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

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For the fiscal year ended December 31, 2019

Or

Transition Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 П For the transition period from _ Commission file number 1-10706

Comerica Incorporated

(Exact Name of Registrant as Specified in Its Charter)

38-1998421 Delaware

(State or Other Jurisdiction of Incorporation)

(IRS Employer Identification Number)

Comerica Bank Tower 1717 Main Street, MC 6404 Dallas, Texas 75201

(Address of Principal Executive Offices) (Zip Code)

(214) 462-6831

(Registrant's Telephone Number, Including Area Code)

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

Title of each class	Trading symbol	Name of each exchange on which registered
Common Stock, \$5 par value	CMA	New York Stock Exchange

Securities registered pursuant to Section 12(g) of the

Exchange 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 o

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

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 o

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 o

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or 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	Ш
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. o

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes □ No ⊠

At June 28, 2019 (the last business day of the registrant's most recently completed second fiscal quarter), the registrant's common stock, \$5 par value, held by nonaffiliates had an aggregate market value of approximately \$10.7 billion based on the closing price on the New York Stock Exchange on that date of \$72.64 per share. For purposes of this Form 10-K only, it has been assumed that all common shares Comerica's Trust Department holds for Comerica's employee plans, and all common shares the registrant's directors and executive officers hold, are shares held by affiliates.

At February 7, 2020, the registrant had outstanding 141,346,049 shares of its common stock, \$5 par value.

Documents Incorporated by Reference:

Part III: Items 10-14—Proxy Statement for the Annual Meeting of Shareholders to be held April 28, 2020.

SIGNATURES

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PART I

Item 1. Business.

GENERAL

Comerica Incorporated ("Comerica") is a financial services company, incorporated under the laws of the State of Delaware in 1973, and headquartered in Dallas, Texas. Based on total assets as reported in the most recently filed Consolidated Financial Statements for Bank Holding Companies (FR Y-9C), it was among the 25 largest commercial United States ("U.S.") financial holding companies. As of December 31, 2019, Comerica owned directly or indirectly all the outstanding common stock of 2 active banking subsidiaries (Comerica Bank, a Texas banking association, and Comerica Bank & Trust, National Association) and 29 non-banking subsidiaries. At December 31, 2019, Comerica had total assets of approximately \$73.4 billion, total deposits of approximately \$57.3 billion, total loans of approximately \$50.4 billion and shareholders' equity of approximately \$7.3 billion.

Comerica has strategically aligned its operations into three major business segments: the Business Bank, the Retail Bank, and Wealth Management. In addition to the three major business segments, Finance is also reported as a segment.

Comerica operates in three primary geographic markets - Texas, California, and Michigan, as well as in Arizona and Florida, with select businesses operating in several other states, and in Canada and Mexico.

We provide information about the net interest income and noninterest income we received from our various classes of products and services: (1) under the caption, "Analysis of Net Interest Income" on page F-6 of the Financial Section of this report; (2) under the caption "Rate/Volume Analysis" on page F-7 of the Financial Section of this report; and (3) under the caption "Noninterest Income" on pages F-8 through F-9 of the Financial Section of this report.

COMPETITION

The financial services business is highly competitive. Comerica and its subsidiaries mainly compete in their three primary geographic markets of Texas, California and Michigan, as well as in the states of Arizona and Florida. They also compete in broader, national geographic markets, as well as markets in Mexico and Canada. They are subject to competition with respect to various products and services, including, without limitation, commercial loans and lines of credit, deposits, cash management, capital market products, international trade finance, letters of credit, foreign exchange management services, loan syndication services, consumer lending, consumer deposit gathering, mortgage loan origination, consumer products, fiduciary services, private banking, retirement services, investment management and advisory services, investment banking services, brokerage services, the sale of annuity products, and the sale of life, disability and long-term care insurance products.

Comerica competes in terms of products and pricing with large national and regional financial institutions and with smaller financial institutions. Some of Comerica's larger competitors, including certain nationwide banks that have a significant presence in Comerica's market area, may make available to their customers a broader array of product, pricing and structure alternatives and, due to their asset size, may more easily absorb credit losses in a larger overall portfolio. Some of Comerica's competitors (larger or smaller) may have more liberal lending policies and processes. Increasingly, Comerica competes with other companies based on financial technology and capabilities, such as mobile banking applications and funds transfer. Further, Comerica's banking competitors may be subject to a significantly different or reduced degree of regulation due to their asset size or types of products offered. They may also have the ability to more efficiently utilize resources to comply with regulations or may be able to more effectively absorb the costs of regulations into their existing cost structure. Comerica believes that the level of competition in all geographic markets will continue to increase in the future.

In addition to banks, Comerica's banking subsidiaries also face competition from other financial intermediaries, including savings and loan associations, consumer and commercial finance companies, leasing companies, venture capital funds, credit unions, investment banks, insurance companies and securities firms. Competition among providers of financial products and services continues to increase as technology advances have lowered the barriers to entry for financial technology companies, with customers having the opportunity to select from a growing variety of traditional and nontraditional alternatives, including crowdfunding, digital wallets and money transfer services. The ability of non-banking financial institutions to provide services previously limited to commercial banks has intensified competition. Because non-banking financial institutions are not subject to many of the same regulatory restrictions as banks and bank holding companies, they can often operate with greater flexibility and lower cost structures.

In addition, the industry continues to consolidate, which affects competition by eliminating some regional and local institutions, while potentially strengthening the franchises of acquirers.

SUPERVISION AND REGULATION

Banks, bank holding companies, and financial institutions are highly regulated at both the state and federal level. Comerica is subject to supervision and regulation at the federal level by the Board of Governors of the Federal Reserve System ("FRB") under the Bank Holding Company Act of 1956, as amended. Comerica Bank is chartered by the State of Texas and at the state level is supervised and regulated by the Texas Department of Banking under the Texas Finance Code. Comerica Bank has elected to be a member of the Federal Reserve System under the Federal Reserve Act and, consequently, is supervised and regulated by the Federal Reserve Bank of Dallas. Comerica Bank & Trust, National Association is chartered under federal law and is subject to supervision and regulation by the Office of the Comptroller of the Currency ("OCC") under the National Bank Act. Comerica Bank & Trust, National Association, by virtue of being a national bank, is also a member of the Federal Reserve System. Furthermore, given that Comerica Bank is a bank with assets in excess of \$10 billion dollars, it is subject to supervision and regulation by the Consumer Financial Protection Bureau ("CFPB") for purposes of assessing compliance with federal consumer financial laws. The deposits of Comerica Bank and Comerica Bank & Trust, National Association are insured by the Deposit Insurance Fund ("DIF") of the Federal Deposit Insurance Corporation ("FDIC") to the extent provided by law, and therefore Comerica Bank and Comerica Bank & Trust, National Association are each also subject to regulation and examination by the FDIC. Certain transactions executed by Comerica Bank are also subject to regulation by the U.S. Commodity Futures Trading Commission ("CFTC"). The Department of Labor ("DOL") regulates financial institutions providing services to plans governed by the Employee Retirement Income Security Act of 1974. Comerica Bank's Canada branch is supervised by the Office of the Superintendent of Financial Institutions and its Mexico representative o

The FRB supervises non-banking activities conducted by companies directly and indirectly owned by Comerica. In addition, Comerica's non-banking subsidiaries are subject to supervision and regulation by various state, federal and self-regulatory agencies, including, but not limited to, the Financial Industry Regulatory Authority, Inc. ("FINRA"), the Department of Licensing and Regulatory Affairs of the State of Michigan and the Municipal Securities Rulemaking Board ("MSRB") (in the case of Comerica Securities, Inc.); the Department of Insurance and Financial Services of the State of Michigan (in the case of Comerica Insurance Services, Inc.); the DOL (in the case of Comerica Securities, Inc. and Comerica Insurance Services, Inc.); and the Securities and Exchange Commission ("SEC") (in the case of Comerica Securities, Inc. and World Asset Management, Inc.).

Both the scope of the laws and regulations and intensity of supervision to which Comerica's business is subject have increased over the past decade in response to the financial crisis as well as other factors such as technological and market changes. Many of these changes have occurred as a result of the Dodd-Frank Wall Street Reform and Consumer Protection Act (the "Dodd-Frank Act") and its implementing regulations, most of which are now in place. In 2018, with the passage of the Economic Growth, Regulatory Relief and Consumer Protection Act ("EGRRCPA"), as described below, there has been some recalibration of the post-financial crisis framework; however, Comerica's business remains subject to extensive regulation and supervision.

Comerica is also subject to the disclosure and regulatory requirements of the Securities Act of 1933, as amended, and the Securities Exchange Act of 1934, as amended, both as administered by the SEC, as well as the rules of the New York Stock Exchange.

Described below are material elements of selected laws and regulations applicable to Comerica and its subsidiaries. The descriptions are not intended to be complete and are qualified in their entirety by reference to the full text of the statutes and regulations described. Changes in applicable law or regulation, and in their application by regulatory agencies, cannot be predicted, but they may have a material effect on the business of Comerica and its subsidiaries.

Economic Growth, Regulatory Relief and Consumer Protection Act

On May 24, 2018, EGRRCPA was signed into law. Among other regulatory changes, EGRRCPA amends various sections of the Dodd-Frank Act, including section 165 of Dodd-Frank Act, which was revised to raise the asset thresholds for determining the application of enhanced prudential standards for bank holding companies. Under EGRRCPA bank holding companies with less than \$100 billion of consolidated assets, including Comerica, were immediately exempted from all of the enhanced prudential standards, except risk committee requirements, which now apply to publicly-traded bank holding companies with \$50 billion or more of consolidated assets, including Comerica. As a result, Comerica is no longer subject to Dodd-Frank Act supervisory and company-run stress testing, required to file a resolution plan under Section 165(d) of the Dodd-Frank Act or subject to internal liquidity stress testing and buffer requirements. In addition, Comerica is no longer required to pay the supervision and regulation fee assessment under the Dodd-Frank Act.

On July 6, 2018, the FRB released a statement that for bank holding companies with between \$50 billion and \$100 billion in total consolidated assets, including Comerica, the FRB would take no action to require such bank holding companies to comply with the Comprehensive Capital Analysis and Review ("CCAR") process or the Liquidity Coverage Ratio. Pursuant to an FRB rule finalized on October 10, 2019, bank holding companies with less than \$100 billion in total consolidated assets are now exempt.

Banks with less than \$100 billion in total consolidated assets, including Comerica Bank, are also exempt from company-run stress testing requirements under the EGRRCPA.

Requirements for Approval of Activities and Acquisitions

The Gramm-Leach-Bliley Act expanded the activities in which a bank holding company registered as a financial holding company can engage. Comerica became a financial holding company in 2000. As a financial holding company, Comerica may affiliate with securities firms and insurance companies, and engage in activities that are financial in nature or incidental or complementary to activities that are financial in nature. Activities that are "financial in nature" include, but are not limited to: securities underwriting; securities dealing and market making; sponsoring mutual funds and investment companies (subject to regulatory requirements described below); insurance underwriting and agency; merchant banking; and activities that the FRB determines, in consultation with the Secretary of the United States Treasury, to be financial in nature or incidental to a financial activity. "Complementary activities" are activities that the FRB determines upon application to be complementary to a financial activity and that do not pose a substantial risk to the safety or soundness of depository institutions or the financial system generally.

In order to maintain its status as a financial holding company, Comerica and each of its depository institution subsidiaries must each remain "well capitalized" and "well managed," and Comerica, Comerica Bank and Comerica Bank & Trust, National Association are each "well capitalized" and "well managed" under FRB standards. If Comerica or any subsidiary bank of Comerica were to cease being "well capitalized" or "well managed" under applicable regulatory standards, the FRB could place limitations on Comerica's ability to conduct the broader financial activities permissible for financial holding companies or impose limitations or conditions on the conduct or activities of Comerica or its affiliates. If the deficiencies persisted, the FRB could order Comerica to divest any subsidiary bank or to cease engaging in any activities permissible for financial holding companies that are not permissible for bank holding companies, or Comerica could elect to conform its non-banking activities to those permissible for a bank holding company that is not also a financial holding company.

In addition, the Community Reinvestment Act of 1977 ("CRA") requires U.S. banks to help serve the credit needs of their communities. Comerica Bank's current rating under the CRA is "satisfactory." If any subsidiary bank of Comerica were to receive a rating under the CRA of less than "satisfactory," Comerica would be prohibited from engaging in certain activities.

Federal and state laws impose notice and approval requirements for mergers and acquisitions of other depository institutions or bank holding companies. In many cases, no FRB approval is required for Comerica to acquire a company engaged in activities that are financial in nature or incidental to activities that are financial in nature, as determined by the FRB. Prior approval is required before Comerica may acquire the beneficial ownership or control of more than 5% of any class of voting shares or substantially all of the assets of a bank holding company (including a financial holding company) or a bank. In considering applications for approval of acquisitions, the banking regulators may take several factors into account, including whether Comerica and its subsidiaries are well capitalized and well managed, are in compliance with anti-money laundering laws and regulations, or have CRA ratings of less than "satisfactory."

Acquisitions of Ownership of Comerica

Acquisitions of Comerica's voting stock above certain thresholds are subject to prior regulatory notice or approval under federal banking laws, including the Bank Holding Company Act of 1956 and the Change in Bank Control Act of 1978. Under the Change in Bank Control Act, a person or entity generally must provide prior notice to the FRB before acquiring the power to vote 10% or more of Comerica's outstanding common stock. Investors should be aware of these requirements when acquiring shares of Comerica's stock.

Capital and Liquidity

Comerica and its bank subsidiaries are subject to risk-based capital requirements and guidelines imposed by the FRB and/or the OCC. In calculating risk-based capital requirements, a depository institution's or holding company's assets and certain specified off-balance sheet commitments are assigned to various risk categories defined by the FRB, each weighted differently based on the level of credit risk that is ascribed to such assets or commitments, based on counterparty type and asset class. A depository institution's or holding company's capital is divided into three tiers: Common Equity Tier 1 ("CET1"), additional Tier 1, and Tier 2. CET1 capital predominantly includes common shareholders' equity, less certain deductions for goodwill, intangible assets and deferred tax assets that arise from net operating losses and tax credit carry-forwards, if any. Additional Tier 1 capital primarily includes any outstanding noncumulative perpetual preferred stock and related surplus. Comerica has also made the election to permanently exclude accumulated other comprehensive income related to debt and equity securities classified as available-for-sale, cash flow hedges, and defined benefit postretirement plans from CET1 capital. Tier 2 capital primarily includes qualifying subordinated debt and qualifying allowance for credit losses. On July 22, 2019, the federal banking agencies issued a final rule that simplifies certain regulatory capital rules, including the capital treatment of mortgage servicing assets, certain deferred tax assets, investments in the capital instruments of unconsolidated financial institutions, and minority interests. In addition, in December 2018, the federal banking regulators adopted rules that would permit bank holding companies and banks to phase in, for regulatory capital purposes, the day-one impact of the new current expected credit loss ("CECL") accounting rule on retained earnings over a period of three years. Comerica does not anticipate to elect this deferral, as the transition impact to

Entities that engage in trading activities that exceed specified levels also are required to maintain capital to account for market risk. Market risk includes changes in the market value of trading account, foreign exchange, and commodity positions, whether resulting from broad market movements (such as changes in the general level of interest rates, equity prices, foreign exchange rates, or commodity prices) or from position specific factors. From time to time, Comerica's trading activities may exceed specified regulatory levels, in which case Comerica adjusts its risk-weighted assets to account for market risk as required.

Comerica and its bank subsidiaries, like other bank holding companies and banks, currently are required to maintain a minimum CET1 capital ratio, minimum Tier 1 capital ratio and minimum total capital ratio equal to at least 4.5 percent, 6 percent and 8 percent of their total risk-weighted assets (including certain off-balance-sheet items, such as standby letters of credit), respectively. Comerica and its bank subsidiaries are required to maintain a minimum capital conservation buffer of 2.5 percent in order to avoid restrictions on capital distributions and discretionary bonuses. Comerica and its bank subsidiaries are also required to maintain a minimum "leverage ratio" (Tier 1 capital to non-risk-adjusted average total assets) of 4 percent.

To be well capitalized, Comerica's bank subsidiaries are required to maintain a total capital ratio, Tier 1 capital ratio, CET1 capital ratio and a leverage ratio equal to at least 10.0 percent, 8.0 percent, 6.5 percent and 5.0 percent, respectively. For purposes of the FRB's Regulation Y, including determining whether a bank holding company meets the requirements to be a financial holding company, bank holding companies, such as Comerica, must maintain a Tier 1 capital ratio of at least 6.0 percent and a total capital ratio of at least 10.0 percent to be well capitalized. The FRB may require bank holding companies, including Comerica, to maintain capital ratios substantially in excess of mandated minimum levels, depending upon general economic conditions and a bank holding company's particular condition, risk profile and growth plans.

Failure to be well capitalized or to meet minimum capital requirements could result in certain mandatory and possible additional discretionary actions by regulators, including restrictions on Comerica's or its bank subsidiaries' ability to pay dividends or otherwise distribute capital or to receive regulatory approval of applications, or other restrictions on growth.

At December 31, 2019, Comerica met all of its minimum risk-based capital ratio and leverage ratio requirements plus the applicable countercyclical conservation buffer and the applicable well capitalized requirements, as shown in the table below:

	Inc	omerica orporated	Comerica
(dollar amounts in millions)	(Coi	nsolidated)	Bank
December 31, 2019			
CET1 capital (minimum \$3.1 billion (Consolidated))	\$	6,919	\$ 7,199
Tier 1 capital (minimum \$4.1 billion (Consolidated))		6,919	7,199
Total capital (minimum \$5.5 billion (Consolidated))		8,282	8,371
Risk-weighted assets		68,273	68,071
Adjusted average assets (fourth quarter)		72,773	72,564
CET1 capital to risk-weighted assets (minimum 4.5%)		10.13%	10.58%
Tier 1 capital to risk-weighted assets (minimum 6.0%)		10.13	10.58
Total capital to risk-weighted assets (minimum 8.0%)		12.13	12.30
Tier 1 capital to average assets (minimum 4.0%)		9.51	9.92
Capital conservation buffer (minimum 2.5%)		4.13	4.30
December 31, 2018			
CET1 capital (minimum \$3.0 billion (Consolidated))	\$	7,470	\$ 7,229
Tier 1 capital (minimum \$4.0 billion (Consolidated))		7,470	7,229
Total capital (minimum \$5.4 billion (Consolidated))		8,855	8,433
Risk-weighted assets		67,047	66,857
Adjusted average assets (fourth quarter)		71,070	70,905
CET1 capital to risk-weighted assets (minimum 4.5%)		11.14%	10.81%
Tier 1 capital to risk-weighted assets (minimum 6.0%)		11.14	10.81
Total capital to risk-weighted assets (minimum 8.0%)		13.21	12.61
Tier 1 capital to average assets (minimum 4.0%)		10.51	10.20
Capital conservation buffer (minimum 2.5%)		5.14	4.61

On November 1, 2019, the federal banking regulators issued a final rule that revises the framework for determining the applicability of regulatory capital and standardized liquidity requirements for large U.S. banking organizations, the U.S. intermediate holding companies of certain foreign banking organizations, and certain of their depository institution subsidiaries. Under the final rule, the Liquidity Coverage Ratio and certain capital requirements no longer apply to banking organizations with total consolidated assets of between \$50 billion and \$100 billion, including Comerica.

Additional information on the calculation of Comerica's and its bank subsidiaries' CET1 capital, Tier 1 capital, total capital and risk-weighted assets is set forth in the "Capital" section located on pages F-17 through F-19 of the Financial Section

of this report and Note 20 of the Notes to Consolidated Financial Statements located on pages F-90 through F-92 of the Financial Section of this report.

Annual Capital Plans and Stress Tests

Comerica was previously subject to the FRB's annual CCAR process, including the requirement to submit an annual capital plan to the FRB for non-objection. However, on October 10, 2019, the FRB finalized a rule that exempts bank holding companies with less than \$100 billion in total consolidated assets from these requirements.

Comerica was also previously subject to Dodd-Frank Act stress testing requirements. As discussed above, as a bank holding company with less than \$100 billion in total consolidated assets Comerica was immediately exempted from Dodd-Frank Act supervisory and company-run stress testing requirements by the EGRRCPA.

Federal Deposit Insurance Corporation Improvement Act

The Federal Deposit Insurance Corporation Improvement Act ("FDICIA") requires, among other things, the federal banking agencies to take "prompt corrective action" with respect to depository institutions that do not meet certain minimum capital requirements. FDICIA establishes five capital tiers: "well capitalized," "adequately capitalized," "undercapitalized," "significantly undercapitalized" and "critically undercapitalized." An institution that fails to remain well capitalized becomes subject to a series of restrictions that increase in severity as its capital condition weakens. Such restrictions may include a prohibition on capital distributions, restrictions on asset growth or restrictions on the ability to receive regulatory approval of applications. The FDICIA also provides for enhanced supervisory authority over undercapitalized institutions, including authority for the appointment of a conservator or receiver for the institution.

As of December 31, 2019, each of Comerica's bank subsidiaries' capital ratios exceeded those required for an institution to be considered "well capitalized" under these regulations.

As an additional means to identify problems in the financial management of depository institutions, FDICIA requires federal bank regulatory agencies to establish certain non-capital-based safety and soundness standards for institutions any such agency supervises. The standards relate generally to, among others, earnings, liquidity, operations and management, asset quality, various risk and management exposures (e.g., credit, operational, market, interest rate, etc.) and executive compensation. The agencies are authorized to take action against institutions that fail to meet such standards.

FDICIA also contains a variety of other provisions that may affect the operations of depository institutions including reporting requirements, regulatory standards for real estate lending, "truth in savings" provisions, the requirement that a depository institution give 90 days prior notice to customers and regulatory authorities before closing any branch, and a prohibition on the acceptance or renewal of brokered deposits by depository institutions that are not well capitalized or are adequately capitalized and have not received a waiver from the FDIC.

Dividends

Comerica is a legal entity separate and distinct from its banking and other subsidiaries. Since Comerica's consolidated net income and liquidity consists largely of net income of and dividends received from Comerica's bank subsidiaries, Comerica's ability to pay dividends and repurchase shares depends upon its receipt of dividends from these subsidiaries. There are statutory and regulatory requirements applicable to the payment of dividends by subsidiary banks to Comerica, as well as by Comerica to its shareholders. Certain, but not all, of these requirements are discussed below. No assurances can be given that Comerica's bank subsidiaries will, in any circumstances, pay dividends to Comerica.

Comerica Bank and Comerica Bank & Trust, National Association are required by federal law to obtain the prior approval of the FRB and/or the OCC, as the case may be, for the declaration and payment of dividends, if the total of all dividends declared by the board of directors of such bank in any calendar year will exceed the total of (i) such bank's net income (as defined and interpreted by regulation) for that year plus (ii) the retained net income (as defined and interpreted by regulation) for the preceding two years, less any required transfers to surplus or to fund the retirement of preferred stock. At January 1, 2020, Comerica's subsidiary banks could declare aggregate dividends of approximately \$98 million from retained net profits of the preceding two years. Comerica's subsidiary banks declared dividends of \$1.2 billion in 2019, \$1.1 billion in 2018 and \$907 million in 2017.

Comerica and its bank subsidiaries must maintain a CET1 capital conservation buffer of 2.5% to avoid becoming subject to restrictions on capital distributions, including dividends.

Furthermore, federal regulatory agencies can prohibit a bank or bank holding company from paying dividends under circumstances in which such payment could be deemed an unsafe and unsound banking practice. Under the FDICIA "prompt corrective action" regime discussed above, which applies to each of Comerica Bank and Comerica Bank & Trust, National Association, a bank is specifically prohibited from paying dividends to its parent company if payment would result in the bank becoming "undercapitalized." In addition, Comerica Bank is also subject to limitations under Texas state law regarding the amount

of earnings that may be paid out as dividends to Comerica, and requires prior approval for payments of dividends that exceed certain levels.

FRB policy provides that a bank holding company should not pay dividends unless (1) the bank holding company's net income over the last four quarters (net of dividends paid) is sufficient to fully fund the dividends, (2) the prospective rate of earnings retention appears consistent with the capital needs, asset quality and overall financial condition of the bank holding company and its subsidiaries and (3) the bank holding company will continue to meet minimum required capital adequacy ratios. The policy also provides that a bank holding company should inform the FRB reasonably in advance of declaring or paying a dividend that exceeds earnings for the period for which the dividend is being paid or that could result in a material adverse change to the bank holding company's capital structure. Bank holding companies also are required to consult with the FRB before redeeming or repurchasing capital instruments (including common stock), or materially increasing dividends.

Transactions with Affiliates

Federal banking laws and regulations impose qualitative standards and quantitative limitations upon certain transactions between a bank and its affiliates, including between Comerica and its nonbank subsidiaries, on the one hand, and Comerica's affiliate insured depository institutions, on the other. For example, Section 23A of the Federal Reserve Act limits the aggregate outstanding amount of any insured depository institution's loans and other "covered transactions" with any particular nonbank affiliate (including financial subsidiaries) to no more than 10% of the institution's total capital and limits the aggregate outstanding amount of any insured depository institution's covered transactions with all of its nonbank affiliates to no more than 20% of its total capital. "Covered transactions" are defined by statute to include (i) a loan or extension of credit to an affiliate, (ii) a purchase of securities issued by an affiliate, (iii) a purchase of assets (unless otherwise exempted by the FRB) from the affiliate, (iv) the acceptance of securities issued by the affiliate as collateral for a loan, (v) the issuance of a guarantee, acceptance or letter of credit on behalf of an affiliate and (vi) securities borrowing or lending transactions and derivative transactions with an affiliate, to the extent that either causes a bank or its affiliate to have credit exposure to the securities borrowing/lending or derivative counterparty. Section 23A of the Federal Reserve Act also generally requires that an insured depository institution's transactions with its nonbank affiliates be on terms and under circumstances that are substantially the same or at least as favorable as those prevailing for comparable transactions with nonaffiliates. Federal banking laws also place similar restrictions on loans and other extensions of credit by FDIC-insured banks, such as Comerica Bank and Comerica Bank & Trust, National Association, and their subsidiaries to their directors, executive officers and principal shareholders.

Data Privacy and Cybersecurity Regulation

Comerica is subject to many U.S. federal, U.S. state and international laws and regulations governing consumer data privacy protection, which require, among other things, maintaining policies and procedures to protect the non-public confidential information of customers and employees. The privacy provisions of the Gramm-Leach-Bliley Act generally prohibit financial institutions, including Comerica and its subsidiaries, from disclosing nonpublic personal financial information of consumer customers to third parties for certain purposes (primarily marketing) unless customers have the opportunity to "opt out" of the disclosure. Other laws and regulations, at the international, federal and state levels, limit Comerica's ability to share certain information with affiliates and non-affiliates for marketing and/or non-marketing purposes, or to contact customers with marketing offers. The Gramm-Leach-Bliley Act also requires banks to implement a comprehensive information security program that includes administrative, technical and physical safeguards to ensure the security and confidentiality of customer records and information. Because we have a limited presence in New York, we are subject to certain requirements of the New York Department of Financial Service's Cybersecurity Requirements for Financial Services Companies, which include maintaining a cybersecurity program and policies and breach notification requirements.

In October 2016, the federal banking regulators issued an advance notice of proposed rulemaking regarding enhanced cyber risk management standards, which would apply to a wide range of large financial institutions, including Comerica, and their third-party service providers. The proposed standards would expand existing cybersecurity regulations and guidance to focus on cyber risk governance and management; management of internal and external dependencies; and incident response, cyber resilience and situational awareness. In addition, the proposal contemplates more stringent standards for institutions with systems that are critical to the financial sector. Comerica continues to monitor the development of this rule.

Data privacy and data protection are areas of increasing state legislative focus. For example, in June of 2018, the Governor of California signed into law the California Consumer Privacy Act of 2018 (the "CCPA"). The CCPA, which became effective on January 1, 2020, applies to for-profit businesses that conduct business in California and meet certain revenue or data collection thresholds. The CCPA will give consumers the right to request disclosure of information collected about them, and whether that information has been sold or shared with others, the right to request deletion of personal information (subject to certain exceptions), the right to opt out of the sale of the consumer's personal information, and the right not to be discriminated against for exercising these rights. The CCPA contains several exemptions, including an exemption applicable to information that is collected, processed, sold or disclosed pursuant to the Gramm-Leach-Bliley Act. The California Attorney General has proposed, but not yet adopted

regulations implementing the CCPA, and the California State Legislature has amended the Act since its passage. Comerica has a physical footprint in California and will be required to comply with the CCPA. In addition, similar laws may be adopted by other states where Comerica does business. The federal government may also pass data privacy or data protection legislation.

Like other lenders, Comerica Bank and other of Comerica's subsidiaries use credit bureau data in their underwriting activities. Use of such data is regulated under the Fair Credit Reporting Act ("FCRA"), and the FCRA also regulates reporting information to credit bureaus, prescreening individuals for credit offers, sharing of information between affiliates, and using affiliate data for marketing purposes. Similar state laws may impose additional requirements on Comerica and its subsidiaries.

FDIC Insurance Assessments

The DIF provides deposit insurance coverage for certain deposits up to \$250,000 per depositor in each deposit account category. Comerica's subsidiary banks are subject to FDIC deposit insurance assessments to maintain the DIF. The FDIC imposes a risk-based deposit premium assessment system, where the assessment rates for an insured depository institution are determined by an assessment rate calculator, which is based on a number of elements to measure the risk each institution poses to the DIF. The assessment rate is applied to total average assets less tangible equity. Under the current system, premiums are assessed quarterly and could increase if, for example, criticized loans and/or other higher risk assets increase or balance sheet liquidity decreases. For 2019, Comerica's FDIC insurance expense totaled \$23 million.

Anti-Money Laundering Regulations

Comerica is subject to several federal laws that are designed to combat money laundering, terrorist financing, and transactions with persons, companies or foreign governments designated by U.S. authorities ("AML laws"). This category of laws includes the Bank Secrecy Act, the Money Laundering Control Act, and the Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism Act of 2001, or USA PATRIOT Act.

The AML laws and their implementing regulations require insured depository institutions, broker-dealers, and certain other financial institutions to have policies, procedures, and controls to detect, prevent, and report money laundering and terrorist financing. The AML laws and their regulations also provide for information sharing, subject to conditions, between federal law enforcement agencies and financial institutions, as well as among financial institutions, for counter-terrorism purposes. Federal banking regulators are required, when reviewing bank holding company acquisition and bank merger applications, to take into account the effectiveness of the anti-money laundering activities of the applicants. To comply with these obligations, Comerica and its various operating units have implemented appropriate internal practices, procedures, and controls.

Office of Foreign Assets Control Regulation

The Office of Foreign Assets Control ("OFAC") is responsible for administering economic sanctions that affect transactions with designated foreign countries, nationals and others, as defined by various Executive Orders and Acts of Congress. OFAC-administered sanctions take many different forms. For example, sanctions may include: (1) restrictions on trade with or investment in a sanctioned country, including prohibitions against direct or indirect imports from and exports to a sanctioned country and prohibitions on U.S. persons engaging in financial transactions relating to, making investments in, or providing investment-related advice or assistance to, a sanctioned country; and (2) a blocking of assets in which the government or "specially designated nationals" of the sanctioned country have an interest, by prohibiting transfers of property subject to U.S. jurisdiction (including property in the possession or control of U.S. persons). OFAC also publishes lists of persons, organizations, and countries suspected of aiding, harboring or engaging in terrorist acts, known as Specially Designated Nationals and Blocked Persons. Blocked assets (e.g., property and bank deposits) cannot be paid out, withdrawn, set off or transferred in any manner without a license from OFAC. Failure to comply with these sanctions could have serious legal and reputational consequences.

Interstate Banking and Branching

The Interstate Banking and Branching Efficiency Act (the "Interstate Act"), as amended by the Dodd-Frank Act, permits a bank holding company, with FRB approval, to acquire banking institutions located in states other than the bank holding company's home state without regard to whether the transaction is prohibited under state law, but subject to any state requirement that the bank has been organized and operating for a minimum period of time, not to exceed five years, and the requirement that the bank holding company, prior to and following the proposed acquisition, control no more than 10 percent of the total amount of deposits of insured depository institutions in the U.S. and no more than 30 percent of such deposits in that state (or such amount as established by state law if such amount is lower than 30 percent). The Interstate Act, as amended, also authorizes banks to operate branch offices outside their home states by merging with out-of-state banks, purchasing branches in other states and by establishing de novo branches in other states, subject to various conditions. In the case of purchasing branches in a state in which it does not already have banking operations, de novo interstate branching is permissible if under the law of the state in which the branch is to be located, a state bank chartered by that state would be permitted to establish the branch. A bank holding company or bank must be well capitalized and well managed in order to take advantage of these interstate banking and branching provisions.

Comerica has consolidated the majority of its banking business into one bank, Comerica Bank, with banking centers in Texas, Arizona, California, Florida and Michigan, as well as Canada.

Source of Strength and Cross-Guarantee Requirements

Federal law and FRB regulations require that bank holding companies serve as a source of strength to each subsidiary bank and commit resources to support each subsidiary bank. This support may be required at times when a bank holding company may not be able to provide such support without adversely affecting its ability to meet other obligations. The FRB may require a bank holding company to make capital injections into a troubled subsidiary bank and may charge the bank holding company with engaging in unsafe and unsound practices if the bank holding company fails to commit resources to such a subsidiary bank or if it undertakes actions that the FRB believes might jeopardize the bank holding company's ability to commit resources to such subsidiary bank. Under these requirements, Comerica may in the future be required to provide financial assistance to its subsidiary banks should they experience financial distress. Capital loans by Comerica to its subsidiary banks would be subordinate in right of payment to deposits and certain other debts of the subsidiary banks. In the event of Comerica's bankruptcy, any commitment by Comerica to a federal bank regulatory agency to maintain the capital of its subsidiary banks would be assumed by the bankruptcy trustee and entitled to a priority of payment.

Similarly, under the cross-guarantee provisions of the Federal Deposit Insurance Act, in the event of a loss suffered or anticipated by the FDIC (either as a result of the failure of a banking subsidiary or related to FDIC assistance provided to such a subsidiary in danger of failure), the other banking subsidiaries may be assessed for the FDIC's loss, subject to certain exceptions. An FDIC cross-guarantee claim against a depository institution is superior in right of payment to claims of the holding company and its affiliates against such depository institution.

Supervisory and Enforcement Powers of Federal and State Banking Agencies

The FRB and other federal and state banking agencies have broad supervisory and enforcement powers, including, without limitation, and as prescribed to each agency by applicable law, the power to conduct examinations and investigations, impose nonpublic supervisory agreements, issue cease and desist orders, terminate deposit insurance, impose substantial fines and other civil penalties and appoint a conservator or receiver. Failure to comply with applicable laws or regulations could subject Comerica or its banking subsidiaries, as well as officers and directors of these organizations, to administrative sanctions and potentially substantial civil and criminal penalties. Bank regulators regularly examine the operations of bank holding companies and banks, and the results of these examinations, as well as certain supervisory and enforcement actions, are confidential and may not be made public.

Resolution Plans

Before the enactment of EGRRCPA, Comerica was required to prepare and submit a resolution plan to the FRB and FDIC. As discussed above, pursuant to EGRRCPA, Comerica is now exempt from this requirement as a bank holding company with less than \$100 billion in total consolidated assets.

EGRRCPA did not change the FDIC's rules that require depository institutions with \$50 billion or more of total consolidated assets, including Comerica Bank, to periodically file a separate resolution plan. On April 16, 2019, the FDIC released an advanced notice of proposed rulemaking ("ANPR") with respect to the FDIC's bank resolution plan requirements meant to better tailor bank resolution plans to a firm's size, complexity and risk profile. The ANPR offers two alternative approaches to resolution planning for commenters to consider and solicits comment on how to tailor the requirements of the rule to reflect differences in size, complexity and other factors among the population of large insured depository institutions, and on whether to increase the current threshold of \$50 billion in assets that triggers application of the rule.

Incentive-Based Compensation

Comerica is subject to guidance issued by the FRB, OCC and FDIC intended to ensure that the incentive compensation policies of banking organizations do not undermine the safety and soundness of such organizations by encouraging excessive risk-taking. The guidance, which covers senior executives as well as other employees who, either individually or as part of a group, have the ability to expose the banking organization to material amounts of risk, is based upon the key principles that a banking organization's incentive compensation arrangements (i) should provide employees incentives that appropriately balance risk and financial results in a manner that does not encourage employees to expose their organizations to imprudent risk; (ii) should be compatible with effective controls and risk-management; and (iii) should be supported by strong corporate governance, including active and effective oversight by the organization's board of directors. Banking organizations are expected to review regularly their incentive compensation arrangements based on these three principles. Where there are deficiencies in the incentive compensation arrangements, they should be promptly addressed. Enforcement actions may be taken against a banking organization if its incentive compensation arrangements, or related risk-management control or governance processes, pose a risk to the organization's safety and soundness, particularly if the organization is not taking prompt and effective measures to correct the deficiencies. Similar to other large banking organizations, Comerica has been subject to a continuing review of incentive compensation policies and practices by representatives of the FRB, the Federal Reserve Bank of Dallas and the Texas Department of Banking since 2011. As part of that review, Comerica has undertaken a thorough analysis of all the incentive compensation programs throughout the organization, the individuals covered by each plan and the risks inherent in each plan's design and implementation. Comerica has determine

In 2016, the FRB, OCC and several other federal financial regulators revised and re-proposed rules to implement Section 956 of the Dodd-Frank Act. Section 956 directed regulators to jointly prescribe regulations or guidelines prohibiting incentive-based payment arrangements, or any feature of any such arrangement, at covered financial institutions that encourage inappropriate risks by providing excessive compensation or that could lead to a material financial loss. This proposal supplements the final guidance issued by the banking agencies in June 2010. Consistent with the Dodd-Frank Act, the proposed rule would impose heightened standards for institutions with \$50 billion or more in total consolidated assets, which includes Comerica. For these larger institutions, the proposed rule would require the deferral of at least 40 percent of incentive-based payments for designated executives and significant risk-takers who individually have the ability to expose the institution to possible losses that are substantial in relation to the institution's size, capital or overall risk tolerance. Moreover, incentive-based compensation of these individuals would be subject to potential clawback for seven years following vesting. Further, the rule imposes enhanced risk management controls and governance and internal policy and procedure requirements with respect to incentive compensation. Comerica is monitoring the development of this rule.

The Volcker Rule

Comerica is prohibited under the Volcker Rule from (1) engaging in short-term proprietary trading for its own account and (2) having certain ownership interests in and relationships with hedge funds or private equity funds ("Covered Funds"). The Volcker Rule regulations contain exemptions for market-making, hedging, underwriting and trading in U.S. government and agency obligations, and permit certain ownership interests in certain types of Covered Funds to be retained. They also permit the offering and sponsoring of Covered Funds under certain conditions. The Volcker Rule regulations impose significant compliance and reporting obligations on banking entities.

Comerica has compliance programs required by the Volcker Rule and has either divested or received extensions for any holdings in Covered Funds. Additional information on Comerica's portfolio of indirect (through funds) private equity and venture capital investments, which includes the Covered Funds, is set forth in Note 1 of the Notes to Consolidated Financial Statements located on page F-48 of the Financial Section of this report.

In October 2019, the five federal agencies with rulemaking authority with respect to the Volcker Rule finalized changes designed to simplify compliance with the Volcker Rule. The final rule formalized a three-tiered approach to compliance program requirements for banking entities based on their level of trading activity. As a banking entity with "moderate" trading assets and liabilities (less than \$20 billion), Comerica is now subject to simplified compliance requirements. Additionally, in January 2020, regulators proposed changes to modify the Volcker Rule's restrictions on Covered Funds. Comerica continues to follow Volcker Rule developments.

Derivative Transactions

As a state member bank, Comerica Bank may engage in derivative transactions, as permitted by applicable Texas and federal law. Title VII of the Dodd-Frank Act contains a comprehensive framework for over-the-counter ("OTC") derivatives transactions. Even though many of the requirements do not impact Comerica directly, since Comerica Bank does not meet the definition of swap dealer or "major swap participant," Comerica continues to review and evaluate the extent to which such requirements impact its business indirectly. On November 5, 2018, the CFTC issued a final rule that sets the permanent aggregate

gross notional amount threshold for the *de minimis* exception from the definition of swap dealer at \$8 billion in swap dealing activity entered into by a person over the preceding 12 months. Comerica's swap dealing activities are currently below this threshold.

The initial margin requirements for non-centrally cleared swaps and security-based swaps will be effective for Comerica's swap and security-based swap counterparties that are swap dealers on September 1, 2021, at which time such counterparties will be required to collect initial margin from Comerica. The initial margin requirements were issued for the purpose of ensuring safety and soundness of swap trading in light of the risk to the financial system associated with non-cleared swaps activity. Comerica is currently working toward meeting compliance with the initial margin requirements.

Consumer Financial Protection Bureau and Certain Recent Consumer Finance Regulations

Comerica is subject to regulation by the CFPB, which has a broad rule-making authority for a wide range of consumer protection laws that apply to all banks and savings institutions and possesses examination and enforcement authority over all banks and savings institutions with more than \$10 billion in assets, including Comerica Bank, and their depositary affiliates.

Comerica is also subject to certain state consumer protection laws, and under the Dodd-Frank Act, state attorneys general and other state officials are empowered to enforce certain federal consumer protection laws and regulations. In recent years, state authorities have increased their focus on and enforcement of consumer protection rules. These federal and state consumer protection laws apply to a broad range of Comerica's activities and to various aspects of its business and include laws relating to interest rates, fair lending, disclosures of credit terms and estimated transaction costs to consumer borrowers, debt collection practices, the use of and the provision of information to consumer reporting agencies, and the prohibition of unfair, deceptive or abusive acts or practices in connection with the offer, sale or provision of consumer financial products and services.

Flood Insurance Rules

Comerica implemented the private flood insurance requirements set forth in the Interagency Final Rule issued on February 20, 2019, which became effective on July 1, 2019. All other flood insurance requirements subject to the Final Rule - Loans in Areas Having Special Flood Hazards, including the escrow of premium and fees for certain real estate loans, are now effective and have been implemented by Comerica.

UNDERWRITING APPROACH

The loan portfolio is a primary source of profitability and risk, so proper loan underwriting is critical to Comerica's long-term financial success. Comerica extends credit to businesses, individuals and public entities based on sound lending principles and consistent with prudent banking practice. During the loan underwriting process, a qualitative and quantitative analysis of potential credit facilities is performed, and the credit risks associated with each relationship are evaluated. Important factors considered as part of the underwriting process for new loans and loan renewals include:

- People: Including the competence, integrity and succession planning of customers.
- Purpose: The legal, logical and productive purposes of the credit facility.
- Payment: Including the source, timing and probability of payment.
- Protection: Including obtaining alternative sources of repayment, securing the loan, as appropriate, with collateral and/or third-party guarantees and ensuring appropriate legal documentation is obtained.
- Perspective: The risk/reward relationship and pricing elements (cost of funds; servicing costs; time value of money; credit risk).

Comerica prices credit facilities to reflect risk, the related costs and the expected return, while maintaining competitiveness with other financial institutions. Loans with variable and fixed rates are underwritten to achieve expected risk-adjusted returns on the credit facilities and for the full relationship including the borrower's ability to repay the principal and interest based on such rates.

Credit Approval and Monitoring

Approval of new loan exposure and oversight and monitoring of Comerica's loan portfolio is the joint responsibility of the Credit Risk Management and Decisioning department and the Credit Underwriting department (collectively referred to as "Credit"), plus the business units ("Line"). Credit assists the Line with underwriting by providing objective financial analysis, including an assessment of the borrower's business model, balance sheet, cash flow and collateral. The approval of new loan exposure is the joint responsibility of Credit Risk Management and Decisioning and the Line. Each commercial borrower relationship is assigned an internal risk rating by Credit Risk Management and Decisioning. Further, Credit updates the assigned internal risk rating as new information becomes available as a result of periodic reviews of credit quality, a change in borrower performance or approval of new loan exposure. The goal of the internal risk rating framework is to support Comerica's risk management capability, including its ability to identify and manage changes in the credit risk profile of its portfolio, predict future

losses and price the loans appropriately for risk. Finally, the Line and Credit (including its Portfolio Risk Analytics department) work together to insure the overall credit risk within the loan portfolio is consistent with the bank's Credit Risk Appetite.

Credit Policy

Comerica maintains a comprehensive set of credit policies. Comerica's credit policies provide Line and Credit Personnel with a framework of sound underwriting practices and potential loan structures. These credit policies also provide the framework for loan committee approval authorities based on its internal risk-rating system and establish maximum exposure limits based on risk ratings and Comerica's legal lending limit. Credit, in conjunction with the Line, monitors compliance with the credit policies and modifies the existing policies as necessary. New or modified policies/guidelines require approval by the Strategic Credit Committee, chaired by Comerica's Chief Credit Officer and comprised of senior credit, market and risk management executives.

Commercial Loan Portfolio

Commercial loans are underwritten using a comprehensive analysis of the borrower's operations. The underwriting process includes an analysis of some or all of the factors listed below:

- The borrower's business model and industry characteristics.
- Periodic review of financial statements including financial statements audited by an independent certified public accountant when appropriate.
- The proforma financial condition including financial projections.
- The borrower's sources and uses of funds.
- The borrower's debt service capacity.
- The guarantor's financial strength.
- A comprehensive review of the quality and value of collateral, including independent third-party appraisals of machinery and equipment and commercial real estate, as appropriate, to determine the advance rates.
- Physical inspection of collateral and audits of receivables, as appropriate.

For additional information specific to our Energy loan portfolio and certain leveraged transactions in our commercial portfolio, please see the captions "Energy Lending" and "Leveraged Loans" on page F-27 of the Financial Section of this report.

Commercial Real Estate (CRE) Loan Portfolio

Comerica's CRE loan portfolio consists of real estate construction and commercial mortgage loans and includes loans to real estate developers and investors and loans secured by owner-occupied real estate. Comerica's CRE loan underwriting policies are consistent with the approach described above and provide maximum loan-to-value ratios that limit the size of a loan to a maximum percentage of the value of the real estate collateral securing the loan. The loan-to-value percentage varies by the type of collateral and is limited by advance rates established by our regulators. Our loan-to-value limitations are, in certain cases, more restrictive than those required by regulators and are influenced by other risk factors such as the financial strength of the borrower or guarantor, the equity provided to the project and the viability of the project itself. CRE loans generally require cash equity. CRE loans are normally originated with full recourse or limited recourse to all principals and owners. There are limitations to the size of a single project loan and to the aggregate dollar exposure to a single guarantor. For additional information specific to our CRE loan portfolio, please see the caption "Commercial Real Estate Lending" on page F-26 of the Financial Section of this report.

Consumer and Residential Mortgage Loan Portfolios

Comerica's consumer and residential mortgage loan underwriting includes an assessment of each borrower's personal financial condition, including a review of credit reports and related FICO scores (a type of credit score used to assess an applicant's credit risk) and verification of income and assets, as applicable. After origination, internal risk ratings are assigned based on payment status and product type.

Comerica does not originate subprime loans. Although a standard industry definition for subprime loans (including subprime mortgage loans) does not exist, Comerica defines subprime loans as specific product offerings for higher risk borrowers, including individuals with one or a combination of high credit risk factors. These credit factors include low FICO scores, poor patterns of payment history, high debt-to-income ratios and elevated loan-to-value. Comerica generally considers subprime FICO scores to be those below 620 on a secured basis (excluding loans with cash or near-cash collateral and adequate income to make payments) and below 660 for unsecured loans. Residential mortgage loans retained in the portfolio are largely relationship based. The remaining loans are typically eligible to be sold on the secondary market. Adjustable-rate loans are limited to standard conventional loan programs. For additional information specific to our residential real estate loan portfolio, please see the caption "Residential Real Estate Lending" on pages F-26 through F-27 of the Financial Section of this report.

EMPLOYEES

As of December 31, 2019, Comerica and its subsidiaries had 7,467 full-time and 481 part-time employees.

AVAILABLE INFORMATION

Comerica maintains an Internet website at *www.comerica.com* where the Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and all amendments to those reports are available without charge, as soon as reasonably practicable after those reports are filed with or furnished to the SEC. The Code of Business Conduct and Ethics for Employees, the Code of Business Conduct and Ethics for Members of the Board of Directors and the Senior Financial Officer Code of Ethics adopted by Comerica are also available on the Internet website and are available in print to any shareholder who requests them. Such requests should be made in writing to the Corporate Secretary at Comerica Incorporated, Comerica Bank Tower, 1717 Main Street, MC 6404, Dallas, Texas 75201.

In addition, pursuant to regulations adopted by the FRB, Comerica makes additional regulatory capital-related disclosures. Under these regulations, Comerica satisfies a portion of these requirements through postings on its website, and Comerica has done so and expects to continue to do so without also providing disclosure of this information through filings with the SEC.

Where we have included web addresses in this report, such as our web address and the web address of the SEC, we have included those web addresses as inactive textual references only. Except as specifically incorporated by reference into this report, information on those websites is not part hereof.

Item 1A. Risk Factors.

This report includes forward-looking statements as defined in the Private Securities Litigation Reform Act of 1995. In addition, Comerica may make other written and oral communications from time to time that contain such statements. All statements regarding Comerica's expected financial position, strategies and growth prospects and general economic conditions Comerica expects to exist in the future are forward-looking statements. The words, "anticipates," "believes," "contemplates," "feels," "expects," "estimates," "seeks," "strives," "plans," "intends," "outlook," "forecast," "position," "target," "mission," "assume," "achievable," "potential," "strategy," "goal," "aspiration," "opportunity," "initiative," "outcome," "continue," "remain," "maintain," "on track," "trend," "objective," "looks forward," "projects," "models" and variations of such words and similar expressions, or future or conditional verbs such as "will," "would," "should," "could," "might," "can," "may" or similar expressions, as they relate to Comerica or its management, are intended to identify forward-looking statements.

Comerica cautions that forward-looking statements are subject to numerous assumptions, risks and uncertainties, which change over time. Forward-looking statements speak only as of the date the statement is made, and Comerica does not undertake to update forward-looking statements to reflect facts, circumstances, assumptions or events that occur after the date the forward-looking statements are made. Actual results could differ materially from those anticipated in forward-looking statements and future results could differ materially from historical performance.

In addition to factors mentioned elsewhere in this report or previously disclosed in Comerica's SEC reports (accessible on the SEC's website at www.sec.gov or on Comerica's website at www.comerica.com), the factors contained below, among others, could cause actual results to differ materially from forward-looking statements, and future results could differ materially from historical performance.

CREDIT RISK

Unfavorable developments concerning credit quality could adversely affect Comerica's financial results.

Although Comerica regularly reviews credit exposure related to its customers and various industry sectors in which it has business relationships, default risk may arise from events or circumstances that are difficult to detect or foresee. Under such circumstances, Comerica could experience an increase in the level of provision for credit losses, nonperforming assets, net charge-offs and reserve for credit losses, which could adversely affect Comerica's financial results.

• Declines in the businesses or industries of Comerica's customers could cause increased credit losses or decreased loan balances, which could adversely affect Comerica.

Comerica's business customer base consists, in part, of customers in volatile businesses and industries such as the automotive, commercial real estate, residential real estate and energy industries. These industries are sensitive to global economic conditions, supply chain factors and/or commodities prices. Any decline in one of these businesses or industries could cause increased credit losses, which in turn could adversely affect Comerica. Further, any decline in these businesses or industries could cause decreased borrowings, either due to reduced demand or reductions in the borrowing base available for each customer loan.

For more information regarding certain of Comerica's lines of business, please see "Concentration of Credit Risk," "Automotive Lending," "Commercial Real Estate Lending," "Residential Real Estate Lending" and "Energy Lending" on pages F-25 through F-27 of the Financial Section of this report.

Changes in customer behavior may adversely impact Comerica's business, financial condition and results of operations.

Individual, economic, political, industry-specific conditions and other factors outside of Comerica's control, such as fuel prices, energy costs, tariffs, real estate values or other factors that affect customer income levels, could alter predicted customer borrowing, repayment, investment and deposit practices. Such a change in these practices could materially adversely affect Comerica's ability to anticipate business needs and meet regulatory requirements.

Recently, there have been discussions regarding potential changes to U.S. trade policies, legislation, treaties and tariffs, including trade policies and tariffs affecting China, the European Union, Canada and Mexico and retaliatory tariffs by such countries. Tariffs and retaliatory tariffs have been imposed, and additional tariffs and retaliatory tariffs have been proposed. On October 1, 2018, the United States, Canada and Mexico agreed to a new trade deal, the United States-Mexico-Canada Agreement ("USMCA"), to replace the North American Free Trade Agreement. The USMCA, subject to congressional approval, passed the House of Representatives on December 19, 2019 and the Senate on January 16, 2020. The trade deal was signed by President Trump on January 29, 2020. These and any other changes in tariffs, retaliatory tariffs or other trade restrictions on products and materials that Comerica's customers import or export could cause the prices of their products to increase, which could reduce demand for such products, or reduce customer margins, and adversely impact their revenues, financial results and ability to service debt; in turn, this could adversely affect Comerica's financial condition and results of operations.

Further, difficult economic conditions may negatively affect consumer confidence levels. A decrease in consumer confidence levels would likely aggravate the adverse effects of these difficult market conditions on Comerica, Comerica's customers and others in the financial institutions industry.

MARKET RISK

• Governmental monetary and fiscal policies may adversely affect the financial services industry, and therefore impact Comerica's financial condition and results of operations.

Monetary and fiscal policies of various governmental and regulatory agencies, in particular the FRB, affect the financial services industry, directly and indirectly. The FRB regulates the supply of money and credit in the U.S., and its monetary policies determine in a large part Comerica's cost of funds for lending and investing and the return that can be earned on such loans and investments. Changes in such policies, including changes in interest rates, such as recent decreases in the federal funds rate, or changes in the FRB's balance sheet, will influence the origination of loans, the value of investments, the generation of deposits and the rates received on loans and investment securities and paid on deposits. Changes in monetary and fiscal policies are beyond Comerica's control and difficult to predict. Comerica's financial condition and results of operations could be materially adversely impacted by changes in governmental monetary and fiscal policies.

Fluctuations in interest rates and their impact on deposit pricing could adversely affect Comerica's net interest income and balance sheet.

The operations of financial institutions such as Comerica are dependent to a large degree on net interest income, which is the difference between interest income from loans and investments and interest expense on deposits and borrowings. Prevailing economic conditions and the trade, fiscal and monetary policies of the federal government and various regulatory agencies all affect market rates of interest and the availability and cost of credit, which in turn significantly affect financial institutions' net interest income and the market value of its investment securities. The Federal Reserve lowered interest rates three times in 2019. A continued low interest rate environment could adversely affect the interest income Comerica earns on loans and investments. For a discussion of Comerica's interest rate sensitivity, please see, "Market and Liquidity Risk" beginning on page F-28 of the Financial Section of this report.

Deposits make up a large portion of Comerica's funding portfolio. Comerica's funding costs may continue to increase if it raises deposit rates to avoid losing customer deposits, or if it loses customer deposits and must rely on more expensive sources of funding. Higher funding costs will reduce Comerica's net interest margin and net interest income.

Volatility in interest rates can also result in disintermediation, which is the flow of funds away from financial institutions into direct investments, such as federal government and corporate securities and other investment vehicles, which, because of the absence of federal insurance premiums and reserve requirements, generally pay higher rates of return than financial institutions. Comerica's financial results could be materially adversely impacted by changes in financial market conditions.

• Interest rates on Comerica's outstanding financial instruments might be subject to change based on developments related to LIBOR, which could adversely affect its revenue, expenses, and the value of those financial instruments.

On July 27, 2017, the United Kingdom's Financial Conduct Authority, which regulates LIBOR, publicly announced that it intends to stop persuading or compelling banks to submit LIBOR rates after 2021. It is expected that a transition away from the widespread use of LIBOR to alternative rates will occur over the course of the next two years. The Alternative Reference Rates Committee, a steering committee comprised of U.S. financial market participants, selected and the Federal Reserve Bank of New York started in May 2018 to publish the Secured Overnight Finance Rate ("SOFR") as an alternative to LIBOR. SOFR is a broad measure of the cost of borrowing cash in the overnight U.S. treasury repo market and differs from LIBOR in key respects. At this time, while it is expected that SOFR will be the successor to LIBOR, it is possible that another reference rate will become an accepted alternative to LIBOR.

The market transition away from LIBOR to an alternative reference rate, including SOFR, is complex and could have a range of adverse effects on our business, financial condition and results of operations. In particular, any such transition could:

- adversely affect the interest rates paid or received on, and the revenues and expenses associated with, Comerica's floating rate obligations, loans, deposits, derivatives, and other financial instruments tied to LIBOR rates, or other securities or financial arrangements given LIBOR's role in determining market interest rates globally;
- adversely affect the value of Comerica's floating rate obligations, loans, deposits, derivatives, and other financial instruments tied to LIBOR rates, or other securities or financial arrangements given LIBOR's role in determining market interest rates globally;
- prompt inquiries or other actions from regulators in respect to Comerica's preparation and readiness for the replacement of LIBOR with an alternative reference rate;
- result in disputes, litigation or other actions with counterparties regarding the interpretation and enforceability of certain fallback language in LIBOR-based securities; and
- require the transition to or development of appropriate systems and analytics to effectively transition Comerica's risk management processes from LIBOR-based products to those based on the applicable alternative pricing benchmark, such as SOFR.

Approximately 75% of Comerica's loans at December 31, 2019 were tied to LIBOR, which excludes the impact of interest rate swaps converting floating-rate loans to fixed. More information regarding the LIBOR transition is available on page F-29 under "LIBOR Transition."

The manner and impact of this transition, as well as the effect of these developments on Comerica's funding costs, loan and investment and trading securities portfolios, asset-liability management, and business, is uncertain.

LIQUIDITY RISK

 Comerica must maintain adequate sources of funding and liquidity to meet regulatory expectations, support its operations and fund outstanding liabilities.

Comerica's liquidity and ability to fund and run its business could be materially adversely affected by a variety of conditions and factors, including financial and credit market disruptions and volatility, a lack of market or customer confidence in financial markets in general, or deposit competition based on interest rates, which may result in a loss of customer deposits or outflows of cash or collateral and/or adversely affect Comerica's ability to access capital markets on favorable terms.

Other conditions and factors that could materially adversely affect Comerica's liquidity and funding include a lack of market or customer confidence in, or negative news about, Comerica or the financial services industry generally which also may result in a loss of deposits and/or negatively affect Comerica's ability to access the capital markets; the loss of customer deposits to alternative investments; counterparty availability; interest rate fluctuations; general economic conditions; and the legal, regulatory, accounting and tax environments governing Comerica's funding transactions. Many of the above conditions and factors may be caused by events over which Comerica has little or no control. There can be no assurance that significant disruption and volatility in the financial markets will not occur in the future. Further, Comerica's customers may be adversely impacted by such conditions, which could have a negative impact on Comerica's business, financial condition and results of operations.

Further, if Comerica is unable to continue to fund assets through customer bank deposits or access funding sources on favorable terms, or if Comerica suffers an increase in borrowing costs or otherwise fails to manage liquidity effectively, Comerica's liquidity, operating margins, financial condition and results of operations may be materially adversely affected.

Reduction in our credit ratings could adversely affect Comerica and/or the holders of its securities.

Rating agencies regularly evaluate Comerica, and their ratings are based on a number of factors, including Comerica's financial strength as well as factors not entirely within its control, including conditions affecting the financial services industry generally. There can be no assurance that Comerica will maintain its current ratings. In December 2019, Fitch Ratings revised each of Comerica Incorporated and Comerica Bank's outlook from "Stable" to "Negative." While recent credit rating actions have had little to no detrimental impact on Comerica's profitability, borrowing costs, or ability to access the capital markets, future downgrades to Comerica's or its subsidiaries' credit ratings could adversely affect Comerica's profitability, borrowing costs, or ability to access the capital markets or otherwise have a negative effect on Comerica's results of operations or financial condition. If such a reduction placed Comerica's or its subsidiaries' credit ratings below investment grade, it could also create obligations or liabilities under the terms of existing arrangements that could increase Comerica's costs under such arrangements. Additionally, a downgrade of the credit rating of any particular security issued by Comerica or its subsidiaries could negatively affect the ability of the holders of that security to sell the securities and the prices at which any such securities may be sold.

The soundness of other financial institutions could adversely affect Comerica.

Comerica's ability to engage in routine funding transactions could be adversely affected by the actions and commercial soundness of other financial institutions. Financial services institutions are interrelated as a result of trading, clearing, counterparty or other relationships. Comerica has exposure to many different industries and counterparties, and it routinely executes transactions with counterparties in the financial industry, including brokers and dealers, commercial banks, investment banks, mutual and hedge funds, and other institutional clients. As a result, defaults by, or even rumors or questions about, one or more financial services institutions, or the financial services industry generally, have led, and may further lead, to marketwide liquidity problems and could lead to losses or defaults by us or by other institutions. Many of these transactions could expose Comerica to credit risk in the event of default of its counterparty or client. In addition, Comerica's credit risk may be impacted when the collateral held by it cannot be realized or is liquidated at prices not sufficient to recover the full amount of the financial instrument exposure due to Comerica. There is no assurance that any such losses would not adversely affect, possibly materially, Comerica.

TECHNOLOGY RISK

Comerica faces security risks, including denial of service attacks, hacking, social engineering attacks targeting Comerica's colleagues and customers, malware intrusion or data corruption attempts, and identity theft that could result in the disclosure of confidential information, adversely affect its business or reputation, and create significant legal and financial exposure.

Comerica's computer systems and network infrastructure and those of third parties, on which Comerica is highly dependent, are subject to security risks and could be susceptible to cyber attacks, such as denial of service attacks, hacking, terrorist activities or identity theft. Comerica's business relies on the secure processing, transmission, storage and retrieval of confidential, proprietary and other information in its computer and data management systems and networks, and in the computer and data management systems and networks of third parties. In addition, to access Comerica's network, products and services, its customers and other third parties may use personal mobile devices or computing devices that are outside of its network environment and are subject to their own cybersecurity risks.

Cyber attacks could include computer viruses, malicious or destructive code, phishing attacks, denial of service or information, ransomware, improper access by employees or vendors, attacks on personal email of employees, ransom demands to not expose security vulnerabilities in Comerica's systems or the systems of third parties, or other security breaches, and could result in the destruction or exfiltration of data and systems. As cyber threats continue to evolve, Comerica may be required to expend significant additional resources to continue to modify or enhance its protective measures or to investigate and remediate any information security vulnerabilities or incidents. Despite efforts to ensure the integrity of Comerica's systems and implement controls, processes, policies and other protective measures, Comerica may not be able to anticipate all security breaches, nor may it be able to implement guaranteed preventive measures against such security breaches. Cyber threats are rapidly evolving and Comerica may not be able to anticipate or prevent all such attacks and could be held liable for any security breach or loss.

Although Comerica has programs in place related to business continuity, disaster recovery and information security to maintain the confidentiality, integrity, and availability of its systems, business applications and customer information, such disruptions may still give rise to interruptions in service to customers and loss or liability to Comerica, including loss of customer data. Like other financial services firms, Comerica and its third party providers continue to be the subject of cyber attacks. Although to this date Comerica has not experienced any material losses or other material consequences related to cyber attacks, future cyber attacks could be more disruptive and damaging, and Comerica may not be able to anticipate or prevent all such attacks. Further, cyber attacks may not be detected in a timely manner.

Cyber attacks or other information or security breaches, whether directed at Comerica or third parties, may result in a material loss or have material consequences. Furthermore, the public perception that a cyber attack on Comerica's systems has been successful, whether or not this perception is correct, may damage its reputation with customers and third parties with whom it does business. Hacking of personal information and identity theft risks, in particular, could cause serious reputational harm. A successful penetration or circumvention of system security could cause Comerica serious negative consequences, including loss of customers and business opportunities, costs associated with maintaining business relationships after an attack or breach; significant business disruption to Comerica's operations and business, misappropriation, exposure, or destruction of its confidential information, intellectual property, funds, and/or those of its customers; or damage to Comerica's or Comerica's customers' and/or third parties' computers or systems, and could result in a violation of applicable privacy laws and other laws, litigation exposure, regulatory fines, penalties or intervention, loss of confidence in Comerica's security measures, reputational damage, reimbursement or other compensatory costs, additional compliance costs, and could adversely impact its results of operations, liquidity and financial condition. In addition, Comerica may not have adequate insurance coverage to compensate for losses from a cybersecurity event.

Cybersecurity and data privacy are areas of heightened legislative and regulatory focus.

As cybersecurity and data privacy risks for banking organizations and the broader financial system have significantly increased in recent years, cybersecurity and data privacy issues have become the subject of increasing legislative and regulatory focus. The federal bank regulatory agencies have proposed enhanced cyber risk management standards, which would apply to a wide range of large financial institutions and their third-party service providers, including Comerica and its bank subsidiaries, and would focus on cyber risk governance and management, management of internal and external dependencies, and incident response, cyber resilience and situational awareness. Several states have also proposed or adopted cybersecurity legislation and regulations, which require, among other things, notification to affected individuals when there has been a security breach of their personal data. For more information regarding cybersecurity regulation, refer to the "Supervision and Regulation" section of this report.

Comerica receives, maintains and stores non-public personal information of Comerica's customers and counterparties, including, but not limited to, personally identifiable information and personal financial information. The sharing, use, disclosure and protection of this information are governed by federal and state law. Both personally identifiable information and personal financial information is increasingly subject to legislation and regulation, the intent of which is to protect the privacy of personal information that is collected and handled. For example, in June of 2018, the Governor of California signed into law the CCPA. The CCPA, which became effective on January 1, 2020, applies to for-profit businesses that conduct business in California and meet certain revenue or data collection thresholds, including Comerica. For more information regarding data privacy regulation, refer to the "Supervision and Regulation" section of this report.

Comerica may become subject to new legislation or regulation concerning cybersecurity or the privacy of personally identifiable information and personal financial information or of any other information Comerica may store or maintain. Comerica could be adversely affected if new legislation or regulations are adopted or if existing legislation or regulations are modified such that Comerica is required to alter its systems or require changes to its business practices or privacy policies. If cybersecurity, data privacy, data protection, data transfer or data retention laws are implemented, interpreted or applied in a manner inconsistent with Comerica's current practices, it may be subject to fines, litigation or regulatory enforcement actions or ordered to change its business practices, policies or systems in a manner that adversely impacts Comerica's operating results.

OPERATIONAL RISK

Comerica's operational or security systems or infrastructure, or those of third parties, could fail or be breached, which could disrupt
Comerica's business and adversely impact Comerica's results of operations, liquidity and financial condition, as well as cause legal or
reputational harm.

The potential for operational risk exposure exists throughout Comerica's business and, as a result of its interactions with, and reliance on, third parties, is not limited to Comerica's own internal operational functions. Comerica's operations rely on the secure processing, storage and transmission of confidential and other information on its technology systems and networks. These networks are subject to infrastructure failures, ongoing system maintenance and upgrades and planned network outages. The increased use of mobile and cloud technologies can heighten these and other operational risks. Any failure, interruption or breach in security of these systems could result in failures or disruptions in Comerica's customer relationship management, general ledger, deposit, loan and other systems.

Comerica relies on its employees and third parties in its day-to-day and ongoing operations, who may, as a result of human error, misconduct, malfeasance or failure, or breach of Comerica's or of third-party systems or infrastructure, expose Comerica to risk. For example, Comerica's ability to conduct business may be adversely affected by any significant disruptions to Comerica or to third parties with whom Comerica interacts or upon whom it relies. Although Comerica

has programs in place related to business continuity, disaster recovery and information security to maintain the confidentiality, integrity and availability of its systems, business applications and customer information, such disruptions may still give rise to interruptions in service to customers and loss or liability to Comerica, including loss of customer data. In addition, Comerica's ability to implement backup systems and other safeguards with respect to third-party systems is more limited than with respect to its own systems.

Comerica's financial, accounting, data processing, backup or other operating or security systems and infrastructure may fail to operate properly or become disabled or damaged as a result of a number of factors, including events that are wholly or partially beyond its control, which could adversely affect its ability to process transactions or provide services. Such events may include sudden increases in customer transaction volume and/or customer activity; electrical, telecommunications or other major physical infrastructure outages; natural disasters such as earthquakes, tornadoes, hurricanes and floods; disease pandemics; cyber attacks; and events arising from local or larger scale political or social matters, including wars and terrorist acts.

The occurrence of any failure or interruption in Comerica's operations or information systems, or any security breach, could cause reputational damage, jeopardize the confidentiality of customer information, result in a loss of customer business, subject Comerica to regulatory intervention or expose it to civil litigation and financial loss or liability, any of which could have a material adverse effect on Comerica.

Comerica relies on other companies to provide certain key components of its delivery systems, and certain failures could materially adversely affect operations.

Comerica faces the risk of operational disruption, failure or capacity constraints due to its dependency on third party vendors for components of its delivery systems. Third party vendors provide certain key components of Comerica's delivery systems, such as cloud-based computing, networking and storage services, payment processing services, recording and monitoring services, internet connections and network access, clearing agency services, card processing services and trust processing services. While Comerica conducts due diligence prior to engaging with third party vendors and performs ongoing monitoring of vendor controls, it does not control their operations. Further, while Comerica's vendor management policies and practices are designed to comply with current regulations, these policies and practices cannot eliminate this risk. In this context, any vendor failure to properly deliver these services could adversely affect Comerica's business operations, and result in financial loss, reputational harm, and/or regulatory action.

• Legal and regulatory proceedings and related matters with respect to the financial services industry, including those directly involving Comerica and its subsidiaries, could adversely affect Comerica or the financial services industry in general.

Comerica has been, and may in the future be, subject to various legal and regulatory proceedings. It is inherently difficult to assess the outcome of these matters, and there can be no assurance that Comerica will prevail in any proceeding or litigation. Any such matter could result in substantial cost and diversion of Comerica's efforts, which by itself could have a material adverse effect on Comerica's financial condition and operating results. Further, adverse determinations in such matters could result in fines or actions by Comerica's regulators that could materially adversely affect Comerica's business, financial condition or results of operations.

Comerica establishes reserves for legal claims when payments associated with the claims become probable and the costs can be reasonably estimated. Comerica may still incur legal costs for a matter even if it has not established a reserve. In addition, due to the inherent subjectivity of the assessments and unpredictability of the outcome of legal proceedings, the actual cost of resolving a legal claim may be substantially higher than any amounts reserved for that matter. The ultimate resolution of a pending legal proceeding, depending on the remedy sought and granted, could adversely affect Comerica's results of operations and financial condition.

Comerica may incur losses due to fraud.

Fraudulent activity can take many forms and has escalated as more tools for accessing financial services emerge, such as real-time payments. Fraud schemes are broad and continuously evolving. Examples include but are not limited to: debit card/credit card fraud, check fraud, mechanical devices attached to ATM machines, social engineering and phishing attacks to obtain personal information, impersonation of our clients through the use of falsified or stolen credentials, employee fraud, information theft and other malfeasance. Increased deployment of technologies, such as chip card technology, defray and reduce aspects of fraud; however, criminals are turning to other sources to steal personally identifiable information in order to impersonate the consumer to commit fraud. Many of these data compromises have been widely reported in the media. Further, as a result of the increased sophistication of fraud activity, Comerica continues to invest in systems, resources, and controls to detect and prevent fraud. This will result in continued ongoing investments in the future.

Controls and procedures may not prevent or detect all errors or acts of fraud.

Controls and procedures are designed to provide reasonable assurance that information required to be disclosed in reports Comerica files or submits under the Exchange Act is accurately accumulated and communicated to management, and recorded, processed, summarized, and reported within the time periods specified in the SEC's rules and forms. Disclosure controls and procedures or internal controls and procedures, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met, due to certain inherent limitations. These limitations include the realities that judgments in decision making can be faulty, that alternative reasoned judgments can be drawn, that breakdowns can occur because of an error or mistake, or that controls may be fraudulently circumvented. Accordingly, because of the inherent limitations in control systems, misstatements due to error or fraud may occur and not be detected.

COMPLIANCE RISK

Changes in regulation or oversight may have a material adverse impact on Comerica's operations.

Comerica is subject to extensive regulation, supervision and examination by the U.S. Treasury, the Texas Department of Banking, the FDIC, the FRB, the OCC, the CFPB, the SEC, FINRA, DOL, MSRB and other regulatory bodies. Such regulation and supervision governs and limits the activities in which Comerica may engage. Regulatory authorities have extensive discretion in their supervisory and enforcement activities, including the imposition of restrictions on Comerica's operations and ability to make acquisitions, investigations and limitations related to Comerica's securities, the classification of Comerica's assets and determination of the level of Comerica's allowance for loan losses. Any change in such regulation and oversight, whether in the form of regulatory policy, regulations, legislation or supervisory action, may have a material adverse impact on Comerica's business, financial condition or results of operations. The impact of any future legislation or regulatory actions may adversely affect Comerica's businesses or operations.

Compliance with stringent capital requirements may adversely affect Comerica.

Comerica is required to satisfy stringent regulatory capital standards, as set forth in the "Supervision and Regulation" section of this report. These requirements, and any other new laws or regulations related to capital and liquidity, could adversely affect Comerica's ability to pay dividends or make share repurchases, or could require Comerica to reduce business levels or to raise capital, including in ways that may adversely affect its results of operations or financial condition and/or existing shareholders. Maintaining higher levels of capital may reduce Comerica's profitability and otherwise adversely affect its business, financial condition, or results of operations.

Tax regulations could be subject to potential legislative, administrative or judicial changes or interpretations.

Federal income tax treatment of corporations may be clarified and/or modified by legislative, administrative or judicial changes or interpretations at any time. Any such changes could adversely affect Comerica, either directly, or indirectly as a result of effects on Comerica's customers. For example, the tax reform bill enacted on December 22, 2017 has had, and is expected to continue to have, far-reaching and significant effects on Comerica, its customers and the U.S. economy.

FINANCIAL REPORTING RISK

Changes in accounting standards could materially impact Comerica's financial statements.

From time to time accounting standards setters change the financial accounting and reporting standards that govern the preparation of Comerica's financial statements. These changes can be difficult to predict and can materially impact how Comerica records and reports its financial condition and results of operations. In some cases, Comerica could be required to apply a new or revised standard retroactively, resulting in changes to previously reported financial results, or a cumulative charge to retained earnings. In particular, the Financial Accounting Standards Board ("FASB") has issued a new accounting standard, CECL, for the recognition and measurement of credit losses for loans and debt securities. The new standard will be effective for Comerica in the first quarter 2020. The anticipated change in loan loss reserves due to CECL is approximately a \$17 million decrease to Comerica's credit loss reserves at adoption, as well as a corresponding increase to retained earnings of \$13 million and a decrease of \$4 million to deferred tax assets.

• Comerica's accounting policies and processes are critical to the reporting of financial condition and results of operations. They require management to make estimates about matters that are uncertain.

Accounting policies and processes are fundamental to how Comerica records and reports its financial condition and results of operations. Management must exercise judgment in selecting and applying many of these accounting policies and processes so they comply with U.S. Generally Accepted Accounting Principles ("GAAP"). In some cases, management must select the accounting policy or method to apply from two or more alternatives, any of which may be reasonable under the circumstances, yet may result in the Company reporting materially different results than would have been reported under a different alternative.

Management has identified certain accounting policies as being critical because they require management's judgment to make difficult, subjective or complex judgments about matters that are uncertain. Materially different amounts could be reported under different conditions or using different assumptions or estimates. Comerica has established detailed policies and control procedures that are intended to ensure these critical accounting estimates and judgments are well controlled and applied consistently. In addition, the policies and procedures are intended to ensure that the process for changing methodologies occurs in an appropriate manner. Because of the uncertainty surrounding management's judgments and the estimates pertaining to these matters, Comerica cannot guarantee that it will not be required to adjust accounting policies or restate prior period financial statements. See "Critical Accounting Policies" on pages F-34 through F-36 of the Financial Section of this report and Note 1 of the Notes to Consolidated Financial Statements located on pages F-45 through F-57 of the Financial Section of this report.

STRATEGIC RISK

Damage to Comerica's reputation could damage its businesses.

Reputational risk is an increasing concern for businesses as customers are interested in doing business with companies they admire and trust. Such risks include compliance issues, operational challenges, or a strategic, high profile event. Comerica's business is based on the trust of its customers, communities, and entire value chain, which makes managing reputational risk extremely important. News or other publicity that impairs Comerica's reputation, or the reputation of the financial services industry generally, can therefore cause significant harm to Comerica's business and prospects. Further, adverse publicity or negative information posted on social media websites regarding Comerica, whether or not true, may result in harm to Comerica's prospects.

Comerica may not be able to utilize technology to efficiently and effectively develop, market, and deliver new products and services to its customers.

The financial services industry experiences rapid technological change with regular introductions of new technology-driven products and services. The ability to access and use technology is an increasingly important competitive factor in the financial services industry, and having the right technology is a critically important component to customer satisfaction. As well, the efficient and effective utilization of technology enables financial institutions to reduce costs. Comerica's future success depends, in part, upon its ability to address the needs of its customers by using technology to market and deliver products and services that will satisfy customer demands, meet regulatory requirements, and create additional efficiencies in Comerica's operations. Comerica may not be able to effectively develop new technology-driven products and services or be successful in marketing or supporting these products and services to its customers, which could have a material adverse impact on Comerica's financial condition and results of operations.

Competitive product and pricing pressures within Comerica's markets may change.

Comerica operates in a very competitive environment, which is characterized by competition from a number of other financial institutions in each market in which it operates. Comerica competes in terms of products and pricing with large national and regional financial institutions and with smaller financial institutions. Some of Comerica's larger competitors, including certain nationwide banks that have a significant presence in Comerica's market area, may make available to their customers a broader array of product, pricing and structure alternatives and, due to their asset size, may more easily absorb credit losses in a larger overall portfolio. Some of Comerica's competitors (larger or smaller) may have more liberal lending policies and processes. Increasingly, Comerica competes with other companies based on financial technology and capabilities, such as mobile banking applications and funds transfer.

Additionally, the financial services industry is subject to extensive regulation. For more information, see the "Supervision and Regulation" section of this report. Such regulations may require significant additional investments in technology, personnel or other resources or place limitations on the ability of financial institutions, including Comerica, to engage in certain activities. Comerica's competitors may be subject to a significantly different or reduced degree of regulation due to their asset size or types of products offered. They may also have the ability to more efficiently utilize resources to comply with regulations or may be able to more effectively absorb the costs of regulations into their existing cost structure.

In addition to banks, Comerica's banking subsidiaries also face competition from other financial intermediaries, including savings and loan associations, consumer and commercial finance companies, leasing companies, venture capital funds, credit unions, investment banks, insurance companies and securities firms. Competition among providers of financial products and services continues to increase as technology advances have lowered the barriers to entry for financial technology companies, with customers having the opportunity to select from a growing variety of traditional and nontraditional alternatives, including crowdfunding, digital wallets and money transfer services. The ability of non-banking financial institutions to provide services previously limited to commercial banks has intensified competition. Because non-banking financial institutions are not subject to many of the same regulatory restrictions as banks and bank holding companies, they can often operate with greater flexibility and lower cost structures.

If Comerica is unable to compete effectively in products and pricing in its markets, business could decline, which could have a material adverse effect on Comerica's business, financial condition or results of operations.

• The introduction, implementation, withdrawal, success and timing of business initiatives and strategies may be less successful or may be different than anticipated, which could adversely affect Comerica's business.

Comerica makes certain projections and develops plans and strategies for its banking and financial products. If Comerica does not accurately determine demand for its banking and financial product needs, it could result in Comerica incurring significant expenses without the anticipated increases in revenue, which could result in a material adverse effect on its business.

Management's ability to maintain and expand customer relationships may differ from expectations.

The financial services industry is very competitive. Comerica not only vies for business opportunities with new customers, but also competes to maintain and expand the relationships it has with its existing customers. While management believes that it can continue to grow many of these relationships, Comerica will continue to experience pressures to maintain these relationships as its competitors attempt to capture its customers. Failure to create new customer relationships and to maintain and expand existing customer relationships to the extent anticipated may adversely impact Comerica's earnings.

Management's ability to retain key officers and employees may change.

Comerica's future operating results depend substantially upon the continued service of its executive officers and key personnel. Comerica's future operating results also depend in significant part upon its ability to attract and retain qualified management, financial, technical, marketing, sales and support personnel. Competition for qualified personnel is intense, and Comerica cannot ensure success in attracting or retaining qualified personnel. There may be only a limited number of persons with the requisite skills to serve in these positions, and it may be increasingly difficult for Comerica to hire personnel over time.

Further, Comerica's ability to retain key officers and employees may be impacted by legislation and regulation affecting the financial services industry. In 2016, the FRB, OCC and several other federal financial regulators revised and re-proposed rules to implement Section 956 of the Dodd-Frank Act. Section 956 directed regulators to jointly prescribe regulations or guidelines prohibiting incentive-based payment arrangements, or any feature of any such arrangement, at covered financial institutions that encourage inappropriate risks by providing excessive compensation or that could lead to a material financial loss. Consistent with the Dodd-Frank Act, the proposed rule would impose heightened standards for institutions with \$50 billion or more in total consolidated assets, which includes Comerica. For these larger institutions, the proposed rule would require the deferral of at least 40 percent of incentive-based payments for designated executives and significant risk-takers who individually have the ability to expose the institution to possible losses that are substantial in relation to the institution's size, capital or overall risk tolerance. Moreover, incentive-based compensation of these individuals would be subject to potential clawback for seven years following vesting. Further, the rule imposes enhanced risk management controls and governance and internal policy and procedure requirements with respect to incentive compensation. Accordingly, Comerica may be at a disadvantage to offer competitive compensation compared to other financial institutions (as referenced above) or companies in other industries, which may not be subject to the same requirements.

Comerica's business, financial condition or results of operations could be materially adversely affected by the loss of any of its key employees, or Comerica's inability to attract and retain skilled employees.

Any future strategic acquisitions or divestitures may present certain risks to Comerica's business and operations.

Difficulties in capitalizing on the opportunities presented by a future acquisition may prevent Comerica from fully achieving the expected benefits from the acquisition, or may cause the achievement of such expectations to take longer to realize than expected.

Further, the assimilation of any acquired entity's customers and markets could result in higher than expected deposit attrition, loss of key employees, disruption of Comerica's businesses or the businesses of the acquired entity or otherwise adversely affect Comerica's ability to maintain relationships with customers and employees or achieve the anticipated benefits of the acquisition. These matters could have an adverse effect on Comerica for an undetermined period. Comerica would be subject to similar risks and difficulties in connection with any future decisions to downsize, sell or close units or otherwise change the business mix of Comerica.

GENERAL RISK

General political, economic or industry conditions, either domestically or internationally, may be less favorable than expected.

Local, domestic, and international events including economic, financial market, political and industry specific conditions affect the financial services industry, directly and indirectly. The economic environment and market conditions in which Comerica operates continue to be uncertain. While many U.S. economic indicators at the end of 2019 were positive and consistent with an ongoing economic expansion, activity in the U.S. manufacturing sector slowed and trade policy and weak global demand remained major sources of uncertainty for businesses and markets. Conditions related to inflation, recession, unemployment, volatile interest rates, international conflicts, changes in trade policies and other factors, such as real estate values, energy prices, state and local municipal budget deficits, government spending and the U.S. national debt, outside of our control may, directly and indirectly, adversely affect Comerica.

Methods of reducing risk exposures might not be effective.

Instruments, systems and strategies used to hedge or otherwise manage exposure to various types of credit, market, liquidity, technology, operational, compliance, financial reporting and strategic risks could be less effective than anticipated. As a result, Comerica may not be able to effectively mitigate its risk exposures in particular market environments or against particular types of risk, which could have a material adverse impact on Comerica's business, financial condition or results of operations.

For more information regarding risk management, please see "Risk Management" on pages F-20 through F-33 of the Financial Section of this report.

Catastrophic events may adversely affect the general economy, financial and capital markets, specific industries, and Comerica.

Acts of terrorism, cyber-terrorism, political unrest, war, civil disturbance, armed regional and international hostilities and international responses to these hostilities, natural disasters (including tornadoes, hurricanes, earthquakes, fires, droughts and floods), global health risks or pandemics, or the threat of or perceived potential for these events could have a negative impact on us. Comerica's business continuity and disaster recovery plans may not be successful upon the occurrence of one of these scenarios, and a significant catastrophic event anywhere in the world could materially adversely affect Comerica's operating results.

In particular, certain of the regions where Comerica operates, including California, Texas, and Florida, are known for being vulnerable to natural disasters, the nature and severity of which may be impacted by climate change. These types of natural catastrophic events have at times disrupted the local economies, Comerica's business and customers, and have caused physical damage to Comerica's property in these regions.

Further, catastrophic events may have an impact on Comerica's customers and in turn, on Comerica.

In addition, these events have had and may continue to have an adverse impact on the U.S. and world economy in general and consumer confidence and spending in particular, which could harm Comerica's operations. Any of these events could increase volatility in the U.S. and world financial markets, which could harm Comerica's stock price and may limit the capital resources available to Comerica and its customers. This could have a material adverse impact on Comerica's operating results, revenues and costs and may result in increased volatility in the market price of Comerica's common stock.

Comerica's stock price can be volatile.

Stock price volatility may make it more difficult for shareholders to resell their common stock when they want and at prices they find attractive. Comerica's stock price can fluctuate significantly in response to a variety of factors including, among other things:

- Actual or anticipated variations in quarterly results of operations.
- Recommendations or projections by securities analysts.
- Operating and stock price performance of other companies that investors deem comparable to Comerica.
- News reports relating to trends, concerns and other issues in the financial services industry.
- Perceptions in the marketplace regarding Comerica and/or its competitors.
- New technology used, or services offered, by competitors.
- Significant acquisitions or business combinations, strategic partnerships, joint ventures or capital commitments by or involving Comerica or its competitors.
- Changes in dividends and capital returns.
- Changes in government regulations.

- · Cyclical fluctuations.
- Geopolitical conditions such as acts or threats of terrorism or military conflicts.
- Activity by short sellers and changing government restrictions on such activity.

General market fluctuations, including real or anticipated changes in the strength of the economy; industry factors and general economic and political conditions and events, such as economic slowdowns or recessions; interest rate changes, oil price volatility or credit loss trends, among other factors, could also cause Comerica's stock price to decrease regardless of operating results.

For the above and other reasons, the market price of Comerica's securities may not accurately reflect the underlying value of the securities, and investors should consider this before relying on the market prices of Comerica's securities when making an investment decision.

Item 1B. Unresolved Staff Comments.

None

Item 2. Properties.

The executive offices of Comerica are located in the Comerica Bank Tower, 1717 Main Street, Dallas, Texas 75201. Comerica Bank occupies six floors of the building, plus additional space on the building's lower level. Comerica does not own the Comerica Bank Tower space, but has naming rights to the building and leases the space from an unaffiliated third party. The lease for such space used by Comerica and its subsidiaries extends through September 2028. Comerica's Michigan headquarters are located in a 10-story building in the central business district of Detroit, Michigan at 411 W. Lafayette, Detroit, Michigan 48226. Such building is owned by Comerica Bank. As of December 31, 2019, Comerica, through its banking affiliates, operated at a total of 550 locations. This includes banking centers, trust services locations, and/or loan production or other financial services offices, primarily in the States of Texas, Michigan, California, Florida and Arizona. Of the 550 locations, 221 were owned and 329 were leased. As of December 31, 2019, affiliates also operated from leased spaces in Denver, Colorado; Wilmington, Delaware; Oakbrook Terrace, Illinois; Boston, Massachusetts; Minneapolis, Minnesota; Morristown, New Jersey; New York, New York; Memphis, Tennessee; McLean, Virginia; Bellevue, Washington; Monterrey, Mexico; Toronto, Ontario, Canada and Windsor, Ontario, Canada. Comerica and its subsidiaries own, among other properties, a check processing center in Livonia, Michigan, and three buildings in Auburn Hills, Michigan, used mainly for lending functions and operations.

Item 3. Legal Proceedings.

Please see Note 21 of the Notes to Consolidated Financial Statements located on pages F-92 through F-93 of the Financial Section of this report.

Item 4. Mine Safety Disclosures.

Not applicable.

PART II

Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities.

Market Information, Holders of Common Stock and Dividends

The common stock of Comerica Incorporated is traded on the New York Stock Exchange (NYSE Trading Symbol: CMA). At February 7, 2020, there were approximately 8,695 record holders of Comerica's common stock.

On January 28, 2020, Comerica's Board of Directors approved a dividend of \$0.68 per common share payable on April 1, 2020 to shareholders of record on March 13, 2020, an increase of \$0.01 over the prior dividend. Subject to approval of the Board of Directors and applicable regulatory requirements, Comerica expects to continue its policy of paying regular cash dividends on a quarterly basis. A discussion of dividend restrictions applicable to Comerica is set forth in Note 20 of the Notes to Consolidated Financial Statements located on pages F-90 through F-92 of the Financial Section of this report, in the "Capital" section on pages F-17 through F-19 of the Financial Section of this report and in the "Supervision and Regulation" section of this report.

Performance Graph

Our performance graph is available under the caption "Performance Graph" on page F-2 of the Financial Section of this report.

Purchases of Equity Securities by the Issuer and Affiliated Purchasers

Authorizations to repurchase up to an additional 15 million shares and 7 million shares of Comerica Incorporated outstanding common stock were announced by the Board on January 22, 2019 and November 5, 2019, respectively. As of December 31, 2019, a total of 87.2 million shares have been authorized for repurchase under the share repurchase program since its inception in 2010. There is no expiration date for Comerica's share repurchase program.

The following table summarizes Comerica's share repurchase activity for the year ended December 31, 2019.

(shares in thousands)	Total Number of Shares Purchased as Part of Publicly Announced Repurchase Plans or Programs	Remaining Repurchase Authorization (a)	Total Number of Shares Purchased (b)	Average Price Paid Per Share
Total first quarter 2019	5,094	14,613 (c)	5,216	\$ 83.48
Total second quarter 2019	5,656	8,957	5,658	75.13
Total third quarter 2019	5,734	3,223	5,739	64.53
October 2019	_	3,223	3	65.47
November 2019	901	9,322 (d)	903	69.90
December 2019	1,225	8,097	1,231	70.84
Total fourth quarter 2019	2,126	8,097	2,137	70.44
Total 2019	18,610	8,097	18,750	\$ 73.67

⁽a) Maximum number of shares that may yet be purchased under the publicly announced plans or programs.

Item 6. Selected Financial Data.

Reference is made to the caption "Selected Financial Data" on page F-3 of the Financial Section of this report.

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations.

Reference is made to the sections entitled "2019 Overview and 2020 Outlook," "Results of Operations," "Strategic Lines of Business," "Balance Sheet and Capital Funds Analysis," "Risk Management," "Critical Accounting Policies," "Supplemental Financial Data" and "Forward-Looking Statements" on pages F-4 through F-39 of the Financial Section of this report.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk.

Reference is made to the subheadings entitled "Market and Liquidity Risk," "Operational Risk," "Technology Risk," "Compliance Risk" and "Strategic Risk" on pages F-28 through F-33 of the Financial Section of this report.

⁽b) Includes approximately 140,000 shares (including 11,000 shares in the quarter ended December 31, 2019) purchased pursuant to deferred compensation plans and shares purchased from employees to pay for taxes related to restricted stock vesting under the terms of an employee share-based compensation plan during the year ended December 31, 2019. These transactions are not considered part of the Corporation's repurchase program.

⁽c) Includes January 2019 equity repurchase authorization for an additional 15 million shares.

⁽d) Includes November 2019 equity repurchase authorization for an additional 7 million shares.

Item 8. Financial Statements and Supplementary Data.

Reference is made to the sections entitled "Consolidated Balance Sheets," "Consolidated Statements of Income," "Consolidated Statements of Comprehensive Income," "Consolidated Statements of Changes in Shareholders' Equity," "Consolidated Statements of Cash Flows," "Notes to Consolidated Financial Statements," "Report of Management," "Reports of Independent Registered Public Accounting Firm," and "Historical Review" on pages F-40 through F-109 of the Financial Section of this report.

Item 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure.

None

Item 9A. Controls and Procedures.

Disclosure Controls and Procedures

As required by Rule 13a-15(b) of the Exchange Act, management, including the Chief Executive Officer and Interim Chief Financial Officer, conducted an evaluation as of the end of the period covered by this Annual Report on Form 10-K, of the effectiveness of our disclosure controls and procedures as defined in Exchange Act Rule 13a-15(e). Based on that evaluation, the Chief Executive Officer and Interim Chief Financial Officer concluded that Comerica's disclosure controls and procedures were effective as of the end of the period covered by this Annual Report on Form 10-K.

Internal Control over Financial Reporting

Management's annual report on internal control over financial reporting and the related attestation report of Comerica's registered public accounting firm are included on pages F-103 and F-104 in the Financial Section of this report.

As required by Rule 13a-15(d) of the Exchange Act, management, including the Chief Executive Officer and Interim Chief Financial Officer, conducted an evaluation of our internal control over financial reporting to determine whether any changes occurred during the last quarter of the fiscal year covered by this Annual Report on Form 10-K that have materially affected, or are reasonably likely to materially affect, Comerica's internal control over financial reporting. Based on that evaluation, the Chief Executive Officer and Interim Chief Financial Officer concluded that there has been no such change during the last quarter of the fiscal year covered by this Annual Report on Form 10-K that has materially affected, or is reasonably likely to materially affect, Comerica's internal control over financial reporting.

Item 9B. Other Information.

None.

PART III

Item 10. Directors, Executive Officers and Corporate Governance.

Comerica has a Senior Financial Officer Code of Ethics that applies to the Chief Executive Officer, the Chief Financial Officer, the Chief Accounting Officer and the Treasurer. The Senior Financial Officer Code of Ethics is available on Comerica's website at *www.comerica.com*. If any substantive amendments are made to the Senior Financial Officer Code of Ethics or if Comerica grants any waiver, including any implicit waiver, from a provision of the Senior Financial Officer Code of Ethics to the Chief Executive Officer, the Chief Financial Officer, the Chief Accounting Officer or the Treasurer, we will disclose the nature of such amendment or waiver on our website.

The remainder of the response to this item will be included under the sections captioned "Information About Nominees," "Committees and Meetings of Directors," and "Executive Officers" of Comerica's definitive Proxy Statement relating to the Annual Meeting of Shareholders to be held on April 28, 2020, which sections are hereby incorporated by reference.

Item 11. Executive Compensation.

The response to this item will be included under the sections captioned "Compensation Committee Interlocks and Insider Participation," "Compensation Discussion and Analysis," "Compensation of Directors," "Governance, Compensation and Nominating Committee Report," "2019 Summary Compensation Table," "2019 Grants of Plan-Based Awards," "Outstanding Equity Awards at Fiscal Year-End 2019," "2019 Option Exercises and Stock Vested," "Pension Benefits at Fiscal Year-End 2019," "2019 Nonqualified Deferred Compensation," "Potential Payments upon Termination or Change of Control at Fiscal Year-End 2019" and "Pay Ratio Disclosure" of Comerica's definitive Proxy Statement relating to the Annual Meeting of Shareholders to be held on April 28, 2020, which sections are hereby incorporated by reference.

Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.

The response to this item will be included under the sections captioned "Security Ownership of Certain Beneficial Owners," "Security Ownership of Management" and "Securities Authorized for Issuance Under Equity Compensation Plans" of

Comerica's definitive Proxy Statement relating to the Annual Meeting of Shareholders to be held on April 28, 2020, which sections are hereby incorporated by reference.

Item 13. Certain Relationships and Related Transactions, and Director Independence.

The response to this item will be included under the sections captioned "Director Independence," "Transactions with Related Persons," and "Information about Nominees" of Comerica's definitive Proxy Statement relating to the Annual Meeting of Shareholders to be held on April 28, 2020, which sections are hereby incorporated by reference.

Item 14. Principal Accountant Fees and Services.

The response to this item will be included under the section captioned "Independent Registered Public Accounting Firm" of Comerica's definitive Proxy Statement relating to the Annual Meeting of Shareholders to be held on April 28, 2020, which section is hereby incorporated by reference.

PART IV

Item 15. Exhibits and Financial Statement Schedules

The following documents are filed as a part of this report:

- 1. Financial Statements: The financial statements that are filed as part of this report are included in the Financial Section on pages F-40 through F-106.
- 2. All of the schedules for which provision is made in the applicable accounting regulations of the SEC are either not required under the related instruction, the required information is contained elsewhere in the Form 10-K, or the schedules are inapplicable and therefore have been omitted.
- 3. Exhibits:
- 2 (not applicable)
- 3.1 Restated Certificate of Incorporation of Comerica Incorporated (filed as Exhibit 3.2 to Registrant's Current Report on Form 8-K dated August 4, 2010, and incorporated herein by reference).
- 3.2 Certificate of Amendment to Restated Certificate of Incorporation of Comerica Incorporated (filed as Exhibit 3.2 to Registrant's Quarterly Report on Form 10-Q for the quarter ended March 31, 2011, and incorporated herein by reference).
- 3.3 Amended and Restated Bylaws of Comerica Incorporated (filed as Exhibit 3.3 to Registrant's Quarterly Report on Form 10-Q for the quarter ended March 31, 2011, and incorporated herein by reference).
- 4.1 [Reference is made to Exhibits 3.1, 3.2 and 3.3 in respect of instruments defining the rights of security holders. In accordance with Regulation S-K Item No. 601(b)(4)(iii), the Registrant is not filing copies of instruments defining the rights of holders of long-term debt because none of those instruments authorizes debt in excess of 10% of the total assets of the Registrant and its subsidiaries on a consolidated basis. The Registrant hereby agrees to furnish a copy of any such instrument to the SEC upon request.]
- 4.2 <u>Description of Registrant's Securities</u>
- 9 (not applicable)
- 10.1† Comerica Incorporated 2018 Long-Term Incentive Plan (filed as Exhibit 10.1 to Registrant's Current Report on Form 8-K dated April 24, 2018, and incorporated herein by reference).
 - A† Form of Standard Comerica Incorporated Restricted Stock Unit Agreement (cliff vesting) under the Comerica Incorporated 2018 Long-Term Incentive Plan (filed as Exhibit 10.2 to Registrant's Current Report on Form 8-K dated April 24, 2018, and incorporated herein by reference).
 - B† Form of Standard Comerica Incorporated Restricted Stock Unit Agreement (non-cliff vesting) under the Comerica Incorporated 2018 Long-Term Incentive Plan (filed as Exhibit 10.3 to Registrant's Current Report on Form 8-K dated April 24, 2018, and incorporated herein by reference).
 - C† Form of Standard Comerica Incorporated Non-Qualified Stock Option Agreement under the Comerica Incorporated 2018 Long-Term Incentive Plan (filed as Exhibit 10.4 to Registrant's Current Report on Form 8-K dated April 24, 2018, and incorporated herein by reference).
 - D† Form of Standard Comerica Incorporated Senior Executive Long-Term Performance Restricted Stock Unit Award Agreement under the Comerica Incorporated 2018 Long-Term Incentive Plan (filed as Exhibit 10.5 to Registrant's Current Report on Form 8-K dated April 24, 2018, and incorporated herein by reference).
 - E† Form of Standard Comerica Incorporated Restricted Stock Agreement (cliff vesting) under the Comerica Incorporated 2018 Long-Term Incentive Plan (filed as Exhibit 10.6 to Registrant's Current Report on Form 8-K dated April 24, 2018, and incorporated herein by reference).
 - F† Form of Standard Comerica Incorporated Restricted Stock Agreement (non-cliff vesting) under the Comerica Incorporated 2018 Long-Term Incentive Plan (filed as Exhibit 10.7 to Registrant's Current Report on Form 8-K dated April 24, 2018, and incorporated herein by reference).
 - G† Form of Standard Comerica Incorporated Senior Executive Long-Term Performance Restricted Stock Unit Award Agreement under the Comerica Incorporated 2018 Long-Term Incentive Plan (2019 version) (filed as Exhibit 10.1G to Registrant's Annual Report on Form 10-K for the year ended December 31, 2018).

- 10.2† Comerica Incorporated 2006 Amended and Restated Long-Term Incentive Plan (filed as Exhibit 10.1 to Registrant's Annual Report on Form 10-K for the year ended December 31, 2016, and incorporated herein by reference).
 - A† Form of Standard Comerica Incorporated Non-Qualified Stock Option Agreement under the Comerica Incorporated Amended and Restated 2006 Long-Term Incentive Plan (filed as Exhibit 10.7 to Registrant's Annual Report on Form 10-K for the year ended December 31, 2006, and incorporated herein by reference).
 - B† Form of Standard Comerica Incorporated Non-Qualified Stock Option Agreement under the Comerica Incorporated Amended and Restated 2006 Long-Term Incentive Plan (2011 version) (filed as Exhibit 10.44 to Registrant's Annual Report on Form 10-K for the year ended December 31, 2010, and incorporated herein by reference).
 - C† Form of Standard Comerica Incorporated Non-Qualified Stock Option Agreement under the Comerica Incorporated Amended and Restated 2006 Long-Term Incentive Plan (2012 version) (filed as Exhibit 10.1C to Registrant's Annual Report on Form 10-K for the year ended December 31, 2011, and incorporated herein by reference).
 - D† Form of Standard Comerica Incorporated Non-Qualified Stock Option Agreement under the Comerica Incorporated Amended and Restated 2006 Long-Term Incentive Plan (2014 version) (filed as Exhibit 10.1 to Registrant's Current Report on Form 8-K dated January 21, 2014, and incorporated herein by reference).
 - E† Form of Standard Comerica Incorporated Non-Qualified Stock Option Agreement under the Comerica Incorporated Amended and Restated 2006 Long-Term Incentive Plan (2014 version 2) (filed as Exhibit 10.1 to Registrant's Current Report on Form 8-K dated July 22, 2014, and incorporated herein by reference).
 - F† Form of Standard Comerica Incorporated Non-Qualified Stock Option Agreement under the Comerica Incorporated Amended and Restated 2006 Long-Term Incentive Plan (2015 version) (filed as Exhibit 10.2 to Registrant's Current Report on Form 8-K dated November 10, 2015, and incorporated herein by reference).
 - G† Form of Standard Comerica Incorporated Non-Qualified Stock Option Agreement under the Comerica Incorporated Amended and Restated 2006 Long-Term Incentive Plan (2017 version) (filed as Exhibit 10.1G to Registrant's Annual Report on Form 10-K for the year ended December 31, 2016, and incorporated herein by reference).
 - H† Form of Standard Comerica Incorporated Restricted Stock Award Agreement (non-cliff vesting) under the Amended and Restated Comerica Incorporated 2006 Long-Term Incentive Plan (2014 version 2) (filed as Exhibit 10.2 to Registrant's Current Report on Form 8-K dated July 22, 2014, and incorporated herein by reference).
 - I† Form of Standard Comerica Incorporated Restricted Stock Award Agreement (non-cliff vesting) under the Amended and Restated Comerica Incorporated 2006 Long-Term Incentive Plan (2017 version) (filed as Exhibit 10.1M to Registrant's Annual Report on Form 10-K for the year ended December 31, 2016, and incorporated herein by reference).
 - J† Form of Standard Comerica Incorporated Restricted Stock Award Agreement (cliff vesting) under the Comerica Incorporated 2006 Amended and Restated Long-Term Incentive Plan (2017 version) (filed as Exhibit 10.1Q to Registrant's Annual Report on Form 10-K for the year ended December 31, 2016, and incorporated herein by reference).
 - K† Form of Standard Comerica Incorporated Restricted Stock Unit Agreement under the Amended and Restated Comerica Incorporated 2006

 Long-Term Incentive Plan (2011 version) (filed as Exhibit 10.47 to Registrant's Annual Report on Form 10-K for the year ended December 31, 2010, and incorporated herein by reference).
 - L† Form of Standard Comerica Incorporated Restricted Stock Unit Award Agreement under the Amended and Restated Comerica Incorporated 2006 Long-Term Incentive Plan (2018 version non-cliff vesting) (filed as Exhibit 10.2 to Registrant's Current Report on Form 8-K dated November 8, 2017, and incorporated herein by reference).
 - M† Form of Standard Comerica Incorporated Restricted Stock Unit Award Agreement under the Amended and Restated Comerica Incorporated 2006 Long-Term Incentive Plan (2018 version cliff vesting) (filed as Exhibit 10.3 to Registrant's Current Report on Form 8-K dated November 8, 2017, and incorporated herein by reference).
 - N† Form of Standard Comerica Incorporated Senior Executive Long-Term Performance Restricted Stock Unit Award Agreement under the Amended and Restated Comerica Incorporated 2006 Long-Term Incentive Plan (2017 version) (filed as Exhibit 10.1 to Registrant's Quarterly Report on Form 10-Q for the quarter ended March 31, 2017, and incorporated herein by reference).
 - O† Form of Standard Comerica Incorporated Senior Executive Long-Term Performance Restricted Stock Unit Award Agreement under the Amended and Restated Comerica Incorporated 2006 Long-Term Incentive Plan (2018 version) (filed as Exhibit 10.1Y to Registrant's Annual Report on Form 10-K for the year ended December 31, 2017, and incorporated herein by reference).
- Amended and Restated Sterling Bancshares, Inc. 2003 Stock Incentive and Compensation Plan effective April 30, 2007 (filed as Exhibit 10.1 to Sterling Bancshares, Inc.'s Current Report on Form 8-K dated August 14, 2007 (File No. 000-20750), and incorporated herein by reference).

- 10.4† Comerica Incorporated Amended and Restated Employee Stock Purchase Plan (amended and restated October 22, 2013) (filed as Exhibit 10.5 to Registrant's Annual Report on Form 10-K for the year ended December 31, 2013, and incorporated herein by reference).
- 10.5† Comerica Incorporated 2016 Management Incentive Plan (filed as Exhibit 10.1 to Registrant's Current Report on Form 8-K dated May 2, 2016, and incorporated herein by reference).
- Form of Standard Comerica Incorporated No Sale Agreement under the Comerica Incorporated Amended and Restated Management Incentive Plan (filed as Exhibit 10.5 to Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 2004, and incorporated herein by reference).
- 10.7† Supplemental Retirement Income Account Plan (formerly known as the Amended and Restated Benefit Equalization Plan for Employees of Comerica Incorporated) (amended and restated October 13, 2016, with amendments effective January 1, 2017) (filed as Exhibit 10.1 to Registrant's Current Report on Form 8-K dated January 24, 2017, and incorporated herein by reference).
- 10.8† 1999 Comerica Incorporated Amended and Restated Deferred Compensation Plan (amended and restated on July 26, 2011) (filed as Exhibit 10.1 to Registrant's Current Report on Form 8-K dated July 26, 2011, and incorporated herein by reference).
- 10.9† 1999 Comerica Incorporated Amended and Restated Common Stock Deferred Incentive Award Plan (amended and restated on July 26, 2011) (filed as Exhibit 10.2 to Registrant's Current Report on Form 8-K dated July 26, 2011, and incorporated herein by reference).
- 10.10† <u>Sterling Bancshares, Inc. Deferred Compensation Plan (as Amended and Restated) (filed as Exhibit 4.4 to Registration Statement on Form S-8 dated July 28, 2011 (Registration No. 333-175857) and incorporated herein by reference).</u>
- 10.11† Amended and Restated Comerica Incorporated Non-Employee Director Fee Deferral Plan (amended and restated on January 27, 2015) (filed as Exhibit 10.13 to Registrant's Annual Report on Form 10-K for the year ended December 31, 2014, and incorporated herein by reference).
- 10.12† Amended and Restated Comerica Incorporated Common Stock Non-Employee Director Fee Deferral Plan (amended and restated on January 27, 2015) (filed as Exhibit 10.14 to Registrant's Annual Report on Form 10-K for the year ended December 31, 2014, and incorporated herein by reference).
- 10.13† Comerica Incorporated Amended and Restated Incentive Plan for Non-Employee Directors (amended and restated effective May 15, 2014) (filed as Exhibit 10.3 to Registrant's Quarterly Report on Form 10-Q for the quarter ended March 31, 2015, and incorporated herein by reference).
 - A† Form of Standard Comerica Incorporated Non-Employee Director Restricted Stock Unit Agreement under the Comerica Incorporated Amended and Restated Incentive Plan for Non-Employee Directors (filed as Exhibit 10.2 to Registrant's Quarterly Report on Form 10-Q for the quarter ended June 30, 2005, and incorporated herein by reference).
 - B† Form of Standard Comerica Incorporated Non-Employee Director Restricted Stock Unit Agreement under the Comerica Incorporated Amended and Restated Incentive Plan for Non-Employee Directors (Version 2) (filed as Exhibit 10.6 to Registrant's Quarterly Report on Form 10-Q for the quarter ended June 30, 2006, and incorporated herein by reference).
 - C† Form of Standard Comerica Incorporated Non-Employee Director Restricted Stock Unit Agreement under the Comerica Incorporated Amended and Restated Incentive Plan for Non-Employee Directors (Version 2.5) (filed as Exhibit 10.48 to Registrant's Annual Report on Form 10-K for the year ended December 31, 2010, and incorporated herein by reference).
 - D† Form of Standard Comerica Incorporated Non-Employee Director Restricted Stock Unit Agreement under the Comerica Incorporated Amended and Restated Incentive Plan for Non-Employee Directors (Version 3) (filed as Exhibit 10.1 to Registrant's Quarterly Report on Form 10-Q for the quarter ended June 30, 2009, and incorporated herein by reference).
 - E† Form of Standard Comerica Incorporated Non-Employee Director Restricted Stock Unit Agreement under the Comerica Incorporated Amended and Restated Incentive Plan for Non-Employee Directors (Version 4) (filed as Exhibit 10.4 to Registrant's Quarterly Report on Form 10-O for the quarter ended June 30, 2011, and incorporated herein by reference).
- 10.14[†] 2015 Comerica Incorporated Incentive Plan for Non-Employee Directors (filed as Exhibit 10.4 to Registrant's Quarterly Report on Form 10-Q for the quarter ended March 31, 2015, and incorporated herein by reference).
 - A† Form of Standard Comerica Incorporated Non-Employee Director Restricted Stock Unit Agreement under the 2015 Comerica Incorporated Incentive Plan for Non-Employee Directors (filed as Exhibit 10.1 to Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 2015, and incorporated herein by reference).

10.15†		Form of Indemnification Agreement between Comerica Incorporated and certain of its directors and officers (filed as Exhibit 10.6 to Registrant's Annual Report on Form 10-K for the year ended December 31, 2002, and incorporated herein by reference).
10.16†		Supplemental Pension and Retiree Medical Agreement with Ralph W. Babb Jr. (filed as Exhibit 10.2 to Registrant's Quarterly Report on Form 10-Q for the quarter ended June 30, 1998, and incorporated herein by reference).
10.17A†		Restrictive Covenants and General Release Agreement by and between David E. Duprey and Comerica Incorporated dated February 5, 2018 (filed as Exhibit 10.1 to Registrant's Current Report on Form 8-K dated February 8, 2018, and incorporated herein by reference).
10.17B†		Restrictive Covenants and General Release Agreement by and between Michael H. Michael H. Michael And Comerica Incorporated dated January 8, 2019 (filed as Exhibit 10.1 to Registrant's Current Report on Form 8-K dated January 11, 2019, and incorporated herein by reference).
10.17C†		Restrictive Covenants and General Release Agreement by and between Muneera S. Carr and Comerica Incorporated dated September 30, 2019 (filed as Exhibit 10.1 to Registrant's Current Report on Form 8-K dated September 30, 2019, and incorporated herein by reference).
10.17D†		Restrictive Covenants and General Release Agreement by and between Ralph W. Babb, Jr. and Comerica Incorporated dated December 17, 2019 (filed as Exhibit 10.1 to Registrant's Current Report on Form 8-K dated December 17, 2019, and incorporated herein by reference).
10.18†		Form of Change of Control Employment Agreement (BE4 and Higher Version without gross-up or window period-current) (filed as Exhibit 10.10 to Registrant's Quarterly Report on Form 10-Q for the quarter ended March 31, 2018, and incorporated herein by reference).
	A†	Schedule of Named Executive Officers Party to Change of Control Employment Agreement (BE4 and Higher Version without gross-up or window period-current).
10.19†		Form of Change of Control Employment Agreement (BE4 and Higher Version without gross-up or window period-2015 version) (filed as Exhibit 10.2 to Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 2015, and incorporated herein by reference).
	A†	Schedule of Named Executive Officers Party to Change of Control Employment Agreement (BE4 and Higher Version without gross-up or window period-2015 version).
10.20†		Form of Change of Control Employment Agreement (BE4 and Higher Version) (filed as Exhibit 10.1 to Registrant's Current Report on Form 8-K dated November 18, 2008, and incorporated herein by reference).
	A†	Schedule of Named Executive Officers Party to Change of Control Employment Agreement (BE4 and Higher Version).
10.21†		Form of Change of Control Employment Agreement (BE4 and Higher Version without gross-up or window period-2009 version) (filed as Exhibit 10.42 to Registrant's Annual Report on Form 10-K for the year ended December 31, 2009, and incorporated herein by reference).
10.22†		Form of Change of Control Employment Agreement (BE2-BE3 Version).
13		(not applicable)
14		(not applicable)
16		(not applicable)
18		(not applicable)
21		Subsidiaries of Registrant.

23.1	Consent of Ernst & Young LLP.
24	(not applicable)
31.1	Chairman, President and CEO Rule 13a-14(a)/15d-14(a) Certification of Periodic Report (pursuant to Section 302 of the Sarbanes-Oxley Act of 2002).
31.2	Executive Vice President, Treasurer and Interim CFO Rule 13a-14(a)/15d-14(a) Certification of Periodic Report (pursuant to Section 302 of the Sarbanes-Oxley Act of 2002).
32	Section 1350 Certification of Periodic Report (pursuant to Section 906 of the Sarbanes-Oxley Act of 2002).
33	(not applicable)
34	(not applicable)
35	(not applicable)
95	(not applicable)
99	(not applicable)
101	Financial statements from the Registrant's Annual Report on Form 10-K for the year ended December 31, 2019, formatted in Inline XBRL: (i) the Consolidated Balance Sheets, (ii) the Consolidated Statements of Income, (iii) the Consolidated Statements of Changes in Shareholders' Equity, (iv) the Consolidated Statements of Cash Flows and (v) the Notes to Consolidated Financial Statements.
104	The cover page from the Registrant's Annual Report on Form 10-K for the year ended December 31, 2019, formatted in Inline XBRL (included in Exhibit 101).
†	Management contract or compensatory plan or arrangement.
	File No. for all filings under Exchange Act, unless otherwise noted: 1-10706.

Item 16. Form 10-K Summary

Not applicable.

Performance Graph

FINANCIAL REVIEW AND REPORTS

Comerica Incorporated and Subsidiaries

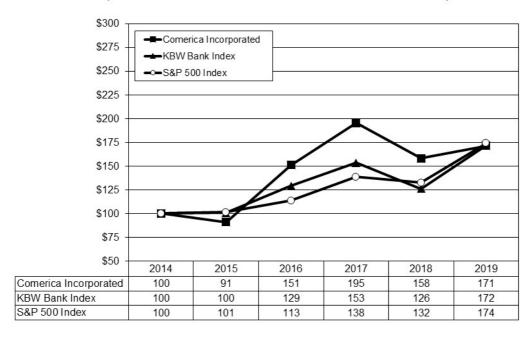
<u>F-2</u>

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PERFORMANCE GRAPH

The graph shown below compares the total returns (assuming reinvestment of dividends) of Comerica Incorporated common stock, the S&P 500 Index, and the KBW Bank Index. The graph assumes \$100 invested in Comerica Incorporated common stock (returns based on stock prices per the NYSE) and each of the indices on December 31, 2014 and the reinvestment of all dividends during the periods presented.

Comparison of Five Year Cumulative Total Return Among Comerica Incorporated, KBW Bank Index, and S&P 500 Index (Assumes \$100 Invested on 12/31/14 and Reinvestment of Dividends)



The performance shown on the graph is not necessarily indicative of future performance.

SELECTED FINANCIAL DATA

(dollar amounts in millions, except per share data)

2019 2018 2017 2016 2015
\$ 2,339 \$ 2,352
74 (1) 74 248 147
1,010 976 (a) 1,107 1,051 1,035
1,743 1,794 (a), (b) 1,860 (b) 1,930 (b) 1,827
334 300 491 (c) 193 229
1,198 1,235 743 477 521
1,191 1,227 738 473 515
\$ 7.87 \$ 7.20
2.68 1.84 1.09 0.89 0.83
51.57 46.89 46.07 44.47 43.03
47.07 42.89 42.34 40.79 39.33
71.75 68.69 86.81 68.11 41.83
151 171 178 177 181
\$ 73,402 \$ 70,818 \$ 71,567 \$ 72,978 \$ 71,877
67,767 65,513 65,880 67,518 66,687
50,369 50,163 49,173 49,088 49,084
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66,134 65,410 66,300 66,545 65,129
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204 229 410 590 379
11 1 5 17 12
215 230 415 607 391
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ge total loans 0.21% 0.11% 0.19% 0.32% 0.21%
od-end loans 1.27 1.34 1.45 1.49 1.29
rforming loans 3.1x 2.9x 1.7x 1.2x 1.7x
3.54% 3.58% 3.11% 2.71% 2.60%
1.68 1.75 1.04 0.67 0.74
16.39 15.82 9.34 6.22 6.91
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e of average assets 10.22 11.04 11.13 10.70 10.73
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10.13 11.14 11.68 11.09 10.54
9.98 10.60 11.13 10.68 ssets (d) 9.19 9.78 10.32 9.89 16: Revenue from Contracts with Customers" (Tonic 606) resulted in a change in presentation which records certain costs in

⁽a) Effective January 1, 2018, adoption of "Topic 606: Revenue from Contracts with Customers" (Topic 606) resulted in a change in presentation which records certain costs in the same category as the associated revenues. The effect of this change was to reduce noninterest income and expenses by \$145 million for the year ended December 31, 2018.

(b) Noninterest expenses included restructuring charges of \$53 million, \$45 million and \$93 million in 2018, 2017 and 2016, respectively.

(c) The provision for income taxes for 2017 was impacted by a \$107 million charge to adjust deferred taxes as a result of the enactment of the Tax Cuts and Jobs Act.

(d) See Supplemental Financial Data section for reconcilements of non-GAAP financial measures.

2019 OVERVIEW AND 2020 OUTLOOK

Comerica Incorporated (the Corporation) is a financial holding company headquartered in Dallas, Texas. The Corporation's major business segments are the Business Bank, the Retail Bank and Wealth Management. The core businesses are tailored to each of the Corporation's three primary geographic markets: Michigan, California and Texas. Information about the activities of the Corporation's business segments is provided in Note 22 to the consolidated financial statements.

As a financial institution, the Corporation's principal activity is lending to and accepting deposits from businesses and individuals. The primary source of revenue is net interest income, which is principally derived from the difference between interest earned on loans and investment securities and interest paid on deposits and other funding sources. The Corporation also provides other products and services that meet the financial needs of customers which generate noninterest income, the Corporation's secondary source of revenue. Growth in loans, deposits and noninterest income is affected by many factors, including economic conditions in the markets the Corporation serves, the financial requirements and economic health of customers, and the ability to add new customers and/or increase the number of products used by current customers. Success in providing products and services depends on the financial needs of customers and the types of products desired.

The accounting and reporting policies of the Corporation and its subsidiaries conform to generally accepted accounting principles (GAAP) in the United States (U.S.). The Corporation's consolidated financial statements are prepared based on the application of accounting policies, the most significant of which are described in Note 1 to the consolidated financial statements. The most critical of these significant accounting policies are discussed in the "Critical Accounting Policies" section of this financial review.

2019 Overview

Full-Year 2019 compared to Full-Year 2018

- Net income decreased \$37 million, or 3 percent, to \$1.2 billion. Net income per diluted common share was a record \$7.87 in 2019 compared to \$7.20 in 2018, an increase of 9 percent.
- Average loans increased \$1.7 billion, or 4 percent, to \$50.5 billion. The increase primarily reflected increases in Energy, Mortgage Banker Finance, National Dealer Services, general Middle Market and Commercial Real Estate.
- Average deposits decreased \$454 million to \$55.5 billion. Average noninterest-bearing deposits decreased \$2.6 billion, or 9 percent, driven by customers shifting balances to interest-bearing deposits and utilizing their deposits to fund growth, acquisitions and capital expenditures as well as choosing other investment options. Average interest-bearing deposits increased \$2.1 billion, or 8 percent, driven by increases of \$1.3 billion in relationship-based deposits and \$703 million in other time deposits.
- Net interest income decreased \$13 million to \$2.3 billion, and the net interest margin decreased 4 basis points to 3.54 percent. Both decreases were primarily driven by the impact of higher interest-bearing deposit and debt balances, partially offset by the benefit from higher loan balances and the net impact of higher short-term rates.
- The provision for credit losses increased \$75 million to \$74 million in 2019 from a benefit of \$1 million in 2018, primarily due to a decline in valuations of select liquidating Energy credits.
- Noninterest income increased \$34 million to \$1.0 billion, including growth in card fees, a decrease in losses related to securities repositioning and higher deferred compensation asset returns, partially offset by lower service charges on deposit accounts.
- Noninterest expenses decreased \$51 million to \$1.7 billion, primarily reflecting the end of restructuring charges related to the GEAR Up efficiency initiative and lower FDIC insurance expense, partially offset by increased technology-related expenses and outside processing fees.
- The provision for income taxes increased \$34 million to \$334 million, primarily due to a \$31 million decrease in discrete tax benefits.
- The Corporation repurchased approximately 18.6 million shares of common stock under the equity repurchase program and issued cash dividends of \$2.68 per share, a 46 percent increase. Altogether, \$1.8 billion was returned to shareholders, an increase of \$141 million.

Full-Year 2020 Outlook

For full-year 2020 compared to full-year 2019 results, management expects the following, assuming a continuation of the current economic and rate environment:

- Two percent to three percent growth in average loans, reflecting increases in most lines of business, partly offset by declines in Mortgage Banker Finance and National Dealer Services.
- One percent to two percent increase in average deposits, with a continued focus on attracting and retaining relationship-based deposits.
- Decrease in net interest income due to:
 - the net impact of lower interest rates, including a net reduction of \$10 million to \$15 million in the first quarter of 2020 compared to the fourth quarter of 2019; followed by a modest decrease in each of the remaining quarters of the year as longer-dated assets and liabilities reprice as well as continued hedging activity;
 - the full-year impact from 2019 funding actions and lower nonaccrual interest recoveries;
 - partially offset by the benefit from loan growth.
- Continued strong credit quality, with net credit-related charge-offs similar to 2019 levels (15 basis points to 25 basis points of average total loans).
- One percent growth in noninterest income, reflecting growth in card fees and fiduciary income, partially offset by lower derivative and warrant income, and assuming no returns on deferred compensation assets.
- Three percent increase in noninterest expenses, reflecting higher outside processing expenses in line with growing revenue, technology expenditures, typical inflationary pressures and higher pension expense.
- Income tax expense to be approximately 23 percent of pre-tax income.
- Common equity Tier 1 capital ratio target of approximately 10 percent.

RESULTS OF OPERATIONS

The following provides a comparative discussion of the Corporation's consolidated results of operations for 2019 compared to 2018. A comparative discussion of results for 2018 compared to 2017 is provided in the "Results of Operations" section beginning on page F-6 of the Corporation's 2018 Annual Report. For a discussion of the Critical Accounting Policies that affect the consolidated results of operations, see the "Critical Accounting Policies" section of this financial review.

Analysis of Net Interest Income

(dollar amounts in millions)

Years Ended December 31		2019			2018		2017			
	Average Balance	Interest	Average Rate	Average Balance	Interest	Average Rate	Average Balance	Interest	Average Rate	
Commercial loans	\$ 32,053	\$ 1,544	4.82%	\$ 30,534	\$ 1,416	4.64%	\$ 30,415	\$ 1,162	3.82%	
Real estate construction loans	3,325	184	5.54	3,155	164	5.21	2,958	124	4.18	
Commercial mortgage loans	9,170	447	4.88	9,131	429	4.69	9,005	358	3.97	
Lease financing	557	19	3.44	470	18	3.82	509	13	2.63	
International loans	1,019	52	5.13	1,021	51	4.97	1,157	47	4.07	
Residential mortgage loans	1,929	74	3.85	1,983	75	3.77	1,989	74	3.70	
Consumer loans	2,458	119	4.85	2,472	109	4.41	2,525	94	3.70	
Total loans (a)	50,511	2,439	4.83	48,766	2,262	4.64	48,558	1,872	3.85	
Mortgage-backed securities	9,348	230	2.44	9,099	214	2.28	9,330	202	2.17	
Other investment securities	2,772	67	2.43	2,711	51	1.86	2,877	48	1.66	
Total investment securities	12,120	297	2.44	11,810	265	2.19	12,207	250	2.05	
Interest-bearing deposits with banks	3,360	69	2.05	4,700	91	1.94	5,443	60	1.09	
Other short-term investments	143	2	1.26	134	1	0.96	92	_	0.64	
Total earning assets	66,134	2,807	4.24	65,410	2,619	3.99	66,300	2,182	3.29	
Cash and due from banks	887			1,135			1,209			
Allowance for loan losses	(667)			(695)			(728)			
Accrued income and other assets	5,134			4,874	_		4,671			
Total assets	\$ 71,488			\$ 70,724			\$ 71,452			
Money market and interest-bearing checking deposits	\$ 23,417	214	0.91	\$ 22,378	111	0.50	\$ 21,585	33	0.15	
Savings deposits	2,166	1	0.05	2,199	1	0.04	2,133	_	0.02	
Customer certificates of deposit	2,522	30	1.18	2,090	10	0.46	2,470	9	0.36	
Other time deposits	705	17	2.44	2	_	1.86	1	_	1.10	
Foreign office time deposits (b)	27	_	1.39	25	_	1.19	56	_	0.64	
Total interest-bearing deposits	28,837	262	0.91	26,694	122	0.46	26,245	42	0.16	
Short-term borrowings	369	9	2.39	62	1	1.93	277	3	1.14	
Medium- and long-term debt	6,955	197	2.82	5,842	144	2.47	4,969	76	1.51	
Total interest-bearing sources	36,161	468	1.29	32,598	267	0.82	31,491	121	0.38	
Noninterest-bearing deposits	26,644			29,241			31,013			
Accrued expenses and other liabilities	1,375			1,076			996			
Total shareholders' equity	7,308			7,809			7,952			
Total liabilities and shareholders' equity	\$ 71,488			\$ 70,724			\$ 71,452			
Net interest income/rate spread		\$ 2,339	2.95		\$ 2,352	3.17		\$ 2,061	2.91	
Impact of net noninterest-bearing sources of funds			0.59			0.41			0.20	
Net interest margin (as a percentage of average earning asse	ts)		3.54%			3.58%			3.11%	

 ⁽a) Nonaccrual loans are included in average balances reported and in the calculation of average rates.
 (b) Includes substantially all deposits by foreign depositors; deposits are primarily in excess of \$100,000.

Rate/Volume Analysis

(in millions)

Years Ended December 31	Increase (Decrease) Due to Rate	I (E	019/2018 Increase Decrease) Due to olume (a)	Net Increase (Decrease)	Increase Due to Rate	2018/2017 Increase (Decrease) Due to Volume (a)		Net Increase (Decrease)
Interest Income:								
Commercial loans	\$ 54	\$	74	\$ 128	\$ 248	\$ 6	\$	254
Real estate construction loans	11		9	20	30	10		40
Commercial mortgage loans	16		2	18	65	6		71
Lease financing	(2)		3	1	6	(1)		5
International loans	1		_	1	11	(7)		4
Residential mortgage loans	1		(2)	(1)	1	_		1
Consumer loans	11		(1)	10	17	(2)		15
Total loans	92		85	177	378	12		390
Mortgage-backed securities	15		1	16	12	_		12
Other investment securities	17		(1)	16	5	(2)		3
Total investment securities	32		_	32	17	(2)		15
Interest-bearing deposits with banks	5		(27)	(22)	46	(15)		31
Other short-term investments	_		1	1	1	_		1
Total interest income	129		59	188	442	(5)		437
Interest Expense:								
Money market and interest-bearing checking deposits	96		7	103	74	4		78
Savings deposits	_		_	_	1	_		1
Customer certificates of deposit	10		10	20	3	(2)		1
Other time deposits			17	17				
Total interest-bearing deposits	106		34	140	78	2		80
Short-term borrowings	_		8	8	2	(4)		(2)
Medium- and long-term debt	16		37	53	50	18		68
Total interest expense	122		79	201	130	16		146
Net interest income	\$ 7	\$	(20)	\$ (13)	\$ 312	\$ (21)	\$	291

(a) Rate/volume variances are allocated to variances due to volume.

Net interest income is the difference between interest earned on assets and interest paid on liabilities. Gains and losses related to risk management interest rate swaps that convert fixed rate debt to a floating rate and qualify as fair value hedges are included in interest expense on medium- and long-term debt. Additionally, the portion of gains and losses on risk management interest rate swaps that convert variable-rate loans to fixed rates through cash flow hedges that relate to the earnings effect of the hedged loans during the period are included in loan interest income. Refer to the Analysis of Net Interest Income and the Rate/Volume Analysis tables above for an analysis of net interest income for the years ended December 31, 2019, 2018 and 2017 and details of the components of the change in net interest income for 2019 compared to 2018 as well as 2018 compared to 2017.

Net interest income was \$2.3 billion, a decrease of \$13 million. The impact to net interest income from higher balances of interest-bearing sources of funds and lower balances with the Federal Reserve Bank (FRB) (included in interest-bearing deposits with banks) was mostly offset by higher loan balances and the net impact of higher short-term rates. Earning assets increased \$724 million, primarily reflecting increases of \$1.7 billion in loans and \$310 million in investment securities, partially offset by a \$1.3 billion decrease in interest-bearing deposits with banks. Interest-bearing sources increased \$3.6 billion, primarily reflecting a \$2.1 billion increase in interest-bearing deposits and a \$1.1 billion increase in medium- and long-term debt.

The net interest margin decreased 4 basis points to 3.54 percent, from 3.58 percent, primarily reflecting higher balances of interest-bearing sources of funds, mostly offset by a decrease in lower-yielding FRB deposit balances, higher loan balances and the net impact of higher short-term rates.

The Corporation utilizes various asset and liability management strategies to manage net interest income exposure to interest rate risk. Refer to the "Market and Liquidity Risk" section of this financial review for additional information regarding the Corporation's asset and liability management policies and the "Balance Sheet and Capital Funds Analysis" section for further discussion on changes in earning assets and interest-bearing liabilities.

Provision for Credit Losses

The provision for credit losses was \$74 million, compared to a benefit of \$1 million. The provision for credit losses includes both the provision for loan losses and the provision for credit losses on lending-related commitments.

The provision for loan losses is recorded to maintain the allowance for loan losses at the level deemed appropriate by the Corporation to cover probable credit losses inherent in the portfolio. The provision for loan losses was \$73 million, an increase of \$62 million compared to \$11 million, primarily driven by an increase in Energy reserves due to a decline in valuations of select liquidating Energy credits. Net loan charge-offs increased \$56 million to \$107 million, or 0.21 percent of average total loans, compared to \$51 million, or 0.11 percent. The increase was driven by an \$80 million increase in Energy net loan charge-offs, to \$86 million.

The provision for credit losses on lending-related commitments is recorded to maintain reserves at the level deemed appropriate by the Corporation to cover probable credit losses inherent in lending-related commitments. The provision for credit losses on lending-related commitments was a provision of \$1 million, an increase of \$13 million compared to a benefit of \$12 million. The benefit in 2018 primarily reflected a decrease in Energy commitments. There were no lending-related commitment charge-offs in 2019 and 2018.

For further discussion of the allowance for loan losses and the allowance for credit losses on lending-related commitments, including the methodology used in the determination of the allowances and an analysis of the changes in the allowances, refer to Note 1 to the consolidated financial statements and the "Credit Risk" section of this financial review.

Noninterest Income

(in millions)

Years Ended December 31		2019	2018	2017 (a)
Card fees	\$	257	\$ 244	\$ 333
Fiduciary income		206	206	198
Service charges on deposit accounts		203	211	227
Commercial lending fees		91	85	85
Foreign exchange income		44	47	45
Bank-owned life insurance		41	39	43
Letter of credit fees		38	40	45
Brokerage fees		28	27	23
Net securities losses		(7)	(19)	_
Other noninterest income (b)		109	96	108
Total noninterest income	S	1.010	\$ 976	\$ 1 107

⁽a) Card fees and fiduciary income in 2017 do not reflect the 2018 adoption of new accounting guidance for revenue from contracts with customers (Accounting Standards Codification Topic 606). Refer to page F-8 of the "Results of Operations" section in the Corporation's 2018 Annual Report for further information.

(b) The table below provides further details on certain categories included in other noninterest income.

Noninterest income increased \$34 million to \$1.0 billion, compared to \$976 million. The change in noninterest income included losses of \$8 million and \$20 million related to repositioning of the securities portfolio in 2019 and 2018, respectively, and an \$11 million increase in deferred compensation asset returns (offset in noninterest expenses). The remaining \$11 million increase was primarily due to increases in card fees, commercial lending fees and customer derivative income, partially offset by a decrease in service charges on deposit accounts.

Card fees consist primarily of interchange and other fee income earned on government prepaid card, commercial card, debit/Automated Teller Machine (ATM) card and merchant payment processing services. Card fees increased \$13 million, or 5 percent. The increase was primarily due to volume-driven increases in merchant payment processing services and government card programs.

Service charges on deposit accounts consist primarily of charges on retail and business accounts, including fees for treasury management services. Service charges on deposit accounts decreased \$8 million, or 3 percent. The decrease primarily reflected higher earnings credit allowances provided on commercial customer deposit balances due to the increase in short-term interest rates.

Commercial lending fees include the assessments on the unused portion of lines of credit (unused commitment fees), syndication agent fees and loan servicing fees. These fees increased \$6 million, or 7 percent, primarily reflecting an increase in syndication agent fees.

Other noninterest income increased \$13 million, or 13 percent, driven by increases of \$11 million in deferred compensation asset returns (offset in noninterest expenses) and \$6 million in customer derivative income as well as a \$6 million gain on the sale of the Corporation's Health Savings Account business as illustrated in the following table. These increases were partially offset

by decreases of \$5 million due to the wind down of a retirement savings program in 2018 and \$4 million in income from tax-credit investments (both included in all other noninterest income).

(in millions)

Years Ended December 31	2019			2018	2017
Customer derivative income	\$	32	\$	26	\$ 26
Investment banking fees		6		9	9
Securities trading income		9		8	8
Income from principal investing and warrants		7		4	6
Deferred compensation asset returns (a)		9		(2)	8
Net gain on sale of business (b)		6		_	_
All other noninterest income		40		51	51
Other noninterest income	\$	109	\$	96	\$ 108

⁽a) Compensation deferred by the Corporation's officers and directors is invested based on investment selections of the officers and directors. Income earned on these assets is reported in noninterest income and the offsetting change in deferred compensation plan liabilities is reported in salaries and benefits expense.

(b) Gain on sale of the Corporation's Health Savings Account business.

Noninterest Expenses

(in millions)

Years Ended December 31	2019	2018	2017 (a)
Salaries and benefits expense	\$ 1,020	\$ 1,009	\$ 961
Outside processing fee expense	264	255	366
Occupancy expense	154	152	154
Software expense	117	125	126
Equipment expense	50	48	45
Advertising expense	34	30	28
FDIC insurance expense	23	42	51
Restructuring charges	_	53	45
Other noninterest expenses	81	80	84
Total noninterest expenses	\$ 1,743	\$ 1.794	\$ 1.860

⁽a) Outside processing fee expense in 2017 does not reflect the 2018 adoption of new accounting guidance for revenue from contracts with customers (Accounting Standards Codification Topic 606). Refer to page F-8 of the "Results of Operations" section in the Corporation's 2018 Annual Report for further information.

Noninterest expenses decreased \$51 million to \$1.7 billion. Excluding \$53 million in restructuring charges completed in 2018, noninterest expenses increased \$2 million, primarily due to increases in salaries and benefits expense, outside processing fees, advertising expense and smaller increases in various other categories, mostly offset by decreases in FDIC insurance expense, pension expense and software expense.

Salaries and benefits expense increased \$11 million, or 1 percent. The increase in salaries and benefits expense was driven by higher technology-related labor costs, deferred compensation expense (offset in noninterest income) and merit increases, partially offset by lower incentive compensation tied to financial performance.

Outside processing fee expense increased \$9 million, or 3 percent, compared to \$255 million in 2018, primarily due to volume-driven increases in merchant payment and government card processing expenses tied to card fee revenues, increased hosting expenses associated with migrating to cloud-based platforms and a \$4 million vendor transition fee incurred in 2019, partially offset by a \$7 million reduction in processing expenses related to the end of a retirement savings program in 2018.

Software expense decreased \$8 million, or 6 percent, primarily reflecting a decrease in software depreciation expense, as several large internally developed applications became fully depreciated in 2018 and 2019.

FDIC insurance expense decreased \$19 million, or 45 percent, primarily due to the completion of FDIC surcharges in 2018.

Advertising expense increased \$4 million, or 16 percent, primarily due to increased marketing expenses related to digital banking technologies as well as an increase in sponsorship expenses, reflecting recent agreements with sports franchises.

Other noninterest expenses included a decrease of \$14 million in other pension and postretirement benefit costs, mostly offset by increases of \$5 million due to a state business tax refund in 2018 and \$3 million each in operational losses and consulting fees.

Income Taxes and Related Items

The provision for income taxes was \$334 million in 2019, compared to \$300 million in 2018. The \$34 million increase in the provision for income taxes primarily reflected a \$31 million decrease in discrete tax benefits, to \$17 million in 2019 from \$48 million in 2018. The discrete tax benefit in 2018 primarily resulted from a review of certain tax capitalization and recovery positions related to software and fixed assets included in the 2017 tax return and tax benefits of \$22 million from employee stock transactions. The discrete benefit in 2019 included \$5 million from adjustments to annual state tax filings in third quarter of 2019 and tax benefits of \$12 million from employee stock transactions.

Net deferred tax assets were \$42 million at December 31, 2019, compared to \$166 million at December 31, 2018. Refer to Note 18 to the consolidated financial statements for information about the components of net deferred tax assets. Deferred tax assets of \$329 million were evaluated for realization and it was determined that a valuation allowance of \$3 million related to state net operating loss carryforwards was needed at both December 31, 2019 and 2018. These conclusions were based on available evidence of projected future reversals of existing taxable temporary differences, assumptions made regarding future events and, when applicable, state loss carryback capacity.

STRATEGIC LINES OF BUSINESS

The Corporation has strategically aligned its operations into three major business segments: the Business Bank, the Retail Bank and Wealth Management. These business segments are differentiated based on the type of customer and the related products and services provided. In addition to the three major business segments, the Finance Division is also reported as a segment. The Other category includes items not directly associated with the business segments or the Finance segment. The performance of the business segments is not comparable with the Corporation's consolidated results and is not necessarily comparable with similar information for any other financial institution. Additionally, because of the interrelationships of the various segments, the information presented is not indicative of how the segments would perform if they operated as independent entities. Market segment results are also provided for the Corporation's three primary geographic markets: Michigan, California and Texas. In addition to the three primary geographic markets, Other Markets is also reported as a market segment. Note 22 to the consolidated financial statements describes the Corporation's segment reporting methodology as well as the business activities of each business segment and presents financial results of the business and market segments for the years ended December 31, 2019, 2018 and 2017.

The Corporation's management accounting system assigns balance sheet and income statement items to each segment using certain methodologies, which are regularly reviewed and refined. These methodologies may be modified as the management accounting system is enhanced and changes occur in the organizational structure and/or product lines.

Net interest income for each segment reflects the interest income generated by earning assets less interest expense on interest-bearing liabilities plus the net impact from associated internal funds transfer pricing (FTP). The FTP methodology allocates credits to each business segment for deposits and other funds provided as well as charges for loans and other assets being funded. FTP crediting rates on deposits and other funds provided reflect the long-term value of deposits and other funding sources based on their implied maturities. FTP charge rates for funding loans and other assets reflect a matched cost of funds based on the pricing and duration characteristics of the assets. Therefore, net interest income for each segment primarily reflects the volume and associated FTP impacts of loan and deposit levels. As overall market rates were higher in 2019, business segments, particularly those focused on generating deposits, benefited from higher FTP crediting rates on deposits compared to the prior year. Similarly, FTP charges for funding loans were higher in 2019. Effective January 1, 2019, the Corporation prospectively discontinued allocating an additional FTP charge for the cost of maintaining liquid assets to support potential draws on unfunded loan commitments.

The following sections present a summary of the performance of each of the Corporation's business and market segments for 2019 compared to 2018.

Business Segments

The following table presents net income (loss) by business segment.

(dollar amounts in millions)

Years Ended December 31	2019		2018			2017			
Business Bank	\$ 1,021	82% \$	1,024	85% \$	755	90 %			
Retail Bank	83	7	65	5	(6)	(1)			
Wealth Management	140	11	121	10	87	11			
	1,244	100%	1,210	100%	836	100 %			
Finance (a)	(56)		(1)		(23)				
Other (b)	10		26		(70)				
Total	\$ 1,198	\$	1,235	\$	743				

- (a) Included losses, net of tax, of \$6 million and \$15 million in 2019 and 2018, respectively, due to repositioning the securities portfolio.
- (b) Included net discrete tax benefits of \$17 million and \$48 million in 2019 and 2018, respectively, and a net discrete tax charge of \$72 million in 2017.

The Business Bank's net income decreased \$3 million to \$1.0 billion. Average loans increased \$1.9 billion and average deposits decreased \$1.1 billion. Net interest income increased \$42 million to \$1.7 billion. An increase in loan income of \$160 million was partially offset by a \$57 million increase in allocated net FTP charges and a \$61 million increase in deposit costs. The provision for credit losses increased \$82 million to \$88 million, primarily reflecting an increase in Energy reserves. Net credit-related charge-offs increased \$59 million to \$111 million, primarily due to a decline in valuations of select liquidating Energy credits, partially offset by decreases in general Middle Market and Technology and Life Sciences. Noninterest income increased \$8 million, primarily reflecting increases of \$12 million in card fees and \$6 million in commercial lending fees, partially offset by a \$4 million decrease in income from tax credit investments, as well as smaller decreases in other categories. Excluding restructuring charges of \$30 million in 2018, noninterest expenses decreased \$22 million, primarily reflecting decreases of \$15 million in corporate overhead and \$14 million in FDIC insurance expense, partially offset by an increase of \$7 million in outside processing fee expense.

The Retail Bank's net income increased \$18 million to \$83 million. Net interest income increased \$20 million to \$568 million. Increases of \$58 million in allocated net FTP credits and \$9 million in loan income were partially offset by a \$47 million increase in deposit costs. The provision for credit losses decreased \$3 million to a benefit of \$4 million. Noninterest income decreased \$5 million, primarily reflecting a \$5 million decrease due to the end of a retirement savings program in 2018 and a \$5 million decrease in service charges on deposit accounts, partially offset by a \$6 million gain on the 2019 sale of the Corporation's HSA business and smaller increases in other categories. Excluding restructuring charges of \$15 million in 2018, noninterest expenses increased \$9 million, primarily reflecting increases of \$16 million in corporate overhead and \$4 million in equipment expense, primarily related to banking center modernization, partially offset by decreases of \$7 million in outside processing fee expense, due to the end of a retirement savings program in 2018, and \$4 million in FDIC insurance expense.

Wealth Management's net income increased \$19 million to \$140 million. Net interest income increased \$2 million to \$183 million. The provision for credit losses decreased \$11 million to a benefit of \$14 million. Net credit-related recoveries increased \$4 million. Noninterest income increased \$4 million to \$270 million, primarily reflecting an increase of \$2 million in customer derivative income. Excluding restructuring charges of \$8 million in 2018, noninterest expenses were stable.

The Finance segment's net loss increased \$55 million to \$56 million. Net interest expense increased \$80 million to \$126 million, primarily reflecting an increase in other time deposits and higher levels of wholesale funding. Net income also benefited from a \$12 million decrease in losses related to securities repositioning.

Market Segments

The following table presents net income (loss) by market segment.

(dollar amounts in millions)

Years Ended December 31	2019		2018		2017	
Michigan	\$ 369	30% \$	326	27% \$	247	30%
California	456	36	379	31	232	27
Texas	119	10	228	19	175	21
Other Markets	300	24	277	23	182	22
	1,244	100%	1,210	100%	836	100%
Finance & Other (a)	(46)		25		(93)	
Total	\$ 1,198	\$	1,235	\$	743	

(a) Included net discrete tax benefits of \$17 million and \$48 million in 2019 and 2018, respectively, and a net discrete tax charge of \$72 million in 2017, as well as losses, net of tax, of \$6 million and \$15 million in 2019 and 2018, respectively, due to repositioning the securities portfolio.

The Michigan market's net income increased \$43 million to \$369 million. Average loans increased \$22 million and average deposits decreased \$689 million. Net interest income increased \$2 million to \$729 million. Increases of \$27 million in loan income and \$23 million in allocated net FTP credits were partially offset by a \$48 million increase in deposit costs. The provision for credit losses decreased \$41 million to a benefit of \$11 million, primarily reflecting decreases in general Middle Market, National Dealer Services and Small Business. Net credit-related charge-offs increased \$4 million to \$11 million. Noninterest income decreased \$5 million, primarily reflecting a \$4 million decrease in service charges on deposit accounts. Excluding restructuring charges of \$16 million in 2018, noninterest expenses decreased \$7 million, primarily reflecting decreases of \$6 million each in FDIC insurance expense and corporate overhead, partially offset by a \$2 million increase in outside processing fee expense and smaller increases in other categories.

The California market's net income increased \$77 million to \$456 million. Average loans increased \$257 million and average deposits decreased \$107 million. Net interest income increased \$23 million to \$811 million. An increase of \$56 million in loan income and a decrease of \$12 million in allocated net FTP charges were partially offset by a \$45 million increase in deposit costs. The provision for credit losses decreased \$59 million to a benefit of \$33 million, primarily reflecting decreases in Technology and Life Sciences, general Middle Market and Private Banking, partially offset by increases in Corporate Banking and Entertainment. Net credit-related charge-offs decreased \$19 million to \$8 million, primarily reflecting decreases in general Middle Market, as well as Technology and Life Sciences. Noninterest income increased \$9 million to \$173 million, primarily reflecting increases of \$5 million in commercial lending fees and \$4 million in warrant income. Excluding restructuring charges of \$15 million in 2018, noninterest expenses decreased \$3 million, primarily reflecting decreases of \$6 million in FDIC insurance expense and \$3 million in salaries and benefits expense, partially offset by a \$4 million increase in corporate overhead and smaller increases in other categories.

The Texas market's net income decreased \$109 million to \$119 million. Average loans increased \$804 million and average deposits decreased \$212 million. Net interest income increased \$19 million to \$493 million. An increase in loan income of \$54 million was partially offset by increases of \$20 million in allocated net FTP charges and \$15 million in deposit costs. The provision for credit losses increased \$172 million to \$119 million from a benefit of \$53 million, primarily reflecting an increase in Energy,

partially offset by a decrease in Technology and Life Sciences. Net credit-related charge-offs increased \$81 million to \$93 million, primarily reflecting an increase in Energy. Noninterest income was stable. Excluding restructuring charges of \$15 million in 2018, noninterest expenses decreased \$5 million, primarily reflecting decreases of \$3 million each in salaries and benefits expense and FDIC insurance expense.

Other Markets' net income increased \$23 million to \$300 million. Average loans increased \$662 million and average deposits decreased \$239 million. Net interest income increased \$20 million to \$373 million. An increase in loan income of \$40 million was partially offset by increases of \$11 million in allocated net FTP charges and \$9 million in deposit costs. The provision for credit losses decreased \$4 million to a benefit of \$5 million from a benefit of \$1 million. Net credit-related charge-offs decreased \$10 million to net recoveries of \$5 million, primarily reflecting decreases in Small Business and Private Banking. Noninterest income increased \$600 million due to a \$7 million increase in card fees. Excluding restructuring charges of \$7 million in 2018, noninterest expenses were unchanged in 2019.

Net income for the Finance & Other category decreased \$71 million to a net loss of \$46 million from net income of \$25 million. Net interest income decreased \$77 million to net interest expense of \$67 million, primarily reflecting an increase in other time deposits and higher levels of wholesale funding. Net income was also impacted by a \$31 million decrease in discrete tax benefits, partially offset by a \$12 million decrease in losses related to securities repositioning.

The following table lists the Corporation's banking centers by geographic market segment.

December 31	2019	2018	2017
Michigan	192	193	194
Texas	123	122	122
California	96	96	97
Other Markets:			
Arizona	17	17	17
Florida	7	7	7
Canada	1	1	1
Total Other Markets	25	25	25
Total	436	436	438

BALANCE SHEET AND CAPITAL FUNDS ANALYSIS

Analysis of Investment Securities and Loans

(in millions)

December 31	2019	2018		2017	2016	2015
Investment securities available-for-sale:						
U.S. Treasury and other U.S. government agency securities	\$ 2,792	\$ 2,727	\$	2,727	\$ 2,779	\$ 2,763
Residential mortgage-backed securities (a)	9,606	9,318	(b)	8,124	7,872	7,545
State and municipal securities				5	7	9
Corporate debt securities	_	_		_	_	1
Equity and other non-debt securities	_	_		82	129	201
Total investment securities available-for-sale	12,398	12,045		10,938	10,787	10,519
Investment securities held to maturity:						
Residential mortgage-backed securities (a)	_	_	(b)	1,266	1,582	1,981
Total investment securities	\$ 12,398	\$ 12,045	\$	12,204	\$ 12,369	\$ 12,500
Commercial loans	\$ 31,473	\$ 31,976	\$	31,060	\$ 30,994	\$ 31,659
Real estate construction loans	3,455	3,077		2,961	2,869	2,001
Commercial mortgage loans	9,559	9,106		9,159	8,931	8,977
Lease financing	588	507		468	572	724
International loans:						
Banks and other financial institutions	_			4	2	
Commercial and industrial	1,009	1,013		979	1,256	1,368
Total international loans	1,009	1,013		983	1,258	1,368
Residential mortgage loans	1,845	1,970		1,988	1,942	1,870
Consumer loans:						
Home equity	1,711	1,765		1,816	1,800	1,720
Other consumer	729	749		738	722	765
Total consumer loans	2,440	2,514	•	2,554	2,522	2,485
Total loans	\$ 50,369	\$ 50,163	\$	49,173	\$ 49,088	\$ 49,084

 ⁽a) Issued and/or guaranteed by U.S. government agencies or U.S. government-sponsored enterprises.
 (b) Effective with the adoption of ASU 2017-12 "Derivatives and Hedging (Topic 815): Targeted Improvements to Accounting for Hedging Activities" on January 1, 2018, the Corporation transferred residential mortgage-backed securities with a book value of approximately \$1.3 billion from held-to-maturity to available-for-sale.

Earning Assets

Loans

On a period-end basis, total loans increased \$206 million to \$50.4 billion at December 31, 2019, compared to \$50.2 billion at December 31, 2018. Average total loans increased \$1.7 billion to \$50.5 billion in 2019, compared to \$48.8 billion in 2018. The following tables provide information about the changes in the Corporation's average loan portfolio in 2019, compared to 2018.

(dollar amounts in millions) Years Ended December 31		2019		2018		Change	Percent Change
By Business Line:		2013		2010		Change	Change
General Middle Market	\$	12,134	\$	11,800	\$	334	3 %
National Dealer Services	Ψ	7,652	Ψ	7,294	Ψ	358	5
Energy		2,449		1,868		581	31
Equity Fund Services		2,570		2,408		162	7
Technology and Life Sciences		1,265		1,400		(135)	(10)
Environmental Services		1,200		1,099		101	9
Entertainment		739		731		8	1
Total Middle Market		28,009		26,600		1,409	5
Corporate Banking		4,231		4,337		(106)	(2)
Mortgage Banker Finance		2,150		1,716		434	25
Commercial Real Estate		5,595		5,287		308	6
Small Business		3,487		3,678		(191)	(5)
Total Business Bank		43,472		41,618		1,854	4
Total Retail Bank		2,104		2,067		37	2
Total Wealth Management		4,935		5,081		(146)	(3)
Total loans	\$	50,511	\$	48,766	\$	1,745	4 %
By Loan Type:							
Commercial	\$	32,053	\$	30,534	\$	1,519	5 %
Real estate construction loans		3,325		3,155		170	5
Commercial mortgage loans		9,170		9,131		39	_
Lease financing		557		470		87	19
International loans		1,019		1,021		(2)	_
Residential mortgage loans		1,929		1,983		(54)	(3)
Consumer loans:							
Home equity		1,769		1,749		20	1
Other consumer		689		723		(34)	(5)
Total consumer loans		2,458		2,472		(14)	(1)
Total loans	\$	50,511	\$	48,766	\$	1,745	4 %
By Geographic Market:							
Michigan	\$	12,553	\$	12,531	\$	22	—%
California		18,540		18,283		257	1
Texas		10,616		9,812		804	8
Other Markets		8,802		8,140		662	8
Total loans	\$	50,511	\$	48,766	\$	1,745	4 %

Middle Market business lines generally serve customers with annual revenue between \$30 million and \$500 million. Within the Middle Market business lines, the largest changes were increases in Energy, National Dealer Services and General Middle Market. Customers in the Energy business line are primarily engaged in the oil and gas businesses. The \$581 million increase in average Energy loans primarily reflected reduced capital market activity, which drove higher utilization. For more information on Energy loans, refer to "Energy Lending" in the "Risk Management" section of this financial review. National Dealer Services provides floor plan inventory financing and commercial mortgages to auto dealerships. The \$358 million increase in average National Dealer Services loans and the \$334 million increase in General Middle Market loans largely reflected the expansion of new and existing relationships.

Mortgage Banker Finance provides short-term, revolving lines of credit to independent mortgage banking companies and therefore partly reflects the level of home sales and refinancing activity in the market as a whole. The \$434 million increase was primarily due to elevated refinancing activity and new customer acquisition.

Investment Securities

		Maturity (a)										Weighted Average	
(dollar amounts in millions)		Within 1	Year	1 - 5	Years	5 - 10	Years	After 10	Years	To	tal	Maturity	
December 31, 2019	An	nount	Yield	Amount	Yield	Amount	Yield	Amount	Yield	Amount	Yield	Years	
U.S. Treasury and other U.S. government agency securities	\$	30	1.68% \$	2,762	2.48% \$	_	_% \$	_	—% \$	2,792	2.47%	2.2	
Residential mortgage-backed securities (b)		_	_	132	3.62	1,013	2.26	8,461	2.42	9,606	2.42	22.3	
Total investment securities	\$	30	1.68% \$	2,894	2.53% \$	1,013	2.26% \$	8,461	2.42% \$	12,398	2.43%	17.9	

(a) Based on final contractual maturity.

(b) Issued and/or guaranteed by U.S. government agencies or U.S. government-sponsored enterprises.

Investment securities increased \$353 million to \$12.4 billion at December 31, 2019, from \$12.0 billion at December 31, 2018. At December 31, 2019, the weighted-average expected life of the Corporation's residential mortgage-backed securities portfolio was approximately 2.9 years. On an average basis, investment securities increased \$310 million to \$12.1 billion in 2019, compared to \$11.8 billion in 2018. The increase was primarily due unrealized gains due to lower interest rates.

The Corporation repositioned treasury securities by selling \$1.0 billion in 2019 and \$1.3 billion in 2018 and purchasing higher yielding treasuries. This resulted in after-tax losses of \$6 million and \$15 million in 2019 and 2018, respectively.

Interest-Bearing Deposits with Banks and Other Short-Term Investments

Interest-bearing deposits with banks primarily include deposits with the Federal Reserve Bank (FRB) and also include deposits with banks in developed countries or international banking facilities of foreign banks located in the United States. Interest-bearing deposits with banks are mostly used to manage liquidity requirements of the Corporation. Interest-bearing deposits with banks increased \$1.7 billion to \$4.8 billion at December 31, 2019. On an average basis, interest-bearing deposits with banks decreased \$1.3 billion to \$3.4 billion in 2019.

Other short-term investments include federal funds sold, trading securities, money market investments and loans held-for-sale. Substantially all trading securities are deferred compensation plan assets. Loans held-for-sale typically represent residential mortgage loans originated with management's intention to sell and, from time to time, other loans that are transferred to held-for-sale. Other short-term investments increased \$21 million to \$155 million at December 31, 2019. On an average basis, other short-term investments increased \$9 million to \$143 million in 2019.

Deposits and Borrowed Funds

At December 31, 2019, total deposits were \$57.3 billion, an increase of \$1.7 billion, or 3 percent, compared to \$55.6 billion at December 31, 2018. The increase reflects an increase of \$3.0 billion, or 11 percent, in interest-bearing deposits, partially offset by a decrease of \$1.3 billion, or 5 percent, in noninterest-bearing deposits. The Corporation's average deposits and borrowed funds balances are detailed in the following table.

(dollar amounts in millions)					Percent
Years Ended December 31	2019	2018	Change	Change	
Noninterest-bearing deposits	\$ 26,644	\$ 29,241	\$	(2,597)	(9)%
Money market and interest-bearing checking deposits	23,417	22,378		1,039	5
Savings deposits	2,166	2,199		(33)	(2)
Customer certificates of deposit	2,522	2,090		432	21
Other time deposits	705	2		703	n/m
Foreign office time deposits	27	25		2	10
Total deposits	\$ 55,481	\$ 55,935	\$	(454)	(1)%
Short-term borrowings	\$ 369	\$ 62	\$	307	n/m
Medium- and long-term debt	6,955	5,842		1,113	19
Total borrowed funds	\$ 7,324	\$ 5,904	\$	1,420	24 %

n/m - not meaningful

Average deposits decreased \$454 million to \$55.5 billion in 2019, compared to \$55.9 billion in 2018, reflecting a decrease of \$2.6 billion in noninterest-bearing deposits, partially offset by an increase of \$2.1 billion in interest-bearing deposits. The decline in noninterest-bearing deposits was primarily the result of customers shifting balances to interest-bearing deposits and utilizing their deposits to fund growth, acquisitions and capital expenditures as well as choosing other investment options. The increase in

interest-bearing deposits reflected increases of \$1.3 billion in relationship-based deposits and \$703 million in other time deposits. Other time deposits, primarily brokered deposits, provided low-cost, flexible funding.

Short-term borrowings totaled \$71 million at December 31, 2019, an increase of \$27 million compared to \$44 million at December 31, 2018. Short-term borrowings primarily include federal funds purchased, short-term FHLB advances and securities sold under agreements to repurchase. Average short-term borrowings increased \$307 million, to \$369 million in 2019, compared to \$62 million in 2018.

Total medium- and long-term debt at December 31, 2019 increased \$806 million to \$7.3 billion, compared to \$6.5 billion at December 31, 2018. The increase in medium- and long-term debt reflected issuances of \$550 million of long-term notes and \$500 million of medium-term notes, partially offset by the maturity of \$350 million of medium-term notes. The Corporation uses medium- and long-term debt, which includes long-term FHLB advances, medium- and long-term senior notes as well as subordinated notes, to provide funding to support earning assets, liquidity and regulatory capital. Average medium- and long-term debt increased \$1.1 billion, or 19 percent, to \$7.0 billion in 2019, compared to \$5.8 billion in 2018.

Further information on medium- and long-term debt is provided in Note 12 to the consolidated financial statements.

Capital

Total shareholders' equity decreased \$180 million to \$7.3 billion at December 31, 2019, compared to \$7.5 billion at December 31, 2018. The following table presents a summary of changes in total shareholders' equity in 2019.

(in millions)

(in millions)		
Balance at January 1, 2019	\$	7,507
Cumulative effect of change in accounting principles		(14)
Net income		1,198
Cash dividends declared on common stock		(398)
Purchase of common stock		(1,380)
Other comprehensive income:		
Investment securities	\$ 203	
Cash flow hedges	34	
Defined benefit and other postretirement plans	137	
Total other comprehensive income		374
Issuance of common stock under employee stock plans		1
Share-based compensation		39
Balance at December 31, 2019	\$	7,327

Further information about other comprehensive income is provided in the Consolidated Statements of Comprehensive Income and Note 14 to the consolidated financial statements.

The Corporation expects to continue to return capital to shareholders with a target of maintaining a common equity Tier 1 capital ratio of approximately 10 percent. At December 31, 2019, the Corporation's Tier 1 capital ratio was 10.13 percent. The timing and ultimate amount of future distributions will be subject to various factors including financial performance, capital needs and market conditions.

The Board of Directors (the Board) authorized additional share repurchases of up to 15 million shares and 7 million shares of Comerica Incorporated common stock in January 2019 and November 2019, respectively, in addition to the 4.7 million shares remaining at December 31, 2018 under the Board's prior authorizations for the share repurchase program. During 2019, the Corporation repurchased 18.6 million shares for a total of \$1.4 billion. At December 31, 2019, 8.1 million shares remained authorized for repurchase under the share repurchase program. Repurchases of common stock under the authorization may include open market purchases, privately negotiated transactions or accelerated repurchase programs. The number of shares ultimately purchased during 2020 will depend on many factors, including capital needs of the Corporation and market conditions. There is no expiration date for the Corporation's share repurchase program.

The Board approved a 7-cent increase in the quarterly dividend, to \$0.67 per share, in January 2019 and approved an additional 1-cent increase to \$0.68 per share in January 2020, effective for the dividend payable April 1, 2020.

The following table summarizes the Corporation's share repurchase activity for the year ended December 31, 2019.

(shares in thousands)	Total Number of Shares Purchased as Part of Publicly Announced Repurchase Plans or Programs	Remaining Repurchase Authorization (a)	_	otal Number of nares Purchased (b)	Average Price Paid Per Share		
First quarter 2019	5,094	14,613	(c)	5,216	\$	83.48	
Second quarter 2019	5,656	8,957		5,658		75.13	
Third quarter 2019	5,734	3,223		5,739		64.53	
Fourth quarter 2019	2,126	8,097	(d)	2,137		70.44	
Total 2019	18,610	8,097		18,750	\$	73.67	

(a) Maximum number of shares that may yet be purchased under the publicly announced plans or programs.

(c) Includes January 2019 equity repurchase authorization for an additional 15 million shares.

The Corporation is subject to the capital adequacy standards under the Basel III regulatory framework (Basel III). This regulatory framework establishes comprehensive methodologies for calculating regulatory capital and risk-weighted assets (RWA). Basel III also set minimum capital ratios as well as overall capital adequacy standards.

Under Basel III, regulatory capital comprises common equity Tier 1 (CET1) capital, additional Tier 1 capital and Tier II capital. CET1 capital predominantly includes common shareholders' equity, less certain deductions for goodwill, intangible assets and deferred tax assets that arise from net operating losses and tax credit carry-forwards. Additionally, the Corporation has elected to permanently exclude capital in accumulated other comprehensive income (AOCI) related to debt and equity securities classified as available-for-sale as well as for cash flow hedges and defined benefit postretirement plans from CET1, an option available to standardized approach entities under Basel III. Tier 1 capital incrementally includes noncumulative perpetual preferred stock. Tier 2 capital includes Tier 1 capital as well as subordinated debt qualifying as Tier 2 and qualifying allowance for credit losses. In December 2018, the federal banking regulators adopted rules that would permit bank holding companies and banks to phase in, for regulatory capital purposes, the transition impact on retained earnings of the new current expected credit loss accounting standard (CECL), effective for the Corporation on January 1, 2020, over a period of three years. The Corporation does not anticipate to elect this deferral. The transition impact to retained earnings is not expected to be significant. For further information about the adoption of CECL, refer to Note 1 to the consolidated financial statement.

The Corporation computes RWA using the standardized approach. Under the standardized approach, RWA is generally based on supervisory risk-weightings which vary by counterparty type and asset class. Under the Basel III standardized approach, capital is required for credit risk RWA, to cover the risk of unexpected losses due to failure of a customer or counterparty to meet its financial obligations in accordance with contractual terms; and if trading assets and liabilities exceed certain thresholds, capital is also required for market risk RWA, to cover the risk of losses due to adverse market movements or from position-specific factors.

The following table presents the minimum ratios required to be considered "adequately capitalized."

Common equity tier 1 capital to risk-weighted assets	4.5%
Tier 1 capital to risk-weighted assets	6.0
Total capital to risk-weighted assets	8.0
Capital conservation buffer (a)	2.5
Tier 1 capital to adjusted average assets (leverage ratio)	4.0

⁽a) In addition to the minimum risk-based capital requirements, the Corporation is required to maintain a minimum capital conservation buffer in the form of common equity, in order to avoid restrictions on capital distributions and discretionary bonuses.

The Corporation's capital ratios exceeded minimum regulatory requirements as follows:

		December 31,	2019	December 31, 2018				
(dollar amounts in millions)	Сар	ital/Assets	Ratio	Capital/Assets	Ratio			
Common equity tier 1 and tier 1 risk-based	\$	6,919	10.13% \$	7,470	11.14%			
Total risk-based		8,282	12.13	8,855	13.21			
Leverage		6,919	9.51	7,470	10.51			
Common equity		7,327	9.98	7,507	10.60			
Tangible common equity (a)		6,688	9.19	6,866	9.78			
Risk-weighted assets		68,273		67,047				

⁽a) See Supplemental Financial Data section for reconcilements of non-GAAP financial measures.

⁽b) Includes approximately 140,000 shares purchased pursuant to deferred compensation plans and shares purchased from employees to pay for taxes related to restricted stock vesting under the terms of an employee share-based compensation plan during the year ended December 31, 2019. These transactions are not considered part of the Corporation's repurchase program.

⁽d) Includes November 2019 equity repurchase authorization for an additional 7 million shares.

At December 31, 2019, the Corporation and its U.S. banking subsidiaries exceeded the capital ratios required for an institution to be considered "well capitalized" by the standards developed under the Federal Deposit Insurance Corporation Improvement Act of 1991. Refer to Note 20 to the consolidated financial statements for further discussion of regulatory capital requirements and capital ratio calculations.

RISK MANAGEMENT

The Corporation assumes various types of risk as a result of conducting business in the normal course. The Corporation's enterprise risk management framework provides a process for identifying, measuring, controlling and managing these risks. This framework incorporates a risk assessment process, a collection of risk committees that manage the Corporation's major risk elements, and a risk appetite statement that outlines the levels and types of risks the Corporation accepts. The Corporation continuously enhances its enterprise risk framework with additional processes, tools and systems designed to not only provide management with deeper insight into the various existing and emerging risks in accordance with its appetite for risk, but also to improve the Corporation's ability to control those risks and ensure that appropriate consideration is received for the risks taken.

The Corporation's front line employees, the first line of defense, are responsible for the day-to-day management of risks including the identification, assessment, measurement and control of risks encountered as a part of the normal course of business. Risks are further monitored and measured by the second line of defense, comprising specialized risk managers for each of the major risk categories, who reside in the Enterprise Risk Division and provide oversight, independent and effective challenge and guidance for the risk management activities of the organization. The Enterprise Risk Division, led by the Chief Risk Officer, is responsible for designing and managing the Corporation's enterprise risk management framework and ensures effective risk management oversight. Risk management committees serve as a point of review and escalation for those risks which may have risk interdependencies or where risk levels may be nearing the limits outlined in the Corporation's risk appetite statement. These committees comprise senior and executive management that represent views from both the lines of business and risk management. Internal Audit, the third line of defense, monitors and assesses the overall effectiveness of the risk management framework on an ongoing basis and provides an independent, objective assessment of the Corporation's ability to manage and control risk to management and the Audit Committee of the Board.

The Enterprise-Wide Risk Management Committee, chaired by the Chief Risk Officer, is established by the Enterprise Risk Committee of the Board, and is responsible for governance over the risk management framework, providing oversight in managing the Corporation's aggregate risk position and reporting on the comprehensive portfolio of risks as well as the potential impact these risks can have on the Corporation's risk profile and resulting capital level. Capital provides the primary buffer for risk. The Enterprise-Wide Risk Management Committee is principally composed of senior officers and executives representing the different risk areas and business units who are appointed by the Chairman and Chief Executive Officer of the Corporation.

The Board's Enterprise Risk Committee meets quarterly and is chartered to assist the Board in promoting the best interests of the Corporation by overseeing policies and risk practices relating to enterprise-wide risk and ensuring compliance with bank regulatory obligations. Members of the Enterprise Risk Committee are selected such that the committee comprises individuals whose experiences and qualifications can lead to broad and informed views on risk matters facing the Corporation and the financial services industry. These include, but are not limited to, existing and emerging risk matters related to credit, market, liquidity, operational, technology, compliance and strategic conditions. A comprehensive risk report is submitted to the Enterprise Risk Committee each quarter providing management's view of the Corporation's aggregate risk position.

Further discussion and analyses of each major risk area are included in the following sub-sections of the Risk Management section in this financial review.

Credit Risk

Credit risk represents the risk of loss due to failure of a customer or counterparty to meet its financial obligations in accordance with contractual terms. Credit risk is found in all activities where success depends on counterparty, issuer, or borrower performance. It arises any time funds are extended, committed, invested or otherwise exposed, whether reflected on or off the balance sheet. The governance structure is administered through the Strategic Credit Committee. The Strategic Credit Committee is chaired by the Chief Credit Officer and approves recommendations to address credit risk matters through credit policy, credit risk management practices and required credit risk actions. The Strategic Credit Committee also ensures a comprehensive reporting of credit risk levels and trends, including exception levels, along with identification and mitigation of emerging risks. In order to facilitate the corporate credit risk management process, various other corporate functions provide the resources for the Strategic Credit Committee to carry out its responsibilities. The Corporation manages credit risk through underwriting and periodically reviewing and approving its credit exposures using approved credit policies and guidelines. Additionally, the Corporation manages credit risk through loan portfolio diversification, limiting exposure to any single industry, customer or guarantor, and selling participations and/or syndicating credit exposures above those levels it deems prudent to third parties.

The Credit Division manages credit policy and provides the resources to manage the line of business transactional credit risk, assuring that all exposure is risk rated according to the requirements of the credit risk rating policy and providing business segment reporting support as necessary. The Enterprise Risk Division provides credible and well-documented challenge of overall portfolio credit risk, and other credit-related attributes of the Corporation's loan portfolios, with a particular emphasis on all attendant modeled results. The Corporation's Asset Quality Review function, a division of Internal Audit, audits the accuracy of internal risk ratings that are assigned by the lending and credit groups. The Special Assets Group is responsible for managing the recovery process on distressed or defaulted loans and loan sales.

Portfolio Risk Analytics, within the Credit Division, provides comprehensive reporting on portfolio credit risk levels and trends, continuous assessment and verification of risk rating models, quarterly calculation of the allowance for loan losses and the allowance for credit losses on lending-related commitments, and calculations of both expected and unexpected loss.

Analysis of the Allowance for Loan Losses

(dollar amounts in millions)

Years Ended December 31	2019	2018	2017	2016		2015
Balance at beginning of year	\$ 671	\$ 712	\$ 730	\$	634	\$ 594
Loan charge-offs:						
Commercial	143	95	133		181	139
Commercial mortgage	3	3	3		3	3
Lease financing	_	_	1		_	1
International	1	1	6		23	14
Residential mortgage	1	_	_		_	1
Consumer	4	4	6		7	10
Total loan charge-offs	152	103	149		214	168
Recoveries:						
Commercial	35	44	37		43	33
Real estate construction	_	_	1		_	1
Commercial mortgage	4	2	9		20	21
International	1	1	3		_	_
Residential mortgage	1	1	1		1	2
Consumer	4	4	6		4	11
Total recoveries	45	52	57		68	68
Net loan charge-offs	107	51	92		146	100
Provision for loan losses	73	11	73		241	142
Foreign currency translation adjustment	_	(1)	1		1	(2)
Balance at end of year	\$ 637	\$ 671	\$ 712	\$	730	\$ 634
Net loan charge-offs during the year as a percentage of	0.210/	0.110/	0.100/		0.700/	0.210/
average loans outstanding during the year	0.21%	0.11%	0.19%		0.30%	0.21%

Allowance for Credit Losses

The allowance for credit losses includes both the allowance for loan losses and the allowance for credit losses on lending-related commitments. The allowance for loan losses represents management's assessment of probable, estimable losses inherent in the Corporation's loan portfolio. The allowance for credit losses on lending-related commitments, included in accrued expenses and other liabilities on the Consolidated Balance Sheets, provides for probable losses inherent in lending-related commitments, including unused commitments to extend credit and standby letters of credit. On January 1, 2020, the Corporation adopted a new accounting standard for estimating credit losses (CECL). The day-one impact to the allowance for credit losses was not significant. Refer to Note 1 to the consolidated financial statements for a discussion of the methodology used in the determination of the allowance for credit losses, as well as further information about the adoption of CECL, under the "Pending Accounting Pronouncements" section.

An analysis of the coverage of the allowance for loan losses is provided in the following table.

Years Ended December 31	2019	2018	2017
Allowance for loan losses as a percentage of total loans at end of year	1.27%	1.34%	1.45%
Allowance for loan losses as a multiple of total nonperforming loans at end of year	3.1x	2.9x	1.7x
Allowance for loan losses as a multiple of total net loan charge-offs for the year	6.0x	13.1x	7.7x

The allowance for loan losses was \$637 million at December 31, 2019, compared to \$671 million at December 31, 2018, a decrease of \$34 million. The decrease in the allowance for loan losses reflected continued strong credit quality, partially offset by an increase in Energy reserves.

Allocation of the Allowance for Loan Losses

		2019		2018	3		2017	7	2016			2015		
(dollar amounts in millions) December 31	ocated owance	Allowance Ratio (a)	% (b)	llocated llowance % (b)		Allocated Allowance %		% (b)	Allocated Allowance		% (b)	Allocated Allowance		% (b)
Business loans														
Commercial	\$ 490	1.56%	62%	\$ 492	64%	\$	521	63%	\$	547	63%	\$	448	65%
Real estate construction	17	0.49	7	19	6		19	6		21	6		12	4
Commercial mortgage	81	0.84	19	99	18		91	19		93	18		93	18
Lease financing	3	0.47	1	4	1		12	1		5	1		3	1
International	10	1.04	2	13	2		18	2		16	3		23	3
Total business loans	601	1.30	91	627	91		661	91		682	91		579	91
Retail loans														
Residential mortgage	7	0.35	4	9	4		13	4		11	4		14	4
Consumer	29	1.21	5	35	5		38	5		37	5		41	5
Total retail loans	36	0.84	9	44	9		51	9		48	9		55	9
Total loans	\$ 637	1.27%	100%	\$ 671	100%	\$	712	100%	\$	730	100%	\$	634	100%

⁽a) Allocated allowance as a percentage of related loans outstanding.

The allowance for credit losses on lending-related commitments includes specific allowances, based on individual evaluations of certain letters of credit in a manner consistent with business loans, and allowances based on the pool of the remaining letters of credit and all unused commitments to extend credit within each internal risk rating.

The allowance for credit losses on lending-related commitments was \$31 million at December 31, 2019 compared to \$30 million at December 31, 2018. An analysis of changes in the allowance for credit losses on lending-related commitments is presented below.

(dollar amounts in millions)

Years Ended December 31	2	2019	2018	2017	2016	2015
Balance at beginning of year	\$	30	\$ 42	\$ 41	\$ 45	\$ 41
Charge-offs on lending-related commitments (a)		_	_	_	(11)	(1)
Provision for credit losses on lending-related commitments		1	(12)	1	7	5
Balance at end of year	\$	31	\$ 30	\$ 42	\$ 41	\$ 45

⁽a) Charge-offs result from the sale of unfunded lending-related commitments.

For additional information regarding the allowance for credit losses, refer to the "Critical Accounting Policies" section of this financial review and Notes 1 and 4 to the consolidated financial statements.

Nonperforming Assets

Nonperforming assets include loans on nonaccrual status, troubled debt restructured loans (TDRs) which have been renegotiated to less than the original contractual rates (reduced-rate loans) and foreclosed property. TDRs include performing and nonperforming loans. Nonperforming TDRs are either on nonaccrual or reduced-rate status.

⁽b) Loans outstanding as a percentage of total loans.

Summary of Nonperforming Assets and Past Due Loans

(dollar amounts in millions)

December 31		2019	2018	2017	2016	2015
Nonaccrual loans:						
Business loans:						
Commercial	\$	148	\$ 141	\$ 309	\$ 445	\$ 238
Real estate construction		_	_	_	_	1
Commercial mortgage		14	20	31	46	60
Lease financing		_	2	4	6	6
International		_	3	6	14	8
Total nonaccrual business loans		162	166	350	511	313
Retail loans:						
Residential mortgage		20	36	31	39	27
Consumer:						
Home equity		17	19	21	28	27
Other consumer		_	_	_	4	_
Total consumer		17	19	21	32	27
Total nonaccrual retail loans		37	55	52	71	54
Total nonaccrual loans		199	221	402	582	367
Reduced-rate loans		5	8	8	8	12
Total nonperforming loans		204	229	410	590	379
Foreclosed property		11	1	5	17	12
Total nonperforming assets	\$	215	\$ 230	\$ 415	\$ 607	\$ 391
	in					
accordance with original terms	\$	20	\$ 19	\$ 31	\$ 38	\$ 27
Interest income recognized		5	4	7	6	5
Nonperforming loans as a percentage of total loans		0.40%	0.46%	0.83%	1.20%	0.77%
Loans past due 90 days or more and still accruing	\$	26	\$ 16	\$ 35	\$ 19	\$ 17

Nonperforming assets decreased \$15 million to \$215 million at December 31, 2019, from \$230 million at December 31, 2018. Nonperforming assets were 0.43 percent of total loans and foreclosed property at December 31, 2019, compared to 0.46 percent at December 31, 2018.

The following table presents a summary of TDRs at December 31, 2019 and 2018.

(in millions)

December 31	2019		2018
Nonperforming TDRs:			
Nonaccrual TDRs	\$	36 \$	73
Reduced-rate TDRs		5	8
Total nonperforming TDRs		41	81
Performing TDRs (a)		69	101
Total TDRs	\$	110 \$	182

⁽a) TDRs that do not include a reduction in the original contractual interest rate which are performing in accordance with their modified terms.

At December 31, 2019, nonaccrual and performing TDRs included \$14 million and \$22 million of Energy loans, respectively, compared to \$38 million and \$46 million, respectively at December 31, 2018.

The following table presents a summary of changes in nonaccrual loans.

(in millions)

Years Ended December 31	2019	2018
Balance at beginning of period	\$ 221	\$ 402
Loans transferred to nonaccrual (a)	230	197
Nonaccrual loan gross charge-offs	(152)	(103)
Loans transferred to accrual status (a)	(7)	(6)
Nonaccrual loans sold	(15)	(39)
Payments/other (b)	(78)	(230)
Balance at end of period	\$ 199	\$ 221

(a) Based on an analysis of nonaccrual loans with book balances greater than \$2 million.

There were 23 borrowers with balances greater than \$2 million transferred to nonaccrual status in 2019, a decrease of 9 compared to 32 in 2018.

The following table presents the composition of nonaccrual loans by balance and the related number of borrowers at December 31, 2019 and 2018.

	2	019		2018				
(dollar amounts in millions)	Number of Borrowers		Balance	Number of Borrowers		Balance		
Under \$2 million	708	\$	74	799	\$	78		
\$2 million - \$5 million	8		22	14		41		
\$5 million - \$10 million	6		49	10		69		
\$10 million - \$25 million	4		54	2		33		
Total	726	\$	199	825	\$	221		

The following table presents a summary of nonaccrual loans at December 31, 2019 and loans transferred to nonaccrual and net loan charge-offs for the year ended December 31, 2019, based on North American Industry Classification System (NAICS) categories.

	December 3	1, 2019	Year Ended December 31, 2019							
(dollar amounts in millions)			Loans Trans	ferred to						
Industry Category	Nonaccrual	Loans	Nonaccru	al (a)	Net Loan Charge-0	Offs (Recoveries)				
Mining, Quarrying and Oil & Gas Extraction	\$ 43	22% \$	128	56%	\$ 86	81 %				
Wholesale Trade	38	19	42	18	3	3				
Manufacturing	28	14	16	7	1	1				
Residential Mortgage	20	10	3	1	_	_				
Information & Communication	13	6	23	10	5	5				
Services	11	5	5	2	7	6				
Health Care & Social Assistance	6	3	_	_	9	8				
Real Estate & Home Builders	5	3	_	_	(2)	(2)				
Contractors	4	2	3	1	(3)	(3)				
Other (b)	31	16	10	5	1	1				
Total	\$ 199	100% \$	230	100%	\$ 107	100 %				

(a) Based on an analysis of nonaccrual loans with book balances greater than \$2 million.

Loans past due 90 days or more and still accruing interest generally represent loans that are well collateralized and in the process of collection. Loans past due 90 days or more increased \$10 million to \$26 million at December 31, 2019, compared to \$16 million at December 31, 2018. Loans past due 30-89 days decreased \$6 million to \$127 million at December 31, 2019, compared to \$133 million at December 31, 2018. An aging analysis of loans included in Note 4 to the consolidated financial statements provides further information about the balances comprising past due loans.

⁽b) Includes net changes related to nonaccrual loans with balances less than \$2 million, payments on nonaccrual loans with book balances greater than \$2 million and transfers of nonaccrual loans to foreclosed property.

⁽b) Consumer, excluding residential mortgage and certain personal purpose nonaccrual loans and net charge-offs, is included in the Other category.

The following table presents a summary of total criticized loans. The Corporation's criticized list is consistent with the Special Mention, Substandard and Doubtful categories defined by regulatory authorities. Criticized loans with balances of \$2 million or more on nonaccrual status or loans with balances of \$1 million or more whose terms have been modified in a TDR are individually subjected to quarterly credit quality reviews, and the Corporation may establish specific allowances for such loans. A table of loans by credit quality indicator included in Note 4 to the consolidated financial statements provides further information about the balances comprising total criticized loans.

(dollar amounts in millions)

December 31	2019	2018
Total criticized loans	\$ 2,120	\$ 1,548
As a percentage of total loans	4.2%	3.1%

The \$572 million increase in criticized loans in the year ended December 31, 2019 included increases of \$423 million in general Middle Market and \$161 million in Energy.

For further information regarding the Corporation's nonperforming assets policies and impaired loans, refer to Notes 1 and 4 to the consolidated financial statements.

Concentrations of Credit Risk

Concentrations of credit risk may exist when a number of borrowers are engaged in similar activities, or activities in the same geographic region, and have similar economic characteristics that would cause them to be similarly impacted by changes in economic or other conditions. The Corporation has concentrations of credit risk with the automotive and commercial real estate industries. All other industry concentrations, as defined by management, individually represented less than 10 percent of total loans at December 31, 2019.

Automotive Lending

The following table presents a summary of loans outstanding to companies related to the automotive industry.

		2019		2	2018
(in millions)		Loans	Percent of	Loans	Percent of
December 31	0	utstanding	Total Loans	Outstanding	Total Loans
Production:					
Domestic	\$	963		\$ 946	
Foreign		286		385	
Total production		1,249	2.5%	1,331	2.7%
Dealer:					
Floor plan		3,967		4,678	
Other		3,447		3,419	
Total dealer		7,414	14.7%	8,097	16.1%
Total automotive	\$	8,663	17.2%	\$ 9,428	18.8%

Substantially all dealer loans are in the National Dealer Services business line. Loans in the National Dealer Services business line primarily include floor plan financing and other loans to automotive dealerships. Floor plan loans, included in commercial loans in the Consolidated Balance Sheets, totaled \$4.0 billion at December 31, 2019, a decrease of \$711 million compared to \$4.7 billion at December 31, 2018. At both December 31, 2019 and 2018, other loans in the National Dealer Services business line totaled \$3.4 billion, including \$2.0 billion of owner-occupied commercial real estate mortgage loans. Automotive lending also includes loans to borrowers involved with automotive production, primarily Tier 1 and Tier 2 suppliers. Loans to borrowers involved with automotive production totaled \$1.2 billion and \$1.3 billion at December 31, 2019 and December 31, 2018, respectively.

Dealer loans, as shown in the table above, totaled \$7.4 billion at December 31, 2019, of which \$4.3 billion, or 61 percent, were to foreign franchises, and \$2.0 billion, or 28 percent, were to domestic franchises. The remaining dealer loans include obligations where a primary franchise was indeterminable, such as loans to large public dealership consolidators and rental car, leasing, heavy truck and recreation vehicle companies.

There were \$19 million of nonaccrual loans to automotive borrowers at December 31, 2019 and \$4 million at December 31, 2018. Automotive loan net recoveries were \$1 million in 2019, compared to net charge-offs of \$5 million in 2018.

Commercial Real Estate Lending

At December 31, 2019, the Corporation's commercial real estate portfolio represented 26 percent of total loans. The following table summarizes the Corporation's commercial real estate loan portfolio by loan category.

	Dece	mbe	er 31, 201	9			Dece	mbe	r 31, 201	8	
(in millions)	 mmercial Real state business line (a)	0	ther (b)		Total	Rea	nmercial l Estate ess line (a)	0	ther (b)		Total
Real estate construction loans	\$ 3,044	\$	411	\$	3,455	\$	2,687	\$	390	\$	3,077
Commercial mortgage loans	2,176		7,383		9,559		1,743		7,363		9,106
Total commercial real estate	\$ 5,220	\$	7,794	\$	13,014	\$	4,430	\$	7,753	\$	12,183

- (a) Primarily loans to real estate developers.
- (b) Primarily loans secured by owner-occupied real estate.

The Corporation limits risk inherent in its commercial real estate lending activities by monitoring borrowers directly involved in the commercial real estate markets and adhering to conservative policies on loan-to-value ratios for such loans. Commercial real estate loans, consisting of real estate construction and commercial mortgage loans, totaled \$13.0 billion at December 31, 2019. Of the total, \$5.2 billion, or 40 percent, were to borrowers in the Commercial Real Estate business line, which includes loans to real estate developers, an increase of \$790 million compared to December 31, 2018. Commercial real estate loans in other business lines totaled \$7.8 billion, or 60 percent, at December 31, 2019. These loans consisted primarily of owner-occupied commercial mortgages, which bear credit characteristics similar to non-commercial real estate business loans.

The real estate construction loan portfolio primarily contains loans made to long-time customers with satisfactory completion experience. Criticized real estate construction loans in the Commercial Real Estate business line totaled \$31 million and \$23 million at December 31, 2019 and 2018, respectively. In other business lines, there were no criticized real estate construction loans at December 31, 2019, compared to \$8 million at December 31, 2018. There were no net charge-offs in either of the years ended December 31, 2019 and 2018.

Commercial mortgage loans are loans where the primary collateral is a lien on any real property and are primarily loans secured by owner occupied real estate. Real property is generally considered primary collateral if the value of that collateral represents more than 50 percent of the commitment at loan approval. Loans in the commercial mortgage portfolio generally mature within three to five years. Criticized commercial mortgage loans in the Commercial Real Estate business line totaled \$55 million and \$61 million at December 31, 2019 and December 31, 2018, respectively. In other business lines, \$242 million and \$206 million of commercial mortgage loans were criticized at December 31, 2019 and 2018, respectively. Commercial mortgage loans net recoveries were \$1 million in 2019, compared to net charge-offs of \$1 million in 2018.

For further information regarding significant group concentrations of credit risk, refer to Note 5 to the consolidated financial statements.

Residential Real Estate Lending

At December 31, 2019, residential real estate loans represented 7 percent of total loans. The following table summarizes the Corporation's residential mortgage and home equity loan portfolios by geographic market.

2018

			2019	9			2010		
(dollar amounts in millions) December 31	M	sidential ortgage Loans	% of Total	Home Equity Loans	% of Total	Residential Mortgage Loans	% of Total	Home Equity Loans	% of Total
Geographic market:									
Michigan	\$	412	22%	\$ 603	35%	\$ 406	21% \$	650	37%
California		932	51	699	41	993	50	710	40
Texas		275	15	346	20	310	16	346	20
Other Markets		226	12	63	4	261	13	59	3
Total	\$	1,845	100%	\$ 1,711	100%	\$ 1,970	100% \$	1,765	100%

Residential real estate loans, which consist of traditional residential mortgages and home equity loans and lines of credit, totaled \$3.6 billion at December 31, 2019. The residential real estate portfolio is principally located within the Corporation's primary geographic markets. Substantially all residential real estate loans past due 90 days or more are placed on nonaccrual status, and substantially all junior lien home equity loans that are current or less than 90 days past due are placed on nonaccrual status if full collection of the senior position is in doubt. At no later than 180 days past due, such loans are charged off to current appraised values less costs to sell.

Residential mortgages totaled \$1.8 billion at December 31, 2019, and were primarily larger, variable-rate mortgages originated and retained for certain private banking relationship customers. Of the \$1.8 billion of residential mortgage loans outstanding, \$20 million were on nonaccrual status at December 31, 2019. The home equity portfolio totaled \$1.7 billion at December 31, 2019, of which \$1.6 billion was outstanding under primarily variable-rate, interest-only home equity lines of credit, \$89 million were in amortizing status and \$23 million were closed-end home equity loans. Of the \$1.7 billion of home equity loans outstanding, \$17 million were on nonaccrual status at December 31, 2019. A majority of the home equity portfolio was secured by junior liens at December 31, 2019.

Energy Lending

The Corporation has a portfolio of Energy loans that are included entirely in commercial loans in the Consolidated Balance Sheets. Customers in the Corporation's Energy business line (approximately 150 relationships) are engaged in three segments of the oil and gas business: exploration and production (E&P), midstream and energy services. E&P generally includes such activities as searching for potential oil and gas fields, drilling exploratory wells and operating active wells. Commitments to E&P borrowers are generally subject to semi-annual borrowing base re-determinations based on a variety of factors including updated prices (reflecting market and competitive conditions), energy reserve levels and the impact of hedging. The midstream sector is generally involved in the transportation, storage and marketing of crude and/or refined oil and gas products. The Corporation's energy services customers provide products and services primarily to the E&P segment.

The following table summarizes information about the Corporation's Energy business line.

(dollar amounts in millions)			2019			2018							
December 31	 		Criticized (a)		Outstand	lings	s Nonaccrual		riticized (a)				
Exploration and production (E&P)	\$ 1,741	78% \$	43	\$	289	\$	1,771	82% \$	46	\$	143		
Midstream	432	20	_		63		298	14	_		43		
Services	48	2	_		14		94	4	2		19		
Total Energy business line	\$ 2,221	100% \$	43	\$	366	\$	2,163	100% \$	48	\$	205		
As a percentage of total Energy loans			2%	6	16%				2%	ó	9%		

(a) Includes nonaccrual loans.

Loans in the Energy business line totaled \$2.2 billion, or approximately 4 percent of total loans, at December 31, 2019, an increase of \$58 million. Total exposure, including unused commitments to extend credit and letters of credit, was \$4.3 billion and \$4.5 billion at December 31, 2019 and December 31, 2018, respectively.

The Corporation's allowance methodology considers the various risk elements within the loan portfolio. When merited, the Corporation may incorporate a qualitative reserve component for Energy loans. There were \$86 million and \$6 million in net credit-related charge-offs in the Energy business line for the years ended December 31, 2019 and 2018, respectively. Criticized loans increased \$161 million to \$366 million at December 31, 2019. The increase in net charge-offs and criticized loans resulted from the impact of a decline in valuations of select liquidating assets due to tight capital markets in the industry.

Leveraged Loans

Certain loans in the Corporation's commercial portfolio are considered leveraged transactions. These loans are typically used for mergers, acquisitions, business recapitalizations, refinancing and equity buyouts. To help mitigate the risk associated with these loans, the Corporation focuses on middle market companies with highly capable management teams, strong sponsors and solid track records of financial performance. Industries prone to cyclical downturns and acquisitions with a high degree of integration risk are generally avoided. Other considerations include the sufficiency of collateral, the level of balance sheet leverage and the adequacy of financial covenants. During the underwriting process, cash flows are stress tested to evaluate the borrowers' abilities to handle economic downturns and an increase in interest rates.

The FDIC defines higher-risk commercial and industrial (HR C&I) loans for assessment purposes as loans generally with leverage of four times total debt to earnings before interest, taxes and depreciation (EBITDA) as well as three times senior debt to EBITDA, excluding certain collateralized loans. HR C&I loans were \$2.6 billion and \$2.5 billion at December 31, 2019 and 2018, respectively. Criticized loans within the HR C&I loan portfolio were \$169 million and \$147 million at December 31, 2019 and 2018, respectively. Charge-offs of HR C&I loans totaled \$6 million in 2019 and \$15 million in 2018.

International Exposure

International assets are subject to general risks inherent in the conduct of business in countries, including economic uncertainties and each foreign government's regulations. Risk management practices minimize the risk inherent in international lending arrangements. These practices include structuring bilateral agreements or participating in bank facilities, which secure repayment from sources external to the borrower's country. Accordingly, such international outstandings are excluded from the cross-border risk of that country.

There were no countries with cross-border outstandings exceeding 0.75 percent of total assets at December 31, 2019, 2018 and 2017. The Corporation's international strategy is to focus on international companies doing business in North America, with an emphasis on the Corporation's primary geographic markets.

Market and Liquidity Risk

Market risk represents the risk of loss due to adverse movement in prices, including interest rates, foreign exchange rates, commodity prices and equity prices. Liquidity risk represents the risk that the Corporation does not have sufficient access to funds to maintain its normal operations at all times, or does not have the ability to raise or borrow funds at a reasonable cost at all times.

The Asset and Liability Policy Committee (ALCO) of the Corporation establishes and monitors compliance with the policies and risk limits pertaining to market and liquidity risk management activities. ALCO meets regularly to discuss and review market and liquidity risk management strategies, and consists of executive and senior management from various areas of the Corporation, including treasury, finance, economics, lending, deposit gathering and risk management. Corporate Treasury mitigates market and liquidity risk under the direction of ALCO through the actions it takes to manage the Corporation's market, liquidity and capital positions.

In addition to assessing liquidity risk on a consolidated basis, Corporate Treasury also monitors the parent company's liquidity and has established limits for the minimum number of months into the future in which the parent company can meet existing and forecasted obligations without the support of additional dividends from subsidiaries. ALCO's liquidity policy requires the parent company to maintain sufficient liquidity to meet expected capital and debt obligations with a target of 24 months but no less than 18 months.

Corporate Treasury and the Enterprise Risk Division support ALCO in measuring, monitoring and managing interest rate risk as well as all other market risks. Key activities encompass: (i) providing information and analyses of the Corporation's balance sheet structure and measurement of interest rate and all other market risks; (ii) monitoring and reporting of the Corporation's positions relative to established policy limits and guidelines; (iii) developing and presenting analyses and strategies to adjust risk positions; (iv) reviewing and presenting policies and authorizations for approval; and (v) monitoring of industry trends and analytical tools to be used in the management of interest rate and all other market and liquidity risks.

Interest Rate Risk

Net interest income is the primary source of revenue for the Corporation. Interest rate risk arises in the normal course of business due to differences in the repricing and cash flow characteristics of assets and liabilities, primarily through the Corporation's core business activities of extending loans and acquiring deposits. The Corporation's balance sheet is predominantly characterized by floating-rate loans funded by core deposits. Including the impact of interest rate swaps converting floating-rate loans to fixed, the Corporation's loan composition at December 31, 2019 was 62 percent 30-day LIBOR, 6 percent other LIBOR (primarily 60-day), 14 percent prime and 18 percent fixed rate. This creates sensitivity to interest rate movements due to the imbalance between the faster repricing of the floating-rate loan portfolio versus deposit products. In addition, the growth and/or contraction in the Corporation's loans and deposits may lead to changes in sensitivity to interest rate movements in the absence of mitigating actions. Examples of such actions are purchasing fixed-rate investment securities, which provide liquidity to the balance sheet and act to mitigate the inherent interest sensitivity, as well as hedging with interest rate swaps and options. The Corporation actively manages its exposure to interest rate risk with the principal objective of optimizing net interest income and the economic value of equity while operating within acceptable limits established for interest rate risk and maintaining adequate levels of funding and liquidity.

Since no single measurement system satisfies all management objectives, a combination of techniques is used to manage interest rate risk. These techniques examine the impact of interest rate risk on net interest income and the economic value of equity under a variety of alternative scenarios, including changes in the level, slope and shape of the yield curve utilizing multiple simulation analyses. Simulation analyses produce only estimates of net interest income as the assumptions used are inherently uncertain. Actual results may differ from simulated results due to many factors, including, but not limited to, the timing, magnitude and frequency of changes in interest rates, market conditions, regulatory impacts and management strategies.

Sensitivity of Net Interest Income to Changes in Interest Rates

The analysis of the impact of changes in interest rates on net interest income under various interest rate scenarios is management's principal risk management technique. Management models a base case net interest income under an unchanged interest rate environment. Existing derivative instruments entered into for risk management purposes as of the balance sheet dates

are included in the analysis, but no additional hedging is forecasted. At December 31, 2019, these derivative instruments comprise interest rate swaps that convert \$3.3 billion of fixed-rate medium- and long-term debt to variable rates through fair value hedges and convert \$4.6 billion of variable-rate loans to fixed rates through cash flow hedges. This base case net interest income is then compared against interest rate scenarios in which rates rise or decline 100 basis points in a linear, non-parallel fashion from the base case over 12 months, resulting in an average increase or decrease in short-term interest rates of 50 basis points over the period.

Each scenario includes assumptions such as loan growth, investment security prepayment levels, depositor behavior, yield curve changes, loan and deposit pricing, and overall balance sheet mix and growth. In this low rate environment, depositors have maintained a higher level of liquidity and their historical behavior may be less indicative of future trends. As a result, the rising rate scenario reflects a greater decrease in deposits than we have experienced historically as rates rise. Changes in actual economic activity may result in a materially different interest rate environment as well as a balance sheet structure that is different from the changes management included in its simulation analysis.

The table below, as of December 31, 2019 and 2018, displays the estimated impact on net interest income during the next 12 months by relating the base case scenario results to those from the rising and declining rate scenarios described above.

	Estimated Annual Change									
(in millions)		2019			2018	2018				
December 31		Amount	%		Amount	%				
Change in Interest Rates:										
Rising 100 basis points	\$	90	4 %	\$	82	3 %				
Declining 100 basis points		(135)	(6)		(155)	(6)				

Sensitivity to declining interest rates decreased from December 31, 2018 to December 31, 2019 due to the impact of swaps converting variable-rate loans to fixed rates. Sensitivity to rising interest rates increased due to changes in balance sheet composition, partially offset by the addition of swaps converting variable-rate loans to fixed rates.

During January 2020, the Corporation added interest rate swaps that convert an additional \$1 billion of variable-rate loans to fixed rates through cash flow hedges. These additional hedges are not included in the sensitivity analysis discussed above.

Sensitivity of Economic Value of Equity to Changes in Interest Rates

In addition to the simulation analysis on net interest income, an economic value of equity analysis provides an alternative view of the interest rate risk position. The economic value of equity is the difference between the estimate of the economic value of the Corporation's financial assets, liabilities and off-balance sheet instruments, derived through discounting cash flows based on actual rates at the end of the period, and the estimated economic value after applying the estimated impact of rate movements. The Corporation primarily monitors the percentage change on the base case economic value of equity. The economic value of equity analysis is based on an immediate parallel 100 basis point shock.

The table below, as of December 31, 2019 and 2018, displays the estimated impact on the economic value of equity from the interest rate scenario described above.

(in millions)		2019		2018			
December 31	-	Amount	%		Amount	%	
Change in Interest Rates:							
Rising 100 basis points	\$	716	7 %	\$	434	3 %	
Declining 100 basis points		(1,178)	(12)		(1,023)	(8)	

The sensitivity of the economic value of equity to rising and declining rates increased from December 31, 2018 and December 31, 2019 due to changes in expected deposit lives and balance sheet composition, partially offset by the addition of swaps converting variable-rate loans to fixed rate.

LIBOR Transition

On July 27, 2017, the United Kingdom's Financial Conduct Authority, which regulates LIBOR, publicly announced that it intends to stop persuading or compelling banks to submit LIBOR rates after 2021. The Corporation has substantial exposure to LIBOR-based products, including loans, securities, derivatives and hedges, and is preparing for a transition from LIBOR toward alternative rates. A dedicated program office and governance structure has been established, with direction and oversight from the Chief Executive Officer, Interim Chief Financial Officer and Chief Risk Officer. A cross-functional implementation team tasked with execution of the LIBOR transition plan is responsible for evaluating alternative rates and associated impacts, assessing the population of impacted contracts and ensuring necessary fallback provisions are incorporated, ensuring operational readiness and communicating timely with internal and external stakeholders. Additionally, the Corporation continues to monitor market developments and regulatory updates, as well as collaborate with regulators and industry groups on the transition. For a discussion

of the various risks facing the Corporation in relation to the transition away from LIBOR, see the market risk discussion within Item 1A. Risk Factors.

Loan Maturities and Interest Rate Sensitivity

		Loans N	Iatur	ring	
(in millions) December 31, 2019	Within One Year (a)	After One But Within Five Years		After Five Years	Total
Commercial loans	\$ 15,068	\$ 15,423	\$	982	\$ 31,473
Real estate construction loans	1,321	1,978		156	3,455
Commercial mortgage loans	1,856	4,922		2,781	9,559
International loans	343	583		83	1,009
Total	\$ 18,588	\$ 22,906	\$	4,002	\$ 45,496
Sensitivity of loans to changes in interest rates:					
Predetermined (fixed) interest rates	\$ 595	\$ 2,147	\$	588	\$ 3,330
Floating interest rates	17,993	20,759		3,414	42,166
Total	\$ 18,588	\$ 22,906	\$	4,002	\$ 45,496

⁽a) Includes demand loans, loans having no stated repayment schedule or maturity and overdrafts.

The Corporation uses investment securities and derivative instruments as asset and liability management tools with the overall objective of managing the volatility of net interest income from changes in interest rates. These tools assist management in achieving the desired interest rate risk management objectives. Activity related to derivative instruments currently involves interest rate swaps effectively converting fixed-rate medium- and long-term debt to a floating rate as well as variable rate loans to a fixed rate.

Risk Management Derivative Instruments

(in millions)	Interest Rate	Foreign Exchange	
Risk Management Notional Activity	Contracts	Contracts	Totals
Balance at January 1, 2018	\$ 1,775	\$ 650	\$ 2,425
Additions	850	10,095	10,945
Maturities/amortizations	_	(10,443)	(10,443)
Balance at December 31, 2018	\$ 2,625	\$ 302	\$ 2,927
Additions	5,600	7,922	13,522
Maturities/amortizations	(350)	(7,894)	(8,244)
Balance at December 31, 2019	\$ 7,875	\$ 330	\$ 8,205

The notional amount of risk management interest rate swaps totaled \$7.9 billion at December 31, 2019, and \$2.6 billion at December 31, 2018, which included fair value hedging strategies that convert \$3.3 billion of fixed-rate medium- and long-term debt to a floating rate as well as cash flow hedging strategies that convert \$4.6 billion of variable-rate loans to a fixed rate. Risk management interest rate swaps generated \$4 million and \$7 million of net interest income for the years ended December 31, 2019 and 2018, respectively.

In addition to interest rate swaps, the Corporation employs various other types of derivative instruments as offsetting positions to mitigate exposures to foreign currency risks associated with specific assets and liabilities (e.g., customer loans or deposits denominated in foreign currencies). Such instruments may include foreign exchange spot and forward contracts as well as foreign exchange swap agreements.

Further information regarding risk management derivative instruments is provided in Note 8 to the consolidated financial statements.

Customer-Initiated and Other Derivative Instruments

(in millions) Customer-Initiated and Other Notional Activity	Interest Rate Contracts	Energy Derivative Contracts	Foreign Exchange Contracts	Totals
Balance at January 1, 2018	\$ 14,389	\$ 1,847	\$ 1,884	\$ 18,120
Additions	4,245	2,287	50,220	56,752
Maturities/amortizations	(2,195)	(1,481)	(50,639)	(54,315)
Terminations	(1,554)	(3)	(370)	(1,927)
Balance at December 31, 2018	\$ 14,885	\$ 2,650	\$ 1,095	\$ 18,630
Additions	6,411	2,719	38,805	47,935
Maturities/amortizations	(2,289)	(2,198)	(38,887)	(43,374)
Terminations	(1,180)	(82)	_	(1,262)
Balance at December 31, 2019	\$ 17,827	\$ 3,089	\$ 1,013	\$ 21,929

The Corporation sells and purchases interest rate caps and floors and enters into foreign exchange contracts, interest rate swaps and energy derivative contracts to accommodate the needs of customers requesting such services. Changes in the fair value of customer-initiated and other derivatives are recognized in earnings as they occur. To limit the market risk of these activities, the Corporation generally takes offsetting positions with dealers. The notional amounts of offsetting positions are included in the table above. Customer-initiated and other notional activity represented 73 percent and 86 percent of total interest rate, energy and foreign exchange contracts at December 31, 2019 and 2018, respectively.

Further information regarding customer-initiated and other derivative instruments is provided in Note 8 to the consolidated financial statements.

Liquidity Risk and Off-Balance Sheet Arrangements

Liquidity is the ability to meet financial obligations through the maturity or sale of existing assets or the acquisition of additional funds. Various financial obligations, including contractual obligations and commercial commitments, may require future cash payments by the Corporation. Certain obligations are recognized on the Consolidated Balance Sheets, while others are off-balance sheet under U.S. generally accepted accounting principles.

The following contractual obligations table summarizes the Corporation's noncancelable contractual obligations and future required minimum payments. Refer to Notes 6, 9, 10, 11, 12, and 18 to the consolidated financial statements for further information regarding these contractual obligations.

Contractual Obligations

		Minimu	m Pa	yments Due l	by Pe	riod			
(in millions) December 31, 2019	Total	Less than 1 Year		1-3 Years		4-5 Years	1	More than 5 Years	
Deposits without a stated maturity (a)	\$ 54,093	\$ 54,093							
Certificates of deposit and other deposits with a stated maturity (a)	3,202	2,970		180		26		26	
Short-term borrowings (a)	71	71		_		_		_	
Medium- and long-term debt (a)	7,125	675		_		1,350		5,100	
Operating leases	438	60		115		88		175	
Commitments to fund low income housing partnerships	160	98		52		5		5	
Other long-term obligations (b)	356	101		92		34		129	
Total contractual obligations	\$ 65,445	\$ 58,068	\$	439	\$	1,503	\$	5,435	
Medium- and long-term debt (parent company only) (a) (c)	\$ 1,650	\$ _	\$	_	\$	850	\$	800	

⁽a) Deposits and borrowings exclude accrued interest.

b) Includes unrecognized tax benefits.

In addition to contractual obligations, other commercial commitments of the Corporation impact liquidity. These include unused commitments to extend credit, standby letters of credit and financial guarantees, and commercial letters of credit. The following table summarizes the Corporation's commercial commitments and expected expiration dates by period.

⁽c) Parent company only amounts are included in the medium- and long-term debt minimum payments above.

Commercial Commitments

		Expected Expiration Dates by Period									
(in millions) December 31, 2019		Total	Less than 1 Year		1-3 Years		4-5 Years		More than 5 Years		
Unused commitments to extend credit	\$	26,861	\$	10,863	\$	8,648	\$	4,507	\$	2,843	
Standby letters of credit and financial guarantees		3,320		2,837		319		103		61	
Commercial letters of credit		18		17		_		1		_	
Total commercial commitments	\$	30,199	\$	13,717	\$	8,967	\$	4,611	\$	2,904	

Since many of these commitments expire without being drawn upon, and each customer must continue to meet the conditions established in the contract, the total amount of these commercial commitments does not necessarily represent the future cash requirements of the Corporation. Refer to the "Other Market Risks" section below and Note 8 to the consolidated financial statements for a further discussion of these commercial commitments.

Wholesale Funding

The Corporation may access the purchased funds market when necessary, which includes a variety of funding sources. Capacity for incremental purchased funds at December 31, 2019 included short-term FHLB advances, the ability to purchase federal funds, sell securities under agreements to repurchase, as well as issue deposits through brokers. Purchased funds increased to \$295 million at December 31, 2019, compared to \$52 million at December 31, 2018, primarily reflecting a \$133 million increase in brokered deposits included in other time deposits on the Consolidated Balance Sheets. At December 31, 2019, the Bank had pledged loans totaling \$22.0 billion which provided for up to \$17.8 billion of available collateralized borrowing with the FRB.

The Bank is a member of the FHLB of Dallas, Texas, which provides short- and long-term funding to its members through advances collateralized by real estate-related assets. Actual borrowing capacity is contingent on the amount of collateral available to be pledged to the FHLB. At December 31, 2019, \$17.2 billion of real estate-related loans were pledged to the FHLB as collateral for current and potential future borrowings. The Corporation had \$3.8 billion of outstanding borrowings maturing between 2026 and 2028 and capacity for potential future borrowings of approximately \$5.1 billion.

Additionally, the Bank had the ability to issue up to \$13.5 billion of debt at December 31, 2019 under an existing \$15.0 billion note program which allows the issuance of debt with maturities between three months and 30 years. The Corporation also maintains a shelf registration statement with the Securities and Exchange Commission from which it may issue debt and equity securities.

The ability of the Corporation and the Bank to raise funds at competitive rates is impacted by rating agencies' views of the credit quality, liquidity, capital and earnings of the Corporation and the Bank. As of December 31, 2019, the three major rating agencies had assigned the following ratings to long-term senior unsecured obligations of the Corporation and the Bank. A security rating is not a recommendation to buy, sell, or hold securities and may be subject to revision or withdrawal at any time by the assigning rating agency. Each rating should be evaluated independently of any other rating.

	Comerica Inc	Comerica Incorporated Comerica		
December 31, 2019	Rating	Outlook	Rating	Outlook
Standard and Poor's	BBB+	Stable	A-	Stable
Moody's Investors Service	A3	Stable	A3	Stable
Fitch Ratings	A	Negative	A	Negative

The Corporation satisfies liquidity needs with either liquid assets or various funding sources. Liquid assets totaled \$17.9 billion at December 31, 2019, compared to \$16.3 billion at December 31, 2018. Liquid assets include cash and due from banks, federal funds sold, interest-bearing deposits with banks, other short-term investments and unencumbered investment securities.

The Corporation performs monthly liquidity stress testing to evaluate its ability to meet funding needs in hypothetical stressed environments. Such environments cover a series of broad events, distinguished in terms of duration and severity. The evaluation as of December 31, 2019 projected that sufficient sources of liquidity were available under each series of events.

Other Market Risks

Market risk related to the Corporation's trading instruments is not significant, as trading activities are limited. Certain components of the Corporation's noninterest income, primarily fiduciary income, are at risk to fluctuations in the market values of underlying assets, particularly equity and debt securities. Other components of noninterest income, primarily brokerage fees, are at risk to changes in the volume of market activity.

Operational Risk

Operational risk represents the risk of loss resulting from inadequate or failed internal processes and people, or from external events, excluding in most cases those driven by technology (see Technology Risk below). The Corporation's definition of operational risk includes fraud; employment practice and workplace safety; clients, products and business practice; business continuity or disaster recovery; execution, delivery, and process management; third party and model risks. The definition does not include strategic or reputational risks. Although operational losses are experienced by all companies and are routinely incurred in business operations, the Corporation recognizes the need to identify and control operational losses and seeks to limit losses to a level deemed appropriate by management, as outlined in the Corporation's risk appetite statement. The appropriate risk level is determined through consideration of the nature of the Corporation's business and the environment in which it operates, in combination with the impact from, and the possible impact on, other risks faced by the Corporation. Operational risk is mitigated through a system of internal controls that are designed to keep operating risks at appropriate levels. The Operational Risk Management Committee monitors risk management techniques and systems. The Corporation has developed a framework that includes a centralized operational risk management function in the Enterprise Risk Division and business/support unit risk liaisons responsible for managing operational risk specific to the respective business lines.

Technology Risk

Technology risk represents the risk of loss or adverse outcomes arising from the people, processes, applications and infrastructure that support the technology environment. The Corporation's definition of technology risk includes technology delivery risk, technology investment risk, cybersecurity risk, information security risk and information management risk. Technology risk is inclusive of the risks associated with the execution of technology processes and activities by third-party contractors and suppliers to the Corporation. Other risk types may materialize in the event of a technology risk event, such as the risk of a financial reporting error or regulatory non-compliance, and the impact of such risks are highly interdependent with operational risk.

The Technology Risk Management Committee, comprising senior and executive business unit managers, as well as managers responsible for technology, cybersecurity, information security and enterprise risk management, oversees technology risk. The Technology Risk Management Committee also ensures that appropriate actions are implemented in business units to mitigate risk to an acceptable level.

Compliance Risk

Compliance risk represents the risk of sanctions or financial loss resulting from the Corporation's failure to comply with all applicable laws, regulations and standards of good banking practice. The impact of such risks is highly interdependent with strategic risk, as the reputational impact from compliance breaches can be severe. Activities which may expose the Corporation to compliance risk include, but are not limited to, those dealing with the prevention of money laundering, privacy and data protection, community reinvestment initiatives, fair lending, consumer protection, employment and tax matters, over-the-counter derivative activities and other regulated activities.

The Enterprise-Wide Compliance Committee, comprising senior and executive business unit managers, as well as managers responsible for compliance, audit and overall risk, oversees compliance risk. This enterprise-wide approach provides a consistent view of compliance across the organization. The Enterprise-Wide Compliance Committee also ensures that appropriate actions are implemented in business units to mitigate risk to an acceptable level.

Strategic Risk

Strategic risk represents the risk of inadequate returns or possible losses due to impairment of reputation, failure to fully develop and execute business plans, failure to assess current and new opportunities in business, markets and products, failure to determine appropriate consideration for risks accepted, and any other event not identified in the defined risk categories of credit, market and liquidity, operational, technology or compliance risks. Mitigation of the various risk elements that represent strategic risk is achieved through various metrics and initiatives to help the Corporation better understand, measure and report on such risks.

CRITICAL ACCOUNTING POLICIES

The Corporation's consolidated financial statements are prepared based on the application of accounting policies, the most significant of which are described in Note 1. These policies require numerous estimates and strategic or economic assumptions, which may prove inaccurate or subject to variations. Changes in underlying factors, assumptions or estimates could have a material impact on the Corporation's future financial condition and results of operations. At December 31, 2019, the most critical of these significant accounting policies were the policies related to the allowance for credit losses, fair value measurement, goodwill, pension plan accounting and income taxes. These policies were reviewed with the Audit Committee of the Corporation's Board of Directors and are discussed more fully below.

ALLOWANCE FOR CREDIT LOSSES

The allowance for credit losses, which includes both the allowance for loan losses and the allowance for credit losses on lending-related commitments, is calculated with the objective of maintaining a reserve sufficient to absorb estimated probable losses. Management's determination of the appropriateness of the allowance is based on periodic evaluations of the loan portfolio, lending-related commitments and other relevant factors. This evaluation is inherently subjective as it requires numerous estimates, including the loss content for internal risk ratings, collateral values, the amounts and timing of expected future cash flows, and for lending-related commitments, estimates of the probability of draw on unused commitments. In addition, management exercises judgment to adjust or supplement modeled estimates for factors not otherwise fully accounted for, such as the risks and uncertainties observed in current market conditions, portfolio developments and other imprecision factors.

In determining the allowance for credit losses, the Corporation individually evaluates certain impaired loans, applies standard reserve factors to pools of homogeneous loans and lending-related commitments and incorporates qualitative adjustments. Standard loss factors, applied to the majority of the Corporation's loan portfolio and lending-related commitments, are based on estimates of probabilities of default for individual risk ratings over the loss emergence period and loss given default. Loss emergence periods are used to determine the most appropriate default horizon associated with the calculation of probabilities of default. Changes to one or more of the estimates used to develop standard loss factors, or the use of different estimates, would result in a different estimated allowance for credit losses. To illustrate, if recent loss experience dictated that the estimated standard loss factors would be changed by five percent of the estimate across all loan risk ratings, the allowance for loan losses as of December 31, 2019 would change by approximately \$28 million.

Because standard loss factors are applied to pools of loans based on the Corporation's internal risk rating system, loss estimates are highly dependent on the accuracy of the risk rating assigned to each loan. The inherent imprecision in the risk rating system resulting from inaccuracy in assigning and/or entering risk ratings in the loan accounting system is monitored by the Corporation's asset quality review function and incorporated in a qualitative adjustment. The Corporation may also include qualitative adjustments intended to capture the impact of certain other uncertainties that exist but are not yet reflected in the standard reserve factors. These qualitative adjustments are based on management's analysis of factors such as portfolios where recent historical losses exceed expected losses or known recent events are expected to alter risk ratings once evidence is acquired, observable macroeconomic metrics, including consideration of regional metrics within the Corporation's footprint, and a qualitative assessment of the lending environment, including underwriting standards, current economic and political conditions, and other factors affecting credit quality. Qualitative reserves at December 31, 2019 primarily included components for portfolios where recent loss trends were in excess of estimated losses based on overall portfolio standard loss factors, model imprecision and changes in market conditions compared to the conditions that existed at the date of the most recent annual update to standard reserve factors.

For further discussion of the methodology used in the determination of the allowance for credit losses, refer to Note 1 to the consolidated financial statements. To the extent actual outcomes differ from management estimates, additional provision for credit losses may be required that would adversely impact earnings in future periods. The allowance is assigned to business segments and any earnings impact resulting from actual outcomes differing from management estimates would primarily affect the Business Bank segment.

On January 1, 2020, the Corporation adopted a new accounting standard for estimating credit losses (CECL). For additional information about the adoption of CECL, refer to the "Pending Accounting Pronouncements" section of Note 1 to the consolidated financial statements.

FAIR VALUE MEASUREMENT

Investment securities available-for-sale, derivatives and deferred compensation plan assets and associated liabilities are recorded at fair value on a recurring basis. Additionally, from time to time, other assets and liabilities may be recorded at fair value on a nonrecurring basis, such as impaired loans that have been reduced based on the fair value of the underlying collateral, other real estate (primarily foreclosed property), nonmarketable equity securities and certain other assets and liabilities. These nonrecurring fair value adjustments typically involve write-downs of individual assets or application of lower of cost or fair value accounting.

Fair value is an estimate of the exchange price that would be received to sell an asset or paid to transfer a liability in an orderly transaction (i.e., not a forced transaction, such as a liquidation or distressed sale) between market participants at the measurement date and is based on the assumptions market participants would use when pricing an asset or liability. Fair value measurement and disclosure guidance establishes a three-level hierarchy for disclosure of assets and liabilities recorded at fair value. Notes 1 and 2 to the consolidated financial statements includes information about the fair value hierarchy, the extent to which fair value is used to measure assets and liabilities, as well as the valuation methodologies and key inputs used.

At December 31, 2019, assets and liabilities measured using observable inputs that are classified as Level 1 or Level 2 represented 99.3 percent and 100 percent of total assets and liabilities recorded at fair value, respectively. Valuations generated from model-based techniques that use at least one significant assumption not observable in the market are considered Level 3 and reflect estimates of assumptions market participants would use in pricing the asset or liability.

GOODWILL

Goodwill is initially recorded as the excess of the purchase price over the fair value of net assets acquired in a business combination and is subsequently evaluated at least annually for impairment. The Corporation may elect to perform a quantitative impairment analysis, or first conduct a qualitative analysis to determine if a quantitative analysis is necessary. Goodwill impairment testing is performed at the reporting unit level, equivalent to a business segment or one level below. The Corporation has three reporting units: the Business Bank, the Retail Bank and Wealth Management. At December 31, 2019, goodwill totaled \$635 million, including \$473 million allocated to the Business Bank, \$101 million allocated to the Retail Bank and \$61 million allocated to Wealth Management.

The annual test of goodwill impairment was performed as of the beginning of the third quarter 2019. The Corporation first assessed qualitative factors to determine whether it was more likely than not that the fair value of any reporting unit was less than its carrying amount, including goodwill. Qualitative factors included economic conditions, industry and market considerations, cost factors, overall financial performance, regulatory developments and performance of the Corporation's stock, among other events and circumstances. At the conclusion of the qualitative assessment in the third quarter 2019, the Corporation determined that it was more likely than not that the fair value of each reporting unit exceeded its carrying value.

Qualitative factors considered in the analysis of each reporting unit incorporated current economic and market conditions, including the recent Federal Reserve announcements and the impact of legislative and regulatory changes, to the extent known. However, further weakening in the economic environment, such as continued declines in interest rates, a decline in the performance of the reporting units or other factors could cause the fair value of one or more of the reporting units to fall below their carrying value, resulting in a goodwill impairment charge. Additionally, new legislative or regulatory changes not anticipated in management's expectations may cause the fair value of one or more of the reporting units to fall below the carrying value, resulting in a goodwill impairment charge. Any impairment charge would not affect the Corporation's regulatory capital ratios, tangible common equity ratio or liquidity position.

PENSION PLAN ACCOUNTING

The Corporation has a qualified and non-qualified defined benefit pension plan. Effective January 1, 2017, benefits are calculated using a cash balance formula based on years of service, age, compensation and an interest credit based on the 30-year Treasury rate. Participants under age 60 as of December 31, 2016 are eligible to receive a frozen final average pay benefit in addition to amounts earned under the cash balance formula. Participants age 60 or older as of December 31, 2016 continue to be eligible for a final average pay benefit. The Corporation makes assumptions concerning future events that will determine the amount and timing of required benefit payments, funding requirements and defined benefit pension expense. The major assumptions are the discount rate used in determining the current benefit obligation, the long-term rate of return expected on plan assets, mix of assets within the portfolio and the projected mortality rate.

The discount rate is determined by matching the expected cash flows of the pension plans to a portfolio of high quality corporate bonds as of the measurement date, December 31. The long-term rate of return expected on plan assets is set after considering both long-term returns in the general market and long-term returns experienced by the assets in the plan. The current target asset allocation model for the plans is provided in Note 17 to the consolidated financial statements. The expected returns on these various asset categories are blended to derive one long-term return assumption. The assets are invested in certain collective investment funds, common stocks, U.S. Treasury and other U.S. government agency securities, as well as corporate and municipal bonds and notes. Mortality rate assumptions are based on mortality tables published by third-parties such as the Society of Actuaries (SOA), considering other available information including historical data as well as studies and publications from reputable sources.

The Corporation reviews its pension plan assumptions on an annual basis with its actuarial consultants to determine if the assumptions are reasonable and adjusts the assumptions to reflect changes in future expectations. The major assumptions used to calculate 2020 defined benefit plan pension expense (benefit) were as follows:

Discount rate	3.43%
Long-term rate of return on plan assets	6.50%
Mortality table:	
Base table (a)	Pri-2012
Mortality improvement scale (a)	MP-2019

(a) Issued by the Society of Actuaries in October 2019.

Defined benefit plan expense is expected to decrease \$7 million to a benefit of approximately \$22 million in 2020, compared to a benefit of \$29 million in 2019. This includes service cost expense of \$35 million and a benefit from other components of \$57 million.

Changing the 2020 discount rate and long-term rate of return by 25 basis points would impact defined benefit expense in 2020 by \$7.6 million and \$6.6 million, respectively.

Due to the long-term nature of pension plan assumptions, actual results may differ significantly from the actuarial-based estimates. Differences resulting in actuarial gains or losses are required to be recorded in shareholders' equity as part of accumulated other comprehensive loss and amortized to defined benefit pension expense in future years. Refer to Note 17 to the consolidated financial statements for further information.

INCOME TAXES

The calculation of the Corporation's income tax provision and tax-related accruals is complex and requires the use of estimates and judgments. The provision for income taxes is the sum of income taxes due for the current year and deferred taxes. Deferred taxes arise from temporary differences between the income tax basis and financial accounting basis of assets and liabilities. Accrued taxes represent the net estimated amount due to or to be received from taxing jurisdictions, currently or in the future, and are included in accrued income and other assets or accrued expenses and other liabilities on the Consolidated Balance Sheets. The Corporation assesses the relative risks and merits of tax positions for various transactions after considering statutes, regulations, judicial precedent and other available information and maintains tax accruals consistent with these assessments. The Corporation is subject to audit by taxing authorities that could question and/or challenge the tax positions taken by the Corporation.

Included in net deferred taxes are deferred tax assets. Deferred tax assets are evaluated for realization based on available evidence of projected future reversals of existing taxable temporary differences, assumptions made regarding future events and, when applicable, state loss carryback capacity. A valuation allowance is provided when it is more-likely-than-not that some portion of the deferred tax asset will not be realized.

Changes in the estimate of accrued taxes occur due to changes in tax law, interpretations of existing tax laws, new judicial or regulatory guidance, and the status of examinations conducted by taxing authorities that impact the relative risks and merits of tax positions taken by the Corporation. These changes, when they occur, impact the estimate of accrued taxes and could be significant to the operating results of the Corporation. For further information on tax accruals and related risks, see Note 18 to the consolidated financial statements.

SUPPLEMENTAL FINANCIAL DATA

The following table provides a reconciliation of non-GAAP financial measures used in this financial review with financial measures defined by GAAP.

(dollar amounts in millions)

December 31	2019	2018 2017		2017	2016		2015	
Tangible Common Equity Ratio:								
Common shareholders' equity	\$ 7,327	\$ 7,507	\$	7,963	\$	7,796	\$	7,560
Less:								
Goodwill	635	635		635		635		635
Other intangible assets	4	6		8		10		14
Tangible common equity	\$ 6,688	\$ 6,866	\$	7,320	\$	7,151	\$	6,911
Total assets	\$ 73,402	\$ 70,818	\$	71,567	\$	72,978	\$	71,877
Less:								
Goodwill	635	635		635		635		635
Other intangible assets	4	6		8		10		14
Tangible assets	\$ 72,763	\$ 70,177	\$	70,924	\$	72,333	\$	71,228
Common equity ratio	9.98%	10.60%		11.13%		10.68%		10.52%
Tangible common equity ratio	9.19	9.78		10.32		9.89		9.70
Tangible Common Equity per Share of Common Stock:								
Common shareholders' equity	\$ 7,327	\$ 7,507	\$	7,963	\$	7,796	\$	7,560
Tangible common equity	6,688	6,866		7,320		7,151		6,911
Shares of common stock outstanding (in millions)	142	160		173		175		176
Common shareholders' equity per share of common stock	\$ 51.57	\$ 46.89	\$	46.07	\$	44.47	\$	43.03
Tangible common equity per share of common stock	47.07	42.89		42.34		40.79		39.33

The tangible common equity ratio removes the effect of intangible assets from capital and total assets. Tangible common equity per share of common stock removes the effect of intangible assets from common shareholders' equity per share of common stock. The Corporation believes these measurements are meaningful measures of capital adequacy used by investors, regulators, management and others to evaluate the adequacy of common equity and to compare against other companies in the industry.

FORWARD-LOOKING STATEMENTS

This report includes forward-looking statements as defined in the Private Securities Litigation Reform Act of 1995. In addition, the Corporation may make other written and oral communications from time to time that contain such statements. All statements regarding the Corporation's expected financial position, strategies and growth prospects, including the GEAR Up initiative, and general economic conditions expected to exist in the future are forward-looking statements. The words, "anticipates," "believes," "contemplates," "feels," "expects," "estimates," "seeks," "strives," "plans," "intends," "outlook," "forecast," "position," "target," "mission," "assume," "achievable," "potential," "strategy," "goal," "aspiration," "opportunity," "initiative," "outcome," "continue," "remain," "maintain," "on track," "trend," "objective," "looks forward," "projects," "models" and variations of such words and similar expressions, or future or conditional verbs such as "will," "would," "should," "could," "might," "can," "may" or similar expressions, as they relate to the Corporation or its management, are intended to identify forward-looking statements. The Corporation cautions that forward-looking statements are subject to numerous assumptions, risks and uncertainties, which change over time. Forward-looking statements speak only as of the date the statement is made, and the Corporation does not undertake to update forward-looking statements to reflect facts, circumstances, assumptions or events that occur after the date the forward-looking statements are made. Actual results could differ materially from those anticipated in forward-looking statements and future results could differ materially from historical performance.

In addition to factors mentioned elsewhere in this report or previously disclosed in the Corporation's SEC reports (accessible on the SEC's website at www.sec.gov or on the Corporation's website at www.comerica.com), actual results could differ materially from forward-looking statements and future results could differ materially from historical performance due to a variety of reasons, including but not limited to, the following factors:

- unfavorable developments concerning credit quality could adversely affect the Corporation's financial results;
- declines in the businesses or industries of the Corporation's customers could cause increased credit losses or decreased loan balances, which could adversely affect the Corporation;
- changes in customer behavior may adversely impact the Corporation's business, financial condition and results of operations;
- governmental monetary and fiscal policies may adversely affect the financial services industry, and therefore impact the Corporation's financial condition and results of operations;
- fluctuations in interest rates and their impact on deposit pricing could adversely affect the Corporation's net interest income and balance sheet;
- developments impacting LIBOR and other interest rate benchmarks could adversely affect the Corporation;
- the Corporation must maintain adequate sources of funding and liquidity to meet regulatory expectations, support its operations and fund outstanding liabilities;
- reduction in the Corporation's credit ratings could adversely affect the Corporation and/or the holders of its securities;
- the soundness of other financial institutions could adversely affect the Corporation;
- security risks, including denial of service attacks, hacking, social engineering attacks targeting the Corporation's colleagues and customers, malware intrusion or data corruption attempts, and identity theft, could result in the disclosure of confidential information;
- cybersecurity and data privacy are areas of heightened legislative and regulatory focus;
- · the Corporation's operational or security systems or infrastructure, or those of third parties, could fail or be breached;
- the Corporation relies on other companies to provide certain key components of its delivery systems, and certain failures could materially adversely
 affect operations;
- legal and regulatory proceedings and related financial services industry matters, including those directly involving the Corporation and its subsidiaries, could adversely affect the Corporation or the financial services industry in general;
- the Corporation may incur losses due to fraud;
- controls and procedures may fail to prevent or detect all errors or acts of fraud;
- · changes in regulation or oversight may have a material adverse impact on the Corporation's operations;
- compliance with more stringent capital requirements may adversely affect the Corporation;
- · the impacts of future legislative, administrative or judicial changes or interpretations to tax regulations are unknown;
- changes in accounting standards could materially impact the Corporation's financial statements;
- the Corporation's accounting policies and processes are critical to the reporting of financial condition and results of operations and require management to make estimates about matters that are uncertain;
- damage to the Corporation's reputation could damage its businesses;
- the Corporation may not be able to utilize technology to develop, market and deliver new products and services to its customers;
- competitive product and pricing pressures within the Corporation's markets may change;
- the introduction, implementation, withdrawal, success and timing of business initiatives and strategies may be less successful or may be different than anticipated, which could adversely affect the Corporation's business;
- · management's ability to maintain and expand customer relationships may differ from expectations;
- management's ability to retain key officers and employees may change;
- any future strategic acquisitions or divestitures may present certain risks to the Corporation's business and operations;

- general political, economic or industry conditions, either domestically or internationally, may be less favorable than expected;
- methods of reducing risk exposures might not be effective;
- catastrophic events may adversely affect the general economy, financial and capital markets, specific industries, and the Corporation; and
- the Corporation's stock price can be volatile.

CONSOLIDATED BALANCE SHEETS Comerica Incorporated and Subsidiaries

(in millions, except share data)

December 31	2019	2018	
ASSETS			
Cash and due from banks	\$ 973	\$	1,390
Interest-bearing deposits with banks	4,845	:	3,171
Other short-term investments	155		134
Investment securities available-for-sale	12,398	1:	2,045
Commercial loans	31,473	3	1,976
Real estate construction loans	3,455	:	3,077
Commercial mortgage loans	9,559	!	9,106
Lease financing	588		507
International loans	1,009		1,013
Residential mortgage loans	1,845		1,970
Consumer loans	2,440	:	2,514
Total loans	50,369	50	0,163
Less allowance for loan losses	(637)		(671)
Net loans	49,732	4:	9,492
Premises and equipment	457		475
Accrued income and other assets	4,842		4,111
Total assets	\$ 73,402	\$ 7	0,818
LIABILITIES AND SHAREHOLDERS' EQUITY			
Noninterest-bearing deposits	\$ 27,382	\$ 2	8,690
Money market and interest-bearing checking deposits	24,527	2:	2,560
Savings deposits	2,184	:	2,172
Customer certificates of deposit	2,978	:	2,131
Other time deposits	133		_
Foreign office time deposits	91		8
Total interest-bearing deposits	29,913	2	6,871
Total deposits	57,295	5.	5,561
Short-term borrowings	71		44
Accrued expenses and other liabilities	1,440		1,243
Medium- and long-term debt	7,269		6,463
Total liabilities	66,075	6	3,311
Common stock - \$5 par value:			
Authorized - 325,000,000 shares			
Issued - 228,164,824 shares	1,141		1,141
Capital surplus	2,174		2,148
Accumulated other comprehensive loss	(235)		(609)
Retained earnings	9,538		8,781
Less cost of common stock in treasury - 86,069,234 shares at 12/31/19 and 68,081,176 shares at 12/31/18	(5,291)	((3,954)
Total shareholders' equity	7,327		7,507
Total liabilities and shareholders' equity	\$ 73,402	\$ 70	0,818

See notes to consolidated financial statements.

CONSOLIDATED STATEMENTS OF INCOME Comerica Incorporated and Subsidiaries

(in millions)

(in millions) Years Ended December 31	2019		2018	2017
INTEREST INCOME				
Interest and fees on loans	\$	2,439	2,262	\$ 1,87
Interest on investment securities		297	265	25
Interest on short-term investments		71	92	(
Total interest income		2,807	2,619	2,18
INTEREST EXPENSE				
Interest on deposits		262	122	2
Interest on short-term borrowings				
		9	1	
Interest on medium- and long-term debt		197	144	5
Total interest expense		468	267	12
Net interest income		2,339	2,352	2,06
Provision for credit losses		74	(1)	7
Net interest income after provision for credit losses		2,265	2,353	1,98
NONINTEREST INCOME				
Card fees		257	244	33
Fiduciary income		206	206	19
Service charges on deposit accounts		203	211	22
Commercial lending fees		91	85	8
Foreign exchange income		44	47	2
Bank-owned life insurance		41	39	2
Letter of credit fees		38	40	2
Brokerage fees		28	27	2
Net securities losses		(7)	(19)	-
Other noninterest income		109	96	10
Total noninterest income		1,010	976	1,10
NONINTEREST EXPENSES				
Salaries and benefits expense		1,020	1,009	96
Outside processing fee expense		264	255	36
Occupancy expense		154	152	15
Software expense		117	125	12
Equipment expense		50	48	2
Advertising expense		34	30	2
FDIC insurance expense		23	42	5
Restructuring charges		_	53	2
Other noninterest expenses		81	80	8
Total noninterest expenses		1,743	1,794	1,86
Income before income taxes		1,532	1,535	1,23
Provision for income taxes		334	300	49
NET INCOME		1,198	1,235	74
Less income allocated to participating securities		7	8	
Net income attributable to common shares	\$	1,191	1,227	\$ 73
Earnings per common share:				
Basic	\$	7.95	7.31	\$ 4.2
Diluted		7.87	7.20	4.1
Cash dividends declared on common stock		398	309	19
Cash dividends declared per common share		2.68	1.84	1.0

 $See\ notes\ to\ consolidated\ financial\ statements.$

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME Comerica Incorporated and Subsidiaries

(in millions)

Years Ended December 31	2019	2018	2017
NET INCOME	\$ 1,198	\$ 1,235	\$ 743
OTHER COMPREHENSIVE INCOME (LOSS)			
Unrealized gains (losses) on investment securities:			
Net unrealized holding gains (losses) arising during the period	257	(69)	(81)
Less:			
Reclassification adjustment for net securities losses included in net income	(8)	(20)	_
Net losses realized as a yield adjustment in interest on investment securities	_	_	(3)
Change in net unrealized gains (losses) before income taxes	265	(49)	(78)
Net gains on cash flow hedges:			
Change in net cash flow hedge gains before income taxes	44	_	_
Defined benefit pension and other postretirement plans adjustment:			
Actuarial gain (loss) arising during the period	163	(191)	72
Adjustments for amounts recognized as components of net periodic benefit cost:			
Amortization of actuarial net loss	42	61	51
Amortization of prior service credit	(27)	(27)	(27)
Change in defined benefit pension and other postretirement plans adjustment before income taxes	178	(157)	96
Total other comprehensive income (loss) before income taxes	487	(206)	18
Provision (benefit) for income taxes	113	(47)	(1)
Total other comprehensive income (loss), net of tax	374	(159)	19
COMPREHENSIVE INCOME	\$ 1,572	\$ 1,076	\$ 762

See notes to consolidated financial statements.

CONSOLIDATED STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY Comerica Incorporated and Subsidiaries

_	Common	Stock	(-		Accumulated Other					Total
(in millions, except per share data)	Shares Outstanding	4	Amount		Capital Surplus	Comprehensive Loss	Retained Earnings	-	Freasury Stock	Shareholders ² Equity	
BALANCE AT DECEMBER 31, 2016	175.3	\$	1,141	\$	2,135	\$ (383)	\$ 7,331	\$	(2,428)	\$	7,796
Cumulative effect of change in accounting principle	_		_		3	_	(2)		_		1
Net income	_		_		_	_	743		_		743
Other comprehensive income, net of tax	_		_		_	19	_		_		19
Cash dividends declared on common stock (\$1.09 per share)	_		_		_	_	(193)		_		(193)
Purchase of common stock	(7.5)		_		_	_	_		(544)		(544)
Net issuance of common stock under employee stock plans	3.3		_		(24)	_	(26)		152		102
Net issuance of common stock for warrants	1.8		_		(30)	_	(53)		83		_
Share-based compensation	_		_		39	_	_		_		39
Reclassification of certain deferred tax effects	_		_		_	(87)	87		_		_
Other	_		_		(1)	_	_		1		_
BALANCE AT DECEMBER 31, 2017	172.9		1,141		2,122	(451)	7,887		(2,736)		7,963
Cumulative effect of change in accounting principles	_		_		_	1	14		_		15
Net income	_		_		_	_	1,235		_		1,235
Other comprehensive loss, net of tax	_		_		_	(159)	_		_		(159)
Cash dividends declared on common stock (\$1.84 per share)	_		_		_	_	(309)		_		(309)
Purchase of common stock	(14.9)		_		(3)	_	_		(1,326)		(1,329)
Net issuance of common stock under employee stock plans	1.5		_		(9)	_	(23)		75		43
Net issuance of common stock for warrants	0.6		_		(10)	_	(23)		33		_
Share-based compensation	_		_		48	_	_		_		48
BALANCE AT DECEMBER 31, 2018	160.1		1,141		2,148	(609)	8,781		(3,954)		7,507
Cumulative effect of change in accounting principle	_		_		_	_	(14)		_		(14)
Net income	_		_		_	_	1,198		_		1,198
Other comprehensive income, net of tax	_		_		_	374	_		_		374
Cash dividends declared on common stock (\$2.68 per share)	_		_		_	_	(398)		_		(398)
Purchase of common stock	(18.7)		_		_	_	_		(1,380)		(1,380)
Net issuance of common stock under employee stock plans	0.7		_		(13)	_	(29)		43		1
Share-based compensation	_		_		39	_	_		_		39
BALANCE AT DECEMBER 31, 2019	142.1	\$	1,141	\$	2,174	\$ (235)	\$ 9,538	\$	(5,291)	\$	7,327

 $See\ notes\ to\ consolidated\ financial\ statements.$

CONSOLIDATED STATEMENTS OF CASH FLOWS Comerica Incorporated and Subsidiaries

Years Ended December 31		2019		2018	2017
OPERATING ACTIVITIES					
Net income	\$	1,198	\$	1,235	\$ 743
Adjustments to reconcile net income to net cash provided by operating activities:				(4)	
Provision for credit losses		74		(1)	74
Provision for deferred income taxes		12		24	79
Depreciation and amortization		114		120	121
Net periodic defined benefit credit		(29)		(18)	(18
Share-based compensation expense Net amortization of securities		39		48	39
		2		3	6
Accretion of loan purchase discount		_		(1)	(3
Net securities losses		7		19	
Net gains on sales of foreclosed property		1		(1)	(3
Net change in:					
Accrued income receivable		17		(45)	(33
Accrued expenses payable		(27)		49	41
Other, net		(318)		184	39
Net cash provided by operating activities		1,090		1,616	1,085
INVESTING ACTIVITIES					
Investment securities available-for-sale:					
Maturities and redemptions		2,262		1,781	1,615
Sales		987		1,256	1,259
Purchases		(3,346)		(3,032)	(3,112
Investment securities held-to-maturity:					
Maturities and redemptions		_		_	319
Net change in loans		(324)		(1,045)	(175
Proceeds from sales of foreclosed property		1		8	22
Net increase in premises and equipment		(86)		(90)	(69
Federal Home Loan Bank stock:					
Purchases		(201)		(41)	(42
Redemptions		201		_	42
Proceeds from bank-owned life insurance settlements		10		9	18
Other, net		2		(2)	3
Net cash used in investing activities		(494)		(1,156)	(120
FINANCING ACTIVITIES					
Net change in:					
Deposits		1,711		(2,082)	(1,180
Short-term borrowings		27		34	(15
Medium- and long-term debt:					
Maturities		(350)		_	(500
Issuances and advances		1,050		1,850	_
Terminations		_		_	(16
Common stock:					
Repurchases		(1,394)		(1,338)	(560
Cash dividends paid		(402)		(263)	(180
Issuances under employee stock plans		18		52	118
Other, net		1		3	(5
Net cash provided by (used in) financing activities		661		(1,744)	(2,338
Net increase (decrease) in cash and cash equivalents		1,257		(1,284)	(1,373
Cash and cash equivalents at beginning of period		4,561		5,845	7,218
Cash and cash equivalents at end of period	\$	5,818	\$	4,561	\$ 5,845
Interest paid	\$	462	\$	261	\$ 122
Income taxes paid	<u> </u>	266	-	200	336
Noncash investing and financing activities:		_00		200	330

Loans transferred to other real estate	12	3	8
Securities transferred from held-to-maturity to available-for-sale	-	1,266	_
Securities transferred from available-for-sale to equity securities	_	81	_

See notes to consolidated financial statements.

NOTE 1 - BASIS OF PRESENTATION AND ACCOUNTING POLICIES

Organization

Comerica Incorporated (the Corporation) is a registered financial holding company headquartered in Dallas, Texas. The Corporation's major business segments are the Business Bank, the Retail Bank and Wealth Management. The Corporation operates in three primary geographic markets: Michigan, California and Texas. For further discussion of each business segment and primary geographic market, refer to Note 22. The Corporation and its banking subsidiaries are regulated at both the state and federal levels.

The accounting and reporting policies of the Corporation conform to United States (U.S.) generally accepted accounting principles (GAAP). The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect reported amounts and disclosures. Actual results could differ from these estimates. Certain amounts in the financial statements for prior years have been reclassified to conform to the current financial statement presentation.

The following summarizes the significant accounting policies of the Corporation applied in the preparation of the accompanying consolidated financial statements.

Principles of Consolidation

The consolidated financial statements include the accounts of the Corporation and the accounts of those subsidiaries that are majority owned and in which the Corporation has a controlling financial interest. The Corporation consolidates entities not determined to be variable interest entities (VIEs) when it holds a controlling financial interest and uses the cost or equity method when it holds less than a controlling financial interest. In consolidation, all significant intercompany accounts and transactions are eliminated. The results of operations of companies acquired are included from the date of acquisition.

The Corporation holds investments in certain legal entities that are considered VIEs. In general, a VIE is an entity that either (1) has an insufficient amount of equity to carry out its principal activities without additional subordinated financial support, (2) has a group of equity owners that are unable to make significant decisions about its activities, or (3) has a group of equity owners that do not have the obligation to absorb losses or the right to receive returns generated by its operations. If any of these characteristics are present, the entity is subject to a variable interests consolidation model, and consolidation is based on variable interests, not on voting interests. Variable interests are defined as contractual ownership or other money interests in an entity that change with fluctuations in the entity's net asset value. The primary beneficiary is required to consolidate the VIE. The primary beneficiary is defined as the party that has both the power to direct the activities of the VIE that most significantly impact the entity's economic performance and the obligation to absorb losses or the right to receive benefits that could be significant to the VIE. The maximum potential exposure to losses relative to investments in VIEs is generally limited to the sum of the outstanding book basis and unfunded commitments for future investments.

The Corporation evaluates its investments in VIEs, both at inception and when there is a change in circumstances that requires reconsideration, to determine if the Corporation is the primary beneficiary and consolidation is required. The Corporation accounts for unconsolidated VIEs using either the proportional, cost or equity method. These investments comprise investments in community development projects which generate tax credits to their investors and are included in accrued income and other assets on the Consolidated Balance Sheets.

The proportional method is used for investments in affordable housing projects that qualify for the low-income housing tax credit (LIHTC). The equity method is used for other investments where the Corporation has the ability to exercise significant influence over the entity's operation and financial policies. Other unconsolidated equity investments that do not meet the criteria to be accounted for under the equity method are accounted for under the cost method. Amortization and other write-downs of LIHTC investments are presented on a net basis as a component of the provision for income taxes, while income, amortization and write-downs from cost and equity method investments are recorded in other noninterest income on the Consolidated Statements of Income.

Assets held in an agency or fiduciary capacity are not assets of the Corporation and are not included in the consolidated financial statements.

See Note 9 for additional information about the Corporation's involvement with VIEs.

Fair Value Measurements

The Corporation utilizes fair value measurements to record fair value adjustments to certain assets and liabilities and to determine fair value disclosures. The determination of fair values of financial instruments often requires the use of estimates. In cases where quoted market values in an active market are not available, the Corporation uses present value techniques and other valuation methods to estimate the fair values of its financial instruments. These valuation methods require considerable judgment and the resulting estimates of fair value can be significantly affected by the assumptions made and methods used.

Fair value is an estimate of the exchange price that would be received to sell an asset or paid to transfer a liability in an orderly transaction (i.e., not a forced transaction, such as a liquidation or distressed sale) between market participants at the measurement date. Fair value is based on the assumptions market participants would use when pricing an asset or liability.

Investment securities available-for-sale, derivatives, deferred compensation plans and equity securities with readily determinable fair values (primarily money market mutual funds) are recorded at fair value on a recurring basis. Additionally, from time to time, the Corporation may be required to record other assets and liabilities at fair value on a nonrecurring basis, such as impaired loans, other real estate (primarily foreclosed property), nonmarketable equity securities and certain other assets and liabilities. These nonrecurring fair value adjustments typically involve write-downs of individual assets or application of lower of cost or fair value accounting.

Fair value measurements and disclosures guidance establishes a three-level fair value hierarchy based on the markets in which the assets and liabilities are traded and the reliability of the assumptions used to determine fair value. The fair value hierarchy gives the highest priority to quoted prices in active markets and the lowest priority to unobservable data. Fair value measurements are separately disclosed by level within the fair value hierarchy. For assets and liabilities recorded at fair value, it is the Corporation's policy to maximize the use of observable inputs and minimize the use of unobservable inputs when developing fair value measurements.

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

The Corporation generally utilizes third-party pricing services to value Level 1 and Level 2 securities. Management reviews the methodologies and assumptions used by the third-party pricing services and evaluates the values provided, principally by comparison with other available market quotes for similar instruments and/or analysis based on internal models using available third-party market data. The Corporation may occasionally adjust certain values provided by the third-party pricing service when management believes, as the result of its review, that the adjusted price most appropriately reflects the fair value of the particular security.

Fair value measurements for assets and liabilities where limited or no observable market data exists are based primarily upon estimates, often calculated based on the economic and competitive environment, the characteristics of the asset or liability and other factors. Therefore, the results cannot be determined with precision and may not be realized in an actual sale or immediate settlement of the asset or liability. Additionally, there may be inherent weaknesses in any calculation technique, and changes in the underlying assumptions used, including discount rates and estimates of future cash flows, could significantly affect the results of current or future values.

Following are descriptions of the valuation methodologies and key inputs used to measure financial assets and liabilities recorded at fair value, as well as a description of the methods and significant assumptions used to estimate fair value disclosures for financial instruments not recorded at fair value in their entirety on a recurring basis. The descriptions include an indication of the level of the fair value hierarchy in which the assets or liabilities are classified. Transfers of assets or liabilities between levels of the fair value hierarchy are recognized at the beginning of the reporting period, when applicable.

Cash and due from banks, federal funds sold and interest-bearing deposits with banks

Due to their short-term nature, the carrying amount of these instruments approximates the estimated fair value. As such, the Corporation classifies the estimated fair value of these instruments as Level 1.

Deferred compensation plan assets and liabilities as well as equity securities with a readily determinable fair value

The Corporation holds a portfolio of securities including equity securities and assets held related to deferred compensation plans. Securities and associated deferred compensation plan liabilities are recorded at fair value on a recurring basis and included in other short-term investments and accrued expenses and other liabilities, respectively, on the Consolidated Balance Sheets. Level 1 securities include assets related to deferred compensation plans, which are invested in mutual funds, U.S. Treasury securities that are traded by dealers or brokers in active over-the-counter markets and other securities traded on an active exchange, such as

the New York Stock Exchange. Deferred compensation plan liabilities represent the fair value of the obligation to the employee, which corresponds to the fair value of the invested assets. Level 2 securities include municipal bonds and residential mortgage-backed securities issued by U.S. government-sponsored entities and corporate debt securities. The methods used to value equity securities and deferred compensation plan assets are the same as the methods used to value investment securities, discussed below.

Investment securities

Investment securities available-for-sale are recorded at fair value on a recurring basis. The Corporation discloses estimated fair values of investment securities held-to-maturity, which is determined in the same manner as investment securities available-for-sale. Level 1 securities include those traded on an active exchange, such as the New York Stock Exchange, U.S. Treasury securities that are traded by dealers or brokers in active over-the-counter markets and money market funds. Level 2 securities include residential mortgage-backed securities issued by U.S. government agencies and U.S. government-sponsored entities and corporate debt securities. The fair value of Level 2 securities is determined using quoted prices of securities with similar characteristics, or pricing models based on observable market data inputs, primarily interest rates, spreads and prepayment information.

Securities classified as Level 3 represent securities in less liquid markets requiring significant management assumptions when determining fair value. The Corporate Treasury department, with appropriate oversight and approval provided by senior management, is responsible for the valuation of Level 3 securities. Valuation results, including an analysis of changes to the valuation methodology, are provided to senior management for review on a quarterly hasis

Loans held-for-sale

Loans held-for-sale, included in other short-term investments on the Consolidated Balance Sheets, are recorded at the lower of cost or fair value. Loans held-for-sale may be carried at fair value on a nonrecurring basis when fair value is less than cost. The fair value is based on what secondary markets are currently offering for portfolios with similar characteristics. As such, the Corporation classifies both loans held-for-sale subjected to nonrecurring fair value adjustments and the estimated fair value of loans held-for sale as Level 2.

Loans

The Corporation does not record loans at fair value on a recurring basis. However, the Corporation may establish a specific allowance for an impaired loan based on the fair value of the underlying collateral. Such loan values are reported as nonrecurring fair value measurements. Collateral values supporting individually evaluated impaired loans are evaluated quarterly. When management determines that the fair value of the collateral requires additional adjustments, either as a result of non-current appraisal value or when there is no observable market price, the Corporation classifies the impaired loan as Level 3. The Special Assets Group is responsible for performing quarterly credit quality reviews for all impaired loans as part of the quarterly allowance for loan losses process overseen by the Chief Credit Officer, during which valuation adjustments to updated collateral values are determined.

The Corporation discloses fair value estimates for loans. The estimated fair value is determined based on characteristics such as loan category, repricing features and remaining maturity, and includes prepayment and credit loss estimates. Fair values are estimated using a discounted cash flow model that employs discount rates that reflects current pricing for loans with similar maturity and risk characteristics, including credit characteristics, and the cost of equity for the portfolio at the balance sheet date. The rates take into account the expected yield curve, as well as an adjustment for prepayment risk, when applicable. The Corporation classifies the estimated fair value of loans held for investment as Level 3.

Customers' liability on acceptances outstanding and acceptances outstanding

Customers' liability on acceptances outstanding is included in accrued income and other assets and acceptances outstanding are included in accrued expenses and other liabilities on the Consolidated Balance Sheets. Due to their short-term nature, the carrying amount of these instruments approximates the estimated fair value. As such, the Corporation classifies the estimated fair value of these instruments as Level 1.

Derivative assets and derivative liabilities

Derivative instruments held or issued for risk management or customer-initiated activities are traded in over-the-counter markets where quoted market prices are not readily available. Fair value for over-the-counter derivative instruments is measured on a recurring basis using internally developed models that use primarily market observable inputs, such as yield curves and option volatilities. The Corporation manages credit risk on its derivative positions based on whether the derivatives are being settled through a clearinghouse or bilaterally with each counterparty. For derivative positions settled on a counterparty-by-counterparty basis, the Corporation calculates credit valuation adjustments, included in the fair value of these instruments, on the basis of its relationships at the counterparty portfolio/master netting agreement level. These credit valuation adjustments are determined by applying a credit spread for the counterparty or the Corporation, as appropriate, to the total expected exposure of the derivative after considering collateral and other master netting arrangements. These adjustments, which are considered Level 3 inputs, are

based on estimates of current credit spreads to evaluate the likelihood of default. When credit valuation adjustments are significant to the overall fair value of a derivative, the Corporation classifies the over-the-counter derivative valuation in Level 3 of the fair value hierarchy; otherwise, over-the-counter derivative valuations are classified in Level 2.

Nonmarketable equity securities

The Corporation has a portfolio of indirect (through funds) private equity and venture capital investments with a carrying value of \$5 million and unfunded commitments of less than \$1 million, at December 31, 2019. The investments are accounted for either on the cost or equity method and are individually reviewed for impairment on a quarterly basis by comparing the carrying value to the estimated fair value. These investments may be carried at fair value on a nonrecurring basis when they are deemed to be impaired and written down to fair value. Where there is not a readily determinable fair value, the Corporation estimates fair value for indirect private equity and venture capital investments based on the net asset value, as reported by the fund.

The Corporation also holds restricted equity investments, primarily Federal Home Loan Bank (FHLB) and Federal Reserve Bank (FRB) stock. Restricted equity securities are not readily marketable and are recorded at cost (par value) in accrued income and other assets on the Consolidated Balance Sheets and evaluated for impairment based on the ultimate recoverability of the par value. No significant observable market data for these instruments is available. The Corporation considers the profitability and asset quality of the issuer, dividend payment history and recent redemption experience and believes its investments in FHLB and FRB stock are ultimately recoverable at par. Therefore, the carrying amount for these restricted equity investments approximates fair value. The Corporation classifies the estimated fair value of such investments as Level 1. The Corporation's investment in FHLB stock totaled \$163 million at both December 31, 2019 and 2018, and its investment in FRB stock totaled \$85 million at both December 31, 2019 and 2018.

Other real estate

Other real estate is included in accrued income and other assets on the Consolidated Balance Sheets and includes primarily foreclosed property. Foreclosed property is initially recorded at fair value, less costs to sell, at the date of legal title transfer to the Corporation, establishing a new cost basis. Subsequently, foreclosed property is carried at the lower of cost or fair value, less costs to sell. Other real estate may be carried at fair value on a nonrecurring basis when fair value is less than cost. Fair value is based upon independent market prices, appraised value or management's estimate of the value of the property. The Special Assets Group obtains updated independent market prices and appraised values, as required by state regulation or deemed necessary based on market conditions, and determines if additional write-downs are necessary. On a quarterly basis, senior management reviews all other real estate and determines whether the carrying values are reasonable, based on the length of time elapsed since receipt of independent market price or appraised value and current market conditions. When management determines that the fair value of other real estate requires additional adjustments, either as a result of a non-current appraisal or when there is no observable market price, the Corporation classifies the other real estate as Level 3.

Deposit liabilities

The estimated fair value of checking, savings and certain money market deposit accounts is represented by the amounts payable on demand. The estimated fair value of term deposits is calculated by discounting the scheduled cash flows using the period-end rates offered on these instruments. As such, the Corporation classifies the estimated fair value of deposit liabilities as Level 2.

Short-term borrowings

The carrying amount of federal funds purchased, securities sold under agreements to repurchase and other short-term borrowings approximates the estimated fair value. As such, the Corporation classifies the estimated fair value of short-term borrowings as Level 1.

Medium- and long-term debt

The estimated fair value of the Corporation's medium- and long-term debt is based on quoted market values when available. If quoted market values are not available, the estimated fair value is based on the market values of debt with similar characteristics. The Corporation classifies the estimated fair value of medium- and long-term debt as Level 2.

Credit-related financial instruments

Credit-related financial instruments include unused commitments to extend credit and letters of credit. These instruments generate ongoing fees which are recognized over the term of the commitment. In situations where credit losses are probable, the Corporation records an allowance. The carrying value of these instruments included in accrued expenses and other liabilities on the Consolidated Balance Sheets, which includes the carrying value of the deferred fees plus the related allowance, approximates the estimated fair value. The Corporation classifies the estimated fair value of credit-related financial instruments as Level 3.

For further information about fair value measurements refer to Note 2.

Other Short-Term Investments

Other short-term investments include deferred compensation plan assets, equity securities with a readily determinable fair value and loans held-forsale.

Deferred compensation plan assets and equity securities are carried at fair value. Realized and unrealized gains or losses are included in other noninterest income on the Consolidated Statements of Income.

Loans held-for-sale, typically residential mortgages originated with the intent to sell and occasionally including other loans transferred to held-for-sale, are carried at the lower of cost or fair value. Fair value is determined in the aggregate for each portfolio. Changes in fair value and gains or losses upon sale are included in other noninterest income on the Consolidated Statements of Income.

Investment Securities

Debt securities are classified as trading, available-for-sale or held-to-maturity. Trading securities are recorded at fair value, with unrealized gains and losses included in noninterest income on the Consolidated Statements of Income. Securities available-for-sale are recorded at fair value, with unrealized gains and losses, net of income taxes, reported as a separate component of other comprehensive income (OCI). Securities for which management has the intent and ability to hold to maturity are classified as held-to-maturity and recorded at amortized cost. Interest income is recognized using the interest method.

Securities transferred from available-for-sale to held-to-maturity are reclassified at fair value on the date of transfer. The net unrealized gain (loss) at the date of transfer is included in historical cost and amortized over the remaining life of the related securities as a yield adjustment consistent with the amortization of the net unrealized gain (loss) included in accumulated other comprehensive loss on the same securities, resulting in no impact to net income.

Debt securities are reviewed quarterly for possible other-than-temporary impairment (OTTI). In determining whether OTTI exists for debt securities in an unrealized loss position, the Corporation assesses the likelihood of selling the security prior to the recovery of its amortized cost basis. If the Corporation intends to sell the debt security or it is more likely than not that the Corporation will be required to sell the debt security prior to the recovery of its amortized cost basis, the debt security is written down to fair value, and the full amount of any impairment charge is recorded as a loss in net securities losses on the Consolidated Statements of Income. If the Corporation does not intend to sell the debt security and it is more likely than not that the Corporation will not be required to sell the debt security prior to recovery of its amortized cost basis, only the credit component of any impairment of a debt security is recognized as a loss in net securities losses on the Consolidated Statements of Income, with the remaining impairment recorded in OCI.

Gains or losses on the sale of securities are computed based on the adjusted cost of the specific security sold.

For further information on investment securities, refer to Note 3.

Loans

Loans and leases originated and held for investment are recorded at the principal balance outstanding, net of unearned income, charge-offs and unamortized deferred fees and costs. Interest income is recognized on loans and leases using the interest method.

The Corporation assesses all loan modifications to determine whether a restructuring constitutes a TDR. A restructuring is considered a TDR when a borrower is experiencing financial difficulty and the Corporation grants a concession to the borrower. TDRs on accrual status at the original contractual rate of interest are considered performing. Nonperforming TDRs include TDRs on nonaccrual status and loans which have been renegotiated to less than the original contractual rates (reduced-rate loans). All TDRs are considered impaired loans.

Loan Origination Fees and Costs

Substantially all loan origination fees and costs are deferred and amortized to net interest income over the life of the related loan or over the commitment period as a yield adjustment. Net deferred income on originated loans, including unearned income and unamortized costs, fees, premiums and discounts, totaled \$103 million and \$115 million at December 31, 2019 and 2018, respectively.

Loan fees on unused commitments and net origination fees related to loans sold are recognized in noninterest income.

Allowance for Credit Losses

The allowance for credit losses includes both the allowance for loan losses and the allowance for credit losses on lending-related commitments.

The Corporation disaggregates the loan portfolio into segments for purposes of determining the allowance for credit losses. These segments are based on the level at which the Corporation develops, documents and applies a systematic methodology to determine the allowance for credit losses. The Corporation's portfolio segments are business loans and retail loans. Business loans include the commercial, real estate construction, commercial mortgage, lease financing and international loan portfolios. Retail loans consist of traditional residential mortgage, home equity and other consumer loans.

For further information on the Allowance for Credit Losses, refer to Note 4.

Allowance for Loan Losses

The allowance for loan losses represents management's assessment of probable, estimable losses inherent in the Corporation's loan portfolio. The allowance for loan losses includes specific allowances, based on individual evaluations of certain loans, and allowances for homogeneous pools of loans with similar risk characteristics.

The Corporation individually evaluates certain impaired loans on a quarterly basis and establishes specific allowances for such loans, if required. A loan is considered impaired when it is probable that interest or principal payments will not be made in accordance with the contractual terms of the loan agreement. Consistent with this definition, all loans for which the accrual of interest has been discontinued (nonaccrual loans) are considered impaired. The Corporation individually evaluates nonaccrual loans with book balances of \$2 million or more and loans whose terms have been modified in a TDR with book balances of \$1 million or more. The threshold for individual evaluation is revised on an infrequent basis, generally when economic circumstances change significantly. Specific allowances for impaired loans are estimated using one of several methods, including the estimated fair value of underlying collateral, observable market value of similar debt or discounted expected future cash flows. Collateral values supporting individually evaluated impaired loans are evaluated quarterly. Generally, appraisals are obtained or appraisal assumptions are updated annually, unless conditions dictate increased frequency. The Corporation may reduce the collateral value based upon the age of the appraisal and adverse developments in market conditions.

Loans which do not meet the criteria to be evaluated individually are evaluated in homogeneous pools of loans with similar risk characteristics. Business loans are assigned to pools based on the Corporation's internal risk rating system. Internal risk ratings are assigned to each business loan at the time of approval and are subjected to subsequent periodic reviews by the Corporation's senior management, generally at least annually or more frequently upon the occurrence of a circumstance that affects the credit risk of the loan. For business loans not individually evaluated, losses inherent to the pool are estimated by applying standard reserve factors to outstanding principal balances. Standard reserve factors are based on estimated probabilities of default for each internal risk rating, set to a default horizon based on an estimated loss emergence period, and loss given default. These factors are evaluated quarterly and updated annually, unless economic conditions necessitate a change, giving consideration to count-based borrower risk rating migration experience and trends, recent charge-off experience, current economic conditions and trends, changes in collateral values of properties securing loans, and trends with respect to past due and nonaccrual amounts.

The allowance for business loans not individually evaluated also includes qualitative adjustments to bring the allowance to the level management believes is appropriate based on factors that have not otherwise been fully accounted for, including adjustments for (i) risk factors that have not been fully addressed in internal risk ratings, (ii) imprecision in the risk rating system resulting from inaccuracy in assigning and/or entering risk ratings in the loan accounting system, (iii) market conditions and (iv) model imprecision. Risk factors that have not been fully addressed in internal risk ratings may include portfolios where recent historical losses exceed expected losses or known recent events are expected to alter risk ratings once evidence is acquired, portfolios where a certain level of concentration introduces added risk, or changes in the level and quality of experience held by lending management. An additional allowance for risk rating errors is calculated based on the results of risk rating accuracy assessments performed on samples of business loans conducted by the Corporation's asset quality review function, a function independent of the lending and credit groups responsible for assigning the initial internal risk rating at the time of approval. Qualitative adjustments for market conditions are determined based on an established framework. The determination of the appropriate adjustment is based on management's analysis of observable macroeconomic metrics, including consideration of regional metrics within the Corporation's footprint, internal credit risk movement and a qualitative assessment of the lending environment, including underwriting standards, current economic and political conditions, and other factors affecting credit quality. Management recognizes the sensitivity of various assumptions made in the quantitative modeling of expected losses and may adjust reserves depending upon the level of uncertainty that currently exists in one or more assumption.

The allowance for retail loans not individually evaluated is determined by applying estimated loss rates to various pools of loans within the portfolios with similar risk characteristics. Estimated loss rates for all pools are updated quarterly, incorporating quantitative and qualitative factors such as recent charge-off experience, current economic conditions and trends, changes in collateral values of properties securing loans (using index-based estimates), and trends with respect to past due and nonaccrual amounts.

The total allowance for loan losses is sufficient to absorb incurred losses inherent in the total portfolio. Unanticipated economic events, including political, economic and regulatory instability in countries where the Corporation has loans, could cause changes in the credit characteristics of the portfolio and result in an unanticipated increase in the allowance. Significant increases in current portfolio exposures, as well as the inclusion of additional industry-specific portfolio exposures in the allowance, could also increase the amount of the allowance. Any of these events, or some combination thereof, may result in the need for additional provision for credit losses in order to maintain an allowance that complies with credit risk and accounting policies.

Loans deemed uncollectible are charged off and deducted from the allowance. Recoveries on loans previously charged off are added to the allowance.

Allowance for Credit Losses on Lending-Related Commitments

The allowance for credit losses on lending-related commitments provides for probable losses inherent in lending-related commitments, including unused commitments to extend credit and letters of credit. The allowance for credit losses on lending-related commitments includes allowances based on homogeneous pools of letters of credit and unused commitments to extend credit within each internal risk rating. A probability of draw estimate is applied to the commitment amount, and the result is multiplied by standard reserve factors consistent with business loans. In general, the probability of draw for letters of credit is considered certain for all letters of credit supporting loans and for letters of credit assigned an internal risk rating generally consistent with regulatory defined substandard or doubtful. Other letters of credit and all unfunded commitments have a lower probability of draw. The allowance for credit losses on lending-related commitments is included in accrued expenses and other liabilities on the Consolidated Balance Sheets, with the corresponding charge reflected in the provision for credit losses on the Consolidated Statements of Income.

Nonperforming Assets

Nonperforming assets consist of nonaccrual loans, reduced-rate loans and foreclosed property.

A loan is considered past due when the contractually required principal or interest payment is not received by the specified due date or, for certain loans, when a scheduled monthly payment is past due and unpaid for 30 days or more. Business loans are generally placed on nonaccrual status when management determines full collection of principal or interest is unlikely or when principal or interest payments are 90 days past due, unless the loan is fully collateralized and in the process of collection. The past-due status of a business loan is one of many indicative factors considered in determining the collectibility of the credit. The primary driver of when the principal amount of a business loan should be fully or partially charged-off is based on a qualitative assessment of the recoverability of the principal amount from collateral and other cash flow sources. Residential mortgage and home equity loans are generally placed on nonaccrual status once they become 90 days past due and are charged off to current appraised values less costs to sell no later than 180 days past due. In addition, junior lien home equity loans less than 90 days past due are placed on nonaccrual status if they have underlying risk characteristics that place full collection of the loan in doubt, such as when the related senior lien position is identified as seriously delinquent. Residential mortgage and consumer loans in bankruptcy for which the court has discharged the borrower's obligation and the borrower has not reaffirmed the debt are placed on nonaccrual status and written down to estimated collateral value, without regard to the actual payment status of the loan, and are classified as TDRs. All other consumer loans are generally placed on nonaccrual status at 90 days past due and are charged off at no later than 120 days past due, or earlier if deemed uncollectible.

At the time a loan is placed on nonaccrual status, interest previously accrued but not collected is charged against current income. Principal and interest payments received on such loans are generally first applied as a reduction of principal. Income on nonaccrual loans is then recognized only to the extent that cash is received after principal has been fully repaid or future collection of principal is probable. Generally, a loan may be returned to accrual status when all delinquent principal and interest have been received and the Corporation expects repayment of the remaining contractual principal and interest, or when the loan or debt security is both well secured and in the process of collection.

Foreclosed property (primarily real estate) is initially recorded at fair value, less costs to sell, at the date of legal title transfer to the Corporation and subsequently carried at the lower of cost or fair value, less estimated costs to sell. Loans are reclassified to foreclosed property upon obtaining legal title to the collateral. Independent appraisals are obtained to substantiate the fair value of foreclosed property at the time of foreclosure and updated at least annually or upon evidence of deterioration in the property's value. At the time of foreclosure, the adjustment for the difference between the related loan balance and fair value (less estimated costs to sell) of the property acquired is charged or credited to the allowance for loan losses. Subsequent write-downs, operating expenses and losses upon sale, if any, are charged to noninterest expenses. Foreclosed property is included in accrued income and other assets on the Consolidated Balance Sheets.

Premises and Equipment

Premises and equipment are stated at cost, less accumulated depreciation and amortization. Depreciation, computed using the straight-line method, is charged to operations over the estimated useful lives of the assets. Estimated useful lives are generally 3 years to 33 years for premises that the Corporation owns and 3 years to 8 years for furniture and equipment. Leasehold improvements are generally amortized over the terms of their respective leases or 10 years, whichever is shorter.

Operating Leases

Effective January 1, 2019, the Corporation adopted the provisions of Accounting Standards Update (ASU) No. 2016-02, "Leases (Topic 842)," (ASU 2016-02), for all open leases with a term greater than one year as of the adoption date, using the modified retrospective approach. Prior comparable periods are presented in accordance with previous guidance under Accounting Standards Codification (ASC) 840, "Leases."

Topic 842 requires the recognition of a lease liability, measured as the present value of unpaid lease payments for operating leases where the Corporation is the lessee, and a corresponding right-of-use (ROU) asset for the right to use the leased properties. The Corporation elected not to reassess whether contracts are or contain leases, lease classification or initial direct costs for existing leases, a set of practical expedients for transition provided by ASU 2016-12. Further, the Corporation elected the practical expedient to use hindsight in determining the lease term and assessing impairment. The election of the hindsight practical expedient resulted in longer lease terms for a limited number of strategic locations based on relevant factors as of the adoption date.

The impact at adoption was increases of \$329 million and \$343 million to total assets and liabilities, respectively, and a \$14 million reduction to retained earnings. The increase in total assets was due to the recognition of ROU assets recorded in accrued income and other assets, and the increase in total liabilities was due to corresponding recognition of lease payment liabilities recorded in accrued expenses and other liabilities.

Operating lease liabilities reflect the Corporation's obligation to make future lease payments, primarily for real estate locations. Lease terms typically comprise contractual terms but may include extension options reasonably certain of being exercised at lease inception for certain strategic locations such as regional headquarters. Payments are discounted using the rate the Corporation would pay to borrow amounts equal to the lease payments over the lease term (the Corporation's incremental borrowing rate). The Corporation does not separate lease and non-lease components for contracts in which it is the lessee. ROU assets are measured based on lease liabilities adjusted for incentives as well as accrued and prepaid rent. Operating lease expense is recognized on a straight-line basis over the lease term, while variable lease payments are recognized as incurred. Common area maintenance and other executory costs are the main components of variable lease payments. Operating and variable lease expenses are recorded in net occupancy expense on the Consolidated Statements of Income.

Software

Capitalized software is stated at cost, less accumulated amortization. Capitalized software includes purchased software, capitalizable application development costs associated with internally-developed software and cloud computing arrangements, including an in-substance software license. Amortization, computed on the straight-line method, is charged to operations over the estimated useful life of the software, generally 5 years. Capitalized software is included in accrued income and other assets on the Consolidated Balance Sheets.

Goodwill and Core Deposit Intangibles

Goodwill, included in accrued income and other assets on the Consolidated Balance Sheets, is initially recorded as the excess of the purchase price over the fair value of net assets acquired in a business combination and is subsequently evaluated at least annually for impairment. Goodwill impairment testing is performed at the reporting unit level, equivalent to a business segment or one level below. The Corporation has three reporting units: the Business Bank, the Retail Bank and Wealth Management.

The Corporation performs its annual evaluation of goodwill impairment in the third quarter of each year and on an interim basis if events or changes in circumstances between annual tests suggest additional testing may be warranted to determine if goodwill might be impaired. The goodwill impairment test is a two-step test. The first step of the goodwill impairment test compares the estimated fair value of identified reporting units with their carrying amount, including goodwill. If the estimated fair value of the reporting unit is less than the carrying value, the second step must be performed to determine the implied fair value of the reporting unit's goodwill and the amount of goodwill impairment, if any. The implied fair value of goodwill is determined as if the reporting unit were being acquired in a business combination. If the implied fair value of goodwill exceeds the goodwill assigned to the reporting unit, there is no impairment. If the goodwill assigned to a reporting unit exceeds the implied fair value of goodwill, an impairment charge would be recorded for the excess.

The Corporation may choose to perform a qualitative assessment to determine whether it is more likely than not that the fair value of any reporting unit is less than its carrying amount, including goodwill. Factors considered in the assessment of the likelihood of impairment include macroeconomic conditions, industry and market considerations, stock performance of the Corporation and its peers, financial performance, events affecting the Corporation as a whole or its reporting units individually and previous results of goodwill impairment tests. Based on the results of the qualitative analysis, the Corporation determines whether a two-step quantitative test is deemed necessary.

Core deposit intangibles are amortized on an accelerated basis, based on the estimated period the economic benefits are expected to be received. Core deposit intangibles are reviewed for impairment when events or changes in circumstances indicate that their carrying amounts may not be recoverable. Impairment for a finite-lived intangible asset exists if the sum of the undiscounted cash flows expected to result from the use of the asset exceeds its carrying value.

Additional information regarding goodwill and core deposit intangibles can be found in Note 7.

Nonmarketable Equity Securities

The Corporation has certain investments that are not readily marketable. These investments include a portfolio of investments in indirect private equity and venture capital funds and restricted equity investments, which are securities the Corporation is required to hold for various reasons, primarily Federal Home Loan Bank of Dallas (FHLB) and Federal Reserve Bank (FRB) stock. These investments are accounted for on the cost or equity method and are included in accrued income and other assets on the Consolidated Balance Sheets. The investments are individually reviewed for impairment on a quarterly basis. Indirect private equity and venture capital funds are evaluated by comparing the carrying value to the estimated fair value. The amount by which the carrying value exceeds the fair value that is determined to be other-than-temporary impairment is charged to current earnings and the carrying value of the investment is written down accordingly. FHLB and FRB stock are recorded at cost (par value) and evaluated for impairment based on the ultimate recoverability of the par value. If the Corporation does not expect to recover the full par value, the amount by which the par value exceeds the ultimately recoverable value would be charged to current earnings and the carrying value of the investment would be written down accordingly.

Derivative Instruments and Hedging Activities

Derivative instruments are carried at fair value in either accrued income and other assets or accrued expenses and other liabilities on the Consolidated Balance Sheets. The accounting for changes in the fair value (i.e., gains or losses) of a derivative instrument is determined by whether it has been designated and qualifies as part of a hedging relationship and, further, by the type of hedging relationship. The Corporation presents derivative instruments at fair value on the Consolidated Balance Sheets on a net basis when a right of offset exists, based on transactions with a single counterparty and any cash collateral paid to and/or received from that counterparty for derivative contracts that are subject to legally enforceable master netting arrangements.

For derivative instruments designated and qualifying as fair value hedges (e.g., hedging the exposure to changes in the fair value of an asset or a liability or an identified portion thereof that is attributable to a particular risk), the gain or loss on the derivative instrument, as well as the offsetting loss or gain on the hedged item attributable to the hedged risk, are recognized in the same consolidated statement of income line that is used to present the earnings effect of the hedged item during the period of the change in fair values. For derivative instruments that are designated and qualify as cash flow hedges (e.g., hedging the exposure to variability in expected future cash flows that is attributable to a particular risk), the gain or loss on the derivative instrument is reported as a component of other comprehensive income and reclassified into earnings in the same consolidated statement of income line item as the earnings effect of the hedged item in the same period or periods during which the hedged transaction affects earnings. For derivative instruments not designated as hedging instruments, the gain or loss is recognized in current earnings during the period of change.

To qualify for the use of hedge accounting, a derivative must be effective at inception and expected to be continuously effective in offsetting the risk being hedged. For derivatives designated as hedging instruments at inception, the Corporation uses either the short-cut method or applies statistical regression analysis to assess effectiveness. The short-cut method is used for \$2.1 billion notional of fair value hedges of medium- and long-term debt. This method allows for the assumption of perfect effectiveness and eliminates the requirement to further assess hedge effectiveness on these transactions. For hedge relationships to which the Corporation does not apply the short-cut method, statistical regression analysis is used at inception to assess whether the derivative used is expected to be highly effective in offsetting changes in the fair value or cash flows of the hedged item. A statistical regression or qualitative analysis is performed at each reporting period thereafter to evaluate hedge effectiveness.

Further information on the Corporation's derivative instruments and hedging activities is included in Note 8.

Short-Term Borrowings

Securities sold under agreements to repurchase are treated as collateralized borrowings and are recorded at amounts equal to the cash received. The contractual terms of the agreements to repurchase may require the Corporation to provide additional collateral if the fair value of the securities underlying the borrowings declines during the term of the agreement.

Financial Guarantees

Certain guarantee contracts or indemnification agreements that contingently require the Corporation, as guarantor, to make payments to the guaranteed party are initially measured at fair value and included in accrued expenses and other liabilities on the Consolidated Balance Sheets. The subsequent accounting for the liability depends on the nature of the underlying guarantee. The release from risk is accounted for under a particular guarantee when the guarantee expires or is settled, or by a systematic and rational amortization method.

Further information on the Corporation's obligations under guarantees is included in Note 8.

Share-Based Compensation

The Corporation recognizes share-based compensation expense using the straight-line method over the requisite service period for all stock awards, including those with graded vesting. The requisite service period is the period an employee is required to provide service in order to vest in the award, which cannot extend beyond the date at which the employee is no longer required to perform any service to receive the share-based compensation (i.e. the retirement-eligible date). Forfeiture of stock awards and dividend equivalents are accounted for as they occur.

Certain awards are contingent upon performance and/or market conditions, which affect the number of shares ultimately issued. The Corporation periodically evaluates the probable outcome of the performance conditions and makes cumulative adjustments to compensation expense as appropriate. Market conditions are included in the determination of the fair value of the award on the date of grant. Subsequent to the grant date, market conditions have no impact on the amount of compensation expense the Corporation will recognize over the life of the award.

Further information on the Corporation's share-based compensation plans is included in Note 16.

Revenue Recognition

Revenue from contracts with customers comprises the noninterest income earned by the Corporation in exchange for services provided to customers and is recognized when services are completed or as they are rendered, although contracts are generally short-term by nature. Services provided over a period of time are typically transferred to customers evenly over the term of the contracts and revenue is recognized accordingly over the period services are provided. Contract receivables are included in accrued income and other assets on the Consolidated Balance Sheets. Payment terms vary by services offered, and the time between completion of performance obligations and payment is typically not significant.

Card Fees

Card fees comprise interchange and other fee income earned on government card, commercial card, debit/automated teller machine card and merchant payment processing programs. Card fees are presented net of network costs, as performance obligations for card services are limited to transaction processing and settlement with the card network on behalf of the customers. Fees for these services are primarily based on interchange rates set by the network and transaction volume. The Corporation also provides ongoing card program support services, for which fees are based on contractually agreed-upon prices and customer demand for services.

Service Charges on Deposit Accounts

Service charges on deposit accounts comprise charges on retail and business accounts, including fees for treasury management services. Treasury management services include transaction-based services related to payment processing, overdrafts, non-sufficient funds and other deposit account activity, as well as account management services that are provided over time. Business customers can earn credits depending on deposit balances maintained with the Corporation, which may be used to offset fees. Fees and credits are based on predetermined, agreed-upon rates.

Fiduciary Income

Fiduciary income includes fees and commissions from asset management, custody, recordkeeping, investment advisory and other services provided primarily to personal and institutional trust customers. Revenue is recognized as the services are performed and is based either on the market value of the assets managed or the services provided, as well as agreed-upon rates.

Commercial Lending Fees

Commercial lending fees include both revenue from contracts with customers (primarily loan servicing fees) and other sources of revenue. Commercial loan servicing fees are based on contractually agreed-upon prices and when the services are provided. Other sources of revenue in commercial lending fees primarily include fees assessed on the unused portion of commercial lines of credit (unused commitment fees) and syndication arrangements.

Brokerage Fees

Brokerage fees are commissions earned for facilitating securities transactions for customers, as well as other brokerage services provided. Revenue is recognized when services are completed and is based on the type of services provided and agreed-upon rates. The Corporation pays commissions based on brokerage fee revenue. These are typically recognized when incurred because the amortization period is one year or less and are included in salaries and benefits expense on the Consolidated Statements of Income.

Other Revenues

Other revenues, consisting primarily of other retail fees, investment banking fees and insurance commissions, are typically recognized when services or transactions are completed and are based on the type of services provided and agreed-upon rates.

Except as discussed above, commissions and other incentives paid to employees are generally based on several internal and external metrics and, as a result, are not solely dependent on revenue generating activities.

Defined Benefit Pension and Other Postretirement Costs

Defined benefit pension costs are funded consistent with the requirements of federal laws and regulations. Inherent in the determination of defined benefit pension costs are assumptions concerning future events that will affect the amount and timing of required benefit payments under the plans. These assumptions include demographic assumptions such as retirement age and mortality, a compensation rate increase, a discount rate used to determine the current benefit obligation, form of payment election and a long-term expected rate of return on plan assets. Net periodic defined benefit pension expense includes service cost, interest cost based on the assumed discount rate, an expected return on plan assets based on an actuarially derived market-related value of assets, amortization of prior service cost or credit and amortization of net actuarial gains or losses. The market-related value of plan assets is determined by amortizing the current year's investment gains and losses (the actual investment return net of the expected investment return) over 5 years. The amortization adjustment cannot exceed 10 percent of the fair value of assets. Prior service costs or credits include the impact of plan amendments on the liabilities and are amortized over the future service periods of active employees expected to receive benefits under the plan. Actuarial gains and losses result from experience different from that assumed and from changes in assumptions (excluding asset gains and losses not yet reflected in market-related value). Amortization of actuarial gains and losses is included as a component of net periodic defined benefit pension cost for a year if the actuarial net gain or loss exceeds 10 percent of the greater of the projected benefit obligation or the market-related value of plan assets. If amortization is required, the excess is amortized over the average remaining service period of participating employees expected to receive benefits under the plan. Service costs are included in salaries and benefits expense,

Postretirement benefits are recognized in other noninterest expenses on the Consolidated Statements of Income during the average remaining service period of participating employees expected to receive benefits under the plan or the average remaining future lifetime of retired participants currently receiving benefits under the plan.

See Note 17 for further information regarding the Corporation's defined benefit pension and other postretirement plans.

Income Taxes

The provision for income taxes is the sum of income taxes due for the current year and deferred taxes. The Corporation classifies interest and penalties on income tax liabilities and, beginning January 1, 2017, excess tax benefits and deficiencies resulting from employee stock awards in the provision for income taxes on the Consolidated Statements of Income.

Deferred taxes arise from temporary differences between the income tax basis and financial accounting basis of assets and liabilities. Deferred tax assets are evaluated for realization based on available evidence of projected future reversals of existing taxable temporary differences, assumptions made regarding future events and, when applicable, state loss carryback capacity. A valuation allowance is provided when it is more likely than not that some portion 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 restricted stock and certain 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 losses incurred by the Corporation. 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 common stock issuable under the assumed exercise of stock options and warrants, as well as service- and performance-based restricted stock units granted under the Corporation's stock plans using the treasury stock method, if dilutive. 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.

Statements of Cash Flows

Cash and cash equivalents are defined as those amounts included in cash and due from banks and interest-bearing deposits with banks on the Consolidated Balance Sheets.

Comprehensive Income (Loss)

The Corporation presents on an annual basis the components of net income and other comprehensive income in two separate, but consecutive statements and presents on an interim basis the components of net income and a total for comprehensive income in one continuous consolidated statement of comprehensive income.

Pending Accounting Pronouncements

Current Expected Credit Losses

In June 2016, the FASB issued ASU No. 2016-13, "Financial Instruments - Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments," which addresses concerns regarding the perceived delay in recognition of credit losses under the existing incurred loss model. The amendment introduces a new, single model for recognizing credit losses on all financial instruments presented on a cost basis. Under the new model, entities must estimate current expected credit losses by considering all available relevant information, including historical and current conditions, as well as reasonable and supportable forecasts of future events. Topic 326 also requires additional qualitative and quantitative disclosure to allow users to better understand the credit risk within the portfolio and the methodologies for determining the allowance for credit losses. The Corporation adopted Topic 326 effective January 1, 2020 using the modified retrospective approach.

Estimation Methodology

The Corporation expects to determine an allowance for the majority of its loan portfolio by applying reserve factors designed to estimate current expected credit losses to amortized cost balances over the remaining contractual life of the portfolio. Loans with similar risk characteristics are aggregated in homogeneous pools. Business loans are assigned to pools based on risk factors including the borrower's industry; loan type and structure; collateral type; as well as the Corporation's historical loss patterns and internal risk rating system. For retail loans, pools are based on loan type, past due status and credit scores. Reserve factors are based on estimated probability of default for each pool, set to a default horizon based on contractual life, and loss given default. Historical estimates are calibrated to economic forecasts over the reasonable and supportable forecast period based on the projected performance of specific economic variables that statistically correlate with each of the probability of default and loss given default pools. The Corporation also includes qualitative adjustments to bring the allowance to the level management believes is appropriate based on factors that have not otherwise been fully accounted for, including adjustments for foresight risk, input imprecisions and model imprecision.

The calculation of current expected credit losses is inherently subjective, as it requires management to exercise judgment in determining appropriate factors used to determine the allowance. Some of the most significant factors are selecting the economic forecasts used to calibrate the reserve factors, determining the reasonable and supportable forecast period and choosing the methodology for reverting to appropriate historical credit losses.

• **Economic Forecasts:** Management selects economic variables it believes to be most relevant based on the composition of the loan portfolio and customer base, including forecasted levels of employment, gross domestic product, corporate bond and

treasury spreads, industrial production levels, consumer and commercial real estate price indices as well as housing statistics. The Corporation generally uses a consensus forecast, which may be adjusted after different economic forecasts ranging from more benign to more severe are evaluated, to forecast losses over the contractual life of the loan portfolio.

- **Forecast Period:** Management believes it can reasonably forecast credit losses over a two-year horizon. The two-year forecast period, which is shorter than the loss emergence period used under the incurred methodology, encompasses most of the remaining contractual life of the portfolio of business loans. Management may adjust the forecast period in response to changes in the economic environment.
- **Reversion Methodology:** For contractual periods which extend beyond the two-year forecast horizon, management elected an immediate reversion to an average historical loss experience that generally incorporates a full economic cycle.

Credit losses for loans that no longer share similar risk characteristics are estimated on an individual basis. Individual evaluations are typically performed for nonaccrual loans and modified loans classified as troubled debt restructurings. Specific allowances are estimated based on one of several methods, including the estimated fair value of the underlying collateral, observable market value of similar debt or the present value of expected cash flows.

The estimation methodology for credit losses on lending-related commitments is similar to the process for estimating credit losses for loans, with the addition of a probability of draw estimate that is applied to each commitment amount.

Topic 326 also requires expected credit losses on available-for-sale (AFS) debt securities be recorded as an allowance for credit losses. For certain types of debt securities, such as U.S. Treasuries and other securities with government guarantees, entities may expect zero credit losses. The Corporation believes the zero-loss expectation currently applies to all its AFS debt securities.

Impact of Adoption

The Corporation's estimate of current expected credit losses in accordance with Topic 326 assumes continued moderate economic growth of the U.S. economy and is expected to result in a \$17 million day-one decrease in the overall allowance for credit losses from \$668 million at December 31, 2019 under the incurred loss model. Accordingly, the Corporation expects a corresponding increase of \$13 million to retained earnings and a \$4 million reduction to deferred tax assets. A similar adjustment at December 31, 2019 would have caused a 2-basis-point increase in the common equity tier 1 capital (CET1) ratio. Business loans, comprising approximately 91 percent of the Corporation's total loan portfolio, consist of loans and lending arrangements with generally short contractual maturities, which resulted in an expected reduction of \$42 million in the allowance for credit losses. The allowance for credit losses is expected to increase \$25 million for retail loans, given their longer contractual maturities.

Cloud Computing Arrangements

In August 2018, the FASB issued ASU No. 2018-15, "Intangibles - Goodwill and Other - Internal-Use Software (Subtopic 350-40): Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract," (ASU 2018-15), to align the requirements for capitalizing implementation costs in a hosting arrangement that is a service contract with the requirements for capitalizing implementation costs relating to internal-use software. The update requires entities in a hosting arrangement that is a service contract to follow the guidance in Subtopic 350-40 to determine which implementation costs to capitalize as an asset and which costs to expense. ASU 2018-15 also requires the amortization of capitalized implementation costs over the term of the associated hosting arrangement to be presented in the same line of the Consolidated Statement of Income as the associated hosting arrangement fees.

The Corporation adopted ASU 2018-15 prospectively on January 1, 2020. The impact of adoption will depend on the magnitude and timing of upcoming software and hosting arrangement projects as well as the nature of the implementation costs. Additionally, upon adoption, certain fees that were previously classified as outside processing fee expense will be reported in software expense on the Consolidated Statements of Income.

NOTE 2 - FAIR VALUE MEASUREMENTS

Note 1 contains information about the fair value hierarchy, descriptions of the valuation methodologies and key inputs used to measure financial assets and liabilities recorded at fair value, as well as a description of the methods and significant assumptions used to estimate fair value disclosures for financial instruments not recorded at fair value in their entirety on a recurring basis.

Assets and Liabilities Recorded at Fair Value on a Recurring Basis

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

(in millions)	Total	Level 1	Level 2	Level 3
December 31, 2019				
Deferred compensation plan assets	\$ 95	\$ 95	\$ _	\$ _
Equity securities	54	54	_	_
Investment securities available-for-sale:				
U.S. Treasury and other U.S. government agency securities	2,792	2,792	_	_
Residential mortgage-backed securities (a)	9,606	_	9,606	_
Total investment securities available-for-sale	12,398	2,792	9,606	_
Derivative assets:				
Interest rate contracts	211	_	189	22
Energy derivative contracts	96	_	96	_
Foreign exchange contracts	10	_	10	_
Total derivative assets	317	_	295	22
Total assets at fair value	\$ 12,864	\$ 2,941	\$ 9,901	\$ 22
Derivative liabilities:				
Interest rate contracts	\$ 39	\$ _	\$ 39	\$ _
Energy derivative contracts	92	_	92	_
Foreign exchange contracts	10	_	10	_
Total derivative liabilities	141	_	141	_
Deferred compensation plan liabilities	95	95	_	_
Total liabilities at fair value	\$ 236	\$ 95	\$ 141	\$ _

⁽a) Issued and/or guaranteed by U.S. government agencies or U.S. government-sponsored enterprises.

(in millions)	Total	Level 1	Level 2	Level 3
December 31, 2018				
Deferred compensation plan assets	\$ 88	\$ 88	\$ _	\$ _
Equity securities	43	43	_	_
Investment securities available-for-sale:				
U.S. Treasury and other U.S. government agency securities	2,727	2,727	_	_
Residential mortgage-backed securities (a)	9,318	_	9,318	_
Total investment securities available-for-sale	12,045	2,727	9,318	_
Derivative assets:				
Interest rate contracts	67	_	58	9
Energy derivative contracts	189	_	189	_
Foreign exchange contracts	19	_	19	_
Total derivative assets	275	_	266	9
Total assets at fair value	\$ 12,451	\$ 2,858	\$ 9,584	\$ 9
Derivative liabilities:				
Interest rate contracts	\$ 70	\$ _	\$ 70	\$ _
Energy derivative contracts	186	_	186	_
Foreign exchange contracts	13	_	13	_
Total derivative liabilities	269	_	269	_
Deferred compensation plan liabilities	88	88	_	_
Total liabilities at fair value	\$ 357	\$ 88	\$ 269	\$ _

⁽a) Issued and/or guaranteed by U.S. government agencies or U.S. government-sponsored enterprises.

There were no transfers of assets or liabilities recorded at fair value on a recurring basis into or out of Level 1, Level 2 and Level 3 fair value measurements during the years ended December 31, 2019 and 2018.

The following table summarizes the changes in Level 3 assets measured at fair value on a recurring basis for the years ended December 31, 2019 and 2018.

(in millions)	Be	alance at ginning of Period	Change in ssification (a)	- \$ 1 \$ 13 4 \$ - \$ - 4) 4)			ales and demptions	E	lance at End of Period	
Year Ended December 31, 2019			(2)					 F		
Derivative assets:										
Interest rate contracts	\$	9	\$ _	\$	1	\$	13	\$ (1)	\$	22
Year Ended December 31, 2018										
Equity securities	\$	_	\$ 44	\$	_	\$	_	\$ (44)	\$	_
Investment securities available-for-sale:										
State and municipal securities (c)		5	_		_		_	(5)		_
Equity and other non-debt securities (c)		44	(44)		_		_	_		
Total investment securities available-for-sale		49	(44)		_		_	(5)		_
Derivative assets:										
Interest rate contracts		14	_		_		(5)	_		9

Assets and Liabilities Recorded at Fair Value on a Nonrecurring Basis

The Corporation may be required to record certain assets and liabilities at fair value on a nonrecurring basis. These include assets that are recorded at the lower of cost or fair value, and were recognized at fair value since it was less than cost at the end of the period.

Reflects the reclassification of equity securities resulting from the adoption of ASU 2016-01.
Realized and unrealized gains and losses due to changes in fair value recorded in other noninterest income on the Consolidated Statements of Income.

Auction-rate securities.

The following table presents assets recorded at fair value on a nonrecurring basis at December 31, 2019 and 2018. No liabilities were recorded at fair value on a nonrecurring basis at December 31, 2019 and 2018.

(in millions)	Level 3
December 31, 2019	
Loans:	
Commercial	\$ 70
Total assets at fair value	\$ 70
December 31, 2018	
Business loans:	
Commercial	\$ 96
Commercial mortgage	4
Total business loans	100
Retail loans:	
Residential mortgage	8
Total assets at fair value	\$ 108

Level 3 assets recorded at fair value on a nonrecurring basis at December 31, 2019 and 2018 included both nonaccrual loans and TDRs for which a specific allowance was established based on the fair value of collateral. The unobservable inputs were the additional adjustments applied by management to the appraised values to reflect such factors as non-current appraisals and revisions to estimated time to sell. These adjustments are determined based on qualitative judgments made by management on a case-by-case basis and are not quantifiable inputs, although they are used in the determination of fair value.

Estimated Fair Values of Financial Instruments Not Recorded at Fair Value on a Recurring Basis

The Corporation typically holds the majority of its financial instruments until maturity and thus does not expect to realize many of the estimated fair value amounts disclosed. The disclosures also do not include estimated fair value amounts for items that are not defined as financial instruments, but which have significant value. These include such items as core deposit intangibles, the future earnings potential of significant customer relationships and the value of trust operations and other fee generating businesses. The Corporation believes the imprecision of an estimate could be significant.

The carrying amount and estimated fair value of financial instruments not recorded at fair value in their entirety on a recurring basis on the Corporation's Consolidated Balance Sheets are as follows:

	Carrying	 Estimated Fair Value							
(in millions)	Amount	Total		Level 1	Level 2			Level 3	
December 31, 2019									
Assets									
Cash and due from banks	\$ 973	\$ 973	\$	973	\$	_	\$	_	
Interest-bearing deposits with banks	4,845	4,845		4,845		_		_	
Loans held-for-sale	6	6		_		6		_	
Total loans, net of allowance for loan losses (a)	49,732	49,975		_		_		49,975	
Customers' liability on acceptances outstanding	2	2		2		_		_	
Restricted equity investments	248	248		248		_		_	
Nonmarketable equity securities (b)	5	10							
Liabilities									
Demand deposits (noninterest-bearing)	27,382	27,382		_		27,382		_	
Interest-bearing deposits	26,802	26,802		_		26,802		_	
Customer certificates of deposit	2,978	2,968		_		2,968		_	
Other time deposits	133	133		_		133		_	
Total deposits	57,295	57,285		_		57,285		_	
Short-term borrowings	71	71		71		_		_	
Acceptances outstanding	2	2		2		_		_	
Medium- and long-term debt	7,269	7,316		_		7,316		_	
Credit-related financial instruments	(57)	(57)		_		_		(57)	
December 31, 2018									
Assets									
Cash and due from banks	\$ 1,390	\$ 1,390	\$	1,390	\$	_	\$	_	
Interest-bearing deposits with banks	3,171	3,171		3,171		_		_	
Loans held-for-sale	3	3		_		3		_	
Total loans, net of allowance for loan losses (a)	49,492	48,889		_		_		48,889	
Customers' liability on acceptances outstanding	4	4		4		_		_	
Restricted equity investments	248	248		248		_		_	
Nonmarketable equity securities (b)	6	11							
Liabilities									
Demand deposits (noninterest-bearing)	28,690	28,690		_		28,690		_	
Interest-bearing deposits	24,740	24,740		_		24,740		_	
Customer certificates of deposit	2,131	2,100		_		2,100		_	
Total deposits	55,561	55,530		_		55,530		_	
Short-term borrowings	44	44		44		_		_	
Acceptances outstanding	4	4		4		_		_	
Medium- and long-term debt	6,463	6,436		_		6,436		_	
Credit-related financial instruments	(57)	(57)		_		_		(57)	

Included \$70 million and \$108 million of impaired loans recorded at fair value on a nonrecurring basis at December 31, 2019 and 2018, respectively.

Certain investments that are measured at fair value using the net asset value have not been classified in the fair value hierarchy. The fair value amounts presented in the table are intended to permit reconciliation of the fair value hierarchy to the amounts presented in the Consolidated Balance Sheets.

NOTE 3 - INVESTMENT SECURITIES

A summary of the Corporation's investment securities follows:

(in millions)	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
December 31, 2019				
Investment securities available-for-sale:				
U.S. Treasury and other U.S. government agency securities	\$ 2,745	\$ 47	\$ _	\$ 2,792
Residential mortgage-backed securities (a)	9,568	66	28	9,606
Total investment securities available-for-sale	\$ 12,313	\$ 113	\$ 28	\$ 12,398
December 31, 2018				
Investment securities available-for-sale:				
U.S. Treasury and other U.S. government agency securities	\$ 2,732	\$ 14	\$ 19	\$ 2,727
Residential mortgage-backed securities (a)	9,493	22	197	9,318
Total investment securities available-for-sale	\$ 12,225	\$ 36	\$ 216	\$ 12,045

⁽a) Issued and/or guaranteed by U.S. government agencies or U.S. government-sponsored enterprises.

A summary of the Corporation's investment securities in an unrealized loss position as of December 31, 2019 and 2018 follows:

	Temporarily Impaired											
		Less than	Less than 12 Months 12 Months or more								Total	
(in millions)		Fair Value	Unrealized Fair Losses Value			Unrealized Losses		Fair Value		Unrealized Losses		
December 31, 2019												
Residential mortgage-backed securities (a)	\$	1,494	\$	7	\$	1,906	\$	21	\$	3,400	\$	28
Total temporarily impaired securities	\$	1,494	\$	7	\$	1,906	\$	21	\$	3,400	\$	28
December 31, 2018												
U.S. Treasury and other U.S. government agency securities	\$	_	\$	_	\$	1,457	\$	19	\$	1,457	\$	19
Residential mortgage-backed securities (a)		1,008		9		6,412		188		7,420		197
Total temporarily impaired securities	\$	1,008	\$	9	\$	7,869	\$	207	\$	8,877	\$	216

⁽a) Issued and/or guaranteed by U.S. government agencies or U.S. government-sponsored enterprises.

At December 31, 2019, the Corporation had 170 residential mortgage-backed securities in an unrealized loss position with no credit impairment. The unrealized losses for these securities resulted from changes in market interest rates and liquidity, not changes in credit quality. The Corporation ultimately expects full collection of the carrying amount of these securities, does not intend to sell the securities in an unrealized loss position, and it is not more-likely-than-not that the Corporation will be required to sell the securities in an unrealized loss position prior to recovery of amortized cost. The Corporation does not consider these securities to be other-than-temporarily impaired at December 31, 2019.

Sales, primarily from repositioning \$1.0 billion and \$1.3 billion of lower-yielding treasury securities in the years ended December 31, 2019 and 2018, respectively, of investment securities available-for-sale resulted in the following gains and losses recorded in net securities losses on the Consolidated Statements of Income, computed based on the adjusted cost of the specific security. There were no securities gains or losses for the year ended December 31, 2017.

(in millions)

Year Ended December 31	2019	2018
Securities gains	\$ 1 \$	2
Securities losses	(8)	(21)
Net securities losses	\$ (7) \$	(19)

The following table summarizes the amortized cost and fair values of debt securities by contractual maturity. Securities with multiple maturity dates are classified in the period of final maturity. Expected maturities will differ from contractual maturities because borrowers may have the right to call or prepay obligations with or without call or prepayment penalties.

(in millions)

December 31, 2019	A	mortized Cost	Fair Value
Contractual maturity			
Within one year	\$	30	\$ 30
After one year through five years		2,842	2,894
After five years through ten years		1,006	1,013
After ten years		8,435	8,461
Total investment securities	\$	12,313	\$ 12,398

Included in the contractual maturity distribution in the table above were residential mortgage-backed securities with a total amortized cost and fair value of \$9.6 billion. The actual cash flows of mortgage-backed securities may differ from contractual maturity as the borrowers of the underlying loans may exercise prepayment options.

At December 31, 2019, investment securities with a carrying value of \$518 million were pledged where permitted or required by law to secure \$418 million of liabilities, primarily public and other deposits of state and local government agencies and derivative instruments.

NOTE 4 - CREDIT QUALITY AND ALLOWANCE FOR CREDIT LOSSES

The following table presents an aging analysis of the recorded balance of loans.

	Lo	ans P	ast Due	and S	till Accrı	iing						
(in millions)	0-59 Days		0-89 Days		Days More	7	Fotal		naccrual Loans	Current Loans		Total Loans
December 31, 2019	 											
Business loans:												
Commercial	\$ 27	\$	7	\$	17	\$	51	\$	148	\$ 31,274	\$	31,473
Real estate construction:												
Commercial Real Estate business line (a)	6		_		_		6		_	3,038		3,044
Other business lines (b)	_		7		_		7		_	404		411
Total real estate construction	6		7		_		13		_	3,442		3,455
Commercial mortgage:												
Commercial Real Estate business line (a)	9		_		_		9		2	2,165		2,176
Other business lines (b)	16		18		9		43		12	7,328		7,383
Total commercial mortgage	25		18		9		52		14	9,493		9,559
Lease financing	1		_		_		1		_	587		588
International	_		5		_		5		_	1,004		1,009
Total business loans	59		37		26		122		162	45,800		46,084
Retail loans:												
Residential mortgage	15		2		_		17		20	1,808		1,845
Consumer:										,		,
Home equity	4		5		_		9		17	1,685		1,711
Other consumer	2		3		_		5		_	724		729
Total consumer	6		8		_		14		17	2,409		2,440
Total retail loans	21		10				31		37	4,217		4,285
Total loans	\$ 80	\$	47	\$	26	\$	153	\$	199	\$ 50,017	\$	50,369
December 31, 2018		•		•		•		<u> </u>		 ,-	•	
Business loans:												
Commercial	\$ 34	\$	26	\$	8	\$	68	\$	141	\$ 31,767	\$	31,976
Real estate construction:										, ,		- ,
Commercial Real Estate business line (a)	6		_		_		6		_	2,681		2,687
Other business lines (b)	6		_		_		6		_	384		390
Total real estate construction	12				_		12		_	3,065		3,077
Commercial mortgage:										,		
Commercial Real Estate business line (a)	4		_		_		4		2	1,737		1,743
Other business lines (b)	32		5		8		45		18	7,300		7,363
Total commercial mortgage	36		5		8		49		20	9,037		9,106
Lease financing	_		_		_		_		2	505		507
International	_		_		_		_		3	1,010		1,013
Total business loans	82		31		16		129		166	45,384		45,679
Retail loans:												
Residential mortgage	11		3		_		14		36	1,920		1,970
Consumer:	**		5				<u> </u>		50	1,520		1,570
Home equity	4		1				5		19	1,741		1,765
Other consumer	1		_		_		1		_	748		749
Total consumer	5		1				6		19	2,489		2,514
Total Collounici	J									∠, -TUJ		2,514
Total retail loans	16		4				20		55	4,409		4,484

⁽a) Primarily loans to real estate developers.

⁽b) Primarily loans secured by owner-occupied real estate.

The following table presents loans by credit quality indicator, based on internal risk ratings assigned to each business loan at the time of approval and subjected to subsequent reviews, generally at least annually, and to pools of retail loans with similar risk characteristics.

				Internally As	signed l	Rating				
(in millions)		Pass (a)		Special Mention (b)	Su	bstandard (c)		Nonaccrual (d)		Total
December 31, 2019		· · ·		, ,		· · · · · · · · · · · · · · · · · · ·				
Business loans:										
Commercial	\$	29,785	\$	841	\$	699	\$	148	\$	31,473
Real estate construction:										
Commercial Real Estate business line (e)		3,013		19		12		_		3,044
Other business lines (f)		411		_		_		_		411
Total real estate construction		3,424		19		12		_		3,455
Commercial mortgage:										
Commercial Real Estate business line (e)		2,121		12		41		2		2,176
Other business lines (f)		7,141		147		83		12		7,383
Total commercial mortgage		9,262		159		124		14		9,559
Lease financing		579		7		2		_		588
International		972		29		8		_		1,009
Total business loans		44,022		1,055		845		162		46,084
Retail loans:										
		1 000		2				20		1 0 4 5
Residential mortgage		1,823		2		_		20		1,845
Consumer:		1,682		1		11		17		1,711
Home equity Other consumer		722		6						729
				7		1		17		
Total rotal leans		2,404				12		17		2,440
Total loans Total loans	<u>.</u>	4,227	¢.	9	ф.	12	¢.	37	¢.	4,285
	\$	48,249	\$	1,064	\$	857	\$	199	\$	50,369
December 31, 2018										
Business loans:	ф	20.045	d.	46.4	ф	55.4	Ф	4.44	ф	24.070
Commercial	\$	30,817	\$	464	\$	554	\$	141	\$	31,976
Real estate construction:		2.664		22						2.007
Commercial Real Estate business line (e)		2,664		23		_		_		2,687
Other business lines (f)		382		8						390
Total real estate construction		3,046		31		_		_		3,077
Commercial mortgage:		1 (00		1.4		45		3		1 740
Commercial Real Estate business line (e)		1,682		14		45		2		1,743
Other business lines (f)		7,157		118		70		18		7,363
Total commercial mortgage		8,839		132		115		20		9,106
Lease financing		500		3		2		2		507
International		996		4		10		3		1,013
Total business loans		44,198		634		681		166		45,679
Retail loans:										
Residential mortgage		1,931		3		_		36		1,970
Consumer:										
Home equity		1,738		_		8		19		1,765
Other consumer		748		1		_		_		749
Total consumer		2,486		1		8		19		2,514
Total retail loans		4,417		4		8		55		4,484
Total loans	\$	48,615	\$	638	\$	689	\$	221	\$	50,163

Includes all loans not included in the categories of special mention, substandard or nonaccrual.

Special mention loans are accruing loans that have potential credit weaknesses that deserve management's close attention, such as loans to borrowers who may be experiencing financial difficulties that may result in

deterioration of repayment prospects from the borrower at some future date. This category is generally consistent with the "special mention" category as defined by regulatory authorities.

Substandard loans are accruing loans that have a well-defined weaknesse, or weaknesses, such as loans to borrowers who may be experiencing losses from operations or inadequate liquidity of a degree and duration that jeopardizes the orderly repayment of the loan. Substandard loans also are distinguished by the distinct possibility of loss in the future if these weaknesses are not corrected. This category is generally consistent with the "substandard" category as defined by regulatory authorities.

Nonaccrual loans are loans for which the accrual of interest has been discontinued. For further information regarding nonaccrual loans, refer to the Nonperforming Assets subheading in Note 1 - Basis of Presentation and Accounting Policies. A significant majority of nonaccrual loans are generally consistent with the "substandard" category and the remainder are generally consistent with the "doubtful" category as defined by regulatory authorities.

Primarily loans to real estate developers.

The following table summarizes nonperforming assets.

(in millions)	December 31, 2019	December 31, 2018
Nonaccrual loans	\$ 199	\$ 221
Reduced-rate loans (a)	5	8
Total nonperforming loans	204	229
Foreclosed property	11	1
Total nonperforming assets	\$ 215	\$ 230

⁽a) Comprised of reduced-rate retail loans.

There were no retail loans secured by residential real estate properties in process of foreclosure included in nonaccrual loans at December 31, 2019, compared to \$1 million at December 31, 2018.

Allowance for Credit Losses

The following table details the changes in the allowance for loan losses and related loan amounts.

				2019			2018					2017	
]	Business	ъ.	9. т	m l	Business	Retail	m l	1	Business		Retail	T. 4 . 1
(dollar amounts in millions)		Loans	ке	tail Loans	Total	Loans	Loans	Total		Loans		Loans	Total
Years Ended December 31													
Allowance for loan losses:													
Balance at beginning of period	\$	627	\$	44	\$ 671	\$ 661	\$ 51	\$ 712	\$	682	\$	48	\$ 730
Loan charge-offs		(147)		(5)	(152)	(99)	(4)	(103)		(143)		(6)	(149)
Recoveries on loans previously charged-off		40		5	45	47	5	52		50		7	57
Net loan (charge-offs) recoveries		(107)		_	(107)	(52)	1	(51)		(93)		1	(92)
Provision for loan losses		81		(8)	73	19	(8)	11		71		2	73
Foreign currency translation adjustment		_		_	_	(1)	_	(1)		1		_	1
Balance at end of period	\$	601	\$	36	\$ 637	\$ 627	\$ 44	\$ 671	\$	661	\$	51	\$ 712
As a percentage of total loans		1.30%	,)	0.84%	1.27%	1.37%	0.97%	1.34%		1.48%)	1.12%	1.45%
December 31													
Allowance for loan losses:													
Individually evaluated for impairment	\$	31	\$	_	\$ 31	\$ 27	\$ _	\$ 27	\$	67	\$	_	\$ 67
Collectively evaluated for impairment		570		36	606	600	44	644		594		51	645
Total allowance for loan losses	\$	601	\$	36	\$ 637	\$ 627	\$ 44	\$ 671	\$	661	\$	51	\$ 712
Loans:													
Individually evaluated for impairment	\$	199	\$	16	\$ 215	\$ 240	\$ 36	\$ 276	\$	443	\$	34	\$ 477
Collectively evaluated for impairment		45,885		4,269	50,154	45,439	4,448	49,887		44,188		4,508	48,696
Total loans evaluated for impairment	\$	46,084	\$	4,285	\$ 50,369	\$ 45,679	\$ 4,484	\$ 50,163	\$	44,631	\$	4,542	\$ 49,173

Changes in the allowance for credit losses on lending-related commitments, included in accrued expenses and other liabilities on the Consolidated Balance Sheets, are summarized in the following table.

(in millions)

Years Ended December 31	2019	2018	2017
Balance at beginning of period	\$ 30	\$ 42	\$ 41
Provision for credit losses on lending-related commitments	1	(12)	1
Balance at end of period	\$ 31	\$ 30	\$ 42

Individually Evaluated Impaired Loans

The following table presents additional information regarding individually evaluated impaired loans.

	F	Recor	ded Investment	ln:			
(in millions)	Impaired Loans with No Related Allowance		Impaired Loans with Related Allowance		Total Impaired Loans	Unpaid Principal Balance	Related Allowance for Loan Losses
December 31, 2019							
Business loans:							
Commercial	\$ 30	\$	120	\$	150	\$ 251	\$ 30
Commercial mortgage:							
Commercial Real Estate business line (a)	39		_		39	49	_
Other business lines (b)	1		9		10	15	1
Total commercial mortgage	40		9		49	64	1
Total business loans	70		129		199	315	31
Retail loans:							
Residential mortgage	8		_		8	8	_
Consumer:							
Home equity	8		_		8	10	_
Total retail loans (c)	16		_		16	18	_
Total individually evaluated impaired loans	\$ 86	\$	129	\$	215	\$ 333	\$ 31
December 31, 2018							
Business loans:							
Commercial	\$ 50	\$	130	\$	180	\$ 227	\$ 24
Commercial mortgage:							
Commercial Real Estate business line (a)	39		_		39	49	_
Other business lines (b)	2		16		18	23	3
Total commercial mortgage	41		16		57	72	3
International	2		1		3	8	
Total business loans	93		147		240	307	27
Retail loans:							
Residential mortgage	16		8		24	25	_
Consumer:							
Home equity	11		_		11	13	_
Other consumer	1		_		1	1	_
Total consumer	12		_		12	14	_
Total retail loans (c)	28		8		36	39	_
Total individually evaluated impaired loans	\$ 121	\$	155	\$	276	\$ 346	\$ 27

Primarily loans to real estate developers.
Primarily loans secured by owner-occupied real estate.
Individually evaluated retail loans generally have no related allowance for loan losses, primarily due to policy which results in direct write-downs of most restructured retail loans.

Retail loans:

Consumer: Home equity

Residential mortgage

Other consumer

Total consumer

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS Comerica Incorporated and Subsidiaries

The following table presents information regarding average individually evaluated impaired loans and the related interest recognized. Interest income recognized for the period primarily related to performing restructured loans.

Individually Evaluated Impaired Loans

2019 2018 2017 Average **Interest Income** Average **Interest Income** Average **Interest Income** Balance for the Recognized for the Balance for the Recognized for the Balance for the Recognized for the (in millions) Period Period Period Period Period Period **Years Ended December 31 Business loans:** \$ \$ 2 262 \$ 8 Commercial 156 \$ 5 \$ 451 \$ Commercial mortgage: Commercial Real Estate business line 39 3 40 4 21 2 (a) Other business lines (b) 14 1 23 31 Total commercial mortgage 53 4 63 4 52 2 Lease financing 1 International 2 4 8 212 329 511 Total business loans 6 9 10

1

1

7

\$

21

11

1

12

33

362

\$

24

13

3

16

40

551

\$

10

9

\$

21

9

9

30

242

\$

Total retail loans

Total individually evaluated impaired loans (a) *Primarily loans to real estate developers*.

⁽a) Primarily loans to real estate developers.(b) Primarily loans secured by owner-occupied real estate.

Troubled Debt Restructurings

The following tables detail the recorded balance at December 31, 2019 and 2018 of loans considered to be TDRs that were restructured during the years ended December 31, 2019 and 2018, by type of modification. In cases of loans with more than one type of modification, the loans were categorized based on the most significant modification.

			2019				
	Type of M	odific	ation		Type of M		
(in millions)	rincipal errals (a)		erest Rate ductions	Total Modifications	Principal Deferrals (a)	Interest Rat Reductions	
Years Ended December 31							
Business loans:							
Commercial	\$ 28	\$	_	\$ 28	\$ 27	\$ _	- \$ 27
Commercial mortgage:							
Other business lines (b)	_		_	_	2	_	- 2
International	_		_	_	1	_	- 1
Total business loans	28		_	28	30	_	- 30
Retail loans:							
Consumer:							
Home equity (c)	_		1	1	_	3	3
Total loans	\$ 28	\$	1	\$ 29	\$ 30	\$ 3	3 \$ 33

- (a) Primarily represents loan balances where terms were extended 90 days or more at or above contractual interest rates. Also includes commercial loans restructured in bankruptcy.
- (b) Primarily loans secured by owner-occupied real estate.
- (c) Includes bankruptcy loans for which the court has discharged the borrower's obligation and the borrower has not reaffirmed the debt.

The Corporation charges interest on principal balances outstanding during deferral periods. Additionally, none of the modifications involved forgiveness of principal.

At December 31, 2019 and 2018, commitments to lend additional funds to borrowers whose terms have been modified in TDRs totaled \$3 million and \$20 million, respectively. On an ongoing basis, the Corporation monitors the performance of modified loans to their restructured terms. The allowance for loan losses continues to be reassessed on the basis of an individual evaluation for each loan.

For principal deferrals, incremental deterioration in the credit quality of the loan, represented by a downgrade in the risk rating of the loan, for example, due to missed interest payments or a reduction of collateral value, is considered a subsequent default. For interest rate reductions, a subsequent payment default is defined in terms of delinquency, when a principal or interest payment is 90 days past due. Subsequent defaults of principal deferrals totaled \$12 million in commercial loans for the year ended December 31, 2019, compared to none in the comparable period in 2018. There were no subsequent defaults of interest rate reductions during either of the years ended December 31, 2019 and 2018.

NOTE 5 - SIGNIFICANT GROUP CONCENTRATIONS OF CREDIT RISK

Concentrations of credit risk may exist when a number of borrowers are engaged in similar activities, or activities in the same geographic region, and have similar economic characteristics that would cause them to be similarly impacted by changes in economic or other conditions. Concentrations of both on-balance sheet and off-balance sheet credit risk are controlled and monitored as part of credit policies. The Corporation is a regional financial services holding company with a geographic concentration of its on-balance-sheet and off-balance-sheet activities in Michigan, California and Texas.

As outlined below, the Corporation has a concentration of credit risk with the automotive industry. Loans to automotive dealers and to borrowers involved with automotive production are reported as automotive, as management believes these loans have similar economic characteristics that might cause them to react similarly to changes in economic conditions. This aggregation involves the exercise of judgment. Included in automotive production are: (a) original equipment manufacturers and Tier 1 and Tier 2 suppliers that produce components used in vehicles and whose primary revenue source is automotive-related ("primary" defined as greater than 50%) and (b) other manufacturers that produce components used in vehicles and whose primary revenue source is automotive-related. Loans less than \$1 million and loans recorded in the Small Business loan portfolio were excluded from the definition. Outstanding loans, included in commercial loans on the Consolidated Balance Sheets, and total exposure

(outstanding loans, unused commitments and standby letters of credit) to companies related to the automotive industry were as follows:

(in millions)

December 31	2019	2018
Automotive loans:		
Production	\$ 1,249	\$ 1,331
Dealer	7,414	8,097
Total automotive loans	\$ 8,663	\$ 9,428
Total automotive exposure:		
Production	\$ 2,358	\$ 2,396
Dealer	9,677	10,044
Total automotive exposure	\$ 12,035	\$ 12,440

Further, the Corporation's portfolio of commercial real estate loans, which includes real estate construction and commercial mortgage loans, was as follows.

(in millions)

December 31	2019		2018
Real estate construction loans:			
Commercial Real Estate business line (a)	\$ 3,	044 \$	2,687
Other business lines (b)		411	390
Total real estate construction loans	3,	455	3,077
Commercial mortgage loans:			
Commercial Real Estate business line (a)	2,	176	1,743
Other business lines (b)	7,	383	7,363
Total commercial mortgage loans	9,	559	9,106
Total commercial real estate loans	\$ 13,	014 \$	12,183
Total unused commitments on commercial real estate loans	s 3.	557 \$	3.146

⁽a) Primarily loans to real estate developers.

NOTE 6 - PREMISES AND EQUIPMENT

A summary of premises and equipment by major category follows:

(in millions)

December 31	2019	2018
Land	\$ 86	\$ 85
Buildings and improvements	818	842
Furniture and equipment	513	492
Total cost	1,417	1,419
Less: Accumulated depreciation and amortization	(960)	(944)
Net book value	\$ 457	\$ 475

The Corporation conducts a portion of its business from leased facilities and leases certain equipment. Rental expense for leased properties and equipment amounted to \$81 million, \$75 million and \$78 million in 2019, 2018 and 2017, respectively. Refer to Note 26 for more information on leased facilities and equipment.

⁽b) Primarily loans secured by owner-occupied real estate.

NOTE 7 - GOODWILL AND CORE DEPOSIT INTANGIBLES

The following table summarizes the carrying value of goodwill by reporting unit for the years ended December 31, 2019 and 2018.

(in millions)

December 31	2019	2018
Business Bank	\$ 473	\$ 473
Retail Bank	101	101
Wealth Management	61	61
Total	\$ 635	\$ 635

The Corporation performs its annual evaluation of goodwill impairment in the third quarter of each year and on an interim basis if events or changes in circumstances between annual tests indicate goodwill might be impaired. In 2019 and 2018, the annual test of goodwill impairment was performed as of the beginning of the third quarter, and in both of these periods, a qualitative assessment resulted in the Corporation determining goodwill was not impaired as it was more likely than not the fair value of each reporting unit exceeded its carrying value.

A summary of core deposit intangible carrying value and related accumulated amortization follows:

(in millions)

December 31	2019	2018
Gross carrying amount	\$ 34	\$ 34
Accumulated amortization	(32)	(30)
Net carrying amount	\$ 2	\$ 4

The Corporation recorded amortization expense related to the core deposit intangible of \$2 million for both the years ended December 31, 2019 and 2018. At December 31, 2019, estimated future amortization expense was as follows:

(in millions)

2020	\$ 1
2021	1
Total	\$ 2

NOTE 8 - DERIVATIVE AND CREDIT-RELATED FINANCIAL INSTRUMENTS

In the normal course of business, the Corporation enters into various transactions involving derivative and credit-related financial instruments to manage exposure to fluctuations in interest rate, foreign currency and other market risks and to meet the financing needs of customers (customer-initiated derivatives). These financial instruments involve, to varying degrees, elements of market and credit risk. Market and credit risk are included in the determination of fair value.

Market risk is the potential loss that may result from movements in interest rates, foreign currency exchange rates or energy commodity prices that cause an unfavorable change in the value of a financial instrument. The Corporation manages this risk by establishing monetary exposure limits and monitoring compliance with those limits. Market risk inherent in interest rate and energy contracts entered into on behalf of customers is mitigated by taking offsetting positions, except in those circumstances when the amount, tenor and/or contract rate level results in negligible economic risk, whereby the cost of purchasing an offsetting contract is not economically justifiable. The Corporation mitigates most of the inherent market risk in foreign exchange contracts entered into on behalf of customers by taking offsetting positions and manages the remainder through individual foreign currency position limits and aggregate value-at-risk limits. These limits are established annually and positions are monitored quarterly. Market risk inherent in derivative instruments held or issued for risk management purposes is typically offset by changes in the fair value of the assets or liabilities being hedged.

Credit risk is the possible loss that may occur in the event of nonperformance by the counterparty to a financial instrument. The Corporation attempts to minimize credit risk arising from customer-initiated derivatives by evaluating the creditworthiness of each customer, adhering to the same credit approval process used for traditional lending activities and obtaining collateral as deemed necessary. Derivatives with dealer counterparties are either cleared through a clearinghouse or settled directly with a single counterparty. For derivatives settled directly with dealer counterparties, the Corporation utilizes counterparty risk limits and monitoring procedures, as well as master netting arrangements and bilateral collateral agreements to facilitate the management of credit risk. Master netting arrangements effectively reduce credit risk by permitting settlement of positive and negative positions

and offset cash collateral held with the same counterparty on a net basis. Bilateral collateral agreements require daily exchange of cash or highly rated securities issued by the U.S. Treasury or other U.S. government entities to collateralize amounts due to either party. At December 31, 2019, counterparties with bilateral collateral agreements had no pledged marketable investment securities and deposited \$12 million of cash with the Corporation to secure the fair value of contracts in an unrealized gain position, and the Corporation had pledged \$23 million of marketable investment securities and posted \$15 million of cash as collateral for contracts in an unrealized loss position. For those counterparties not covered under bilateral collateral agreements, collateral is obtained, if deemed necessary, based on the results of management's credit evaluation of the counterparty. Collateral varies, but may include cash, investment securities, accounts receivable, equipment or real estate. Included in the fair value of derivative instruments are credit valuation adjustments reflecting counterparty credit risk. These adjustments are determined by applying a credit spread for the counterparty or the Corporation, as appropriate, to the total expected exposure of the derivative. There were no derivative instruments with credit-risk-related contingent features that were in a liability position at December 31, 2019.

Derivative Instruments

Derivative instruments utilized by the Corporation are negotiated over-the-counter and primarily include swaps, caps and floors, forward contracts and options, each of which may relate to interest rates, energy commodity prices or foreign currency exchange rates. Swaps are agreements in which two parties periodically exchange cash payments based on specified indices applied to a specified notional amount until a stated maturity. Caps and floors are agreements which entitle the buyer to receive cash payments based on the difference between a specified reference rate or price and an agreed strike rate or price, applied to a specified notional amount until a stated maturity. Forward contracts are over-the-counter agreements to buy or sell an asset at a specified future date and price. Options are similar to forward contracts except the purchaser has the right, but not the obligation, to buy or sell the asset during a specified period or at a specified future date.

Over-the-counter contracts are tailored to meet the needs of the counterparties involved and, therefore, contain a greater degree of credit risk and liquidity risk than exchange-traded contracts, which have standardized terms and readily available price information. The Corporation reduces exposure to market and liquidity risks from over-the-counter derivative instruments entered into for risk management purposes, and transactions entered into to mitigate the market risk associated with customer-initiated transactions, by taking offsetting positions with investment grade domestic and foreign financial institutions and subjecting counterparties to credit approvals, limits and collateral monitoring procedures similar to those used in making other extensions of credit. In addition, certain derivative contracts executed bilaterally with a dealer counterparty in the over-the-counter market are cleared through a clearinghouse, whereby the clearinghouse becomes the counterparty to the transaction.

The following table presents the composition of the Corporation's derivative instruments held or issued for risk management purposes or in connection with customer-initiated and other activities at December 31, 2019 and 2018. The table excludes commitments and warrants accounted for as derivatives.

Notional/

December 31, 2019

Gross

Fair Value

December 31, 2018

Notional/

Fair Value

	Derivative Assets	Contract Amount (a)	rivative abilities		Derivative Assets	I	Contract Amount (a)		(in millions)
									Risk management purposes
									Derivatives designated as hedging instruments
									Interest rate contracts:
— \$ 2	\$ —	\$ 2,625	_	\$	_	\$	3,325	\$	Swaps - fair value - receive fixed/pay floating
	_	_	_		_		4,550		Swaps - cash flow - receive fixed/ pay floating
									Derivatives used as economic hedges
									Foreign exchange contracts:
1 1	1	302	2		_		330		Spot, forwards and swaps
1 3	1	2,927	2		_		8,205		Total risk management purposes
									Customer-initiated and other activities
									Interest rate contracts:
_ 1	_	885	_		_		671		Caps and floors written
1 —	1	885	_		_		671		Caps and floors purchased
66 67	66	13,115	39		211		16,485		Swaps
67 68	67	14,885	39		211		17,827		Total interest rate contracts
									Energy contracts:
26	_	278	23		_		477		Caps and floors written
26 —	26	278	_		23		477		Caps and floors purchased
163 160	163	2,094	69		73		2,135		Swaps
189 186	189	2,650	92		96		3,089		Total energy contracts
									Foreign exchange contracts:
18 12	18	1,095	8		10		1,013		Spot, forwards, options and swaps
274 266	274	18,630	139		317		21,929		Total customer-initiated and other activities
275 269	275	\$ 21,557	141		317		30,134	\$	Total gross derivatives
									Amounts offset in the Consolidated Balance Sheets:
									Netting adjustment - Offsetting derivative
(45) (45)	(45)		(63))	(63)				assets/liabilities
174) (1)	(174)		(12))	(11)			d	Netting adjustment - Cash collateral received/poste
									Net derivatives included in the Consolidated Balance
56 223	56		66		243				Sheets (b)
									Amounts not offset in the Consolidated Balance Sheets:
(1) —	(1)		(21)		_				Marketable securities pledged under bilateral collateral agreements
									and the control of th
55 \$ 223					243	\$			
55 casi sk a othe ing	\$ 55 contractual cast or market risk a penses and othe ments reflecting	nts subject to credit ded in accrued exp edit valuation adjusti	45 et, are used acceed amounts are includities are cre	es mar cantly (iabiliti ve liab	e derivative ged, signific derivative li net derivativ	in the contract in the contrac	e typically not ex ther assets and derivative assets	xtent its are nd oti f net d	Net derivatives after deducting amounts not offset in the Consolidated Balance Sheets (a) Notional or contractual amounts, which represent the e accordance with the terms of the agreement. These amoun on the Consolidated Balance Sheets. (b) Net derivative assets are included in accrued income a Consolidated Balance Sheets. Included in the fair value of risk and credit risk of the Corporation. The fair value of million at December 31, 2019 and 2018, respectively.

Risk Management

The Corporation's derivative instruments used for managing interest rate risk include fair value hedging strategies that convert fixed-rate long-term debt to variable rates and variable-rate loans to fixed rates.

The following table details the effects of fair value hedging on the Consolidated Statements of Income.

(in millions)	Interest on Medium- and Long-Term Debt			
Years Ended December 31	2019		2018	
Total interest on medium-and long-term debt (a)	\$	197 \$	144	
Fair value hedging relationships:				
Interest rate contracts:				
Hedged items		110	74	
Derivatives designated as hedging instruments		(4)	(7)	

(a) Includes the effects of hedging.

For the impact of cash flow hedging, refer to Note 14.

The following table summarizes the expected weighted average remaining maturity of the notional amount of risk management interest rate swaps, the carrying amount of the related hedged items and the weighted average interest rates associated with amounts expected to be received or paid on interest rate swap agreements as of December 31, 2019 and 2018.

(dollar amounts in millions)	N	erivative Votional Amount	of	rying Value f Hedged tems (a)	Remaining Maturity (in years)	Receive Rate	Pay Rate (b)
December 31, 2019							
Swaps - cash flow - receive fixed/pay floating rate							
Variable rate loans	\$	4,550			3.0	1.94%	1.71%
Swaps - fair value - receive fixed/pay floating rate							
Medium- and long-term debt		3,325	\$	3,469	4.6	3.44	2.80
December 31, 2018							
Swaps - fair value - receive fixed/pay floating rate							
Medium- and long-term debt		2,625		2,663	3.9	3.40	3.45

- (a) Included \$146 million and \$49 million of cumulative hedging adjustments at December 31, 2019 and 2018, respectively, which included \$7 million and \$8 million, respectively, of hedging adjustment on a discontinued hedging relationship.
- (b) Variable rates paid on receive fixed swaps designated as fair value and cash flow hedges are based on one- and six-month LIBOR rates in effect at December 31, 2019 and 2018.

Foreign exchange rate risk arises from changes in the value of certain assets and liabilities denominated in foreign currencies. The Corporation employs spot and forward contracts in addition to swap contracts to manage exposure to these and other risks. These instruments are used as economic hedges and net gains or losses are included in other noninterest income on the Consolidated Statements of Income.

Customer-Initiated and Other

The Corporation enters into derivative transactions at the request of customers and generally takes offsetting positions with dealer counterparties to mitigate the inherent market risk. Income primarily results from the spread between the customer derivative and the offsetting dealer position.

For customer-initiated foreign exchange contracts where offsetting positions have not been taken, the Corporation manages the remaining inherent market risk through individual foreign currency position limits and aggregate value-at-risk limits. These limits are established annually and reviewed quarterly. For those customer-initiated derivative contracts which were not offset or where the Corporation holds a position within the limits described above, the Corporation recognized no net gains and losses in other noninterest income on the Consolidated Statements of Income for the years ended December 31, 2019 and 2018, respectively.

Fair values of customer-initiated and other derivative instruments represent the net unrealized gains or losses on such contracts and are recorded on the Consolidated Balance Sheets. Changes in fair value are recognized on the Consolidated Statements of Income. The net gains recognized in income on customer-initiated derivative instruments, net of the impact of offsetting positions, were as follows:

(in millions)

<u>. </u>	Years Ended December 31	Location of Gain	2019	2018	
Interest rate contracts		Other noninterest income	\$ 29	\$	26
Energy contracts		Other noninterest income	5		4
Foreign exchange contracts		Foreign exchange income	43		47
Total			\$ 77	\$	77

Credit-Related Financial Instruments

The Corporation issues off-balance sheet financial instruments in connection with commercial and consumer lending activities. The Corporation's credit risk associated with these instruments is represented by the contractual amounts indicated in the following table.

(in millions)

December 31	2019	2018
Unused commitments to extend credit:		
Commercial and other	\$ 23,681	\$ 24,266
Bankcard, revolving check credit and home equity loan commitments	3,180	3,001
Total unused commitments to extend credit	\$ 26,861	\$ 27,267
Standby letters of credit	\$ 3,320	\$ 3,244
Commercial letters of credit	18	39

The Corporation maintains an allowance to cover probable credit losses inherent in lending-related commitments, including unused commitments to extend credit, letters of credit and financial guarantees. The allowance for credit losses on lending-related commitments, included in accrued expenses and other liabilities on the Consolidated Balance Sheets, was \$31 million and \$30 million at December 31, 2019 and 2018, respectively.

Unused Commitments to Extend Credit

Commitments to extend credit are legally binding agreements to lend to a customer, provided there is no violation of any condition established in the contract. These commitments generally have fixed expiration dates or other termination clauses and may require payment of a fee. Since many commitments expire without being drawn upon, the total contractual amount of commitments does not necessarily represent future cash requirements of the Corporation. Commercial and other unused commitments are primarily variable rate commitments. The allowance for credit losses on lending-related commitments included \$25 million and \$24 million at December 31, 2019 and 2018, respectively, for probable credit losses inherent in the Corporation's unused commitments to extend credit.

Standby and Commercial Letters of Credit

Standby letters of credit represent conditional obligations of the Corporation which guarantee the performance of a customer to a third party. Standby letters of credit are primarily issued to support public and private borrowing arrangements, including commercial paper, bond financing and similar transactions. Commercial letters of credit are issued to finance foreign or domestic trade transactions. These contracts expire in decreasing amounts through the year 2028. The Corporation may enter into participation arrangements with third parties that effectively reduce the maximum amount of future payments which may be required under standby and commercial letters of credit. These risk participations covered \$161 million and \$136 million at December 31, 2019 and 2018, respectively, of the \$3.3 billion of standby and commercial letters of credit outstanding at both December 31, 2019 and 2018.

The carrying value of the Corporation's standby and commercial letters of credit, included in accrued expenses and other liabilities on the Consolidated Balance Sheets, totaled \$32 million at December 31, 2019, including \$26 million in deferred fees and \$6 million in the allowance for credit losses on lending-related commitments. At December 31, 2018, the comparable amounts were \$34 million, \$28 million and \$6 million, respectively.

The following table presents a summary of criticized standby and commercial letters of credit at December 31, 2019 and 2018. The Corporation's criticized list is consistent with the Special Mention, Substandard and Doubtful categories defined by regulatory authorities. The Corporation manages credit risk through underwriting, periodically reviewing and approving its credit exposures using Board committee approved credit policies and guidelines.

(dollar amounts in millions)	December 31, 2019	December 31, 2018
Total criticized standby and commercial letters of credit	\$ 44	\$ 49
As a percentage of total outstanding standby and commercial letters of credit	1.3%	1.5%

Other Credit-Related Financial Instruments

The Corporation enters into credit risk participation agreements, under which the Corporation assumes credit exposure associated with a borrower's performance related to certain interest rate derivative contracts. The Corporation is not a party to the interest rate derivative contracts and only enters into these credit risk participation agreements in instances in which the Corporation is also a party to the related loan participation agreement for such borrowers. The Corporation manages its credit risk on the credit risk participation agreements by monitoring the creditworthiness of the borrowers, which is based on the normal credit review process had it entered into the derivative instruments directly with the borrower. The notional amount of such credit risk participation agreement reflects the pro-rata share of the derivative instrument, consistent with its share of the related participated loan. As of December 31, 2019 and 2018, the total notional amount of the credit risk participation agreements was approximately \$786 million and \$703 million, respectively, and the fair value was insignificant for both periods. The maximum estimated exposure to these agreements, as measured by projecting a maximum value of the guaranteed derivative instruments, assuming 100 percent default by all obligors on the maximum values, was \$20 million and \$7 million at December 31, 2019 and 2018, respectively. In the event of default, the lead bank has the ability to liquidate the assets of the borrower, in which case the lead bank would be required to return a percentage of the recouped assets to the participating banks. As of December 31, 2019, the weighted average remaining maturity of outstanding credit risk participation agreements was 3.4 years.

NOTE 9 - VARIABLE INTEREST ENTITIES (VIEs)

The Corporation evaluates its interest in certain entities to determine if these entities meet the definition of a VIE and whether the Corporation is the primary beneficiary and should consolidate the entity based on the variable interests it held both at inception and when there is a change in circumstances that requires a reconsideration.

The Corporation holds ownership interests in funds in the form of limited partnerships or limited liability companies (LLCs) investing in affordable housing projects that qualify for the low-income housing tax credit (LIHTC). The Corporation also directly invests in limited partnerships and LLCs which invest in community development projects, which generate similar tax credits to investors (other tax credit entities). As an investor, the Corporation obtains income tax credits and deductions from the operating losses of these tax credit entities. These tax credit entities meet the definition of a VIE; however, the Corporation is not the primary beneficiary of the entities, as the general partner or the managing member has both the power to direct the activities that most significantly impact the economic performance of the entities and the obligation to absorb losses or the right to receive benefits that could be significant to the entities.

The Corporation accounts for its interests in LIHTC entities using the proportional amortization method. Ownership interests in other tax credit entities are accounted for under either the cost or equity method. Exposure to loss as a result of the Corporation's involvement in LIHTC entities and other tax credit entities at December 31, 2019 was limited to \$441 million and \$6 million, respectively.

Investment balances, including all legally binding commitments to fund future investments, are included in accrued income and other assets on the Consolidated Balance Sheets. A liability is recognized in accrued expenses and other liabilities on the Consolidated Balance Sheets for all legally binding unfunded commitments to fund tax credit entities (\$160 million at December 31, 2019). Amortization and other write-downs of LIHTC investments are presented on a net basis as a component of the provision for income taxes on the Consolidated Statements of Income, while amortization and write-downs of other tax credit investments are recorded in other noninterest income. The income tax credits and deductions are recorded as a reduction of income tax expense and a reduction of federal income taxes payable.

The Corporation provided no financial or other support that was not contractually required to any of the above VIEs during the years ended December 31, 2019, 2018 and 2017.

The following table summarizes the impact of these tax credit entities on line items on the Corporation's Consolidated Statements of Income.

(in millions)

Years Ended December 31	2019	2018	3	2017
Other noninterest income:				
Sales of other tax credit investments	\$ 2	\$	5	\$ 2
Provision for income taxes:				
Amortization of LIHTC Investments	65		65	67
Low income housing tax credits	(62)		(62)	(63)
Other tax benefits related to tax credit entities	(13)		(14)	(24)
Total provision for income taxes	\$ (10)	\$	(11)	\$ (20)

For further information on the Corporation's consolidation policy, see Note 1.

NOTE 10 - DEPOSITS

At December 31, 2019, the scheduled maturities of certificates of deposit and other deposits with a stated maturity were as follows:

(in millions)

Years Ending December 31

2020	\$ 2,970
2021	156
2022	24
2023	15
2024	11
Thereafter	26
Total	\$ 3,202

A maturity distribution of domestic certificates of deposit of \$100,000 and over follows:

(in millions)

December 31	2019		2018
Three months or less	\$	398	\$ 363
Over three months to six months		503	146
Over six months to twelve months		819	278
Over twelve months		97	297
Total	\$ 1	,817	\$ 1,084

The aggregate amount of domestic certificates of deposit that meet or exceed the current FDIC insurance limit of \$250,000 was \$956 million and \$543 million at December 31, 2019 and 2018, respectively. All foreign office time deposits of \$91 million and \$8 million at December 31, 2019 and 2018, respectively, were in denominations of \$250,000 or more.

NOTE 11 - SHORT-TERM BORROWINGS

Federal funds purchased and securities sold under agreements to repurchase generally mature within one to four days from the transaction date.

Other short-term borrowings, which may consist of borrowed securities and short-term notes, generally mature within one to 120 days from the transaction date.

At December 31, 2019, Comerica Bank (the Bank), a wholly-owned subsidiary of the Corporation, had pledged loans totaling \$22.0 billion which provided for up to \$17.8 billion of available collateralized borrowing with the FRB.

The following table provides a summary of short-term borrowings.

(dollar amounts in millions)	Federal Funds Purchased and Securities Sold Under Agreements to Repurchase	Other Short-term Borrowings	
December 31, 2019			
Amount outstanding at year-end	\$ 71	\$	_
Weighted average interest rate at year-end	1.50%		—%
Maximum month-end balance during the year	\$ 835	\$	1,200
Average balance outstanding during the year	113		256
Weighted average interest rate during the year	2.28%		2.44%
December 31, 2018			
Amount outstanding at year-end	\$ 44	\$	_
Weighted average interest rate at year-end	2.39%		%
Maximum month-end balance during the year	\$ 182	\$	250
Average balance outstanding during the year	59		3
Weighted average interest rate during the year	1.91%		1.75%
December 31, 2017			
Amount outstanding at year-end	\$ 10	\$	_
Weighted average interest rate at year-end	1.43%		%
Maximum month-end balance during the year	\$ 41	\$	1,024
Average balance outstanding during the year	20		257
Weighted average interest rate during the year	1.02%		1.15%

NOTE 12 - MEDIUM- AND LONG-TERM DEBT

Medium- and long-term debt is summarized as follows:

(in millions)

December 31	2	019	2018
Parent company			
Subordinated notes:			
3.80% subordinated notes due 2026 (a)	\$	264 \$	250
Medium- and long-term notes:			
2.125% notes due 2019 (a)		_	348
3.70% notes due 2023 (a)		884	861
4.00% notes due 2029 (a)		587	_
Total medium- and long-term notes		1,471	1,209
Total parent company		1,735	1,459
Subsidiaries			
Subordinated notes:			
4.00% subordinated notes due 2025 (a)		360	343
7.875% subordinated notes due 2026 (a)		202	198
Total subordinated notes		562	541
Medium- and long-term notes:			
2.50% notes due 2020 (a)		674	663
2.50% notes due 2024 (a)		498	_
Total medium- and long-term notes		1,172	663
Federal Home Loan Bank (FHLB) advances:			
Floating-rate based on FHLB auction rate due 2026		2,800	2,800
Floating-rate based on FHLB auction rate due 2028		1,000	1,000
Total FHLB advances		3,800	3,800
Total subsidiaries		5,534	5,004
Total medium- and long-term debt	\$	7,269 \$	6,463

⁽a) The fixed interest rates on these notes have been swapped to a variable rate and designated in a hedging relationship. Accordingly, carrying value has been adjusted to reflect the change in the fair value of the debt as a result of changes in the benchmark rate.

Subordinated notes with remaining maturities greater than one year qualify as Tier 2 capital.

The Bank, a wholly-owned subsidiary of the Corporation, is a member of the FHLB, which provides short- and long-term funding to its members through advances collateralized by real-estate related assets. The interest rate on the FHLB advances resets between four and eight weeks, based on the FHLB auction rate. At December 31, 2019, the weighted-average rate on the FHLB advances was 1.75%. Each note may be prepaid in full, without penalty, at each scheduled reset date. Borrowing capacity is contingent upon the amount of collateral available to be pledged to the FHLB. At December 31, 2019, \$17.2 billion of real estate-related loans were pledged to the FHLB as blanket collateral for current and potential future borrowings of approximately \$5.1 billion.

The Corporation issued \$350 million of 4.00% senior notes maturing in 2029, swapped to a floating rate at 30-day LIBOR plus 129 basis points in first quarter 2019 and issued an additional \$200 million of 4.00% senior notes maturing in 2029 in third quarter 2019, swapped to a floating rate at 30-day LIBOR plus 123 basis points. These notes were consolidated under a single series with an aggregate principal amount of \$550 million.

Also in third quarter 2019, the Bank issued \$500 million of 2.50% medium-term notes due in 2024, swapped to a floating rate based on 30-day LIBOR plus 84 basis points.

Unamortized debt issuance costs deducted from the carrying amount of medium- and long-term debt totaled \$12 million and \$8 million at December 31, 2019 and 2018, respectively.

At December 31, 2019, the principal maturities of medium- and long-term debt were as follows:

(in millions)

Years Ending December 31

2020	\$ 675
2021	_
2022	_
2023	850
2024	500
Thereafter	5,100
Total	\$ 7,125

NOTE 13 - SHAREHOLDERS' EQUITY

Repurchases of common stock under the equity repurchase program initially authorized in 2010 by the Board of Directors of the Corporation totaled 18.6 million shares at an average price paid of \$73.60 in 2019, 14.8 million shares at an average price paid of \$89.21 per share in 2018 and 7.3 million shares at an average price paid of \$72.44 per share in 2017. There is no expiration date for the Corporation's equity repurchase program. During the year ended December 31, 2019, the Corporation repurchased \$1.4 billion under the equity repurchase program.

At December 31, 2019, the Corporation had no outstanding warrants as all remaining warrants to purchase common stock expired in 2018. Approximately 585,000 and 1.8 million shares of common stock were issued upon exercise of warrants in 2018 and 2017, respectively.

At December 31, 2019, the Corporation had 3.8 million shares of common stock reserved for stock option exercises and restricted stock unit vesting and 458,000 shares of restricted stock outstanding to employees and directors under share-based compensation plans.

NOTE 14 - ACCUMULATED OTHER COMPREHENSIVE LOSS

The following table presents a reconciliation of the changes in the components of accumulated other comprehensive loss and details the components of other comprehensive income (loss) for the years ended December 31, 2019, 2018 and 2017, including the amount of income tax expense (benefit) allocated to each component of other comprehensive income (loss).

(in millions)

Years Ended December 31		2019		2018		2017
Accumulated net unrealized gains (losses) on investment securities:						
Balance at beginning of period, net of tax	\$	(138)	\$	(101)	\$	(33)
Cumulative effect of change in accounting principle		_		1		_
Net unrealized holding gains (losses) arising during the period		257		(69)		(81)
Less: Provision (benefit) for income taxes		60		(16)		(27)
Net unrealized holding gains (losses) arising during the period, net of tax		197		(53)		(54)
Less:				. ,		. ,
Net realized losses included in net securities losses		(8)		(20)		_
Less: Benefit for income taxes		(2)		(5)		_
Reclassification adjustment for net securities losses included in net income, net of tax		(6)		(15)		_
Less:				. ,		
Net losses realized as a yield adjustment in interest on investment securities		_		_		(3)
Less: Benefit for income taxes		_		_		(1)
Reclassification adjustment for net losses realized as a yield adjustment included in net						
income, net of tax						(2)
Change in net unrealized gains (losses) on investment securities, net of tax		203		(38)		(52)
Reclassification of certain deferred tax effects (a)		_				(16)
Balance at end of period, net of tax	\$	65	\$	(138)	\$	(101)
Accumulated net gains on cash flow hedges:						
Balance at beginning of period, net of tax	\$	_	\$	_	\$	_
Net cash flow hedge gains arising during the period		44		_		_
Less: Provision for income taxes		10		_		_
Change in net cash flow hedge gains, net of tax		34		_		_
Balance at end of period, net of tax (b)	\$	34	\$	_	\$	_
Accumulated defined benefit pension and other postretirement plans adjustment:						
Balance at beginning of period, net of tax	\$	(471)	\$	(350)	\$	(350)
Actuarial gain (loss) arising during the period		163		(191)		72
Less: Provision (benefit) for income taxes		38		(44)		17
Net defined benefit pension and other postretirement adjustment arising during the period, net	of					
tax		125		(147)		55
Amounts recognized in other noninterest expense:						
Amortization of actuarial net loss		42		61		51
Amortization of prior service credit		(27)		(27)		(27)
Total amounts recognized in other noninterest expense		15		34		24
Less: Provision for income taxes		3		8		8
Adjustment for amounts recognized as other components of net benefit cost during the period, net of tax		12		26		16
Change in defined benefit pension and other postretirement plans adjustment, net of tax		137		(121)		71
Reclassification of certain deferred tax effects (a)						
		_				(71)
Balance at end of period, net of tax	\$	(334)		(471)	\$	(350)
Total accumulated other comprehensive loss at end of period, net of tax	\$	(235)	\$	(609)	\$	(451)

⁽a) Amounts reclassified to retained earnings due to early adoption of ASU 2018-02. For further information, refer to Note 1.

⁽b) The corporation expects to reclassify \$12 million of net gains, net of tax, from accumulated other comprehensive loss to earnings over the next twelve months if interest yield curves and notional amounts remain at December 31, 2019 levels.

NOTE 15 - NET INCOME PER COMMON SHARE

Basic and diluted net income per common share are presented in the following table.

(in millions, except per share data)

Years Ended December 31	2019 2018		2017	
Basic and diluted				
Net income	\$ 1,198	\$	1,235	\$ 743
Less: Income allocated to participating securities	7		8	5
Net income attributable to common shares	\$ 1,191	\$	1,227	\$ 738
Basic average common shares	150		168	174
Basic net income per common share	\$ 7.95	\$	7.31	\$ 4.23
Basic average common shares	150		168	174
Dilutive common stock equivalents:				
Net effect of the assumed exercise of stock options	1		2	3
Net effect of the assumed exercise of warrants	_		1	1
Diluted average common shares	151		171	178
Diluted net income per common share	\$ 7.87	\$	7.20	\$ 4.14

The following average shares related to outstanding options to purchase shares of common stock were not included in the computation of diluted net income per common share because the options were anti-dilutive for the period. There were no anti-dilutive options for the year ended December 31, 2017.

Years Ended December 31	2019	2018
Average outstanding options	542,786	193,248
Range of exercise prices	\$67.53 - \$95.25	\$95.25

NOTE 16 - SHARE-BASED COMPENSATION

Share-based compensation expense is charged to salaries and benefits expense on the Consolidated Statements of Income. The components of share-based compensation expense for all share-based compensation plans and related tax benefits are as follows:

(in millions)

Years Ended December 31	201	9	2018	2017
Total share-based compensation expense	\$	39	\$ 48	\$ 39
Related tax benefits recognized in net income	\$	9	\$ 11	\$ 14

The following table summarizes unrecognized compensation expense for all share-based plans.

(dollar amounts in millions)	December 31, 2019
Total unrecognized share-based compensation expense	\$ 33
Weighted-average expected recognition period (in years)	2.3

The Corporation has share-based compensation plans under which it awards shares of restricted stock units to executive officers, directors and key personnel, and stock options to executive officers and key personnel of the Corporation and its subsidiaries. Additionally, the Corporation has awarded restricted stock to executive officers and key personnel under a previous share-based compensation plan that remain unvested. Restricted stock and restricted stock units fully vest after a period ranging from three years to five years, and stock options fully vest after four years. The maturity of each option is determined at the date of grant; however, no options may be exercised later than ten years from the date of grant. The options may have restrictions regarding exercisability. The plans provide for a grant of up to 6.1 million common shares, plus shares under certain plans that are forfeited, expire or are canceled, which become available for re-grant. At December 31, 2019, over 5 million shares were available for grant.

The Corporation used a binomial model to value stock options granted in the periods presented. Option valuation models require several inputs, including the expected stock price volatility, and changes in input assumptions can materially affect the fair value estimates. The model used may not necessarily provide a reliable single measure of the fair value of stock options. The risk-free interest rate assumption used in the binomial option-pricing model as outlined in the table below was based on the federal ten-year treasury interest rate. The expected dividend yield was based on the historical and projected long-term dividend yield patterns of the Corporation's common shares. Expected volatility assumptions considered both the historical volatility of the Corporation's common stock over a ten-year period and implied volatility based on actively traded options on the Corporation's common stock with pricing terms and trade dates similar to the stock options granted. Expected option life was based on historical exercise activity over the contractual term of the option grant (10 years), excluding certain forced transactions.

The estimated weighted-average grant-date fair value per option and the underlying binomial option-pricing model assumptions are summarized in the following table:

Years Ended December 31	2019	2018	2017
Weighted-average grant-date fair value per option	\$ 22.27	\$ 30.32	\$ 19.61
Weighted-average assumptions:			
Risk-free interest rates	2.74%	2.63%	2.47%
Expected dividend yield	3.00	3.00	3.00
Expected volatility factors of the market price of			
Comerica common stock	30	36	34
Expected option life (in years)	7.6	7.4	7.0

A summary of the Corporation's stock option activity and related information for the year ended December 31, 2019 follows:

		Weighted-			
	Number of Options (in thousands)	Exercise Price per Share	Remaining Contractual Term (in years)	•	Aggregate Intrinsic Value (in millions)
Outstanding-January 1, 2019	2,943	\$ 44.70			
Granted	283	80.14			
Forfeited or expired	(35)	65.91			
Exercised	(511)	37.32			
Outstanding-December 31, 2019	2,680	49.58	5.3	\$	66
Exercisable-December 31, 2019	1,816	\$ 41.79	4.2	\$	56

The aggregate intrinsic value of outstanding options shown in the table above represents the total pretax intrinsic value at December 31, 2019, based on the Corporation's closing stock price of \$71.75 at December 31, 2019.

The total intrinsic value of stock options exercised was \$20 million, \$81 million and \$104 million for the years ended December 31, 2019, 2018 and 2017, respectively.

A summary of the Corporation's restricted stock activity and related information for the year ended December 31, 2019 follows:

	Number of Shares (in thousands)	Weighted-Average Grant-Date Fair Value per Share
Outstanding-January 1, 2019	869	\$ 44.34
Forfeited	(27)	49.81
Vested	(384)	38.81
Outstanding-December 31, 2019	458	\$ 48.64

The total fair value of restricted stock awards that fully vested was \$15 million, \$14 million and \$19 million for the years ended December 31, 2019, 2018 and 2017, respectively.

A summary of the Corporation's restricted stock unit activity and related information for the year ended December 31, 2019 follows:

	Service-E	Based Units	Performance	e-Based Units	
	Number of Units (in thousands)	Weighted-Average Grant-Date Fair Value per Share	Grant-Date Fair Units		
Outstanding-January 1, 2019	367	\$ 68.14	662	\$ 56.64	
Granted	237	78.81	329	66.80	
Forfeited	(14)	87.38	(28)	81.06	
Vested	(12)	55.81	(420)	32.53	
Outstanding-December 31, 2019	578		543	80.22	

The total fair value of restricted stock units that fully vested was \$14 million, \$10 million and \$10 million for the years ended December 31, 2019, 2018 and 2017, respectively.

The Corporation expects to satisfy the exercise of stock options, the vesting of restricted stock units and future grants of restricted stock by issuing shares of common stock out of treasury. At December 31, 2019, the Corporation held 86.1 million shares in treasury.

For further information on the Corporation's share-based compensation plans, refer to Note 1.

NOTE 17 - EMPLOYEE BENEFIT PLANS

Defined Benefit Pension and Postretirement Benefit Plans

The Corporation has a qualified and non-qualified defined benefit pension plan. In October 2016, the Corporation modified its defined benefit pension plans to freeze final average pay benefits as of December 31, 2016, other than for participants who were age 60 or older as of December 31, 2016, and added a cash balance plan provision effective January 1, 2017. Active pension plan participants 60 years or older as of December 31, 2016 receive the greater of the final average pay formula or the frozen final average pay benefit as of December 31, 2016 plus the cash balance benefit earned after January 1, 2017. Employees participating in the retirement account plan as of December 31, 2016 were eligible to participate in the cash balance pension plan effective January 1, 2017. Benefits earned under the cash balance pension formula, in the form of an account balance, include contribution credits based on eligible pay earned each month, age and years of service and monthly interest credits based on the 30-year Treasury rate.

The Corporation's postretirement benefit plan provides postretirement health care and life insurance benefits for retirees as of December 31, 1992. The plan also provides certain postretirement health care and life insurance benefits for a limited number of retirees who retired prior to January 1, 2000. For all other employees hired prior to January 1, 2000, a nominal benefit is provided. Employees hired on or after January 1, 2000 and prior to January 1, 2007 are eligible to participate in the plan on a full contributory basis until Medicare-eligible based on age and service. Employees hired on or after January 1, 2007 are not eligible to participate in the plan. The Corporation funds the pre-1992 retiree plan benefits with bank-owned life insurance.

The following table sets forth reconciliations of plan assets and the projected benefit obligation, the weighted-average assumptions used to determine year-end benefit obligations, and the amounts recognized in accumulated other comprehensive income (loss) for the Corporation's defined benefit pension plans and postretirement benefit plan at December 31, 2019 and 2018. The Corporation used a measurement date of December 31, 2019 for these plans.

			De									
		Qua	alified			Non-C	Qualif	ied	I	Postretireme	nt Be	nefit Plan
(dollar amounts in millions)		2019	2018			2019		2018		2019		2018
Change in fair value of plan assets:												
Fair value of plan assets at January 1	\$	2,458	\$	2,747	\$	_	\$	_	\$	56	\$	60
Actual return on plan assets		579		(167)		_		_		5		(1)
Employer contributions		_		_		_		_		1		1
Benefits paid		(104)		(122)		_		_		(5)		(4)
Fair value of plan assets at December 31	\$	2,933	\$	2,458	\$	_	\$	_	\$	57	\$	56
Change in projected benefit obligation:												
Projected benefit obligation at January 1	\$	1,901	\$	2,061	\$	211	\$	212	\$	46	\$	51
Service cost		31		29		3		2		_		_
Interest cost		80		75		9		8		2		2
Actuarial loss (gain)		223		(142)		25		_		5		(3)
Benefits paid		(104)		(122)		(13)		(11)		(5)		(4)
Projected benefit obligation at December 31	\$	2,131	\$	1,901	\$	235	\$	211	\$	48	\$	46
Accumulated benefit obligation	\$	2,121	\$	1,893	\$	234	\$	209	\$	48	\$	46
Funded status at December 31 (a) (b)	\$	802	\$	557	\$	(235)	\$	(211)	\$	9	\$	10
Weighted-average assumptions used:												
Discount rate		3.43%		4.37%		3.43%		4.37%		3.26%		4.26%
Rate of compensation increase		4.00		4.00		4.00		4.00		n/a		n/a
Healthcare cost trend rate:												
Cost trend rate assumed for next year		n/a		n/a		n/a		n/a		6.25		6.50
Rate to which the cost trend rate is assumed to decline				,				,		4.50		4.50
(the ultimate trend rate)		n/a		n/a		n/a		n/a		4.50		4.50
Year when rate reaches the ultimate trend rate		n/a		n/a		n/a		n/a		2027		2027
Amounts recognized in accumulated other comprehensive												
income (loss) before income taxes: Net actuarial loss	¢	(462)	¢	(607)	¢	(0.4)	¢	(76)	¢	(20)	¢	(10)
Prior service credit	\$	(463) 121	\$	(687) 140	\$	(94) 26	\$	(76) 34	\$	(20)	\$	(19)
	¢		<u></u>		<u></u>				.	1 (10)	<u></u>	1 (10)
Balance at December 31	\$	(342)	\$	(547)	\$	(68)	\$	(42)	\$	(19)	\$	(18)

(a) Based on projected benefit obligation for defined benefit pension plans and accumulated benefit obligation for postretirement benefit plan.

Because the non-qualified defined benefit pension plan has no assets, the accumulated benefit obligation exceeded the fair value of plan assets at December 31, 2019 and December 31, 2018.

The following table details the changes in plan assets and benefit obligations recognized in other comprehensive income (loss) for the year ended December 31, 2019.

	Defined Benefi	t Pe	nsion Plans		
(in millions)	Qualified		Non-Qualified	Postretirement Benefit Plan	Total
Actuarial gain (loss) arising during the period	\$ 190	\$	(25)	\$ (2)	\$ 163
Amortization of net actuarial loss	34		7	1	42
Amortization of prior service credit	(19)		(8)	_	(27)
Total recognized in other comprehensive income (loss)	\$ 205	\$	(26)	\$ (1)	\$ 178

⁽b) The Corporation recognizes the overfunded and underfunded status of the plans in accrued income and other assets and accrued expenses and other liabilities, respectively, on the Consolidated Balance Sheets.

n/a - not applicable

Components of net periodic defined benefit cost and postretirement benefit cost, the actual return on plan assets and the weighted-average assumptions used were as follows:

	Defined Benefit Pension Plans												
(dollar amounts in millions)	Qualified							Non-Qualified					
Years Ended December 31		2019		2018	2017		2019		2018			2017	
Service cost (a)	\$	31	\$	29	\$	29	\$	3	\$	2	\$	2	
Other components of net benefit (credit) cost:													
Interest cost		80		75		78		9		8		8	
Expected return on plan assets		(166)		(165)		(159)		_		_		_	
Amortization of prior service credit		(19)		(19)		(19)		(8)		(8)		(8)	
Amortization of net loss		34		51		43		7		9		8	
Total other components of net benefit (credit) cost (b)		(71)		(58)		(57)		8		9		8	
Net periodic defined benefit (credit) cost	\$	(40)	\$	(29)	\$	(28)	\$	11	\$	11	\$	10	
Actual return on plan assets	\$	579	\$	(167)	\$	396		n/a		n/a		n/a	
Actual rate of return on plan assets		24.07%		(6.21)%		16.48%		n/a		n/a		n/a	
Weighted-average assumptions used:													
Discount rate		4.37%		3.74 %		4.23%		4.37%		3.74%		4.23%	
Expected long-term return on plan assets		6.50		6.50		6.50		n/a		n/a		n/a	
Rate of compensation increase		4.00		3.75		3.50		4.00		3.75		3.50	

⁽a) Included in salaries and benefits expense on the Consolidated Statements of Income.

n/a - not applicable

(dollar amounts in millions)	Postretirement Benefit Plan				
Years Ended December 31	 2019		2018		2017
Other components of net benefit cost:					
Interest cost	\$ 2	\$	2	\$	2
Expected return on plan assets	(3)		(3)		(3)
Amortization of net loss	1		1		1
Net periodic postretirement benefit cost	\$ _	\$	_	\$	_
Actual return on plan assets	\$ 5	\$	(1)	\$	2
Actual rate of return on plan assets	9.14%		(2.05)%		3.52%
Weighted-average assumptions used:					
Discount rate	4.26%		3.55 %		3.92%
Expected long-term return on plan assets	5.00		5.00		5.00
Healthcare cost trend rate:					
Cost trend rate assumed	6.50		6.50		6.50
Rate to which the cost trend rate is assumed to decline (the ultimate trend rate)	4.50		4.50		4.50
Year that the rate reaches the ultimate trend rate	2027		2027		2027

The expected long-term rate of return of plan assets is the average rate of return expected to be realized on funds invested or expected to be invested over the life of the plan, which has an estimated duration of approximately 12 years as of December 31, 2019. The expected long-term rate of return on plan assets is set after considering both long-term returns in the general market and long-term returns experienced by the assets in the plan. The returns on the various asset categories are blended to derive one long-term rate of return. The Corporation reviews its pension plan assumptions on an annual basis with its actuarial consultants to determine if assumptions are reasonable and adjusts the assumptions to reflect changes in future expectations.

The estimated portion of balances remaining in accumulated other comprehensive income (loss) that are expected to be recognized as a component of net periodic benefit cost in the year ended December 31, 2020 are as follows:

	Defined Benef	it Pension Pl	ans			
(in millions)	 Qualified	Non-Q	ualified	Postretirement Benefit Plan	Total	
Net loss	\$ 54	\$	9 \$	5 1	\$	64
Prior service credit	(19)		(8)	_		(27)

⁽b) Included in other noninterest expenses on the Consolidated Statements of Income.

Assumed healthcare cost trend rates have a significant effect on the amounts reported for the postretirement benefit plan. A one-percentage-point change in 2019 assumed healthcare and prescription drug cost trend rates would result in a five-percentage-point change in the postretirement benefit obligation.

Plan Assets

The Corporation's overall investment goals for the qualified defined benefit pension plan are to maintain a portfolio of assets of appropriate liquidity and diversification; to generate investment returns (net of operating costs) that are reasonably anticipated to maintain the plan's fully funded status or to reduce a funding deficit, after taking into account various factors, including reasonably anticipated future contributions and expense and the interest rate sensitivity of the plan's assets relative to that of the plan's liabilities; and to generate investment returns (net of operating costs) that meet or exceed a customized benchmark as defined in the plan investment policy. Derivative instruments are permissible for hedging and transactional efficiency, but only to the extent that the derivative use enhances the efficient execution of the plan's investment policy. The plan does not directly invest in securities issued by the Corporation and its subsidiaries. The Corporation's target allocations for plan investments are 45 percent to 55 percent for both equity securities and fixed income, including cash. Equity securities include collective investment and mutual funds and common stock. Fixed income securities include U.S. Treasury and other U.S. government agency securities, mortgage-backed securities, corporate bonds and notes, municipal bonds, collateralized mortgage obligations and money market funds.

Fair Value Measurements

The Corporation's qualified defined benefit pension plan utilizes fair value measurements to record fair value adjustments and to determine fair value disclosures. The Corporation's qualified benefit pension plan categorizes investments recorded at fair value into a three-level hierarchy, based on the markets in which the investment are traded and the reliability of the assumptions used to determine fair value. Refer to Note 1 for a description of the three-level hierarchy.

Following is a description of the valuation methodologies and key inputs used to measure the fair value of the Corporation's qualified defined benefit pension plan investments, including an indication of the level of the fair value hierarchy in which the investments are classified.

Mutual funds

Fair value measurement is based upon the net asset value (NAV) provided by the administrator of the fund. Mutual fund NAVs are quoted in an active market exchange, such as the New York Stock Exchange, and are included in Level 1 of the fair value hierarchy.

Common stock

Fair value measurement is based upon the closing price quoted in an active market exchange, such as the New York Stock Exchange. Level 1 common stock includes domestic and foreign stock and real estate investment trusts.

U.S. Treasury and other U.S. government agency securities

Level 1 securities include U.S. Treasury securities that are traded by dealers or brokers in active over-the-counter markets. Fair value measurement is based upon quoted prices in an active market exchange, such as the New York Stock Exchange. Level 2 securities include debt securities issued by U.S. government agencies and U.S. government-sponsored entities. The fair value of Level 2 securities is determined using quoted prices of securities with similar characteristics, or pricing models based on observable market data inputs, primarily interest rates and spreads.

Corporate and municipal bonds and notes

Fair value measurement is based upon quoted prices of securities with similar characteristics or pricing models based on observable market data inputs, primarily interest rates, spreads and prepayment information. Level 2 securities include corporate bonds, municipal bonds, foreign bonds and foreign notes.

Mortgage-backed securities

Fair value measurement is based upon independent pricing models or other model-based valuation techniques such as the present value of future cash flows, adjusted for the security's credit rating, prepayment assumptions and other factors, such as credit loss and liquidity assumptions, and are included in Level 2 of the fair value hierarchy.

Private placements

Fair value is measured using the NAV provided by fund management as quoted prices in active markets are not available. Management considers additional discounts to the provided NAV for market and credit risk. Private placements are included in Level 3 of the fair value hierarchy.

Collective investment funds

Fair value measurement is based upon the NAV provided by the administrator of the fund as a practical expedient to estimate fair value. There are no unfunded commitments or redemption restrictions on the collective investment funds. The investments are redeemable daily.

Fair Values

The fair values of the Corporation's qualified defined benefit pension plan investments measured at fair value on a recurring basis at December 31, 2019 and 2018, by asset category and level within the fair value hierarchy, are detailed in the table below.

(in millions)	Total	Level 1			Level 2	Level 3	
December 31, 2019							
Equity securities:							
Mutual funds	\$ 2	\$	2	\$	_	\$	_
Common stock	1,086		1,086		_		
Fixed income securities:							
U.S. Treasury and other U.S. government agency securities	574		551		23		
Corporate and municipal bonds and notes	734		_		734		_
Mortgage-backed securities	27		_		27		
Private placements	57		_		_		57
Total investments in the fair value hierarchy	2,480	\$	1,639	\$	784	\$	57
Investments measured at net asset value:							
Collective investment funds	469						
Total investments at fair value	\$ 2,949						
December 31, 2018							
Equity securities:							
Mutual funds	\$ 3	\$	3	\$	_	\$	_
Common stock	803		803		_		_
Fixed income securities:							
U.S. Treasury and other U.S. government agency securities	496		482		14		_
Corporate and municipal bonds and notes	679		_		679		_
Mortgage-backed securities	29		_		29		_
Private placements	60		_		_		60
Total investments in the fair value hierarchy	2,070	\$	1,288	\$	722	\$	60
Investments measured at net asset value:							
Collective investment funds	392						
Total investments at fair value	\$ 2,462						

The table below provides a summary of changes in the Corporation's qualified defined benefit pension plan's Level 3 investments measured at fair value on a recurring basis for the years ended December 31, 2019 and 2018.

		nce at nning	Net Gain	ıs (L	osses)				Balance at
(in millions)	U	eriod	Realized		Unrealized	Purchases	Sales	I	End of Period
Year Ended December 31, 2019									
Private placements	\$	60	\$ 3	\$	8	\$ 49	\$ (63)	\$	57
Year Ended December 31, 2018									
Private placements	\$	80	\$ (1)	\$	(7)	\$ 70	\$ (82)	\$	60

There were no assets in the non-qualified defined benefit pension plan at December 31, 2019 and 2018. The postretirement benefit plan is fully invested in bank-owned life insurance policies. The fair value of bank-owned life insurance policies is based on the cash surrender values of the policies as reported by the insurance companies and is classified in Level 2 of the fair value hierarchy.

Cash Flows

The Corporation currently expects to make no employer contributions to the qualified and non-qualified defined benefit pension plans and postretirement benefit plan for the year ended December 31, 2020.

	Estimated Future Benefit Payments										
(in millions) Years Ended December 31	Defin	ialified ed Benefit ion Plan	Non-Qualified Defined Benefit Pension Plan		Postretirement Benefit Plan (a)						
2020	\$	134	\$ 14	. :	\$ 5						
2021		133	14	ļ	5						
2022		136	14	ļ	5						
2023		137	15	;	5						
2024		139	15	5	4						
2025 - 2029		683	74	ļ	16						

⁽a) Estimated benefit payments in the postretirement benefit plan are net of estimated Medicare subsidies.

Defined Contribution Plans

Substantially all of the Corporation's employees are eligible to participate in the Corporation's principal defined contribution plan (a 401(k) plan). Under this plan, the Corporation makes core matching cash contributions of 100 percent of the first 4 percent of qualified earnings contributed by employees (up to the current IRS compensation limit), invested based on employee investment elections. Employee benefits expense included expense for the plan of \$22 million for the year ended December 31, 2019, and \$21 million for the years ended December 31, 2018 and 2017.

Deferred Compensation Plans

The Corporation offers optional deferred compensation plans under which certain employees and non-employee directors (participants) may make an irrevocable election to defer incentive compensation and/or a portion of base salary until retirement or separation from the Corporation. The participant may direct deferred compensation into one or more deemed investment options. Although not required to do so, the Corporation invests actual funds into the deemed investments as directed by participants, resulting in a deferred compensation asset, recorded in other short-term investments on the Consolidated Balance Sheets that offsets the liability to participants under the plan, recorded in accrued expenses and other liabilities. The earnings from the deferred compensation asset are recorded in interest on short-term investments and other noninterest income and the related change in the liability to participants under the plan is recorded in salaries and benefits expense on the Consolidated Statements of Income.

NOTE 18 - INCOME TAXES AND TAX-RELATED ITEMS

The provision for income taxes is calculated as the sum of income taxes due for the current year and deferred taxes. Income taxes due for the current year is computed by applying federal and state tax statutes to current year taxable income. Deferred taxes arise from temporary differences between the income tax basis and financial accounting basis of assets and liabilities. Tax-related interest and penalties and foreign taxes are then added to the tax provision.

The current and deferred components of the provision for income taxes were as follows:

(in millions)

(in militoria)			
December 31	2019	2018	2017
Current:			
Federal	\$ 267	\$ 227	\$ 371
Foreign	7	10	5
State and local	48	39	36
Total current	322	276	412
Deferred:			
Federal	16	29	(26)
State and local	(4)	3	(2)
Remeasurement of deferred taxes	_	(8)	107
Total deferred	12	24	79
Total	\$ 334 \$	300	\$ 491

Income before income taxes of \$1.5 billion for the year ended December 31, 2019 included \$42 million of foreign-source income.

The Tax Cuts and Jobs Act (the "Act"), enacted on December 22, 2017, reduced the U.S. federal corporate tax rate from 35 percent to 21 percent. The amount recorded related to the remeasurement of the Corporation's deferred tax balance was a reduction of \$99 million, including a provisional adjustment of \$107 million recognized in 2017 and an \$8 million revision to the impact recorded in 2018.

The provision for income taxes does not reflect the tax effects of unrealized gains and losses on investment securities available-for-sale or the change in defined benefit pension and other postretirement plans adjustment included in accumulated other comprehensive loss. Refer to Note 14 for additional information on accumulated other comprehensive loss.

A reconciliation of expected income tax expense at the federal statutory rate to the Corporation's provision for income taxes and effective tax rate follows:

(dollar amounts in millions)	2019	1	2018		2017	
Years Ended December 31	Amount	Rate	Amount	Rate	Amount	Rate
Tax based on federal statutory rate	\$ 322	21.0 % \$	323	21.0 % \$	432	35.0 %
State income taxes	33	2.2	35	2.3	22	1.8
Employee stock transactions	(12)	(0.8)	(23)	(1.5)	(35)	(2.8)
Capitalization and recovery positions (a)	_	_	(17)	(1.1)	_	_
Affordable housing and historic credits	(11)	(0.7)	(12)	(0.8)	(21)	(1.7)
Bank-owned life insurance	(9)	(0.6)	(9)	(0.6)	(16)	(1.3)
Remeasurement of deferred taxes	_	_	(8)	(0.5)	107	8.7
FDIC insurance expense (b)	5	0.3	8	0.5	_	_
Other changes in unrecognized tax benefits	_	_	4	0.3	_	_
Tax-related interest and penalties	2	0.1	(3)	(0.2)	4	0.3
Lease termination transactions	_	_	_	_	(2)	(0.2)
Other	4	0.2	2	0.1	_	_
Provision for income taxes	\$ 334	21.7 % \$	300	19.5 % \$	491	39.8 %

- (a) Tax benefits from the review of tax capitalization and recovery positions related to software and fixed assets included in the 2017 tax return.
- (b) Beginning January 1, 2018, FDIC insurance expense is no longer deductible as a result of the enactment of the Tax Cuts and Jobs Act.

The liability for tax-related interest and penalties included in accrued expenses and other liabilities on the Consolidated Balance Sheets was \$8 million and \$7 million at December 31, 2019 and 2018, respectively.

In the ordinary course of business, the Corporation enters into certain transactions that have tax consequences. From time to time, the Internal Revenue Service (IRS) may review and/or challenge specific interpretive tax positions taken by the Corporation with respect to those transactions. The Corporation believes that its tax returns were filed based upon applicable statutes, regulations and case law in effect at the time of the transactions. The IRS or other tax jurisdictions, an administrative authority or a court, if presented with the transactions, could disagree with the Corporation's interpretation of the tax law.

A reconciliation of the beginning and ending amount of net unrecognized tax benefits follows:

(in millions)	2	2019	2018	2017
Balance at January 1	\$	14 \$	10 \$	15
Increase as a result of tax positions taken during a prior period		4	9	4
Decrease related to settlements with tax authorities		(1)	(4)	(8)
Other		_	(1)	(1)
Balance at December 31	\$	17 \$	14 \$	10

The Corporation anticipates it is reasonably possible settlements with tax authorities will result in a \$5 million decrease in net unrecognized tax benefits within the next twelve months.

After consideration of the effect of the federal tax benefit available on unrecognized state tax benefits, the total amount of unrecognized tax benefits, if recognized, would affect the Corporation's effective tax rate was approximately \$14 million and \$11 million at December 31, 2019 and 2018, respectively.

The following tax years for significant jurisdictions remain subject to examination as of December 31, 2019:

Jurisdiction	Tax Years
Federal	2014-2018
California	2006-2017

Based on current knowledge and probability assessment of various potential outcomes, the Corporation believes current tax reserves are adequate, and the amount of any potential incremental liability arising is not expected to have a material adverse effect on the Corporation's consolidated financial condition or results of operations. Probabilities and outcomes are reviewed as events unfold, and adjustments to the reserves are made when necessary.

The principal components of deferred tax assets and liabilities were as follows:

(in millions)

December 31	2019		2018
Deferred tax assets:			
Allowance for loan losses	\$	134	\$ 141
Deferred compensation		61	68
Deferred loan origination fees and costs		8	9
Net unrealized losses on investment securities available-for-sale		_	42
Operating lease liability		77	_
Other temporary differences, net		49	42
Total deferred tax asset before valuation allowance		329	302
Valuation allowance		(3)	(3)
Total deferred tax assets		326	299
Deferred tax liabilities:			
Lease financing transactions		(73)	(74)
Defined benefit plans		(91)	(41)
Allowance for depreciation		(21)	(18)
Hedging gains and losses		(10)	_
Leasing right of use asset		(69)	_
Net unrealized gains on investment securities available-for-sale		(20)	_
Total deferred tax liabilities		(284)	(133)
Net deferred tax asset	\$	42	\$ 166

Deferred tax assets included state net operating loss carryforwards of \$3 million and \$4 million at December 31, 2019 and December 31, 2018, respectively, which expire between 2019 and 2028. The Corporation believes it is more likely than not the benefit from certain of these state net operating loss carryforwards will not be realized and, accordingly, maintained a valuation allowance of \$3 million at both December 31, 2019 and December 31, 2018. For further information on the Corporation's valuation policy for deferred tax assets, refer to Note 1.

NOTE 19 - TRANSACTIONS WITH RELATED PARTIES

The Corporation's banking subsidiaries had, and expect to have in the future, transactions with the Corporation's directors and executive officers, companies with which these individuals are associated, and certain related individuals. Such transactions were made in the ordinary course of business and included extensions of credit, leases and professional services. With respect to extensions of credit, all were made on substantially the same terms, including interest rates and collateral, as those prevailing at the same time for comparable transactions with other customers and did not, in management's opinion, involve more than normal risk of collectibility or present other unfavorable features. The aggregate amount of loans attributable to persons who were related parties at December 31, 2019, totaled \$109 million at the beginning of 2019 and \$74 million at the end of 2019. During 2019, new loans to related parties aggregated \$732 million and repayments totaled \$767 million.

NOTE 20 - REGULATORY CAPITAL AND RESERVE REQUIREMENTS

Reserves required to be maintained and/or deposited with the FRB are classified in interest-bearing deposits with banks. These reserve balances vary, depending on the level of customer deposits in the Corporation's banking subsidiaries. The average required reserve balances were \$586 million and \$599 million for the years ended December 31, 2019 and 2018, respectively.

Banking regulations limit the transfer of assets in the form of dividends, loans or advances from the bank subsidiaries to the parent company. Under the most restrictive of these regulations, the aggregate amount of dividends which can be paid to the parent company, with prior approval from bank regulatory agencies, approximated \$98 million at January 1, 2020, plus 2020 net profits. Substantially all the assets of the Corporation's banking subsidiaries are restricted from transfer to the parent company of the Corporation in the form of loans or advances.

The Corporation's subsidiary banks declared dividends of \$1.2 billion, \$1.1 billion and \$907 million in 2019, 2018 and 2017, respectively.

The Corporation and its U.S. banking subsidiaries are subject to various regulatory capital requirements administered by federal and state banking agencies under the Basel III regulatory framework (Basel III). This regulatory framework establishes comprehensive methodologies for calculating regulatory capital and risk-weighted assets (RWA). Basel III also set minimum capital ratios as well as overall capital adequacy standards.

Under Basel III, regulatory capital comprises common equity Tier 1 (CET1) capital, additional Tier 1 capital and Tier II capital. CET1 capital predominantly includes common shareholders' equity, less certain deductions for goodwill, intangible assets and deferred tax assets that arise from net operating losses and tax credit carry-forwards. Additionally, the Corporation has elected to permanently exclude capital in accumulated other comprehensive income (AOCI) related to debt and equity securities classified as available-for-sale as well as for cash flow hedges and defined benefit postretirement plans from CET1, an option available to standardized approach entities under Basel III. Tier 1 capital incrementally includes noncumulative perpetual preferred stock. Tier 2 capital includes Tier 1 capital as well as subordinated debt qualifying as Tier 2 and qualifying allowance for credit losses. In addition to the minimum risk-based capital requirements, the Corporation and its Bank subsidiaries are required to maintain a minimum capital conservation buffer, in the form of common equity, of 2.5 percent in order to avoid restrictions on capital distributions and discretionary bonuses.

The Corporation computes RWA using the standardized approach. Under the standardized approach, RWA is generally based on supervisory risk-weightings which vary by counterparty type and asset class. Under the Basel III standardized approach, capital is required for credit risk RWA, to cover the risk of unexpected losses due to failure of a customer or counterparty to meet its financial obligations in accordance with contractual terms; and if trading assets and liabilities exceed certain thresholds, capital is also required for market risk RWA, to cover the risk of losses due to adverse market movements or from position-specific factors.

Quantitative measures established by regulation to ensure capital adequacy require the maintenance of minimum amounts and ratios of CET1, Tier 1 and total capital (as defined in the regulations) to average and/or risk-weighted assets. Failure to meet minimum capital requirements can initiate certain mandatory and possibly additional discretionary actions by regulators that, if undertaken, could have a direct material effect on the Corporation's financial statements. At December 31, 2019 and 2018, the Corporation and its U.S. banking subsidiaries exceeded the ratios required for an institution to be considered "well capitalized" For U.S. banking subsidiaries, those requirements were total risk-based capital, Tier 1 risk-based capital, CET1 risk-based capital and leverage ratios greater than 10 percent, 8 percent, 6.5 percent and 5 percent, respectively, at December 31, 2019 and 2018. For the Corporation, requirements to be considered "well capitalized" were total risk-based capital and Tier 1 risk-based capital ratios greater than 10 percent and 6 percent, respectively, at December 31, 2019 and 2018. There have been no conditions or events since December 31, 2019 that management believes have changed the capital adequacy classification of the Corporation or its U.S. banking subsidiaries.

The following is a summary of the capital position of the Corporation and Comerica Bank, its principal banking subsidiary.

(dollar amounts in millions)	Iı	Comerica ncorporated onsolidated)	Comerica Bank
December 31, 2019			
CET1 capital (minimum \$3.1 billion (Consolidated))	\$	6,919	\$ 7,199
Tier 1 capital (minimum \$4.1 billion (Consolidated))		6,919	7,199
Total capital (minimum \$5.5 billion (Consolidated))		8,282	8,371
Risk-weighted assets		68,273	68,071
Average assets (fourth quarter)		72,773	72,564
CET1 capital to risk-weighted assets (minimum-4.5%)		10.13%	10.58%
Tier 1 capital to risk-weighted assets (minimum-6.0%)		10.13	10.58
Total capital to risk-weighted assets (minimum-8.0%)		12.13	12.30
Tier 1 capital to average assets (minimum-4.0%)		9.51	9.92
Capital conservation buffer (minimum-2.5%)		4.13	4.30
December 31, 2018			
CET1 capital (minimum \$3.0 billion (Consolidated))	\$	7,470	\$ 7,229
Tier 1 capital (minimum \$4.0 billion (Consolidated))		7,470	7,229
Total capital (minimum \$5.4 billion (Consolidated))		8,855	8,433
Risk-weighted assets		67,047	66,857
Average assets (fourth quarter)		71,070	70,905
CET1 capital to risk-weighted assets (minimum-4.5%)		11.14%	10.81%
Tier 1 capital to risk-weighted assets (minimum-6.0%)		11.14	10.81
Total capital to risk-weighted assets (minimum-8.0%)		13.21	12.61
Tier 1 capital to average assets (minimum-4.0%)		10.51	10.20
Capital conservation buffer (minimum-2.5%)		5.14	4.61

NOTE 21 - CONTINGENT LIABILITIES

Legal Proceedings

Comerica Bank, a wholly-owned subsidiary of the Corporation, was named in November 2011 as a third-party defendant in *Butte Local Development v. Masters Group v. Comerica Bank* (the case), for lender liability. The case was initially tried in January 2014, in the Montana Second District Judicial Court for Silver Bow County in Butte, Montana. On January 17, 2014, a jury found for Masters, resulting in an award against the Bank. On July 1, 2015, after an appeal filed by the Bank, the Montana Supreme Court reversed the judgment against the Bank and remanded the case for a new trial with instructions that Michigan contract law should apply and dismissing all other claims. In January 2017, the case was retried, without a jury, in the Second District Court, Silver Bow County, Montana. In November 2019, the court found the Bank breached its forbearance agreement. On January 17, 2020, the court conducted a hearing on the amount of costs and interest that Masters is entitled to recover. The court also heard argument on whether Masters is entitled to attorneys fees, and if so how much. Its decision is pending. The Bank is considering its options, including additional appeals. Management believes that current reserves related to this case are adequate in the event of a negative outcome.

The Corporation and certain of its subsidiaries are subject to various other pending or threatened legal proceedings arising out of the normal course of business or operations. The Corporation believes it has meritorious defenses to the claims asserted against it in its other currently outstanding legal proceedings and, with respect to such legal proceedings, intends to continue to defend itself vigorously, litigating or settling cases according to management's judgment as to what is in the best interests of the Corporation and its shareholders. Settlement may result from the Corporation's determination that it may be more prudent financially to settle, rather than litigate, and should not be regarded as an admission of liability. On at least a quarterly basis, the Corporation assesses its potential liabilities and contingencies in connection with outstanding legal proceedings utilizing the latest information available. On a case-by-case basis, reserves are established for those legal claims for which it is probable that a loss will be incurred either as a result of a settlement or judgment, and the amount of such loss can be reasonably estimated. The actual costs of resolving these claims may be substantially higher or lower than the amounts reserved. Based on current knowledge, and after consultation with legal counsel, management believes current reserves are adequate, and the amount of any incremental liability arising from these matters is not expected to have a material adverse effect on the Corporation's consolidated financial condition, results of operations or cash flows. Legal fees of \$15 million, \$17 million and \$15 million for the years ended December 31, 2019, 2018 and 2017, respectively, were included in other noninterest expenses on the Consolidated Statements of Income.

For matters where a loss is not probable, the Corporation has not established legal reserves. The Corporation believes the estimate of the aggregate range of reasonably possible losses, in excess of reserves established, for all legal proceedings in which it is involved is from zero to approximately \$45 million at December 31, 2019. This estimated aggregate range of reasonably possible losses is based upon currently available information for those proceedings in which the Corporation is involved, taking into account the Corporation's best estimate of such losses for those cases for which such estimate can be made. For certain cases, the Corporation does not believe that an estimate can currently be made. The Corporation's estimate involves significant judgment, given the varying stages of the proceedings (including the fact many are currently in preliminary stages), the existence in certain proceedings of multiple defendants (including the Corporation) whose share of liability has yet to be determined, the numerous yet-unresolved issues in many of the proceedings (including issues regarding class certification and the scope of many of the claims) and the attendant uncertainty of the various potential outcomes of such proceedings. Accordingly, the Corporation's estimate will change from time to time, and actual losses may be more or less than the current estimate.

In the event of unexpected future developments, it is possible that the ultimate resolution of these matters, if unfavorable, may be material to the Corporation's consolidated financial condition, results of operations or cash flows.

For information regarding income tax contingencies, refer to Note 18.

NOTE 22 - BUSINESS SEGMENT INFORMATION

The Corporation has strategically aligned its operations into three major business segments: the Business Bank, the Retail Bank and Wealth Management. These business segments are differentiated based on the type of customer and the related products and services provided. In addition to the three major business segments, the Finance Division is also reported as a segment. Business segment results are produced by the Corporation's internal management accounting system. This system measures financial results based on the internal business unit structure of the Corporation. The performance of the business segments is not comparable with the Corporation's consolidated results and is not necessarily comparable with similar information for any other financial institution. Additionally, because of the interrelationships of the various segments, the information presented is not indicative of how the segments would perform if they operated as independent entities. The management accounting system assigns balance sheet and income statement items to each business segment using certain methodologies, which are regularly reviewed and refined. From time to time, the Corporation may make reclassifications among the segments to more appropriately reflect management's current view of the segments, and methodologies may be modified as the management accounting system is enhanced and changes occur in the organizational structure and/or product lines. For comparability purposes, amounts in all periods are based on business unit structure and methodologies in effect at December 31, 2019.

Net interest income for each segment reflects the interest income generated by earning assets less interest expense on interest-bearing liabilities plus the net impact from associated internal funds transfer pricing (FTP) funding credits and charges. The FTP methodology allocates credits to each business segment for deposits and other funds provided as well as charges for loans and other assets being funded. This credit or charge is based on matching stated or implied maturities for these assets and liabilities. The FTP crediting rates on deposits and other funds provided reflect the long-term value of deposits and other funding sources based on their implied maturity. FTP charge rates for funding loans and other assets reflect a matched cost of funds based on the pricing and duration characteristics of the assets. For acquired loans and deposits, matched maturity funding is determined based on origination date. Accordingly, the FTP process reflects the transfer of interest rate risk exposures to the Corporate Treasury department within the Finance segment, where such exposures are centrally managed. Effective January 1, 2019, the Corporation prospectively discontinued allocating an additional FTP charge for the cost of maintaining liquid assets to support potential draws on unfunded loan commitments. The allowance for loan losses is allocated to the business segments based on the methodology used to estimate the consolidated allowance for loan losses described in Note 1. The related provision for loan losses is assigned based on the amount necessary to maintain an allowance for loan losses appropriate for each business segment. Noninterest income and expenses directly attributable to a line of business are assigned to that business segment. Direct expenses incurred by areas whose services support the overall Corporation are allocated to the business segments as follows: product processing expenditures are allocated based on standard unit costs applied to actual volume measurements; administrative expenses are allocated based on estimated time expended; and corporate overhead is assigned 50 percent based on the ratio of the business segment's noninterest expenses to total noninterest expenses incurred by all business segments and 50 percent based on the ratio of the business segment's attributed equity to total attributed equity of all business segments. Equity is attributed based on credit, operational and interest rate risks. Most of the equity attributed relates to credit risk, which is determined based on the credit score and expected remaining life of each loan, letter of credit and unused commitment recorded in the business segments. Operational risk is allocated based on loans and letters of credit, deposit balances, non-earning assets, trust assets under management, certain noninterest income items, and the nature and extent of expenses incurred by business units. Virtually all interest rate risk is assigned to Finance, as are the Corporation's hedging activities.

The following discussion provides information about the activities of each business segment. A discussion of the financial results and the factors impacting 2019 performance can be found in the section entitled "Business Segments" in the financial review.

The Business Bank meets the needs of small and middle market businesses, multinational corporations and governmental entities by offering various products and services including commercial loans and lines of credit, deposits, cash management, capital market products, international trade finance, letters of credit, foreign exchange management services and loan syndication services.

The Retail Bank includes a full range of personal financial services, consisting of consumer lending, consumer deposit gathering and mortgage loan origination. This business segment offers a variety of consumer products, including deposit accounts, installment loans, credit cards, student loans, home equity lines of credit and residential mortgage loans.

Wealth Management offers products and services consisting of fiduciary services, private banking, retirement services, investment management and advisory services, investment banking and brokerage services. This business segment also offers the sale of annuity products, as well as life, disability and long-term care insurance products.

The Finance segment includes the Corporation's securities portfolio and asset and liability management activities. This segment is responsible for managing the Corporation's funding, liquidity and capital needs, performing interest sensitivity analysis and executing various strategies to manage the Corporation's exposure to liquidity, interest rate risk and foreign exchange risk.

The Other category includes the income and expense impact of equity and cash, tax benefits not assigned to specific business segments, charges of an unusual or infrequent nature that are not reflective of the normal operations of the business segments and miscellaneous other expenses of a corporate nature.

Business segment financial results are as follows:

(dollar amounts in millions) Year Ended December 31, 2019		Business Bank		Retail Bank		Wealth Management		Finance		Other		Total
Earnings summary:		Dalik		Dalik		Widnagement		rmance		Other		10(d)
Net interest income (expense)	\$	1,655	\$	568	\$	183	\$	(126)	\$	59	\$	2,339
Provision for credit losses	.	88	Ψ	(4)		(14)	4	_	4	4	—	74
Noninterest income		555		132		270		43		10		1,010
Noninterest expenses		795		597		283		(1)		69		1,743
Provision (benefit) for income taxes		306		24		44		(26)		(14)	(a)	334
Net income (loss)	\$	1,021	\$	83	\$	140	\$	(56)	\$	10	\$	1,198
Net credit-related charge-offs (recoveries)	\$	111	\$	1	\$	(5)	\$	_	\$	_	\$	107
Selected average balances:												
Assets	\$	44,946	\$	2,852	\$	5,083	\$	14,235	\$	4,372	\$	71,488
Loans		43,472		2,104		4,935		_		_		50,511
Deposits		29,047		20,743		3,833		1,673		185		55,481
Statistical data:												
Return on average assets (b)		2.27%		0.39%		2.76%		n/m		n/m		1.68%
Efficiency ratio (c)		35.96		84.49		62.45		n/m		n/m		51.82
Year Ended December 31, 2018												
Earnings summary:												
Net interest income (expense)	\$	1,613	\$	548	\$	181	\$	(46)	\$	56	\$	2,352
Provision for credit losses		6		(1)		(3)		_		(3)		(1)
Noninterest income		547		136		266		27		_		976
Noninterest expenses		847		602		293		(4)		56		1,794
Provision (benefit) for income taxes		283		18		36		(14)		(23)	(a)	300
Net income (loss)	\$	1,024	\$	65	\$	121	\$	(1)	\$	26	\$	1,235
Net credit-related charge-offs (recoveries)	\$	52	\$	_	\$	(1)	\$	_	\$	_	\$	51
Selected average balances:		40.00=	_		_		_		_			
Assets	\$	43,207	\$	2,633	\$	5,214	\$	13,705	\$	5,965	\$	70,724
Loans		41,618		2,067		5,081		_				48,766
Deposits		30,116		20,812		3,941		941		125		55,935
Statistical data:												
Return on average assets (b)		2.37%		0.31%		2.32%		n/m		n/m		1.75%
Efficiency ratio (c)		39.22		87.59		65.60		n/m		n/m		53.56

(Table continues on following page)

(dollar amounts in millions)	Business	Retail		Wealth				
Year Ended December 31, 2017	Bank	Bank		Management	Finance	Other		Total
Earnings summary:								
Net interest income (expense)	\$ 1,513	\$ 453	\$	169	\$ (111)	\$ 37	\$	2,061
Provision for credit losses	69	2		1	_	2		74
Noninterest income	639	154		255	49	10		1,107
Noninterest expenses	918	615		285	(4)	46		1,860
Provision (benefit) for income taxes	410	(4)		51	(35)	69	(a)	491
Net income (loss)	\$ 755	\$ (6)	\$	87	\$ (23)	\$ (70)	\$	743
Net credit-related charge-offs (recoveries)	\$ 96	\$ 1	\$	(5)	\$ _	\$ _	\$	92
Selected average balances:								
Assets	\$ 42,653	\$ 2,626	\$	5,401	\$ 13,954	\$ 6,818	\$	71,452
Loans	41,241	2,061		5,256	_	_		48,558
Deposits	31,999	20,775		4,081	241	162		57,258
Statistical data:								
Return on average assets (b)	1.77%	(0.03)%)	1.61%	n/m	n/m		1.04%
Efficiency ratio (c)	42.67	101.29		67.06	n/m	n/m		58.70

(a) Primarily reflected discrete tax items, including benefits of \$17 million and \$48 million in 2019 and 2018, respectively, and a net charge of \$72 million in 2017.

(b) Return on average assets is calculated based on the greater of average assets or average liabilities and attributed equity.

n/m – not meaningful

The Corporation operates in three primary markets - Texas, California, and Michigan, as well as in Arizona and Florida, with select businesses operating in several other states, and in Canada and Mexico. The Corporation produces market segment results for the Corporation's three primary geographic markets as well as Other Markets. Other Markets includes Florida, Arizona, the International Finance division and businesses with a national perspective. The Finance & Other category includes the Finance segment and the Other category as previously described. Market segment results are provided as supplemental information to the business segment results and may not meet all operating segment criteria as set forth in GAAP. For comparability purposes, amounts in all periods are based on market segments and methodologies in effect at December 31, 2019.

A discussion of the financial results and the factors impacting performance can be found in the section entitled "Market Segments" in the financial review.

Market segment financial results are as follows:

(dollar amounts in millions)					Other]	Finance		
Year Ended December 31, 2019	Michigan	(California	Texas	Markets	8	& Other		Total
Earnings summary:									
Net interest income (expense)	\$ 729	\$	811	\$ 493	\$ 373	\$	(67)	\$	2,339
Provision for credit losses	(11)		(33)	119	(5)		4		74
Noninterest income	291		173	128	365		53		1,010
Noninterest expenses	554		406	345	369		69		1,743
Provision (benefit) for income taxes	108		155	38	74		(41)	(a)	334
Net income (loss)	\$ 369	\$	456	\$ 119	\$ 300	\$	(46)	\$	1,198
Net credit-related charge-offs (recoveries)	\$ 11	\$	8	\$ 93	\$ (5)	\$	_	\$	107
Selected average balances:									
Assets	\$ 13,157	\$	18,856	\$ 11,269	\$ 9,599	\$	18,607	\$	71,488
Loans	12,553		18,540	10,616	8,802		_		50,511
Deposits	20,081		16,857	8,780	7,905		1,858		55,481
Statistical data:									
Return on average assets (b)	1.77%		2.42%	1.06%	3.13%		n/m		1.68%
Efficiency ratio (c)	54.02		41.21	55.59	50.03		n/m		51.82

(Table continues on following page)

⁽c) Noninterest expenses as a percentage of the sum of net interest income and noninterest income excluding net gains (losses) from securities and a derivative contract tied to the conversion rate of Visa Class B shares.

(dollar amounts in millions) Year Ended December 31, 2018	I	Michigan	(California	Texas	Other Markets	Finance & Other		Total
Earnings summary:									
Net interest income	\$	727	\$	788	\$ 474	\$ 353	\$ 10	\$	2,352
Provision for credit losses		30		26	(53)	(1)	(3)		(1)
Noninterest income		296		164	130	359	27		976
Noninterest expenses		577		424	365	376	52		1,794
Provision (benefit) for income taxes		90		123	64	60	(37)	(a)	300
Net income	\$	326	\$	379	\$ 228	\$ 277	\$ 25	\$	1,235
Net credit-related charge-offs	\$	7	\$	27	\$ 12	\$ 5	\$ _	\$	51
Selected average balances:									
Assets	\$	13,207	\$	18,544	\$ 10,380	\$ 8,922	\$ 19,671	\$	70,724
Loans		12,531		18,283	9,812	8,140	_		48,766
Deposits		20,770		16,964	8,992	8,144	1,065		55,935
Statistical data:									
Return on average assets (b)		1.51%		2.04%	2.20%	3.11%	n/m		1.75%
Efficiency ratio (c)		56.22		44.58	60.30	52.93	n/m		53.56
Year Ended December 31, 2017									
Earnings summary:									
Net interest income (expense)	\$	657	\$	711	\$ 451	\$ 316	\$ (74)	\$	2,061
Provision for credit losses		8		101	(72)	36	1		74
Noninterest income		324		171	131	423	58		1,107
Noninterest expenses		589		404	375	450	42		1,860
Provision for income taxes		137		145	104	71	34	(a)	491
Net income (loss)	\$	247	\$	232	\$ 175	\$ 182	\$ (93)	\$	743
Net credit-related (recoveries) charge-offs	\$	(1)	\$	33	\$ 46	\$ 14	\$ _	\$	92
Selected average balances:									
Assets	\$	13,393	\$	18,269	\$ 10,434	\$ 8,584	\$ 20,772	\$	71,452
Loans		12,676		18,008	9,960	7,914	_		48,558
Deposits		21,818		17,533	9,623	7,881	403		57,258
Statistical data:									
Return on average assets (b)		1.09%		1.25%	1.61%	2.12%	n/m		1.04%
Efficiency ratio (c)		60.01		45.83	64.35	60.98	n/m		58.70

 ⁽a) Primarily reflected discrete tax items, including benefits of \$17 million and \$48 million in 2019 and 2018, respectively, and a net charge of \$72 million in 2017.
 (b) Return on average assets is calculated based on the greater of average assets or average liabilities and attributed equity.
 (c) Noninterest expenses as a percentage of the sum of net interest income and noninterest income excluding net gains (losses) from securities and a derivative contract tied to the conversion rate of Visa Class B shares.
 n/m – not meaningful

NOTE 23 - PARENT COMPANY FINANCIAL STATEMENTS

BALANCE SHEETS - COMERICA INCORPORATED

(in millions, except share data)

December 31	2019	2018
Assets		
Cash and due from subsidiary bank	\$ 1,196	\$ 1,524
Other short-term investments	95	88
Investment in subsidiaries, principally banks	7,784	7,429
Premises and equipment	1	1
Other assets	242	169
Total assets	\$ 9,318	\$ 9,211
Liabilities and Shareholders' Equity		
Medium- and long-term debt	\$ 1,735	\$ 1,459
Other liabilities	256	245
Total liabilities	1,991	1,704
Common stock - \$5 par value:		
Authorized - 325,000,000 shares		
Issued - 228,164,824 shares	1,141	1,141
Capital surplus	2,174	2,148
Accumulated other comprehensive loss	(235)	(609)
Retained earnings	9,538	8,781
Less cost of common stock in treasury - 86,069,234 shares at 12/31/19 and 68,081,176 shares at 12/31/18	(5,291)	(3,954)
Total shareholders' equity	7,327	7,507
Total liabilities and shareholders' equity	\$ 9,318	\$ 9,211

STATEMENTS OF INCOME - COMERICA INCORPORATED

(in millions)

Years Ended December 31	2019	2018	2017
Income			
Income from subsidiaries:			
Dividends from subsidiaries	\$ 1,229	\$ 1,135	\$ 915
Other interest income	20	13	3
Intercompany management fees	224	228	136
Other noninterest income	_	_	8
Total income	1,473	1,376	1,062
Expenses			
Interest on medium- and long-term debt	56	29	13
Salaries and benefits expense	143	140	127
Occupancy expense	6	5	5
Equipment expense	1	1	1
Restructuring charges	_	2	6
Other noninterest expenses	72	75	80
Total expenses	278	252	232
Income before benefit for income taxes and equity in undistributed earnings of subsidiaries	1,195	1,124	830
Benefit for income taxes	(9)	(5)	(26)
Income before equity in undistributed earnings of subsidiaries	1,204	1,129	856
Equity in undistributed earnings of subsidiaries, principally banks	(6)	106	(113)
Net income	1,198	1,235	743
Less income allocated to participating securities	7	8	5
Net income attributable to common shares	\$ 1,191	\$ 1,227	\$ 738

STATEMENTS OF CASH FLOWS - COMERICA INCORPORATED

(in millions)

Years Ended December 31	2	2019	2018	2017
Operating Activities				
Net income	\$	1,198 \$	1,235 \$	743
Adjustments to reconcile net income to net cash provided by operating activities:				
Undistributed earnings of subsidiaries, principally banks		6	(106)	113
Depreciation and amortization		1	1	1
Net periodic defined benefit cost (credit)		4	4	(2)
Share-based compensation expense		15	21	16
Benefit for deferred income taxes		(2)	(1)	(10)
Other, net		28	10	59
Net cash provided by operating activities		1,250	1,164	920
Financing Activities				
Medium- and long-term debt:				
Maturities		(350)	_	_
Issuances		550	850	_
Common Stock:				
Repurchases		(1,394)	(1,338)	(560)
Cash dividends paid		(402)	(263)	(180)
Issuances of common stock under employee stock plans		18	52	118
Net cash used in financing activities		(1,578)	(699)	(622)
Net (decrease) increase in cash and cash equivalents		(328)	465	298
Cash and cash equivalents at beginning of period		1,524	1,059	761
Cash and cash equivalents at end of period	\$	1,196 \$	1,524 \$	1,059
Interest paid	\$	55 \$	11 \$	12
Income taxes recovered	\$	(226) \$	(155) \$	(331)

NOTE 24 - SUMMARY OF QUARTERLY FINANCIAL STATEMENTS (UNAUDITED)

The following quarterly information is unaudited. However, in the opinion of management, the information reflects all adjustments, which are necessary for the fair presentation of the results of operations, for the periods presented.

(in millions, except per share data)		Fourth Quarter		Third Quarter	Second Quarter	First Quarter		
Interest income	\$	659	\$	711	\$ 727	\$	710	
Interest expense		115		125	124		104	
Net interest income		544		586	603		606	
Provision for credit losses		8		35	44		(13)	
Net securities gains (losses)		1		_	_		(8)	
Noninterest income excluding net securities gains (losses)		265		256	250		246	
Noninterest expenses		451		435	424		433	
Provision for income taxes		82		80	87		85	
Net income		269		292	298		339	
Less income allocated to participating securities		2		2	1		2	
Net income attributable to common shares	\$	267	\$	290	\$ 297	\$	337	
Earnings per common share:								
Basic	\$	1.87	\$	1.98	\$ 1.95	\$	2.14	
Diluted		1.85		1.96	1.94		2.11	
Comprehensive income		370		338	429		435	

		2018											
(in millions, except per share data)		Fourth Quarter		Third Quarter		Second Quarter	First Quarter						
Interest income	\$	704	\$	675	\$	650	\$	590					
Interest expense		90		76		60		41					
Net interest income		614		599		590		549					
Provision for credit losses		16		_		(29)		12					
Net securities (losses) gains		_		(20)		_		1					
Noninterest income excluding net securities (losses) gains		250		254		248		243					
Noninterest expenses		448		452		448		446					
Provision for income taxes		90		63		93		54					
Net income		310		318		326		281					
Less income allocated to participating securities		2		2		2		2					
Net income attributable to common shares	\$	308	\$	316	\$	324	\$	279					
Earnings per common share:								_					
Basic	\$	1.91	\$	1.89	\$	1.90	\$	1.62					
Diluted		1.88		1.86		1.87		1.59					
Comprehensive income		312		296		290		178					

NOTE 25 - REVENUE FROM CONTRACTS WITH CUSTOMERS

Revenue from contracts with customers comprises the noninterest income earned by the Corporation in exchange for services provided to customers. The following table presents the composition of revenue from contracts with customers, segregated from other sources of noninterest income, by business segment.

(in millions)	Business Bank	Retail Bank	Wealth Management										Total
Year Ended December 31, 2019													
Revenue from contracts with customers:													
Card fees	\$ 213	\$ 40	\$	4	\$	_	\$ 257						
Fiduciary income	_	_		206		_	206						
Service charges on deposit accounts	130	68		5		_	203						
Commercial loan servicing fees (a)	18	_		_		_	18						
Brokerage fees	_	_		28		_	28						
Other noninterest income (b)	8	11		18		_	37						
Total revenue from contracts with customers	369	119		261		_	749						
Other sources of noninterest income	186	13		9		53	261						
Total noninterest income	\$ 555	\$ 132	\$	270	\$	53	\$ 1,010						
Year Ended December 31, 2018													
Revenue from contracts with customers:													
Card fees (c)	\$ 201	\$ 39	\$	4	\$	_	\$ 244						
Fiduciary income	_	_		206		_	206						
Service charges on deposit accounts (c)	134	72		5		_	211						
Commercial loan servicing fees (a)	18	_		_		_	18						
Brokerage fees	_	_		27		_	27						
Other noninterest income (b)	12	19		17		1	49						
Total revenue from contracts with customers	365	130		259		1	755						
Other sources of noninterest income	182	6		7		26	221						
Total noninterest income	\$ 547	\$ 136	\$	266	\$	27	\$ 976						
Year Ended December 31, 2017													
Card fees	\$ 285	\$ 43	\$	5	\$	_	\$ 333						
Fiduciary income	 	 _	-	198		_	198						
Services charges on deposit accounts	143	79		5		_	227						
Commercial lending fees	84	_		1		_	85						
Letter of credit fees	44	_		1		_	45						
Bank-owned life insurance	_	_		_		43	43						
Foreign exchange income	43	_		2			45						
Brokerage fees	_	_		23		_	23						
Other noninterest income	40	32		20		16	108						
Total noninterest income	\$ 639	\$ 154	\$	255	\$	59	\$ 1,107						

Included in commercial lending fees on the Consolidated Statements of Income.

Adjustments to revenue during the years ended December 31, 2019 and 2018 for refunds or credits relating to prior periods were not significant.

Revenue from contracts with customers did not generate significant contract assets and liabilities.

Excludes derivative, warrant and other miscellaneous income.

Adoption of Topic 606 resulted in a change in presentation which records certain costs in the same category as the associated revenues. The effect of this change was to reduce card fees by \$140 million and service charges on deposit accounts by \$5 million for the twelve months ended December 31, 2018. Refer to Note 1 for further information.

NOTE 26 - LEASES

As a lessee, the Corporation has entered into operating leases for the majority of its real estate locations, primarily retail and office space. Total lease expenses were \$81 million, including \$64 million of operating lease expense and \$19 million of variable lease expense, reported net of \$2 million in sublease income, for the year ended December 31, 2019.

At December 31, 2019, the Corporation's Right of Use (ROU) assets and operating lease liabilities were \$329 million and \$367 million, respectively. The weighted average lease term for the lease liabilities was 9 years, and the weighted average discount rate of remaining payments was 3.78 percent. Lease liabilities from new ROU assets obtained during the year ended December 31, 2019 totaled \$49 million. Cash paid on operating lease liabilities was \$67 million for the year ended December 31, 2019.

As of December 31, 2019, the contractual maturities of operating lease liabilities were as follows:

(in millions)

Years Ending December 31 2020 \$ 60 2021 62 2022 53 2023 46 2024 42 Thereafter 175 Total contractual maturities 438 Less imputed interest (71)Total operating lease liabilities 367 \$

As a lessor, the Corporation leases certain types of manufacturing and warehouse equipment as well as public and private transportation vehicles to its customers. The Corporation recognized lease-related revenue, primarily interest income from sales-type and direct financing leases of \$14 million for the year ended December 31, 2019. At December 31, 2019, the Corporation's net investment in sales-type and direct financing leases was \$369 million.

As of December 31, 2019, the contractual maturities of sales-type and direct financing lease receivables were as follows:

(in millions)

Vears	Ending	December 31	

0	
2020	\$ 66
2021	54
2022	90
2023	45
2024	40
Thereafter	31
Total lease payments receivable	326
Unguaranteed residual values	64
Less deferred interest income	(21)
Total lease receivables (a)	\$ 369

(a) Excludes net investment in leveraged leases of \$219 million.

REPORT OF MANAGEMENT

The management of Comerica Incorporated (the Corporation) is responsible for the accompanying consolidated financial statements and all other financial information in this Annual Report. The consolidated financial statements 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. The other financial information herein is consistent with that in the consolidated financial statements.

In meeting its responsibility for the reliability of the consolidated financial statements, management develops and maintains effective internal controls, including those over financial reporting, as defined in the Securities and Exchange Act of 1934, as amended. The Corporation's internal control over financial reporting 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.

Management assessed, with participation of the Corporation's Chief Executive Officer and Interim Chief Financial Officer, internal control over financial reporting as it relates to the Corporation's consolidated financial statements presented in conformity with U.S. generally accepted accounting principles as of December 31, 2019. The assessment was based on criteria for effective internal control over financial reporting described in Internal Control —Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework) (the COSO criteria). Based on this assessment, management determined that internal control over financial reporting is effective as it relates to the Corporation's consolidated financial statements presented in conformity with U.S. generally accepted accounting principles 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.

The Corporation's Board of Directors oversees management's internal control over financial reporting and financial reporting responsibilities through its Audit Committee as well as various other committees. The Audit Committee, which consists of directors who are not officers or employees of the Corporation, meets regularly with management, internal audit and the independent public accountants to assure that the Audit Committee, management, internal auditors and the independent public accountants are carrying out their responsibilities, and to review auditing, internal control and financial reporting matters.

Curtis C. Farmer Chairman, President and Chief Executive Officer James J. Herzog
Executive Vice President, Treasurer and
Interim Chief Financial Officer

Mauricio A. Ortiz Senior Vice President and Chief Accounting Officer

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Shareholders and the Board of Directors of Comerica Incorporated

Opinion on Internal Control over Financial Reporting

We have audited Comerica Incorporated and subsidiaries' 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, Comerica Incorporated and subsidiaries (the Company) 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 the Company as of December 31, 2019 and 2018, and the related consolidated statements of income, comprehensive income, changes in shareholders' equity and cash flows for each of the three years in the period ended December 31, 2019, and the related notes of the Company and our report dated February 11, 2020 expressed an unqualified opinion thereon.

Basis for Opinion

The Company'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 Report of Management. Our responsibility is to express an opinion on the Company'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 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 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.

/s/ Ernst & Young LLP

Dallas, TX February 11, 2020

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Shareholders and the Board of Directors of Comerica Incorporated

Opinion on the Financial Statements

We have audited the accompanying consolidated balance sheets of Comerica Incorporated and subsidiaries (the Company) as of December 31, 2019 and 2018, and the related consolidated statements of income, comprehensive income, changes in shareholders' 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 11, 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 losses

Description of the Matter

The Company's loan portfolio totaled \$50.3 billion as of December 31, 2019, and the associated allowance for loan losses (ALL) was \$637 million. As discussed in Note 1 and 4 of the financial statements, the allowance for loan losses represents management's estimate of incurred loan losses inherent in the loan portfolio at the balance sheet date. The allowance for loan losses includes specific allowances for certain nonaccrual loans and TDR loans and allowances for homogeneous pools of loans with similar risk characteristics. The Company evaluates each impaired loan to determine the need and amount of specific allowance. The Company determines the allowance for homogeneous pools of loans with similar risk characteristics by applying loss factors to outstanding principal balances. Qualitative adjustments are then made to bring the allowance to the level management believes is appropriate based on factors that are not fully considered in the quantitative analysis. Examples of these adjustments include 1) risk factors that have not been fully addressed in internal risk ratings, 2) imprecision in the risk rating system resulting from inaccuracy in assigning and/or entering risk ratings in the loan accounting system, 3) market conditions, and 4) model imprecision.

Auditing management's estimate of the allowance for loan losses involved a high degree of subjectivity due to the qualitative adjustments included in the ALL. Management's identification and measurement of the qualitative adjustments is highly judgmental and could have a significant effect on the allowance for loan losses.

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How We Addressed the Matter in Our Audit We obtained an understanding of the Company's process for establishing the allowance for loan losses, including the qualitative adjustments made to the ALL. We evaluated the design and tested the operating effectiveness of the controls and governance over the appropriateness of the qualitative reserve methodology, including the identification and the assessment for the need for qualitative adjustments, the reliability and accuracy of data used to estimate the various components of the qualitative reserves, and management's review and approval of qualitative adjustments.

To test the qualitative adjustments, we evaluated the identification and measurement of the qualitative adjustments, including the basis for concluding an adjustment was warranted when considering historical loss experience utilized in the quantitative analysis, tested the completeness and accuracy of data used by the Company to estimate the qualitative adjustments, recalculated the analyses used by management to determine the qualitative adjustments, and analyzed the changes in assumptions and components of the qualitative reserves relative to changes in the Company's loan portfolio. For example, we evaluated the data and information utilized by management to estimate the qualitative adjustments by independently obtaining and comparing to historical loan data, third-party macroeconomic data, and peer bank data to assess the appropriateness of the information and to consider whether new or contradictory information existed.

/s/ Ernst & Young LLP

We have served as the Company's auditor since 1992. Dallas, TX February 11, 2020

HISTORICAL REVIEW - AVERAGE BALANCE SHEETS Comerica Incorporated and Subsidiaries

CONSOLIDATED FINANCIAL INFORMATION

(in millions)

Years Ended December 31	2019	2018	2017	2016	2015
ASSETS					
Cash and due from banks \$	887	\$ 1,135	\$ 1,209	\$ 1,146	\$ 1,059
Interest-bearing deposits with banks	3,360	4,700	5,443	5,099	6,158
Other short-term investments	143	134	92	102	106
Investment securities	12,120	11,810	12,207	12,348	10,237
Commercial loans	32,053	30,534	30,415	31,062	31,501
Real estate construction loans	3,325	3,155	2,958	2,508	1,884
Commercial mortgage loans	9,170	9,131	9,005	8,981	8,697
Lease financing	557	470	509	684	783
International loans	1,019	1,021	1,157	1,367	1,441
Residential mortgage loans	1,929	1,983	1,989	1,894	1,878
Consumer loans	2,458	2,472	2,525	2,500	2,444
Total loans	50,511	48,766	48,558	48,996	48,628
Less allowance for loan losses	(667)	(695)	(728)	(730)	(621)
Net loans	49,844	48,071	47,830	48,266	48,007
Accrued income and other assets	5,134	4,874	4,671	4,782	4,680
Total assets \$	71,488	\$ 70,724	\$ 71,452	\$ 71,743	\$ 70,247
LIABILITIES AND SHAREHOLDERS' EQUITY					
Noninterest-bearing deposits \$	26,644	\$ 29,241	\$ 31,013	\$ 29,751	\$ 28,087
Money market and interest-bearing checking deposits	23,417	22,378	21,585	22,744	24,073
Savings deposits	2,166	2,199	2,133	2,013	1,841
Customer certificates of deposit	2,522	2,090	2,470	3,198	4,208
Other time deposits	705	2	1	2	1
Foreign office time deposits	27	25	56	33	116
Total interest-bearing deposits	28,837	26,694	26,245	27,990	30,239
Total deposits	55,481	55,935	57,258	57,741	58,326
Short-term borrowings	369	62	277	138	93
Accrued expenses and other liabilities	1,375	1,076	996	1,273	1,389
Medium- and long-term debt	6,955	5,842	4,969	4,917	2,905
Total liabilities	64,180	62,915	63,500	64,069	62,713
Total shareholders' equity	7,308	7,809	7,952	7,674	7,534
Total liabilities and shareholders' equity \$	71,488	\$ 70,724	\$ 71,452	\$ 71,743	\$ 70,247

HISTORICAL REVIEW - STATEMENTS OF INCOME Comerica Incorporated and Subsidiaries

CONSOLIDATED FINANCIAL INFORMATION

(in millions, except per share data)

(in millions, except per share data) Years Ended December 31		2019		2018		2017		2016		2015
INTEREST INCOME		2013		2010		∠ ∪±/		2010		2010
Interest and fees on loans	\$	2,439	\$	2,262	\$	1,872	\$	1,635	\$	1,551
Interest on investment securities	Ψ	297	Ψ	265	Ψ	250	Ψ	247	Ψ	216
Interest on short-term investments		71		92		60		27		17
Total interest income		2,807		2,619		2,182		1,909		1,784
INTEREST EXPENSE		,		,		, -		,		, -
Interest on deposits		262		122		42		40		43
Interest on short-term borrowings		9		1		3		_		_
Interest on medium- and long-term debt		197		144		76		72		52
Total interest expense		468		267		121		112		95
Net interest income		2,339		2,352		2,061		1,797		1,689
Provision for credit losses		74		(1)		74		248		147
Net interest income after provision for loan losses		2,265		2,353		1,987		1,549		1,542
NONINTEREST INCOME										
Card fees		257		244		333		303		276
Fiduciary income		206		206		198		190		187
Service charges on deposit accounts		203		211		227		219		223
Commercial lending fees		91		85		85		89		99
Foreign exchange income		44		47		45		42		40
Bank-owned life insurance		41		39		43		42		40
Letter of credit fees		38		40		45		50		53
Brokerage fees		28		27		23		19		17
Net securities losses		(7)		(19)		_		_		(2)
Other noninterest income		109		96		108		97		102
Total noninterest income		1,010		976		1,107		1,051		1,035
NONINTEREST EXPENSES										
Salaries and benefits expense		1,020		1,009		961		989		1,000
Outside processing fee expense		264		255		366		336		318
Occupancy expense		154		152		154		157		159
Software expense		117		125		126		119		99
Equipment expense		50		48		45		53		53
Advertising expense		34		30		28		21		24
FDIC insurance expense Restructuring charges		23		42		51		54		37
		_		53		45		93		_
Other noninterest expenses		81		80		84		108		137
Total noninterest expenses		1,743		1,794		1,860		1,930		1,827
Income before income taxes		1,532		1,535		1,234		670		750
Provision for income taxes		334		300		491		193		229
NET INCOME	\$	1,198	\$	1,235	\$	743	\$	477	\$	521
Less income allocated to participating securities		7		8		5		4		6
Net income attributable to common shares	\$	1,191	\$	1,227	\$	738	\$	473	\$	515
Earnings per common share:		_					_			
Basic	\$	7.95	\$	7.31	\$	4.23	\$	2.74	\$	2.93
Diluted		7.87		7.20		4.14		2.68		2.84
Comprehensive income		1,572		1,076		762		523		504
Cash dividends declared on common stock		398		309		193		154		1 40
								154		148
Cash dividends declared per common share		2.68		1.84		1.09		0.89		0.83

HISTORICAL REVIEW - STATISTICAL DATA **Comerica Incorporated and Subsidiaries**

CONSOLIDATED FINANCIAL INFORMATION

Years Ended December 31	2019	2018	2017		2016		2015
Average Rates							
Interest-bearing deposits with banks	2.05%	1.94%	1.09%)	0.51%	,	0.26%
Other short-term investments	1.26	0.96	0.64		0.61		0.81
Investment securities	2.44	2.19	2.05		2.02		2.13
Commercial loans	4.82	4.64	3.82		3.25		3.06
Real estate construction loans	5.54	5.21	4.18		3.63		3.48
Commercial mortgage loans	4.88	4.69	3.97		3.49		3.41
Lease financing	3.44	3.82	2.63		2.64		3.15
International loans	5.13	4.97	4.07		3.63		3.58
Residential mortgage loans	3.85	3.77	3.70		3.76		3.77
Consumer loans	4.85	4.41	3.70		3.32		3.26
Total loans	4.83	4.64	3.85		3.34		3.19
Interest income as a percentage of earning assets	4.24	3.99	3.29		2.88		2.75
Domestic deposits	0.91	0.45	0.16		0.14		0.14
Deposits in foreign offices	1.39	1.19	0.64		0.35		1.02
Total interest-bearing deposits	0.91	0.46	0.16		0.14		0.14
Short-term borrowings	2.39	1.93	1.14		0.45		0.05
Medium- and long-term debt	2.82	2.47	1.51		1.45		1.80
Interest expense as a percentage of interest-bearing sources	1.29	0.82	0.38		0.34		0.29
Interest rate spread	2.95	3.17	2.91		2.54		2.46
Impact of net noninterest-bearing sources of funds	0.59	0.41	0.20		0.17		0.14
Net interest margin as a percentage of earning assets	3.54%	3.58%	3.11%)	2.71%)	2.60%
Ratios							
Return on average common shareholders' equity	16.39%	15.82%	9.34%)	6.22%)	6.91%
Return on average assets	1.68	1.75	1.04		0.67		0.74
Efficiency ratio (a)	51.82	53.56	58.64		67.62		67.03
Common equity tier 1 capital as a percentage of risk weighted assets	10.13	11.14	11.68		11.09		10.54
Tier 1 capital as a percentage of risk-weighted assets	10.13	11.14	11.68		11.09		10.54
Total capital as a percentage of risk-weighted assets	12.13	13.21	13.84		13.27		12.69
Common equity ratio	9.98	10.60	11.13		10.68		10.52
Tangible common equity as a percentage of tangible assets (b)	9.19	9.78	10.32		9.89		9.70
Per Common Share Data							
Book value at year-end	\$ 51.57	\$ 46.89	\$ 46.07	\$	44.47	\$	43.03
Market value at year-end	71.75	68.69	86.81		68.11		41.83
Market value for the year							
High	88.96	102.66	88.22		70.44		53.45
Low	58.54	63.69	64.04		30.48		39.52
Other Data (share data in millions)							
Average common shares outstanding - basic	150	168	174		172		176
Average common shares outstanding - diluted	151	171	178		177		181
Number of banking centers	436	436	438		458		477
Number of employees (full-time equivalent)	7,747	7,865	7,999		7,960		8,880

⁽a) Noninterest expenses as a percentage of the sum of net interest income and noninterest income excluding net securities gains (losses) from securities and a derivative contract tied to the conversion rate of Visa Class B shares.

(b) See Supplemental Financial Data section for reconcilements of non-GAAP financial measures.

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 as of February 11, 2020.

COMERICA INCORPORATED

By:	/s/ Curtis C. Farmer
	Curtis C. Farmer
	Chairman, President and Chief Executive Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed by the following persons on behalf of the registrant in the capacities indicated as of February 11, 2020.

/s/ Curtis C. Farmer	Chairman, President and Chief Executive Officer and
Curtis C. Farmer	Director (Principal Executive Officer)
/s/ James J. Herzog	Executive Vice President, Treasurer and Interim
James J. Herzog	Chief Financial Officer (Principal Financial Officer)
/s/ Mauricio A. Ortiz	Senior Vice President and Chief Accounting Officer
Mauricio A. Ortiz	(Principal Accounting Officer)
/s/ Michael E. Collins	
Michael E. Collins	Director
/s/ Roger A. Cregg	
Roger A. Cregg	Director
/s/ T. Kevin DeNicola	
T. Kevin DeNicola	Director
/s/ Jacqueline P. Kane	
Jacqueline P. Kane	Director
/s/ Richard G. Lindner	
Richard G. Lindner	Director
/s/ Barbara R. Smith	
Barbara R. Smith	Director
/s/ Robert S. Taubman	
Robert S. Taubman	Director
/s/ Reginald M. Turner, Jr.	
Reginald M. Turner, Jr.	Director
/s/ Nina G. Vaca	
Nina G. Vaca	Director
/s/ Michael G. Van de Ven	
Michael G. Van de Ven	Director

DESCRIPTION OF THE REGISTRANT'S SECURITIES REGISTERED PURSUANT TO SECTION 12 OF THE SECURITIES EXCHANGE ACT OF 1934

COMMON STOCK

The following description of Comerica Incorporated's Common Stock is a summary and does not purport to be complete. It is subject to and qualified in its entirety by reference to Comerica's Restated Certificate of Incorporation, as amended (the "Certificate of Incorporation") and Amended and Restated Bylaws (the "Bylaws"), each of which are incorporated by reference as an exhibit to the Annual Report on Form 10-K of which this Exhibit 4.2 is a part. We encourage you to read the Articles of Incorporation, the Bylaws and the applicable provisions of Delaware General Corporation Law for additional information.

Authorized Capital Stock

Comerica's authorized capital stock consists of 325,000,000 shares of common stock, par value \$5.00 per share ("Common Stock"), and 10,000,000 shares of preferred stock, without par value. As of December 31, 2019, no shares of preferred stock were authorized or outstanding.

Dividend Rights

Subject to applicable regulatory requirements, holders of Common Stock are entitled to receive dividends when, as and if declared by the Comerica board of directors out of any funds legally available for dividends. Comerica pays dividends on Common Stock only if it has paid or provided for all dividends on any outstanding class or series of Comerica preferred stock, and, in the case of any cumulative Comerica preferred stock, all prior periods.

Liquidation Rights

Holders of Common Stock are also entitled, upon the liquidation of Comerica, and after claims of creditors and preferences of Comerica preferred stock, and any other class or series of Comerica preferred stock outstanding at the time of liquidation, to receive pro rata the net assets of Comerica.

Voting Rights

Holders of Common Stock are entitled to one vote for each share that they hold and are vested with all of the voting power except as the Comerica board of directors may provide in the future with respect to any class or series of Comerica preferred stock that it may authorize in the future. Common Stock does not have cumulative voting rights. In an election of directors where the number of nominees does not exceed the number of directors to be elected, each director must receive the vote of the majority of the votes cast with respect to that director. If a director does not receive the vote of the majority of the votes cast and no successor has been elected at such meeting, the director will promptly tender his or her resignation to the Board.

Applicable Anti-Takeover Law

Delaware General Corporation Law section 203 prohibits a Delaware corporation from engaging in a "business combination" (as defined in the Delaware General Corporation Law) with a person owning 15% or more of a corporation's voting stock for three years following the time that person becomes a 15% stockholder, with certain exceptions. Comerica has not opted out of § 203 and is therefore governed by the default terms of this provision of the Delaware General Corporation Law.

The Change in Bank Control Act of 1978, as amended, prohibits a person or group of persons from acquiring "control" of a bank holding company unless the Federal Reserve Board has been notified and has not objected to the transaction. Under a rebuttable presumption established by the Federal Reserve Board, the acquisition of 10% or more of a class of voting stock of a bank holding company with a class of securities registered under Section 12 of the Exchange Act, such as Comerica, would, under the circumstances set forth in the presumption, constitute acquisition of control of the bank holding company.

In addition, a company is required to obtain the approval of the Federal Reserve Board under the Bank Holding Company Act of 1956 before acquiring 25% (5% in the case of an acquiror that is a bank holding company) or more of any class of outstanding voting stock of a bank holding company, or otherwise obtaining control or a "controlling influence" over that bank holding company.

Listing

Common Stock is listed on the New York Stock Exchange under the symbol "CMA."

Other Rights and Preferences

Shares of Common Stock are not redeemable and have no subscription, conversion or preemptive rights. The outstanding shares of Common Stock are fully paid and non-assessable.

The Transfer Agent and Registrar for Common Stock is Computershare, P.O. Box 505000, Louisville, KY 40233-5000.

CHANGE OF CONTROL EMPLOYMENT AGREEMENT (BE2 - BE3)

CHANGE OF CONTROL EMPLOYMENT AGREEMENT, dated as of the day of, 20 (this
"Agreement"), by and between COMERICA INCORPORATED, a Delaware corporation (the "Company"), and
(the "Executive").

WHEREAS, the Board of Directors of the Company (the "Board"), has determined that it is in the best interests of the Company and its stockholders to assure that the Company will have the continued dedication of the Executive, notwithstanding the possibility, threat or occurrence of a Change of Control (as defined herein). The Board believes it is imperative to diminish the inevitable distraction of the Executive by virtue of the personal uncertainties and risks created by a pending or threatened Change of Control and to encourage the Executive's full attention and dedication to the Company in the event of any threatened or pending Change of Control, and to provide the Executive with compensation and benefits arrangements upon a Change of Control that ensure that the compensation and benefits expectations of the Executive will be satisfied and that provide the Executive with compensation and benefits arrangements that are competitive with those of other corporations. Therefore, in order to accomplish these objectives, the Board has caused the Company to enter into this Agreement.

NOW, THEREFORE, IT IS HEREBY AGREED AS FOLLOWS:

Section 1. Certain Definitions. (a) "Effective Date" means the first date during the Change of Control Period (as defined herein) on which a Change of Control occurs. Notwithstanding anything in this Agreement to the contrary, if (A) the Executive's employment with the Company is terminated by the Company, (B) the Date of Termination is prior to the date on which a Change of Control occurs, and (C) it is reasonably demonstrated by the Executive that such termination of employment (i) was at the request of a third party that has taken steps reasonably calculated to effect a Change of Control or (ii) otherwise arose in connection with or anticipation of a Change of Control (such a termination of employment, an "Anticipatory Termination"), then for all purposes of this Agreement, the "Effective Date" means the date immediately prior to such Date of Termination.

- (b) "Change of Control Period" means the period commencing on the date hereof and ending on the third anniversary of the date hereof; *provided*, *however*, that, commencing on the date one year after the date hereof, and on each annual anniversary of such date (such date and each annual anniversary thereof, the "Renewal Date"), unless previously terminated, the Change of Control Period shall be automatically extended so as to terminate three years from such Renewal Date, unless, at least 60 days prior to the Renewal Date, the Company shall give notice to the Executive that the Change of Control Period shall not be so extended.
 - (c) "Affiliated Company" means any company controlled by, controlling or under common control with the Company.
 - (d) "Change of Control" means:

- (1) Any individual, entity or group (within the meaning of Section 13(d)(3) or 14(d)(2) of the Securities Exchange Act of 1934, as amended (the "Exchange Act")) (a "Person") becomes the beneficial owner (within the meaning of Rule 13d-3 promulgated under the Exchange Act) of 20% or more of either (A) the then-outstanding shares of common stock of the Company (the "Outstanding Company Common Stock") or (B) the combined voting power of the then-outstanding voting securities of the Company entitled to vote generally in the election of directors (the "Outstanding Company Voting Securities"); provided, however, that, for purposes of this Section 1(d), the following acquisitions shall not constitute a Change of Control: (i) any acquisition directly from the Company, (ii) any acquisition by any employee benefit plan (or related trust) sponsored or maintained by the Company or any Affiliated Company or (iv) any acquisition pursuant to a transaction that complies with Sections 1(d)(3)(A), 1(d)(3)(B) and 1(d)(3)(C);
- (2) Individuals who, as of the date hereof, constitute the Board (the "Incumbent Board") cease for any reason to constitute at least a majority of the Board; *provided*, *however*, that any individual becoming a director subsequent to the date hereof whose election, or nomination for election by the Company's stockholders, was approved by a vote of at least a majority of the directors then comprising the Incumbent Board shall be considered as though such individual was a member of the Incumbent Board, but excluding, for this purpose, any such individual whose initial assumption of office occurs as a result of an actual or threatened election contest with respect to the election or removal of directors or other actual or threatened solicitation of proxies or consents by or on behalf of a Person other than the Board;
- Consummation of a reorganization, merger, statutory share exchange or consolidation or similar transaction involving the Company or any of its subsidiaries, a sale or other disposition of all or substantially all of the assets of the Company, or the acquisition of assets or stock of another entity by the Company or any of its subsidiaries (each, a "Business Combination"), in each case unless, following such Business Combination, (A) all or substantially all of the individuals and entities that were the beneficial owners of the Outstanding Company Common Stock and the Outstanding Company Voting Securities immediately prior to such Business Combination beneficially own, directly or indirectly, more than 50% of the then-outstanding shares of common stock (or, for a non-corporate entity, equivalent securities) and the combined voting power of the then-outstanding voting securities entitled to vote generally in the election of directors (or, for a non-corporate entity, equivalent governing body), as the case may be, of the entity resulting from such Business Combination (including, without limitation, an entity that, as a result of such transaction, owns the Company or all or substantially all of the Company's assets either directly or through one or more subsidiaries) in substantially the same proportions as their ownership immediately prior to such Business Combination of the Outstanding Company Common Stock and the Outstanding Company Voting Securities, as the case may be, (B) no Person (excluding any corporation resulting from such Business Combination or any employee benefit plan (or related trust) of the Company or such corporation resulting from such Business Combination) beneficially owns, directly or indirectly, 20% or more of, respectively, the then-outstanding shares of common stock of the corporation resulting from such Business Combination or the combined voting power of the then-outstanding voting securities of such corporation, except to the extent that such ownership existed prior to the Business Combination, and (C) at least a majority of the members of the board of directors (or, for a non-corporate entity, equivalent governing body) of the entity resulting from such Business

Combination were members of the Incumbent Board at the time of the execution of the initial agreement or of the action of the Board providing for such Business Combination; or

(4) Approval by the stockholders of the Company of a complete liquidation or dissolution of the Company.

Section 2. Employment Period. The Company hereby agrees to continue the Executive in its employ, subject to the terms and conditions of this Agreement, for the period commencing on the Effective Date and ending on the last day of the thirtieth consecutive month following the Effective Date (the "Employment Period"). The Employment Period shall terminate upon the Executive's termination of employment for any reason.

Section 3. <u>Terms of Employment</u>. (a) <u>Position and Duties</u>.

- During the Employment Period, (A) the Executive's position (including status, offices, titles and reporting requirements), authority, duties and responsibilities shall be at least commensurate in all respects with the most significant of those held, exercised and assigned at any time during the 120-day period immediately preceding the Effective Date, and (B) the Executive's services shall be performed at the location where the Executive was employed immediately preceding the Effective Date or at any office or location less than 60 miles from such location.
- During the Employment Period, and excluding any periods of vacation and sick leave to which the Executive is entitled, the Executive agrees to devote reasonable attention and time during normal business hours to the business and affairs of the Company and, to the extent necessary to discharge the responsibilities assigned to the Executive hereunder, to use the Executive's reasonable best efforts to perform faithfully and efficiently such responsibilities. During the Employment Period, it shall not be a violation of this Agreement for the Executive to (A) serve on corporate, civic or charitable boards or committees, (B) deliver lectures, fulfill speaking engagements or teach at educational institutions and (C) manage personal investments, so long as such activities do not significantly interfere with the performance of the Executive's responsibilities as an employee of the Company in accordance with this Agreement. It is expressly understood and agreed that, to the extent that any such activities have been conducted by the Executive prior to the Effective Date, the continued conduct of such activities (or the conduct of activities similar in nature and scope thereto) subsequent to the Effective Date shall not thereafter be deemed to interfere with the performance of the Executive's responsibilities to the Company.
- (b) <u>Compensation</u>. (1) <u>Base Salary</u>. During the Employment Period, the Executive shall receive an annual base salary (the "Annual Base Salary") at an annual rate at least equal to 26 times the highest bi-weekly base salary paid or payable, including any base salary that has been earned but deferred, to the Executive by the Company and the Affiliated Companies in respect of the one-year period immediately preceding the month in which the Effective Date occurs. The Annual Base Salary shall be paid to the Executive at such intervals as the Company pays executive salaries generally, unless the Executive shall elect to defer the receipt of such Base Salary pursuant to an arrangement that meets the requirements of Section 409A of the Internal Revenue Code of 1986, as amended (the "Code"). During the Employment Period, the Annual Base Salary shall be reviewed at least annually, beginning no more than 12

months after the last salary increase awarded to the Executive prior to the Effective Date. Any increase in the Annual Base Salary shall not serve to limit or reduce any other obligation to the Executive under this Agreement. The Annual Base Salary shall not be reduced after any such increase and the term "Annual Base Salary" shall refer to the Annual Base Salary as so increased.

- (2) **Annual Bonus.** In addition to the Annual Base Salary, the Executive shall be awarded, for each fiscal year ending during the Employment Period, an annual bonus (the "Annual Bonus") in cash at least equal to the aggregate of the Executive's highest bonus under each of
 - (i) the Company's Management Incentive Plan; and
- (ii) any business unit incentive plan of the Company in which the Executive has participated during any portion of the last three fiscal years (or any predecessor or successor plan to any thereof), as applicable, for the last three full fiscal years prior to the Effective Date, including any bonus or portion thereof that has been earned but deferred (annualized in the event that the Executive was not employed by the Company for the whole of such fiscal year and not otherwise paid a full year's bonus for such year) (the "Recent Annual Bonus"). For purposes of determining the Recent Annual Bonus, the highest bonus under the Management Incentive Plan shall be determined by including bonuses earned for both the annual and multiyear performance periods ending in each of the last three full fiscal years prior to the Effective Date (or for such lesser number of full fiscal years prior to the Effective Date for which the Executive was eligible to earn such a bonus and annualized in the case of any pro rata bonus earned for a partial fiscal year). Each such Annual Bonus shall be paid no later than two and a half months after the end of the fiscal year for which the Annual Bonus is awarded, unless the Executive shall elect to defer the receipt of such Annual Bonus pursuant to an arrangement that meets the requirements of Section 409A of the Code.
- Long-Term Equity Incentives, Savings and Retirement Plans. During the Employment Period, the Executive shall be entitled to participate in all equity incentive, savings and retirement plans, practices, policies, and programs applicable generally to other peer executives of the Company and the Affiliated Companies, but in no event shall such plans, practices, policies and programs provide the Executive with incentive opportunities (measured with respect to both regular and special incentive opportunities, to the extent, if any, that such distinction is applicable), savings opportunities and retirement benefit opportunities, in each case, less favorable, in the aggregate, than the most favorable of those provided by the Company and the Affiliated Companies for the Executive under such plans, practices, policies and programs as in effect at any time during the 120-day period immediately preceding the Effective Date or, if more favorable to the Executive, those provided generally at any time after the Effective Date to other peer executives of the Company and the Affiliated Companies.
- (4) <u>Welfare Benefit Plans</u>. During the Employment Period, the Executive and/or the Executive's family, as the case may be, shall be eligible for participation in and shall receive all benefits under welfare benefit plans, practices, policies and programs provided by the Company and the Affiliated Companies (including, without limitation, medical, prescription, dental, disability, employee life, group life, accidental death and travel accident insurance plans

and programs) to the extent applicable generally to other peer executives of the Company and the Affiliated Companies, but in no event shall such plans, practices, policies and programs provide the Executive with benefits that are less favorable, in the aggregate, than the most favorable of such plans, practices, policies and programs in effect for the Executive at any time during the 120-day period immediately preceding the Effective Date or, if more favorable to the Executive, those provided generally at any time after the Effective Date to other peer executives of the Company and the Affiliated Companies.

- (5) <u>Expenses</u>. During the Employment Period, the Executive shall be entitled to receive prompt reimbursement for all reasonable expenses incurred by the Executive in accordance with the most favorable policies, practices and procedures of the Company and the Affiliated Companies in effect for the Executive at any time during the 120-day period immediately preceding the Effective Date or, if more favorable to the Executive, as in effect generally at any time thereafter with respect to other peer executives of the Company and the Affiliated Companies.
- (6) <u>Fringe Benefits.</u> During the Employment Period, the Executive shall be entitled to fringe benefits, including, without limitation, tax planning services, payment of club dues, and, if applicable, use of an automobile and payment of related expenses, in accordance with the most favorable plans, practices, programs and policies of the Company and the Affiliated Companies in effect for the Executive at any time during the 120-day period immediately preceding the Effective Date or, if more favorable to the Executive, as in effect generally at any time thereafter with respect to other peer executives of the Company and the Affiliated Companies.
- (7) Office and Support Staff. During the Employment Period, the Executive shall be entitled to an office or offices of a size and with furnishings and other appointments, and to exclusive personal secretarial and other assistance, at least equal to the most favorable of the foregoing provided to the Executive by the Company and the Affiliated Companies at any time during the 120-day period immediately preceding the Effective Date or, if more favorable to the Executive, as provided generally at any time thereafter with respect to other peer executives of the Company and the Affiliated Companies.
- (8) <u>Vacation</u>. During the Employment Period, the Executive shall be entitled to paid vacation in accordance with the most favorable plans, policies, programs and practices of the Company and the Affiliated Companies as in effect for the Executive at any time during the 120-day period immediately preceding the Effective Date or, if more favorable to the Executive, as in effect generally at any time thereafter with respect to other peer executives of the Company and the Affiliated Companies.
- **Section 4.** Termination of Employment. (a) Death or Disability. The Executive's employment shall terminate automatically if the Executive dies during the Employment Period. If the Company determines in good faith that the Disability (as defined herein) of the Executive has occurred during the Employment Period (pursuant to the definition of "Disability"), it may give to the Executive written notice in accordance with Section 11(b) of its intention to terminate the Executive's employment. In such event, the Executive's employment with the Company shall terminate effective on the 30th day after receipt of such

notice by the Executive (the "Disability Effective Date"), *provided* that, within the 30 days after such receipt, the Executive shall not have returned to full-time performance of the Executive's duties. "Disability" means the absence of the Executive from the Executive's duties with the Company on a full-time basis for 180 consecutive business days as a result of incapacity due to mental or physical illness that is determined to be total and permanent by a physician selected by the Company or its insurers and acceptable to the Executive or the Executive's legal representative.

- (b) <u>Cause.</u> The Company may terminate the Executive's employment during the Employment Period with or without Cause. "Cause" means:
- (1) the willful and continued failure of the Executive to perform substantially the Executive's duties with the Company or any Affiliated Company (other than any such failure resulting from incapacity due to physical or mental illness), after a written demand for substantial performance is delivered to the Executive by the Board or the Chief Executive Officer of the Company that specifically identifies the manner in which the Board or the Chief Executive Officer of the Company believes that the Executive has not substantially performed the Executive's duties, or
- (2) the willful engaging by the Executive in illegal conduct or gross misconduct that is materially and demonstrably injurious to the Company.

For purposes of this Section 4(b), no act, or failure to act, on the part of the Executive shall be considered "willful" unless it is done, or omitted to be done, by the Executive in bad faith or without reasonable belief that the Executive's action or omission was in the best interests of the Company. Any act, or failure to act, based upon (A) authority given pursuant to a resolution duly adopted by the Board, or if the Company is not the ultimate parent corporation of the Affiliated Companies and is not publicly-traded, the board of directors of the ultimate parent of the Company (the "Applicable Board"), (B) the instructions of the Chief Executive Officer of the Company or a senior officer of the Company or (C) the advice of counsel for the Company shall be conclusively presumed to be done, or omitted to be done, by the Executive in good faith and in the best interests of the Company. The cessation of employment of the Executive shall not be deemed to be for Cause unless and until there shall have been delivered to the Executive a copy of a resolution duly adopted by the affirmative vote of not less than three-quarters of the entire membership of the Applicable Board (excluding the Executive, if the Executive is a member of the Applicable Board) at a meeting of the Applicable Board called and held for such purpose (after reasonable notice is provided to the Executive and the Executive is given an opportunity, together with counsel for the Executive, to be heard before the Applicable Board), finding that, in the good faith opinion of the Applicable Board, the Executive is guilty of the conduct described in Section 4(b)(1) or 4(b)(2), and specifying the particulars thereof in detail.

- (c) <u>Good Reason</u>. The Executive's employment may be terminated during the Employment Period by the Executive for Good Reason or by the Executive voluntarily without Good Reason. "Good Reason" means:
- (1) the assignment to the Executive of any duties inconsistent in any respect with the Executive's position (including status, offices, titles and reporting requirements), authority,

duties or responsibilities as contemplated by Section 3(a), or any action by the Company that results in a diminution in such position, authority, duties or responsibilities, excluding for this purpose an isolated, insubstantial and inadvertent action not taken in bad faith and that is remedied by the Company promptly after receipt of notice thereof given by the Executive;

- (2) any failure by the Company to comply with any of the provisions of Section 3(b), other than an isolated, insubstantial and inadvertent failure not occurring in bad faith and that is remedied by the Company promptly after receipt of notice thereof given by the Executive;
- (3) the Company's requiring the Executive to be based at any office or location other than as provided in Section 3(a)(i) (B) hereof or the Company's requiring the Executive to travel on Company business to a substantially greater extent than required immediately prior to the Effective Date;
- (4) any purported termination by the Company of the Executive's employment otherwise than as expressly permitted by this Agreement; or
 - (5) any failure by the Company to comply with and satisfy Section 10(c).

For purposes of this Section 4(c) of this Agreement, any good faith determination of Good Reason made by the Executive shall be conclusive. The Executive's mental or physical incapacity following the occurrence of an event described above in clauses (1) through (5) shall not affect the Executive's ability to terminate employment for Good Reason.

- (d) Notice of Termination. Any termination by the Company for Cause, or by the Executive for Good Reason, shall be communicated by Notice of Termination to the other party hereto given in accordance with Section 11(b). "Notice of Termination" means a written notice that (1) indicates the specific termination provision in this Agreement relied upon, (2) to the extent applicable, sets forth in reasonable detail the facts and circumstances claimed to provide a basis for termination of the Executive's employment under the provision so indicated, and (3) if the Date of Termination (as defined herein) is other than the date of receipt of such notice, specifies the Date of Termination (which Date of Termination shall be not more than 30 days after the giving of such notice). The failure by the Executive or the Company to set forth in the Notice of Termination any fact or circumstance that contributes to a showing of Good Reason or Cause shall not waive any right of the Executive or the Company, respectively, hereunder or preclude the Executive or the Company, respectively, from asserting such fact or circumstance in enforcing the Executive's or the Company's respective rights hereunder.
- (e) <u>Date of Termination</u>. "Date of Termination" means (1) if the Executive's employment is terminated by the Company for Cause, or by the Executive for Good Reason, the date of receipt of the Notice of Termination or such later date specified in the Notice of Termination, as the case may be, (2) if the Executive's employment is terminated by the Company other than for Cause or Disability, the date on which the Company notifies the Executive of such termination, (3) if the Executive resigns without Good Reason, the date on which the Executive notifies the Company of such termination, and (4) if the Executive's employment is terminated by reason of death or Disability, the date of death of the Executive or the Disability Effective Date, as the case may be. Notwithstanding the foregoing, in no event

shall the Date of Termination occur until the Executive experiences a "separation from service" within the meaning of Section 409A of the Code, and notwithstanding anything contained herein to the contrary, the date on which such separation from service takes place shall be the "Date of Termination."

Section 5. <u>Obligations of the Company upon Termination</u>. (a) <u>By the Executive for Good Reason; By the Company Other Than for Cause, Death or Disability.</u> If, during the Employment Period, the Company terminates the Executive's employment other than for Cause, Death or Disability or the Executive terminates employment for Good Reason:

- (1) the Company shall pay to the Executive, in a lump sum in cash within 30 days after the Date of Termination, the aggregate of the following amounts:
 - (A) the sum of (i) the Executive's Annual Base Salary through the Date of Termination to the extent not theretofore paid or deferred pursuant to an irrevocable election under any deferred compensation arrangement subject to Section 409A, (ii) any accrued vacation pay to the extent not theretofore paid (the sum of the amounts described in subclauses (i) and (ii), the "Accrued Obligations") and (iii) an amount equal to the product of (x) the higher of (I) the Recent Annual Bonus and (II) the aggregate Annual Bonus under each of the Company's Management Incentive Plan and any business unit incentive plan of the Company in which the Executive has participated (or any predecessor or successor plan to any thereof) paid or payable, including any bonus or portion thereof that has been earned but deferred (and annualized for any fiscal year consisting of less than 12 full months or during which the Executive was employed for less than 12 full months), for the most recently completed fiscal year during the Employment Period, if any, (it being understood that, such Annual Bonus shall be determined by including bonuses earned for both the annual and multiyear performance periods ending in such recently completed fiscal year during the Employment Period) (such higher amount, the "Highest Annual Bonus") and (y) a fraction, the numerator of which is the number of days in the current fiscal year through the Date of Termination and the denominator of which is 365 (the "Pro Rata Bonus"); and
 - (B) the amount equal to the product of (i) two and (ii) the sum of (x) the Executive's Annual Base Salary and (y) the Highest Annual Bonus.
- the Company shall pay to the Executive, at such time as such amounts are payable under the terms of each applicable SERP (as defined below), or, if the Executive does not participate in a SERP, in a lump sum in cash within 30 days after the Date of Termination, an amount equal to the excess of (i) the actuarial equivalent of the benefit under the Company's qualified defined benefit retirement plan (the "Retirement Plan") (utilizing actuarial assumptions no less favorable to the Executive than those in effect under the Retirement Plan immediately prior to the Effective Date) and any excess or supplemental retirement plan in which the Executive participates (collectively, the "SERP") (utilizing actuarial assumptions no less favorable to the Executive than those in effect under the SERP immediately prior to the

Effective Date) that the Executive would receive if the Executive's employment continued for two years after the Date of Termination, assuming for this purpose that (x) the accrued benefit is fully vested, (y) the Executive's age is increased by the number of years (including partial years) that the Executive is deemed to be so employed and (z) the Executive's compensation in each of the two years is that required by Sections 3(b)(1) and 3(b)(2) payable in equal biweekly installments over such two-year period, over (ii) the actuarial equivalent of the Executive's actual benefit (paid or payable), if any, under the Retirement Plan and the SERP as of the Date of Termination;

during the two year period following the Date of Termination (the "Benefits Period"), the Company shall provide the Executive, the Executive's spouse and the Executive's eligible dependents with medical and dental insurance coverage (the "Health Care Benefits") and life insurance benefits no less favorable to those which the Executive, the Executive's spouse and the Executive's eligible dependents were receiving immediately prior to the Date of Termination or, if more favorable to such persons, as in effect generally at any time thereafter with respect to other peer executives of the Company and the Affiliated Companies; provided, however, that the Health Care Benefits shall be provided during the Benefits Period in such a manner that such benefits are excluded from the Executive's income for federal income tax purposes; provided, further, however, that if the Executive becomes re-employed with another employer and is eligible to receive health care benefits under another employer-provided plan, the health care benefits provided hereunder shall be secondary to those provided under such other plan during such applicable period of eligibility. The receipt of the Health Care Benefits shall be conditioned upon the Executive continuing to pay the monthly premium as in effect at the Company from time to time for coverage provided to former employees under Section 4980B of the Code in respect of the maximum level of coverage that the Executive could otherwise elect to receive for the Executive, the Executive's spouse and the Executive's eligible dependents if the Executive were still an employee of the Company during the Benefits Period (i.e., single, single, single plus one, or family) (the "Applicable COBRA Premium") regardless of what level of coverage is

actually elected. During the portion of the Benefits Period in which the Executive, the Executive's spouse and the Executive's eligible dependents continue to receive coverage under the Company's Health Care Benefits plans, the Company shall pay to the Executive a monthly amount equal to the excess of (x) the Applicable COBRA Premium over (y) the monthly employee contribution rate that is paid by Company employees generally for the same or similar coverage, as in effect from time to time (and which amount shall in no event be greater than the employee contribution rate for the applicable level of coverage as in effect immediately prior to the Effective Date), which payment shall be paid in advance on the first payroll day of each month, commencing with the month immediately following the Executive's Date of Termination. The Company shall use its reasonable best efforts to ensure that, following the end of the Benefit Period, the Executive shall be eligible to elect continued health coverage pursuant to Section 4980B of the Code or other applicable law ("COBRA Coverage"), as if the Executive's employment with the Company had terminated as of the end of such period. For purposes of determining eligibility (but not the time of commencement of benefits) of the Executive for retiree welfare benefits pursuant to the Company's retiree welfare benefit plans, if any, the Executive shall be considered to have remained employed until the end of the Benefit Period and to have retired on the last day of such period. In order to comply with Section 409A of the Code, (i) the amount of benefits that the Company is obligated to provide under this Section 5(a)(3) in any given calendar year shall not affect the amount of such benefits may not be liquidated or exchanged for any other calendar year; and (ii) the Executive's right to have the Company provide such benefits may not be liquidated or exchanged for any other

- the Company shall, at its sole expense as incurred, provide the Executive with outplacement services the scope and provider of which shall be selected by the Executive in the Executive's sole discretion, *provided* that such outplacement benefits shall end not later than the last day of the second calendar year that begins after the Date of Termination; and
- (5) except as otherwise set forth in the last sentence of Section 6, to the extent not theretofore paid or provided, the Company shall timely pay or provide to the Executive any Other Benefits (as defined in Section 6) in accordance with the terms of the underlying plans or agreements.

Notwithstanding the foregoing provisions of Sections 5(a)(1), (2) or (3), in the event that the Executive is a "specified employee" within the meaning of Section 409A of the Code (as determined in accordance with the methodology established by the Company as in effect on the Date of Termination) (a "Specified Employee"), amounts that constitute "nonqualified deferred compensation" within the meaning of Section 409A of the Code that would otherwise be payable and benefits that would otherwise be provided under Sections 5(a)(1), (2) or (3) during the sixmonth period immediately following the Date of Termination (other than the Accrued Obligations) shall instead be paid, with interest on any delayed payment at the applicable federal rate provided for in Section 7872(f)(2)(A) of the Code ("Interest") determined as of the Date of Termination, or provided on the first business day after the date that is six months following the Executive's "separation from service" within the meaning of Section 409A of the Code (the "Delayed Payment Date").

- (b) <u>Death</u>. If the Executive's employment is terminated by reason of the Executive's death during the Employment Period, the Company shall provide the Executive's estate or beneficiaries with the Accrued Obligations and the Pro Rata Bonus and the timely payment or delivery of the Other Benefits, and shall have no other severance obligations under this Agreement. The Accrued Obligations and the Pro Rata Bonus shall be paid to the Executive's estate or beneficiary, as applicable, in a lump sum in cash within 30 days of the Date of Termination. With respect to the provision of the Other Benefits, the term "Other Benefits" as utilized in this Section 5(b) shall include, without limitation, and the Executive's estate and/or beneficiaries shall be entitled to receive, benefits at least equal to the most favorable benefits provided by the Company and the Affiliated Companies to the estates and beneficiaries of peer executives of the Company and the Affiliated Companies under such plans, programs, practices and policies relating to death benefits, if any, as in effect with respect to other peer executives and their beneficiaries at any time during the 120-day period immediately preceding the Effective Date or, if more favorable to the Executive's estate and/or the Executive's beneficiaries, as in effect on the date of the Executive's death with respect to other peer executives of the Company and the Affiliated Companies and their beneficiaries.
- (c) <u>Disability.</u> If the Executive's employment is terminated by reason of the Executive's Disability during the Employment Period, the Company shall provide the Executive with the Accrued Obligations and Pro Rata Bonus and the timely payment or delivery of the Other Benefits in accordance with the terms of the underlying plans or agreements, and shall have no other severance obligations under this Agreement. The Accrued Obligations and the Pro Rata Bonus shall be paid to the Executive in a lump sum in cash within 30 days of the Date of Termination, *provided*, that in the event that the Executive is a Specified Employee, the Pro Rata Bonus shall be paid, with Interest, to the Executive on the Delayed Payment Date. With respect to the provision of the Other Benefits, the term "Other Benefits" as utilized in this Section 5(c) shall include, and the Executive shall be entitled after the Disability Effective Date to receive, disability and other benefits at least equal to the most favorable of those generally provided by the Company and the Affiliated Companies to disabled executives and/or their families in accordance with such plans, programs, practices and policies relating to disability, if any, as in effect generally with respect to other peer executives and their families at any time during the 120-day period immediately preceding the Effective Date or, if more favorable to the Executive and/or the Executive's family, as in effect at any time thereafter generally with respect to other peer executives of the Company and the Affiliated Companies and their families.
- Employment Period, the Company shall provide the Executive with the Executive's Annual Base Salary through the Date of Termination, and the timely payment or delivery of the Other Benefits, and shall have no other severance obligations under this Agreement. If the Executive voluntarily terminates employment during the Employment Period, excluding a termination for Good Reason, the Company shall provide to the Executive the Accrued Obligations and the Pro Rata Bonus and the timely payment or delivery of the Other Benefits, and shall have no other severance obligations under this Agreement. In such case, all the Accrued Obligations and the Pro Rata Bonus shall be paid to the Executive in a lump sum in cash within 30 days of the Date of Termination, *provided*, that in the event that the Executive is a

Specified Employee, the Pro Rata Bonus shall be paid, with Interest, to the Executive on the Delayed Payment Date.

Section 6. **Non-exclusivity of Rights.** Nothing in this Agreement shall prevent or limit the Executive's continuing or future participation in any plan, program, policy or practice provided by the Company or the Affiliated Companies and for which the Executive may qualify, nor, subject to Section 11(f), shall anything herein limit or otherwise affect such rights as the Executive may have under any other contract or agreement with the Company or the Affiliated Companies. Amounts that are vested benefits or that the Executive is otherwise entitled to receive under any plan, policy, practice or program of or any other contract or agreement with the Company or the Affiliated Companies at or subsequent to the Date of Termination ("Other Benefits") shall be payable in accordance with such plan, policy, practice or program or contract or agreement, except as explicitly modified by this Agreement. Without limiting the generality of the foregoing, the Executive's resignation under this Agreement with or without Good Reason, shall in no way affect the Executive's ability to terminate employment by reason of the Executive's "retirement" under, or to be eligible to receive benefits under, any compensation and benefits plans, programs or arrangements of the Company or the Affiliated Companies, including without limitation any retirement or pension plans or arrangements or substitute plans adopted by the Company, the Affiliated Companies or their respective successors, and any termination which otherwise qualifies as Good Reason shall be treated as such even if it is also a "retirement" for purposes of any such plan. Notwithstanding the foregoing, if the Executive receives payments and benefits pursuant to Section 5(a) of this Agreement, the Executive shall not be entitled to any severance pay or benefits under any severance plan, program or policy of the Company and the Affiliated Companies, unless otherwise specifically provided therein in a specific reference to this Agreement.

Section 7. Full Settlement; Legal Fees. The Company's obligation to make the payments provided for in this Agreement and otherwise to perform its obligations hereunder shall not be affected by any set-off, counterclaim, recoupment, defense, or other claim, right or action that the Company may have against the Executive or others. In no event shall the Executive be obligated to seek other employment or take any other action by way of mitigation of the amounts payable to the Executive under any of the provisions of this Agreement, and except as specifically provided in Section 5(a)(2), such amounts shall not be reduced whether or not the Executive obtains other employment. The Company agrees to pay as incurred (within 10 days following the Company's receipt of an invoice from the Executive), at any time from the Change of Control through the Executive's remaining lifetime (or, if longer, through the 20th anniversary of the Change of Control) to the full extent permitted by law, all legal fees and expenses that the Executive may reasonably incur as a result of any contest (regardless of the outcome thereof) by the Company, the Executive or others of the validity or enforceability of, or liability under, any provision of this Agreement or any guarantee of performance thereof (including as a result of any contest by the Executive about the amount of

any payment pursuant to this Agreement), plus, in each case, Interest determined as of the date such legal fees and expenses were incurred; *provided*, that the Executive shall have submitted an invoice for such fees and expenses at least 10 days before the end of the calendar year next following the calendar year in which such fees and expenses were incurred (or, in connection with a contest related to an Anticipatory Termination, following the calendar year in which such contest is finally resolved). The amount of such legal fees and expenses that the Company is obligated to pay in any given calendar year shall not affect the legal fees and expenses that the Company is obligated to pay in any other calendar year, and the Executive's right to have the Company pay such legal fees and expenses may not be liquidated or exchanged for any other benefit.

Section 8. <u>Certain Additional Reductions.</u>

- (a) Anything in this Agreement to the contrary notwithstanding, in the event that the Accounting Firm shall determine that receipt of all Payments would subject an Executive to tax under Section 4999 of the Code, the Accounting Firm shall determine whether some amount of Agreement Payments meets the definition of "Reduced Amount." If the Accounting Firm determines that there is a Reduced Amount, then the aggregate Agreement Payments shall be reduced to such Reduced Amount.
- (b) If the Accounting Firm determines that the aggregate Agreement Payments should be reduced to the Reduced Amount, the Company shall promptly give the applicable Executive notice to that effect and a copy of the detailed calculation thereof, and the Executive may then elect, in his or her sole discretion, which and how much of the Agreement Payments shall be eliminated or reduced (as long as after such election the Present Value of the aggregate Agreement Payments equals the Reduced Amount); provided, that the Executive shall not be permitted to elect to reduce any Agreement Payment that constitutes "nonqualified deferred compensation" for purposes of Section 409A of the Code, and shall advise the Company in writing of his or her election within ten days of his or her receipt of notice. If no such election is made by the Executive within such ten-day period, the Company shall reduce the Agreement Payments in the following order: (1) by reducing benefits payable pursuant to Section 5(a)(1)(B) of the Agreement and then (2) by reducing amounts payable pursuant to Section 5(a) (2) of the Agreement. All determinations made by the Accounting Firm under this Section 8 shall be binding upon the Company and the Executive and shall be made within 60 days of the Executive's Date of Termination. In connection with making determinations under this Section 8, the Accounting Firm shall take into account the value of any reasonable compensation for services to be rendered by the Executive before or after the Change of Control, including any non-competition provisions that may apply to the Executive and the Company shall cooperate in the valuation of any such services, including any non-competition provisions.
- (c) As a result of the uncertainty in the application of Section 4999 of the Code at the time of the initial determination by the Accounting Firm hereunder, it is possible that amounts will have been paid or distributed by the Company to or for the benefit of the Executive pursuant to this Agreement which should not have been so paid or distributed (each, an "Overpayment") or that additional amounts which will have not been paid or distributed by the Company to or for the benefit of the Executive pursuant to this Agreement could have been so paid or distributed (each, an "Underpayment"), in each case, consistent with the calculation of the

Reduced Amount hereunder. In the event that the Accounting Firm, based upon the assertion of a deficiency by the Internal Revenue Service against either the Company or the Executive which the Accounting Firm believes has a high probability of success determines that an Overpayment has been made, any such Overpayment paid or distributed by the Company to or for the benefit of the Executive shall be repaid by the Executive to the Company together with interest at the applicable federal rate provided for in Section 7872(f)(2) of the Code; provided, however, that no such repayment shall be required if and to the extent such deemed repayment would not either reduce the amount on which the Executive is subject to tax under Section 1 and Section 4999 of the Code or generate a refund of such taxes. In the event that the Accounting Firm, based upon controlling precedent or substantial authority, determines that an Underpayment has occurred, any such Underpayment shall be promptly paid by the Company to or for the benefit of the Executive together with interest at the applicable federal rate provided for in Section 7872(f)(2) of the Code.

- (d) All fees and expenses of the Accounting Firm in implementing the provisions of this Section 8 shall be borne by the Company.
 - (e) <u>Definitions</u>. The following terms shall have the following meanings for purposes of this Section 8.
- (1) A "Payment" shall mean any payment or distribution in the nature of compensation (within the meaning of Section 280G(b)(2) of the Code) to or for the benefit of the Executive, whether paid or payable pursuant to this Agreement or otherwise;
- (2) "Agreement Payment" shall mean a Payment paid or payable pursuant to this Agreement (disregarding this Section);
- (3) "Net After-Tax Receipt" shall mean the Present Value of a Payment net of all taxes imposed on the Executive with respect thereto under Sections 1 and 4999 of the Code and under applicable state and local laws, determined by applying the highest marginal rate under Section 1 of the Code and under state and local laws which applied to the Executive's taxable income for the immediately preceding taxable year, or such other rate(s) as the Executive shall certify, in the Executive's sole discretion, as likely to apply to the Executive in the relevant tax year(s);
- (4) "Accounting Firm" shall mean such nationally recognized certified public accounting firm as may be designated by the Executive, other than the certified public accounting firm serving as the independent auditor of the Company or of another company that is a party to a Business Combination, if applicable;
- (5) "Parachute Value" of a Payment shall mean the present value as of the date of the change of control for purposes of Section 280G of the Code of the portion of such Payment that constitutes a "parachute payment" under Section 280G(b)(2), as determined by the Accounting Firm for purposes of determining whether and to what extent the Excise Tax will apply to such Payment; and
- (6) "Reduced Amount" shall mean the amount of Agreement Payments that (x) has a Present Value that is less than the Present Value of all Agreement Payments and

(y) results in aggregate Net After-Tax Receipts for all Payments that are greater than the Net After-Tax Receipts for all Payments that would result if the aggregate Present Value of Agreement Payments were any other amount that is less than the Present Value of all Agreement Payments.

Section 9. Confidential Information. The Executive shall hold in a fiduciary capacity for the benefit of the Company all secret or confidential information, knowledge or data relating to the Company or the Affiliated Companies, and their respective businesses, which information, knowledge or data shall have been obtained by the Executive during the Executive's employment by the Company or the Affiliated Companies and which information, knowledge or data shall not be or become public knowledge (other than by acts by the Executive or representatives of the Executive in violation of this Agreement). After termination of the Executive's employment with the Company, the Executive shall not, without the prior written consent of the Company or as may otherwise be required by law or legal process, communicate or divulge any such information, knowledge or data to anyone other than the Company and those persons designated by the Company, provided, however, that nothing in this Agreement shall prohibit or limit Executive's ability to make disclosures that are protected by Rule 21F-17 of the Securities and Exchange Act of 1934 or similar provisions of federal law or regulation. In no event shall an asserted violation of the provisions of this Section 9 constitute a basis for deferring or withholding any amounts otherwise payable to the Executive under this Agreement.

Section 10. <u>Successors.</u> (a) This Agreement is personal to the Executive, and, without the prior written consent of the Company, shall not be assignable by the Executive other than by will or the laws of descent and distribution. This Agreement shall inure to the benefit of and be enforceable by the Executive's legal representatives.

- (b) This Agreement shall inure to the benefit of and be binding upon the Company and its successors and assigns. Except as provided in Section 10(c), without the prior written consent of the Executive this Agreement shall not be assignable by the Company.
- (c) The Company will require any successor (whether direct or indirect, by purchase, merger, consolidation or otherwise) to all or substantially all of the business and/or assets of the Company to assume expressly and agree to perform this Agreement in the same manner and to the same extent that the Company would be required to perform it if no such succession had taken place. "Company" means the Company as hereinbefore defined and any successor to its business and/or assets as aforesaid that assumes and agrees to perform this Agreement by operation of law or otherwise.

Section 11. <u>Miscellaneous</u>. (a) This Agreement shall be governed by and construed in accordance with the laws of the State of Delaware, without reference to principles of conflict of laws. The captions of this Agreement are not part of the provisions hereof and shall have no force or effect. Subject to the last sentence of Section 11(g), this Agreement may not be amended or modified other than by a written agreement executed by the parties hereto or their respective successors and legal representatives.

(b)	All notices and other communications hereunder shall be in writing and shall be given by hand delivery to the other
party or by registered or ce	rtified mail, return receipt requested, postage prepaid, addressed as follows:

if to the Executive:

At the most recent address on file at the Company.

if to the Company:

Comerica Incorporated Comerica Bank Tower 1717 Main Street, MC 6404 Dallas, Texas 75201 Attention: General Counsel

or to such other address as either party shall have furnished to the other in writing in accordance herewith. Notice and communications shall be effective when actually received by the addressee.

- (c) The invalidity or unenforceability of any provision of this Agreement shall not affect the validity or enforceability of any other provision of this Agreement.
- (d) The Company may withhold from any amounts payable under this Agreement such United States federal, state or local or foreign taxes as shall be required to be withheld pursuant to any applicable law or regulation.
- (e) The Executive's or the Company's failure to insist upon strict compliance with any provision of this Agreement or the failure to assert any right the Executive or the Company may have hereunder, including, without limitation, the right of the Executive to terminate employment for Good Reason pursuant to Sections 4(c)(1) through 4(c)(5), shall not be deemed to be a waiver of such provision or right or any other provision or right of this Agreement.
- (f) The Executive and the Company acknowledge that, except as may otherwise be provided under any other written agreement between the Executive and the Company, the employment of the Executive by the Company is "at will" and, subject to Section 1(a), prior to the Effective Date, the Executive's employment may be terminated by either the Executive or the Company at any time prior to the Effective Date, in which case the Executive shall have no further rights under this Agreement. From and after the Effective Date, except as specifically provided herein, this Agreement shall supersede any other agreement between the parties with respect to the subject matter hereof in effect immediately prior to the execution of this Agreement.

The Agreement is intended to comply with the requirements of Section 409A of the Code or an exemption or exclusion therefrom and shall in all respects be administered in accordance with Section 409A of the Code. Each payment under this Agreement shall be treated as a separate payment for purposes of Section 409A of the Code. In no event may the Executive, directly or indirectly, designate the calendar year of any payment to be made under this Agreement. If the Executive dies following the Date of Termination and prior to the payment of the any amounts delayed on account of Section 409A of the Code, such amounts shall be paid to the personal representative of the Executive's estate within 30 days after the date of the Executive's death. All reimbursements and in-kind benefits that constitute deferred compensation within the meaning of Section 409A provided under this Agreement shall be made or provided in accordance with the requirements of Section 409A of the Code, including, without limitation, that (i) in no event shall reimbursements by the Company under this Agreement be made later than the end of the calendar year next following the calendar year in which the applicable fees and expenses were incurred, provided, that the Executive shall have submitted an invoice for such fees and expenses at least 10 days before the end of the calendar year next following the calendar year in which such fees and expenses were incurred; (ii) the amount of in-kind benefits that the Company is obligated to pay or provide in any given calendar year shall

not affect the in-kind benefits that the Company is obligated to pay or provide in any other calendar year; (iii) the Executive's right to have the Company pay or provide such reimbursements and in-kind benefits may not be liquidated or exchanged for any other benefit; and (iv) in no event shall the Company's obligations to make such reimbursements or to provide such in-kind benefits apply later than the Executive's remaining lifetime (or if longer, through the 20th anniversary of the Effective Date). Prior to the Effective Date but within the time period permitted by the applicable Treasury Regulations, the Company may, in consultation with the Executive, modify the Agreement, in the least restrictive manner necessary and without any diminution in the value of the payments to the Executive, in order to cause the provisions of the Agreement to comply with the requirements of Section 409A of the Code, so as to avoid the imposition of taxes and penalties on the Executive pursuant to Section 409A of the Code.

Section 12. Survivorship. Upon the expiration or other termination of this Agreement or the Executive's employment, the respective rights and obligations of the parties hereto shall survive to the extent necessary to carry out the intentions of the parties under this Agreement.

IN WITNESS WHEREOF, the Executive has hereunto set the Executive's hand and, pursuant to the authorization from its Board of
Directors, the Company has caused these presents to be executed in its name on its behalf, all as of the day and year first above written.

[Name of Executive]

COMERICA INCORPORATED

Schedule of Named Executive Officers Party to Change of Control Employment Agreement (BE4 and Higher Version without gross-up or window period - current)

(As of December 31, 2019)

Jay K. Oberg

Schedule of Named Executive Officers Party to Change of Control Employment Agreement (BE4 and Higher Version without gross-up or window period - 2015 version)

(As of December 31, 2019)

John D. Buchanan

Peter L. Sefzik

Schedule of Named Executive Officers Party to Change of Control Employment Agreement (BE4 and Higher Version)

(As of December 31, 2019)

Ralph W. Babb, Jr.

Curtis C. Farmer

Subsidiaries of Registrant

As of December 31, 2019

Name	State or Jurisdiction of Incorporation or Organization
Cass & Co.	Cayman Islands
Comerica Assurance Ltd.	Bermuda
Comerica Bank (d.b.a. Comerica - Technology & Life Sciences Co.; Sterling Bank, a division of Comerica Bank; Comerica Bank Inc.; Comerica Bank Incorporated; Comerica Bank (Inc.))	Texas
Comerica Bank & Trust, National Association	United States
Comerica Capital Advisors Incorporated	Delaware
Comerica do Brasil Participacoes e Servicos Ltda.	Brazil
Comerica Community Development Investment Fund II, LLC	Delaware
Comerica Financial Incorporated (f/k/a/ Comerica AutoLease, Inc.)	Michigan
Comerica Holdings Incorporated	Delaware
Comerica Insurance Group, Inc. (d.b.a. The Comerica Insurance Group)	Michigan
Comerica Insurance Services, Inc. (d.b.a. Comerica Insurance Agency)	Michigan
Comerica Insurance Services of Texas Incorporated (f/k/a CMA Insurance Services, Inc.)	Texas
Comerica Investment Services, Inc. (d.b.a. Comerica Investment Services)	Michigan
Comerica Leasing Corporation (f/k/a CMCA Lease, Inc.)	Michigan
Comerica Management Company	Michigan
Comerica Properties Corporation	Michigan
Comerica Securities, Inc. (d.b.a. Comerica Securities)	Michigan
Comerica Ventures Incorporated (f/k/a Imperial Ventures, Inc.)	California
Interstate Select Insurance Services, Inc. (d.b.a. Comerica of California Insurance Services)	California
Munder UK, L.L.C.	Delaware
SCFS Reverse Exchange, LLC (f/k/a NBF Reverse Exchange, LLC)	Delaware
Silver Funding Corp.	Delaware
VRB Corp. (d.b.a. VRB Properties Corp.)	Michigan
VRB Comfort, LLC	Delaware
VRB Marketplace of Rochester Hills, LLC	Delaware
VRB Ocala Ranch, LLC	Delaware
VRB Red Oak, LLC	Delaware
VRB Spanish Oaks, LLC	Delaware
WAM Holdings, Inc.	Delaware
Wilson, Kemp & Associates, Inc.	Michigan
World Asset Management, Inc.	Delaware

We consent to the incorporation by reference in the following Registration Statements:

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Registration Statement No. 33-42485 on Form S-8
Registration Statement No. 33-53220 on Form S-8
Registration Statement No. 33-53222 on Form S-8
Registration Statement No. 333-00839 on Form S-8
Registration Statement No. 333-24569 on Form S-8
Registration Statement No. 333-24567 on Form S-8
Registration Statement No. 333-24565 on Form S-8
Registration Statement No. 333-24555 on Form S-8
Registration Statement No. 333-37061 on Form S-8
Registration Statement No. 333-48118 on Form S-8
Registration Statement No. 333-48120 on Form S-8
Registration Statement No. 333-48122 on Form S-8
Registration Statement No. 333-48124 on Form S-8
Registration Statement No. 333-48126 on Form S-8
Registration Statement No. 333-50966 on Form S-8
Registration Statement No. 333-104163 on Form S-8
Registration Statement No. 333-107962 on Form S-8
Registration Statement No. 333-110791 on Form S-8
Registration Statement No. 333-110792 on Form S-8
Registration Statement No. 333-117788 on Form S-8
Registration Statement No. 333-136053 on Form S-8
Registration Statement No. 333-167261 on Form S-8
Registration Statement No. 333-172211 on Form S-4
Registration Statement No. 333-175857 on Form S-8
Registration Statement No. 333-172211 on Form S-8 (Post-Effective Amendment No. 2 to Form S-4)
Registration Statement No. 333-185042 on Form S-3
Registration Statement No. 333-188274 on Form S-8
Registration Statement No. 333-204099 on Form S-8
Registration Statement No. 333-223083 on Form S-3
Registration Statement No. 333-224490 on Form S-8
Registration Statement No. 333-228250 on Form S-8
Registration Statement No. 333-228254 on Form S-8
Registration Statement No. 333-228259 on Form S-8
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of our reports dated February 11, 2020, with respect to the consolidated financial statements of Comerica Incorporated and the effectiveness of internal control over financial reporting of Comerica Incorporated, included in this Annual Report (Form 10-K) of Comerica Incorporated for the year ended December 31, 2019.

/s/ Ernst & Young LLP

February 11, 2020 Dallas, Texas Chairman, President and CEO Rule 13a-14(a)/15d-14(a) Certification of Periodic Report (pursuant to Section 302 of the Sarbanes-Oxley Act of 2002)

CERTIFICATION OF PERIODIC REPORT

PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Curtis C. Farmer, certify that:

- 1. I have reviewed this annual report on Form 10-K for the year ended December 31, 2019 of Comerica Incorporated (the "Registrant");
- 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;
- 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 15(d)-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
- 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 11, 2020 /s/ Curtis C. Farmer

Curtis C. Farmer

Chairman, President and Chief Executive Officer

Executive Vice President, Treasurer and Interim CFO Rule 13a-14(a)/15d-14(a) Certification of Periodic Report (pursuant to Section 302 of the Sarbanes-Oxley Act of 2002)

CERTIFICATION OF PERIODIC REPORT

PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, James J. Herzog, certify that:

- 1. I have reviewed this annual report on Form 10-K for the year ended December 31, 2019 of Comerica Incorporated (the "Registrant");
- 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 15(d)-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
- 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 11, 2020 /s/ James J. Herzog

James J. Herzog

Executive Vice President, Treasurer and
Interim Chief Financial Officer

Section 1350 Certification of Periodic Report (pursuant to Section 906 of the Sarbanes-Oxley Act of 2002)

CERTIFICATION OF PERIODIC REPORT

PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

The undersigned, Curtis C. Farmer, Chairman, President and Chief Executive Officer, and James J. Herzog, Executive Vice President, Treasurer and Interim Chief Financial Officer, of Comerica Incorporated (the "Company"), certify, pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, 18 U.S.C. Section 1350, that:

- (1) the Annual Report on Form 10-K of the Company for the year ended December 31, 2019 (the "Report") fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m or 78o(d)); and
- (2) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: February 11, 2020 /s/ Curtis C. Farmer

Curtis C. Farmer

Chairman, President and Chief Executive Officer

/s/ James J. Herzog

James J. Herzog Executive Vice President, Treasurer and Interim Chief Financial Officer