UMB FINANCIAL CORP
Form 10-K
March 01, 2019

UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-K

(Mark One)

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended: December 31, 2018

OR

TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the transition period from to

Commission file number: 001-38481

UMB FINANCIAL CORPORATION

(Exact name of registrant as specified in its charter)

Missouri	43-0903811
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)

1010 Grand Boulevard, Kansas City, Missouri	64106
(Address of principal executive offices)	(Zip Code)

(Registrant's telephone number, including area code): (816) 860-7000

Securities Registered Pursuant to Section 12(b) of the Act:

Title of each class	Name of each exchange on which registered
Common Stock, $1.00 Par Value	The NASDAQ Global Select Market

Securities Registered Pursuant to Section 12(g) of the Act: None

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

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

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes No

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

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. (Check One):

Large accelerated filer	Accelerated filer
Non-accelerated filer	Smaller reporting company
	Emerging growth company

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

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

As of June 30, 2018, the aggregate market value of common stock outstanding held by nonaffiliates of the registrant was approximately $3,442,816,067 based on the closing price of the registrant’s common stock on the NASDAQ Global Select Market on that date.

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

Class	Outstanding at February 22, 2019
Common Stock, $1.00 Par Value	49,053,206

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Company's Definitive Proxy Statement on Schedule 14A (“Proxy Statement”) to be delivered to shareholders in connection with the Annual Meeting of Shareholders to be held on April 23, 2019, are incorporated by reference into Part III of this Annual Report on Form 10-K.

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PART I

ITEM 1. BUSINESS

General

UMB Financial Corporation (together with its consolidated subsidiaries, unless the context requires otherwise, the Company) is a financial holding company that is headquartered in Kansas City, Missouri. The Company provides banking services and asset servicing to its customers in the United States and around the globe.

The Company was organized as a corporation under Missouri law in 1967 and is registered as a bank holding company under the Bank Holding Company Act of 1956, as amended (the BHCA) and a financial holding company under the Gramm-Leach-Bliley Act of 1999, as amended (the GLBA). The Company currently owns all of the outstanding stock of one national bank and several nonbank subsidiaries.

The Company's national bank, UMB Bank, National Association (the Bank), has its principal office in Missouri and also has branches in Arizona, Colorado, Illinois, Kansas, Nebraska, Oklahoma, and Texas. The Bank offers a full complement of banking products and other services to commercial, retail, government, and correspondent-bank customers, including a wide range of asset-management, trust, bank-card, and cash-management services.

The Company also owns UMB Fund Services, Inc. (UMBFS), which is a significant nonbank subsidiary and that has offices in Milwaukee, Wisconsin, Chadds Ford, Pennsylvania, and Ogden, Utah. UMBFS provides fund accounting, transfer agency, and other services to mutual fund and alternative-investment groups.

Until November 17, 2017, the Company also owned Scout Investments, Inc. (Scout), which is an institutional asset-management company that offered domestic and international equity strategies through its Scout Asset Management Division and fixed income strategies through its Reams Asset Management division. On November 17, 2017, the Company closed on the sale of Scout to Carillon Tower Advisers, Inc., a Florida corporation, for a purchase price of approximately $172.5 million, after giving effect to customary purchase price adjustments.

On a full-time equivalent basis at December 31, 2018, the Company and its subsidiaries employed 3,573 persons.

Business Segments

The Company's products and services are grouped into four segments: Commercial Banking, Institutional Banking, Personal Banking, and Healthcare Services.

These segments and their financial results are described in detail in (i) the section of Management's Discussion and Analysis of Financial Condition and Results of Operations entitled Business Segments, which can be found in Part II, Item 7, pages 33 through 35, of this report and (ii) Note 12, "Business Segment Reporting," in the Notes to the Consolidated Financial Statements, which can be found in Part II, Item 8, pages 89 through 90 of this report.

Competition

The Company faces intense competition in each of its business segments and in all of the markets and geographic regions that the Company serves. Competition comes from both traditional and non-traditional financial-services providers, including banks, savings associations, finance companies, investment advisors, asset managers, mutual funds, private-equity firms, hedge funds, brokerage firms, mortgage-banking companies, credit-card companies, insurance companies, trust companies, securities processing companies, and credit unions. Increasingly,

financial-technology (fintech) companies are partnering with financial-services providers to compete with the Company for lending, payments, and other business. Many of the Company's competitors are not subject to the same kind or degree of supervision and regulation as the Company.

Competition is based on a number of factors. Banking customers are generally influenced by convenience, interest rates and pricing, personal experience, quality and availability of products and other services, lending limits, transaction execution, and reputation. Investment advisory services compete primarily on returns, expenses, third-party ratings, and the reputation and performance of managers. Asset servicing competes primarily on price, quality

of services, and reputation. The Company and its competitors are all impacted to varying degrees by the overall economy and health of the financial markets.

The Company's ability to successfully compete in its chosen markets and regions also depends on the its ability to attract, retain, and motivate talented employees, to invest in technology and infrastructure, and to innovate, all the while effectively managing its expenses. The Company expects that competition will likely intensify in the future.

Government Monetary and Fiscal Policies

In addition to the impact of general economic conditions, the Company's business, results of operations, financial condition, capital, liquidity, and prospects are significantly affected by government monetary and fiscal policies that are announced or implemented in the United States and abroad.

A sizeable influence is exerted, in particular, by the policies of the Board of Governors of the Federal Reserve System (the FRB), which influences monetary and credit conditions in the economy in pursuit of maximum employment, stable prices, and moderate long-term interest rates. Among the FRB's policy tools are (1) open market operations (that is, purchases or sales of securities in the open market to adjust the supply of reserve balances in order to achieve targeted federal funds rates or to put pressure on longer-term interest rates in order to achieve more desirable levels of economic activity and job creation), (2) the discount rate charged on loans by the Federal Reserve Banks, (3) the level of reserves required to be held by depository institutions against specified deposit liabilities, (4) the interest paid or charged on balances maintained with the Federal Reserve Banks by depository institutions, including balances used to satisfy their reserve requirements, and (5) other deposit and loan facilities.

The FRB and its policies have a substantial impact on the availability and demand for loans and deposits, the rates and other aspects of pricing for loans and deposits, and the conditions in equity, fixed income, currency, and other markets in which the Company operates. Policies announced or implemented by other central banks around the world have a meaningful effect as well and sometimes may be coordinated with those of the FRB.

Tax and other fiscal policies, moreover, impact not only general economic conditions but also give rise to incentives or disincentives that affect how the Company and its customers prioritize objectives, operate businesses, and deploy resources.

Regulation and Supervision

The Company is subject to regulatory frameworks in the United States at federal, State, and local levels. In addition, the Company is subject to the direct supervision of various government authorities charged with overseeing the kinds of financial activities conducted by its business segments.

This section summarizes some pertinent provisions of the principal laws and regulations that apply to the Company. The descriptions, however, are not complete and are qualified in their entirety by the full text and judicial or administrative interpretations of those laws and regulations and other laws and regulations that affect the Company.

Overview

The Company is a bank holding company under the BHCA and a financial holding company under the GLBA. As a result, the Company—including all of its businesses and operations—is subject to the regulation, supervision, and examination of the FRB and to restrictions on permissible activities. This framework of regulation, supervision, and examination is intended primarily for the protection and benefit of depositors and other customers of the Bank, the Deposit Insurance Fund (the DIF) of the Federal Deposit Insurance Corporation (the FDIC), the banking and financial

systems as a whole, and the broader economy, not for the protection or benefit of the Company's shareholders or its non-deposit creditors.

Many of the Company's subsidiaries are also subject to separate or related forms of regulation, supervision, and examination, including: (1) the Bank by the Office of the Comptroller of the Currency (the OCC) under the National Banking Acts, the FDIC under the Federal Deposit Insurance Act (the FDIA), and the Consumer Financial Protection Bureau (the CFPB) under the Dodd-Frank Wall Street Reform and Consumer Protection Act (the Dodd-Frank Act); (2) UMBFS, UMB Distribution Services, LLC, UMB Financial Services, Inc., and Prairie Capital

Management, LLC by the Securities and Exchange Commission (the SEC) and State regulatory authorities under federal and State securities laws, and UMB Distribution Services, LLC and UMB Financial Services, Inc. by the Financial Industry Regulatory Authority (FINRA); and (3) UMB Insurance, Inc. by State regulatory authorities under applicable State insurance laws. These regulatory schemes, like those overseen by the FRB, are designed to protect public or private interests that often are not aligned with those of the Company's shareholders or non-deposit creditors.

The FRB possesses extensive authorities and powers to regulate the conduct of the Company's businesses and operations. If the FRB were to take the position that the Company or any of its subsidiaries have violated any law or commitment or engaged in any unsafe or unsound practice, formal or informal corrective or enforcement actions could be taken by the FRB against the Company, its subsidiaries, and institution-affiliated parties (such as directors, officers, and agents). These enforcement actions could include an imposition of civil monetary penalties and could directly affect not only the Company, its subsidiaries, and institution-affiliated parties but also the Company's counterparties, shareholders, and creditors and its commitments, arrangements, or other dealings with them. The OCC has similarly expansive authorities and powers over the Bank and its subsidiaries, as does the CFPB over matters involving consumer financial laws. The SEC, FINRA, and other domestic or foreign government authorities also have an array of means at their disposal to regulate and enforce matters within their jurisdiction that could impact the Company's businesses and operations.

Restrictions on Permissible Activities and Corporate Matters

Under the BHCA, bank holding companies and their subsidiaries are generally limited to the business of banking and to closely-related activities that are incidental to banking.

As a bank holding company that has elected to become a financial holding company under the GLBA, the Company is also able—directly or indirectly through its subsidiaries—to engage in activities that are financial in nature, that are incidental to a financial activity, or that are complementary to a financial activity and do not pose a substantial risk to the safety or soundness of depository institutions or the financial system generally. Activities that are financial in nature include: (1) underwriting, dealing in, or making a market in securities, (2) providing financial, investment, or economic advisory services, (3) underwriting insurance, and (4) merchant banking.

The Company's ability to directly or indirectly engage in these banking and financial activities, however, is subject to conditions and other limits imposed by law or the FRB and, in some cases, requires the approval of the FRB or other government authorities. These conditions or other limits may arise due to the particular type of activity or, in other cases, may apply to the Company's business more generally. Examples of the former are the substantial restrictions on the timing, amount, form, substance, interconnectedness, and management of the Company's merchant banking investments. An example of the latter is a condition that, in order for the Company to engage in broader financial activities, its depository institutions must remain "well capitalized" and "well managed" under applicable banking laws and must receive at least a "satisfactory" rating under the Community Reinvestment Act (CRA).

Under amendments to the BHCA promulgated by the Riegle-Neal Interstate Banking and Branching Efficiency Act of 1994 and the Dodd-Frank Act, the Company may acquire banks outside of its home State of Missouri, subject to specified limits and may establish new branches in other States to the same extent as banks chartered in those States. Under the BHCA, however, the Company must procure the prior approval of the FRB and possibly other government authorities to directly or indirectly acquire ownership or control of five percent or more of any class of voting securities of, or substantially all of the assets of, an unaffiliated bank, savings association, or bank holding company. In deciding whether to approve any acquisition or branch, the FRB, the OCC, and other government authorities will consider public or private interests that may not be aligned with those of the Company's shareholders or non-deposit creditors. The FRB also has the power to require the Company to divest any depository institution that cannot maintain its "well capitalized" or "well managed" status.

The FRB maintains a targeted policy that requires a bank holding company to inform and consult with the staff of the FRB sufficiently in advance of (1) declaring and paying a dividend that could raise safety and soundness concerns (for example, a dividend that exceeds earnings in the period for which the dividend is being paid), (2) redeeming or repurchasing regulatory capital instruments when the holding company is experiencing financial weaknesses, or (3) redeeming or repurchasing common stock or perpetual preferred stock that would result in a net reduction as of the end of the quarter in the amount of those equity instruments outstanding compared with the beginning of the quarter in which the redemption or repurchase occurred.

Requirements Affecting the Relationships among the Company, Its Subsidiaries, and Other Affiliates

The Company is a legal entity separate and distinct from the Bank, UMBFS, and its other subsidiaries but receives the vast majority of its revenue in the form of dividends from those subsidiaries. Without the approval of the OCC, however, dividends payable by the Bank in any calendar year may not exceed the lesser of (1) the current year's net income combined with the retained net income of the two preceding years and (2) undivided profits. In addition, under the Basel III capital-adequacy standards described below under the heading "Capital-Adequacy Standards," the Bank is currently required to maintain a capital conservation buffer in excess of its minimum risk-based capital ratios and will be restricted in declaring and paying dividends whenever the buffer is breached. The authorities and powers of the FRB, the OCC, and other government authorities to prevent any unsafe or unsound practice also could be employed to further limit the dividends that the Bank or the Company's other subsidiaries may declare and pay to the Company.

The Dodd-Frank Act requires a bank holding company like the Company to serve as a source of financial strength for its depository-institution subsidiaries and to commit resources to support those subsidiaries in circumstances when the Company might not otherwise elect to do so. The functional regulator of any nonbank subsidiary of the Company, however, may prevent that subsidiary from directly or indirectly contributing its financial support, and if that were to preclude the Company from serving as an adequate source of financial strength, the FRB may instead require the divestiture of depository-institution subsidiaries and impose operating restrictions pending such a divestiture.

A number of laws, principally Sections 23A and 23B of the Federal Reserve Act (the FRA), and the FRB's Regulation W, also exist to prevent the Company and its nonbank subsidiaries from taking improper advantage of the benefits afforded to the Bank as a depository institution, including its access to federal deposit insurance and the discount window. These laws generally require the Bank and its subsidiaries to deal with the Company and its nonbank subsidiaries only on market terms and, in addition, impose restrictions on the Bank and its subsidiaries in directly or indirectly extending credit to or engaging in other covered transactions with the Company or its nonbank subsidiaries. The Dodd-Frank Act extended the restrictions to derivatives and securities lending transactions and expanded the restrictions for transactions involving hedge funds or private-equity funds that are owned or sponsored by the Company or its nonbank subsidiaries.

In addition, under the Volcker Rule, the Company is subject to extensive limits on proprietary trading and on owning or sponsoring hedge funds and private-equity funds. The limits on proprietary trading are largely directed toward purchases or sales of financial instruments by a banking entity as principal primarily for the purpose of short-term resale, a benefit from actual or expected short-term price movements, or the realization of short-term arbitrage profits. The limits on owning or sponsoring hedge funds and private-equity funds are designed to ensure that banking entities generally maintain only small positions in managed or advised funds and are not exposed to significant losses arising directly or indirectly from them. The Volcker Rule also provides for increased capital charges, quantitative limits, rigorous compliance programs, and other restrictions on permitted proprietary trading and fund activities, including a prohibition on transactions with a covered fund that would constitute a covered transaction under Sections 23A and 23B of the FRA.

Stress Testing and Enhanced Prudential Standards

The Economic Growth, Regulatory Relief, and Consumer Protection Act (EGRRCPA) was enacted in May 2018, amending requirements previously established in the Dodd-Frank Act, including stress testing and enhanced prudential standards. Bank holding companies with assets of less than $100 billion, including the Company, are no longer subject to the requirement to conduct forward-looking, company-run stress testing, including publishing a summary of results. The Company continues to run internal stress tests as a component of our comprehensive risk management and capital planning process. In addition, the EGRRCPA increased the statutory asset threshold above which the Federal Reserve is required to apply enhanced prudential standards from $50 billion to $250 billion (subject

to certain discretion by the Federal Reserve to apply any enhanced prudential standard requirement to any bank holding company with between $100 billion and $250 billion in total consolidated assets that would otherwise be exempt under EGRRCPA). The Company remains exempt from applying the enhanced prudential standards.

Capital-Adequacy Standards

The FRB and the OCC have adopted risk-based capital and leverage guidelines that require the capital-to-assets ratios of bank holding companies and national banks, respectively, to meet specified minimum standards.

The risk-based capital ratios are based on a banking organization's risk-weighted asset amounts (RWAs), which are generally determined under the standardized approach applicable to the Company and the Bank by (1) assigning on-balance-sheet exposures to broad risk-weight categories according to the counterparty or, if relevant, the guarantor or collateral (with higher risk weights assigned to categories of exposures perceived as representing greater risk) and (2) multiplying off-balance-sheet exposures by specified credit conversion factors to calculate credit equivalent amounts and assigning those credit equivalent amounts to the relevant risk-weight categories. The leverage ratio, in contrast, is based on an institution's average on-balance-sheet exposures alone.

The capital ratios for the Company and the Bank as of December 31, 2018, are set forth below:

	Tier 1 Leverage Ratio	Tier 1 Risk-Based Capital Ratio	Common Equity Tier 1 Capital Ratio	Total Risk-Based Capital Ratio
UMB Financial Corporation	9.87	12.89	12.89	13.95
UMB Bank, n.a.	8.85	11.65	11.65	12.29

These capital-to-assets ratios also play a central role in prompt corrective action (PCA), which is an enforcement framework used by the federal banking agencies to constrain the activities of banking organizations based on their levels of regulatory capital. Five categories have been established using thresholds for the total risk-based capital ratio, the tier 1 risk-based capital ratio, the common-equity tier 1 risk-based capital ratio, and the leverage ratio: (1) well capitalized, (2) adequately capitalized, (3) undercapitalized, (4) significantly undercapitalized, and (5) critically undercapitalized. While bank holding companies are not subject to the PCA framework, the FRB is empowered to compel a holding company to take measures—such as the execution of financial or performance guarantees—when prompt corrective action is required in connection with one of its depository-institution subsidiaries. At December 31, 2018, the Bank was well capitalized under the PCA framework.

Basel III includes a number of more rigorous provisions applicable only to banking organizations that are larger or more internationally active than the Company and the Bank. These include, for example, a supplementary leverage ratio incorporating off-balance-sheet exposures, a liquidity coverage ratio, and a net stable funding ratio. These standards may be informally applied or considered by the FRB and the OCC in their regulation, supervision, and examination of the Company and the Bank.

Deposit Insurance and Related Matters

The deposits of the Bank are insured by the FDIC in the standard insurance amount of $250 thousand per depositor for each account ownership category. This insurance is funded through assessments on the Bank and other insured depository institutions. Under the Dodd-Frank Act, each institution's assessment base is determined based on its average consolidated total assets less average tangible equity, and there is a scorecard method for calculating assessments that combines CAMELS (an acronym that refers to the five components of a bank's condition that are addressed: capital adequacy, asset quality, management, earnings, and liquidity) ratings and specified forward-looking financial measures to determine each institution's risk to the DIF. The Dodd-Frank Act also requires the FDIC, in setting assessments, to offset the effect of increasing its reserve for the DIF on institutions with consolidated assets of less than $10 billion. The result of this revised approach to deposit-insurance assessments is generally an increase in costs, on an absolute or relative basis, for institutions with consolidated assets of $10 billion

or more.

If an insured depository institution such as the Bank were to become insolvent or if other specified events were to occur relating to its financial condition or the propriety of its actions, the FDIC may be appointed as conservator or receiver for the institution. In that capacity, the FDIC would have the power (1) to transfer assets and liabilities of the institution to another person or entity without the approval of the institution's creditors, (2) to require that its claims process be followed and to enforce statutory or other limits on damages claimed by the institution's creditors, (3) to enforce the institution's contracts or leases according to their terms, (4) to repudiate or disaffirm the institution's contracts or leases, (5) to seek to reclaim, recover, or recharacterize transfers of the institution's assets or to exercise control over assets in which the institution may claim an interest, (6) to enforce statutory or other injunctions, and (7) to exercise a wide range of other rights, powers, and authorities, including those that could impair the rights and interests of all or some of the institution's creditors. In addition, the administrative expenses of the conservator or receiver could be afforded priority over all or some of the claims of the institution's creditors, and under the FDIA, the claims of depositors (including the FDIC as subrogee of depositors) would enjoy priority over the claims of the institution's unsecured creditors.

The FDIA also provides that an insured depository institution can be held liable for any loss incurred or expected to be incurred by the FDIC in connection with another commonly controlled insured depository institution that is in default or in danger of default. This cross-guarantee liability is generally superior in right of payment to claims of the institution's holding company and its affiliates.

Other Regulatory and Supervisory Matters

As a public company, the Company is subject to the Securities Act of 1933, as amended (the Securities Act), the Securities Exchange Act of 1934, as amended (the Exchange Act), the Sarbanes-Oxley Act of 2002, and other federal and State securities laws. In addition, because the Company's common stock is listed with The NASDAQ Stock Market LLC (NASDAQ), the Company is subject to the listing rules of that exchange.

The Currency and Foreign Transactions Reporting Act of 1970 (commonly known as the Bank Secrecy Act), the USA PATRIOT Act of 2001, and related laws require all financial institutions, including banks and broker-dealers, to establish a risk-based system of internal controls reasonably designed to prevent money laundering and the financing of terrorism. These laws include a variety of recordkeeping and reporting requirements (such as currency and suspicious activity reporting) as well as know-your-customer and due-diligence rules.

Under the CRA, the Bank has a continuing and affirmative obligation to help meet the credit needs of its local communities—including low- and moderate-income neighborhoods—consistent with safe and sound banking practices. The CRA does not create specific lending programs but does establish the framework and criteria by which the OCC regularly assesses the Bank's record in meeting these credit needs. The Bank's ratings under the CRA are taken into account by the FRB and the OCC when considering merger or other specified applications that the Company or the Bank may submit from time to time.

The Bank is subject as well to a vast array of consumer-protection laws, such as qualified-mortgage and other mortgage-related rules under the jurisdiction of the CFPB. Lending limits, restrictions on tying arrangements, limits on permissible interest-rate charges, and other laws governing the conduct of banking or fiduciary activities are also applicable to the Bank. In addition, the GLBA imposes on the Company and its subsidiaries a number of obligations relating to financial privacy.

Statistical Disclosure

The information required by Guide 3, "Statistical Disclosure by Bank Holding Companies," has been included in Part II, Items 6, 7, and 7A, pages 20 through 55, of this report.

Executive Officers of the Registrant. The following are the executive officers of the Company, each of whom is appointed annually, and there are no arrangements or understandings between any of the executive officers and any other person pursuant to which such person was elected as an executive officer.

Name	Age	Position with Registrant
Dana H. Abraham	54	Ms. Abraham has served as the President of Private Wealth Management of the Bank since September 2018. Prior to that time, Ms. Abraham served at the Bank as the President of Personal banking from July 2015 to September 2018 and as President of Private Wealth Management from May 2009 to July 2015.
	57	

James Cornelius		Mr. Cornelius has served as the President of Institutional Banking for the Bank since June 2015. Prior to this time, he served as the President of Institutional Banking and Investor services from June 2012 until June 2015.
Shannon A. Johnson	39	Ms. Johnson has served as Executive Vice President and Chief Human Resources Officer of the Company since April 2015. Ms. Johnson’s previous positions with the Company include Senior Vice President, Executive Director of Talent Management and Development, and Senior Vice President, Director of Talent Management. Ms. Johnson held these positions from May 2011 to April 2015, and December 2009 to May 2011, respectively.

J. Mariner Kemper	46	Mr. Kemper has served as the President of the Company since November 2015 and as the Chairman and Chief Executive Officer of the Company since May 2004. He served as the Chairman and Chief Executive Officer of the Bank between December 2012 and January 2014, and as the Chairman of UMB Bank Colorado, n.a. (a prior subsidiary of the Company) between 2000 and 2012. He was President of UMB Bank Colorado from 1997 to 2000. Mr. Kemper is the brother of Mr. Alexander C. Kemper, who currently serves on the Company's Board of Directors.
Kevin M. Macke	46	Mr. Macke has served as Executive Vice President and Director of Operations for the Bank since November 2015. In addition, beginning in January 2014 and ending in December 2015, Mr. Macke served as the Chief Financial Officer of the Bank. Prior to this time, Mr. Macke held several other positions within the Company or the Bank, including Director of Strategic Technology Initiatives with the Bank from November 2010 to January 2014, and Director of Financial Planning and Analysis with the Company from August 2005 to November 2010.
J. Benjamin Morris	44	Mr. Morris was named the President of UMB Healthcare Services of the Bank in May 2015. Prior to this time, he served as a Vice President and Business Development Officer of UMB Healthcare Services. Mr. Morris has worked for the Bank since February 1998.
Jennifer M. Payne	42	Ms. Payne was named as Executive Vice President and Chief Risk Officer of the Company in January 2016. Prior to this time, she served the Company as Director of Corporate Risk Services and Director of Corporate Audit Services, from May 2012 to December 2015, and August 2005 to May 2012, respectively.
James D. Rine	48	Mr. Rine was named President and Chief Executive Officer of the Bank in October 2018. He served as President of Commercial Banking from December 2017 until October 2018 and as President of Commercial Banking/Western Region from October 2016 to December 2017. Prior to this time, Mr. Rine served as the President of the Kansas City Region since October 2011. Overall, Mr. Rine has over 20 years of commercial banking experience with the Bank.
Ram Shankar	46	Mr. Shankar was named as Executive Vice President and Chief Financial Officer of the Company effective August 2016. From September 2011 until his employment with the Company commenced, he worked at First Niagara Financial Group, most recently serving as managing director where he headed financial planning and analysis and investor relations. Prior to that, Shankar spent time at FBR Capital Markets as a senior research analyst and at M&T Bank Corporation in the financial planning measurement and corporate finance/mergers & acquisitions group.
John C. Pauls	54	Mr. Pauls has served as Executive Vice President, General Counsel and Corporate Secretary of the Company and the Bank since June 2016. Mr. Pauls served as interim General Counsel from April 2016 until his full appointment in June of 2016. He has been with UMB for over 24 years, having served as a top legal advisor for the Company and the Bank for over 17 years.
Thomas S. Terry	55	Mr. Terry has served as Executive Vice President and Chief Lending Officer of the Company since January 2011. Prior to this time, Mr. Terry served as Executive Vice President. Mr. Terry first joined UMB in 1986, and subsequently joined the Commercial Lending department in 1987 where he worked as a loan officer until 2011.
Brian J. Walker	47	Mr. Walker has served as Executive Vice President and Chief Accounting Officer of the Company since June 2007. He previously served as Chief Financial Officer of the Company from January 2014 to October 2015. From July 2004 to June 2007, he served as a Certified Public Accountant for KPMG LLP, where he worked primarily as an auditor for financial institutions.
Abigail Wendel	45	Ms. Wendel was named President of Consumer Banking of the Bank in September 2018. She has also served as Chief Strategy Officer for the Company from June 2015 until September 2018, and as the Director of Investor and Government Relations for the Company from February 2013 through June 2015.

The Company makes available free of charge on its website at www.umb.com/investor, its annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K and amendments to such reports, as soon as reasonably practicable after it electronically files or furnishes such material with or to the SEC. These reports can also be found on the SEC website at www.sec.gov.

ITEM 1A. RISK FACTORS

Financial-services companies routinely encounter and address risks and uncertainties. In the following paragraphs, the Company describes some of the principal risks and uncertainties that could adversely affect its business, results of operations, financial condition (including capital and liquidity), or prospects or the value of or return on an investment in the Company. These risks and uncertainties, however, are not the only ones faced by the Company. Other risks and uncertainties that are not presently known to the Company that it has failed to identify, or that it currently considers immaterial may adversely affect the Company as well. Except where otherwise noted, the risk factors address risks and uncertainties that may affect the Company as well as its subsidiaries. These risk factors should be read in conjunction with Management's Discussion and Analysis of Financial Condition and Results of Operations (which can be found in Part II, Item 7 of this report beginning on page 21) and the Notes to the Consolidated Financial Statements (which can be found in Part II, Item 8 of this report beginning on page 56).

The levels of, or changes in, interest rates could affect the Company's business or performance. The Company's business, results of operations, and financial condition are highly dependent on net interest income, which is the difference between interest income on earning assets (such as loans and investments) and interest expense on deposits and borrowings. Net interest income is significantly affected by market interest rates, which in turn are influenced by monetary and fiscal policies, general economic conditions, the regulatory environment, competitive pressures, and expectations about future changes in interest rates. The policies and regulations of the federal government, in general, and the FRB, in particular, have a substantial impact on market interest rates. See "Government Monetary and Fiscal Policies" in Part I, Item 1 of this report beginning on page 4, which is incorporated by reference herein. The Company may be adversely affected by policies, regulations, or events that have the effect of altering the difference between long-term and short-term interest rates (commonly known as the yield curve), depressing the interest rates associated with its earning assets to levels near the rates associated with its interest expense, or changing the spreads among different interest-rate indices. The Company's customers and counterparties also may be negatively impacted by the levels of, or changes in, interest rates, which could increase the risk of delinquency or default on obligations to the Company. The levels of, or changes in, interest rates, moreover, may have an adverse effect on the value of the Company's investment portfolio, which includes long-term municipal bonds with fixed interest rates, and other financial instruments, the return on or demand for loans, the prepayment speed of loans (including, without limitation, the pace of pay-downs expected or forecasted for commercial real estate and construction loans), the cost or availability of deposits or other funding sources, or the purchase or sale of investment securities. In addition, a rapid change in interest rates could result in interest expense increasing faster than interest income because of differences in the maturities of the Company's assets and liabilities. Further, if laws impacting taxation and interest rates materially change, or if new laws are enacted, certain of the Company's services and products, including municipal bonds, may be subject to less favorable tax treatment or otherwise adversely impacted. The level of, and changes in, market interest rates—and, as a result, these risks and uncertainties—are beyond the Company's control. The dynamics among these risks and uncertainties are also challenging to assess and manage. For example, while the highly accommodative monetary policy currently adopted by the FRB may benefit the Company to some degree by spurring economic activity among its customers, such a policy may ultimately cause the Company more harm by inhibiting its ability to grow or sustain net interest income. See "Quantitative and Qualitative Disclosures About Market Risk—Interest Rate Risk" in Part II, Item 7A of this report beginning on page 49 for a discussion of how the Company monitors and manages interest-rate risk.

Weak or deteriorating economic conditions, more liberal origination or underwriting standards, or financial or systemic shocks could increase the Company's credit risk and adversely affect its lending or other banking businesses and the value of its loans or investment securities. The Company's business and results of operations depend significantly on general economic conditions. When those conditions are weak or deteriorating in any of the markets or regions where the Company operates, its business or performance could be adversely affected. The Company's lending and other banking businesses, in particular, are susceptible to weak or deteriorating economic conditions,

which could result in reduced loan demand or utilization rates and at the same time increased delinquencies or defaults. These kinds of conditions also could dampen the demand for products and other services in the Company's investment-management, asset-servicing, insurance, brokerage, or related businesses. Increased delinquencies or defaults could result as well from the Company adopting—for strategic, competitive, or other reasons—more liberal origination or underwriting standards for extensions of credit or other dealings with its customers or counterparties. If delinquencies or defaults on the Company's loans or investment securities increase, their value and the income derived from them could be adversely affected, and the Company could incur administrative and other costs in seeking a recovery on its claims and any collateral. Weak or deteriorating economic conditions also may negatively impact the market value and liquidity of the Company's investment securities, and the Company may be required to record additional impairment charges if investment securities suffer

a decline in value that is determined to be other-than-temporary. In addition, to the extent that loan charge-offs exceed estimates, an increase to the amount of provision expense related to the allowance for loan losses would reduce the Company's income. See "Quantitative and Qualitative Disclosures About Market Risk—Credit Risk Management" in Part II, Item 7A of this report beginning on page 53 for a discussion of how the Company monitors and manages credit risk. A financial or systemic shock and a failure of a significant counterparty or a significant group of counterparties could negatively impact the Company, possibly to a severe degree, due to its role as a financial intermediary and the interconnectedness of the financial system.

A meaningful part of the Company's loan portfolio is secured by real estate and, as a result, could be negatively impacted by deteriorating or volatile real-estate markets or associated environmental liabilities. At December 31, 2018, 42.8 percent of the Company's aggregate loan portfolio—comprised of commercial real-estate loans (representing 30.5 percent of the aggregate loan portfolio), construction real-estate loans (representing 6.5 percent of the aggregate loan portfolio), and residential real-estate loans (representing 5.8 percent of the aggregate loan portfolio)—was primarily secured by interests in real estate located in the States where the Company operates. Other credit extended by the Company may be secured in part by real estate as well. Real-estate values in the markets where this collateral is located may be different from, and in some instances worse than, real-estate values in other markets or in the United States as a whole and may be affected by general economic conditions and a variety of other factors outside of the control of the Company or its customers. Any deterioration or volatility in these real-estate markets could result in increased delinquencies or defaults, could adversely affect the value of the loans and the income to be derived from them, could give rise to unreimbursed recovery costs, and could reduce the demand for new or additional credit and related banking products and other services, all to the detriment of the Company's business and performance. In addition, if hazardous or toxic substances were found on any real estate that the Company acquires in foreclosure or otherwise, the Company may incur substantial liability for compliance and remediation costs, personal injury, or property damage.

Challenging business, economic, or market conditions could adversely affect the Company's fee-based banking, investment-management, asset-servicing, or other businesses. The Company's fee-based banking, investment-management, asset-servicing, and other businesses are driven by wealth creation in the economy, robust market activity, monetary and fiscal stability, and positive investor, business, and consumer sentiment. Economic downturns, market disruptions, high unemployment or underemployment, unsustainable debt levels, depressed real-estate markets, or other challenging business, economic, or market conditions could adversely affect these businesses and their results. If the funds or other groups that are clients of UMBFS were to encounter similar difficulties, UMBFS's revenue could suffer. The Company's bank-card revenue is driven primarily by transaction volumes in business and consumer spending that generate interchange fees, and any of these conditions could dampen those volumes. Other fee-based banking businesses that could be adversely affected include trading, asset management, custody, trust, and cash and treasury management.

The Company's investment-management and asset-servicing businesses could be negatively impacted by declines in assets under management or administration or by shifts in the mix of assets under management or administration. The revenues of the Company's investment-management businesses are highly dependent on advisory fee income. These businesses generally earn higher fees on equity-based or alternative investments and strategies and lower fees on fixed income investments and strategies. Advisory-fee income may be negatively impacted by an absolute decline in assets under management or by a shift in the mix of assets under management from equities or alternatives to fixed income. Such a decline or shift could be caused or influenced by any number of factors, such as underperformance in absolute or relative terms, loss of key advisers or other talent, changes in investing preferences or trends, market downturns or volatility, drops in investor confidence, reputational damage, increased competition, or general economic conditions. Any of these factors also could affect clients of UMBFS, and if this were to cause a decline in assets under administration at UMBFS or an adverse shift in the mix of those assets, the performance of UMBFS could suffer.

To the extent that the Company continues to maintain a sizeable portfolio of available-for-sale investment securities, its income may be adversely affected and its reported equity more volatile. As of December 31, 2018, the Company's securities portfolio totaled approximately $7.8 billion, which represented approximately 33.6 percent of its total assets. Regulatory restrictions and the Company's investment policies generally result in the acquisition of securities with lower yields than loans. For the year-ended December 31, 2018, the weighted average yield of the Company's securities portfolio was 2.4 percent as compared to 4.8 percent for its loan portfolio. Accordingly, to the extent that the Company is unable to effectively deploy its funds to originate or acquire loans or other assets with higher yields than those of its investment securities, the Company's income may be negatively impacted. Additionally, approximately $6.5 billion, or 83.4 percent, of the Company's investment

securities are classified as available for sale and reported at fair value. Unrealized gains or losses on these securities are excluded from earnings and reported in other comprehensive income, which in turn affects the Company's reported equity. As a result, to the extent that the Company continues to maintain a significant portfolio of available-for-sale securities, its reported equity may experience greater volatility.

Cyber incidents and other security breaches at the Company, at the Company's service providers or counterparties, or in the business community or markets may negatively impact the Company's business or performance. In the ordinary course of its business, the Company collects, stores, and transmits sensitive, confidential, or proprietary data and other information, including intellectual property, business information, funds-transfer instructions, and the personally identifiable information of its customers and employees. The secure processing, storage, maintenance, and transmission of this information is critical to the Company's operations and reputation, and if any of this information were mishandled, misused, improperly accessed, lost, or stolen or if the Company's operations were disrupted, the Company could suffer significant financial, business, reputational, regulatory, or other damage. For example, despite security measures, the Company's information technology and infrastructure may be breached through cyber-attacks, computer viruses or malware, pretext calls, electronic phishing, or other means. These risks and uncertainties are rapidly evolving and increasing in complexity, and the Company's failure to effectively mitigate them could negatively impact its business and operations.

Service providers and counterparties also present a source of risk to the Company if their own security measures or other systems or infrastructure were to be breached or otherwise fail. Likewise, a cyber-attack or other security breach affecting the business community, the markets, or parts of them may cycle or cascade through the financial system and adversely affect the Company or its service providers or counterparties. Many of these risks and uncertainties are beyond the Company's control.

Even when an attempted cyber incident or other security breach is successfully avoided or thwarted, the Company may need to expend substantial resources in doing so, may be required to take actions that could adversely affect customer satisfaction or behavior, and may be exposed to reputational damage. If a breach were to occur, moreover, the Company could be exposed to contractual claims, regulatory actions, and litigation by private plaintiffs, and would additionally suffer reputational harm. Despite the Company's efforts to safeguard the integrity of systems and controls and to manage third-party risk, the Company may not be able to anticipate or implement effective measures to prevent all security breaches or all risks to the sensitive, confidential, or proprietary information that it or its service providers or counterparties collect, store, or transmit.

The trading volume in the Company's common stock at times may be low, which could adversely affect liquidity and stock price. Although the Company's common stock is listed for trading on the NASDAQ Global Select Market, the trading volume in the stock may at times be low and, in relative terms, less than that of other financial-services companies. A public trading market that is deep, liquid, and orderly depends on the presence in the marketplace of a large number of willing buyers and sellers and narrow bid-ask spreads. These market features, in turn, depend on a number of factors, such as the individual decisions of investors and general economic and market conditions, over which the Company has no control. During any period of lower trading volume in the Company's common stock, the stock price could be more volatile, and the liquidity of the stock could suffer.

The Company operates in a highly regulated industry, and its business or performance could be adversely affected by the legal, regulatory and supervisory frameworks applicable to it, changes in those frameworks, and other legal and regulatory risks and uncertainties. The Company is subject to expansive legal and regulatory frameworks in the United States—at the federal, State, and local levels—and in the foreign jurisdictions where its business segments operate. In addition, the Company is subject to the direct supervision of government authorities charged with overseeing the taxation of domestic companies and the kinds of financial activities conducted by the Company in its business segments. These legal, regulatory, and supervisory frameworks are often designed to protect public or private

interests that differ from the interests of the Company's shareholders or non-deposit creditors. See "Government Monetary and Fiscal Policies" and "Regulation and Supervision" in Part I, Item 1 of this report beginning on page 4, which is incorporated by reference herein. We believe that government scrutiny of all financial-services companies has increased, fundamental changes have been made to the banking, securities, and other laws that govern financial services (with the Dodd-Frank Act and Basel III being two of the more prominent examples), and a host of related business practices have been reexamined and reshaped. As a result, the Company expects to continue devoting increased time and resources to risk management, compliance, and regulatory change management. Risks also exist that government authorities could judge the Company's business or other practices as unsafe, unsound, or otherwise unadvisable and bring formal or informal corrective or enforcement actions against it, including fines or other penalties and directives to change its products or other services. For

practical or other reasons, the Company may not be able to effectively defend itself against these actions, and they in turn could give rise to litigation by private plaintiffs. Further, if the laws, rules, and regulations materially adversely affect the Company, including any changes that would negatively impact the tax treatment of the Company, the Company's products and services or the Company's shareholders, the Company may be adversely impacted. All of these and other regulatory risks and uncertainties could adversely affect the Company's reputation, business, results of operations, financial condition, or prospects.

Regulatory or supervisory requirements, future growth, operating results, or strategic plans may prompt the Company to raise additional capital, but that capital may not be available at all or on favorable terms and, if raised, may be dilutive. The Company is subject to safety-and-soundness and capital-adequacy standards under applicable law and to the direct supervision of government authorities. See "Regulation and Supervision" in Part I, Item 1 of this report beginning on page 4. If the Company is not or is at risk of not satisfying these standards or applicable supervisory requirements—whether due to inadequate operating results that erode capital, future growth that outpaces the accumulation of capital through earnings, or otherwise—the Company may be required to raise capital, restrict dividends, or limit originations of certain types of commercial and mortgage loans. If the Company is required to limit originations of certain types of commercial and mortgage loans, it would thereby reduce the amount of credit available to borrowers and limit opportunities to earn interest income from the loan portfolio. The Company also may be compelled to raise capital if regulatory or supervisory requirements change. In addition, the Company may elect to raise capital for strategic reasons even when it is not required to do so. The Company's ability to raise capital on favorable terms or at all will depend on general economic and market conditions, which are outside of its control, and on the Company's operating and financial performance. Accordingly, the Company cannot be assured of its ability to raise capital when needed or on favorable terms. An inability to raise capital when needed or on favorable terms could damage the performance and value of its business, prompt regulatory intervention, and harm its reputation, and if the condition were to persist for any appreciable period of time, its viability as a going concern could be threatened. If the Company is able to raise capital and does so by issuing common stock or convertible securities, the ownership interest of our existing stockholders could be diluted, and the market price of our common stock could decline.

The market price of the Company's common stock could be adversely impacted by banking, antitrust, or corporate laws that have or are perceived as having an anti-takeover effect. Banking and antitrust laws, including associated regulatory-approval requirements, impose significant restrictions on the acquisition of direct or indirect control over any bank holding company, including the Company. Acquisition of ten percent or more of any class of voting stock of a bank holding company or depository institution, including shares of our common stock, generally creates a rebuttable presumption that the acquirer "controls" the bank holding company or depository institution. Also, a bank holding company must obtain the prior approval of the Federal Reserve before, among other things, acquiring direct or indirect ownership or control of more than 5 percent of the voting shares of any bank, including our bank.

In addition, a non-negotiated acquisition of control over the Company may be inhibited by provisions of the Company's restated articles of incorporation and bylaws that have been adopted in conformance with applicable corporate law, such as the ability to issue shares of preferred stock and to determine the rights, terms, conditions and privileges of such preferred stock without stockholder approval. If any of these restrictions were to operate or be perceived as operating to hinder or deter a potential acquirer for the Company, the market price of the Company's common stock could suffer.

The Company's business relies on systems, employees, service providers, and counterparties, and failures or errors by any of them or other operational risks could adversely affect the Company. The Company engages in a variety of businesses in diverse markets and relies on systems, employees, service providers, and counterparties to properly oversee, administer, and process a high volume of transactions. This gives rise to meaningful operational risk—including the risk of fraud by employees or outside parties, unauthorized access to its premises or systems, errors in processing, failures of technology, breaches of internal controls or compliance safeguards, inadequate integration of acquisitions,

human error, and breakdowns in business continuity plans. Significant financial, business, reputational, regulatory, or other harm could come to the Company as a result of these or related risks and uncertainties. For example, the Company could be negatively impacted if financial, accounting, data-processing, or other systems were to fail or not fully perform their functions. The Company also could be adversely affected if key personnel or a significant number of employees were to become unavailable due to a pandemic, natural disaster, war, act of terrorism, accident, or other reason. These same risks arise as well in connection with the systems and employees of the service providers and counterparties on whom the Company depends as well as their own third-party service providers and counterparties. See "Quantitative and Qualitative

Disclosures About Market Risk—Operational Risk” in Part II, Item 7A of this report beginning on page 55 for a discussion of how the Company monitors and manages operational risk.

The soundness of other financial institutions could adversely affect us. The soundness of other financial institutions could adversely affect us. Financial services institutions are interrelated because of trading, clearing, counterparty and other relationships. We routinely execute transactions with counterparties in the financial services industry, including brokers and dealers, commercial banks, investment banks, payment processors, and other institutional clients, which may result in payment obligations to us or to our clients due to products we have arranged. Many of these transactions expose us to credit and market risk that may cause our counterparty or client to default. In addition, we are exposed to market risk when the collateral we hold cannot be realized or is liquidated at prices not sufficient to recover the full amount of the secured obligation. Any losses arising from such occurrences could materially and adversely affect our business, results of operations or financial condition.

The Company is heavily reliant on technology, and a failure or delay in effectively implementing technology initiatives or anticipating future technology needs or demands could adversely affect the Company’s business or performance. Like most financial-services companies, the Company significantly depends on technology to deliver its products and other services and to otherwise conduct business. To remain technologically competitive and operationally efficient, the Company invests in system upgrades, new solutions, and other technology initiatives, including for both internally and externally hosted solutions. Many of these initiatives have a significant duration, are tied to critical systems, and require substantial internal and external resources. Although the Company takes steps to mitigate the risks and uncertainties associated with these initiatives, there is no guarantee that they will be implemented on time, within budget, or without negative operational or customer impact. The Company also may not succeed in anticipating its future technology needs, the technology demands of its customers, or the competitive landscape for technology. In addition, the Company relies upon the expertise and support of service providers to help implement, maintain and/or service certain of its core technology solutions. If the Company cannot effectively manage these service providers, the service parties fail to materially perform, or the Company was to falter in any of the other noted areas, its business or performance could be negatively impacted.

Negative publicity outside of the Company’s control, or its failure to successfully manage issues arising from its conduct or in connection with the financial-services industry generally, could damage the Company’s reputation and adversely affect its business or performance. The performance and value of the Company’s business could be negatively impacted by any reputational harm that it may suffer. This harm could arise from negative publicity outside of its control or its failure to adequately address issues arising from its conduct or in connection with the financial-services industry generally. Risks to the Company’s reputation could arise in any number of contexts—for example, cyber incidents and other security breaches, mergers and acquisitions, lending or investment-management practices, actual or potential conflicts of interest, failures to prevent money laundering, corporate governance, and unethical behavior and practices committed by competitors in the financial services industry.

The Company faces intense competition from other financial-services and financial-services technology companies, and competitive pressures could adversely affect the Company’s business or performance. The Company faces intense competition in each of its business segments and in all of its markets and geographic regions, and the Company expects competitive pressures to intensify in the future—especially in light of recent legislative and regulatory initiatives, technological innovations that alter the barriers to entry, current economic and market conditions, and government monetary and fiscal policies. Competition with financial-services technology companies, or technology companies partnering with financial-services companies, may be particularly intense, due to, among other things, differing regulatory environments. See “Competition” in Part I, Item 1 of this report beginning on page 3. Competitive pressures may drive the Company to take actions that the Company might otherwise eschew, such as lowering the

interest rates or fees on loans or raising the interest rates on deposits in order to keep or attract high-quality customers. These pressures also may accelerate actions that the Company might otherwise elect to defer, such as substantial investments in technology or infrastructure. The Company has certain businesses that utilize wholesale models which can lead to customer concentrations for those businesses that, if negatively impacted by competitive pressures, could affect the Company's fee income. Whatever the reason, actions that the Company takes in response to competition may adversely affect its results of operations and financial condition. These consequences could be exacerbated if the Company is not successful in introducing new products and other services, achieving market acceptance of its products and other services, developing and maintaining a strong customer base, or prudently managing expenses.

The Company's risk-management and compliance programs or functions may not be effective in mitigating risk and loss. The Company maintains an enterprise risk-management program that is designed to identify, quantify, monitor, report, and control the risks that it faces. These include interest-rate risk, credit risk, liquidity risk, market risk, operational risk, reputational risk, and compliance risk. The Company also maintains a compliance program to identify, measure, assess, and report on its adherence to applicable law, policies, and procedures. While the Company assesses and improves these programs on an ongoing basis, there can be no assurance that its frameworks or models for risk management, compliance, and related controls will effectively mitigate risk and limit losses in its business. If conditions or circumstances arise that expose flaws or gaps in the Company's risk-management or compliance programs or if its controls break down, the performance and value of the Company's business could be adversely affected. The Company could be negatively impacted as well if, despite adequate programs being in place, its risk-management or compliance personnel are ineffective in executing them and mitigating risk and loss.

Liquidity is essential to the Company and its business or performance could be adversely affected by constraints in, or increased costs for, funding. The Company defines liquidity as the ability to fund increases in assets and meet obligations as they come due, all without incurring unacceptable losses. Banks are especially vulnerable to liquidity risk because of their role in the maturity transformation of demand or short-term deposits into longer-term loans or other extensions of credit. The Company, like other financial-services companies, relies to a significant extent on external sources of funding (such as deposits and borrowings) for the liquidity needed to conduct its business. A number of factors beyond the Company's control, however, could have a detrimental impact on the availability or cost of that funding and thus on its liquidity. These include market disruptions, changes in its credit ratings or the sentiment of its investors, the state of the regulatory environment and monetary and fiscal policies, declines in the value of its investment securities, the loss of substantial deposits or customer relationships, financial or systemic shocks, significant counterparty failures, and reputational damage. Unexpected declines or limits on the dividends declared and paid by the Company's subsidiaries also could adversely affect its liquidity position. While the Company's policies and controls are designed to ensure that it maintains adequate liquidity to conduct its business in the ordinary course even in a stressed environment, there can be no assurance that its liquidity position will never become compromised. In such an event, the Company may be required to sell assets at a loss in order to continue its operations. This could damage the performance and value of its business, prompt regulatory intervention, and harm its reputation, and if the condition were to persist for any appreciable period of time, its viability as a going concern could be threatened. See "Quantitative and Qualitative Disclosures About Market Risk—Liquidity Risk" in Part II, Item 7A of this report beginning on page 54 for a discussion of how the Company monitors and manages liquidity risk.

If the Company's subsidiaries are unable to make dividend payments or distributions to the Company, it may be unable to satisfy its obligations to counterparties or creditors or make dividend payments to its stockholders. The Company is a legal entity separate and distinct from its bank and nonbank subsidiaries and depends on dividend payments and distributions from those subsidiaries to fund its obligations to counterparties and creditors and its dividend payments to stockholders. See "Regulation and Supervision—Requirements Affecting the Relationships among the Company, Its Subsidiaries, and Other Affiliates" in Part I, Item 1 of this report beginning on page 6. Any of the Company's subsidiaries, however, may be unable to make dividend payments or distributions to the Company, including as a result of a deterioration in the subsidiary's performance, investments in the subsidiary's own future growth, or regulatory or supervisory requirements. If any subsidiary were unable to remain viable as a going concern, moreover, the Company's right to participate in a distribution of assets would be subject to the prior claims of the subsidiary's creditors (including, in the case of the Bank, its depositors and the FDIC).

An inability to attract, retain, or motivate qualified employees could adversely affect the Company's business or performance. Skilled employees are the Company's most important resource, and competition for talented people is intense. Even though compensation is among the Company's highest expenses, it may not be able to locate and hire the best people, keep them with the Company, or properly motivate them to perform at a high level. Recent scrutiny of compensation practices, especially in the financial-services industry, has made this only more difficult. In addition,

some parts of the Company's business are particularly dependent on key personnel, including investment management, asset servicing, and commercial lending. If the Company were to lose and find itself unable to replace these personnel or other skilled employees or if the competition for talent drove its compensation costs to unsustainable levels, the Company's business, results of operations, and financial condition could be negatively impacted.

The Company is subject to a variety of litigation and other proceedings, which could adversely affect its business or performance. The Company is involved from time to time in a variety of judicial, alternative-dispute, and other proceedings arising out of its business or operations. The Company establishes reserves for claims when

appropriate under generally accepted accounting principles, but costs often can be incurred in connection with a matter before any reserve has been created. The Company also maintains insurance policies to mitigate the cost of litigation and other proceedings, but these policies have deductibles, limits, and exclusions that may diminish their value or efficacy. Despite the Company's efforts to appropriately reserve for claims and insure its business and operations, the actual costs associated with resolving a claim may be substantially higher than amounts reserved or covered. Substantial legal claims, even if not meritorious, could have a detrimental impact on the Company's business, results of operations, and financial condition and could cause reputational harm.

Changes in accounting standards could impact the Company's financial statements and reported earnings. Accounting standard-setting bodies, such as the Financial Accounting Standards Board, periodically change the financial accounting and reporting standards that affect the preparation of the Company's Consolidated Financial Statements. These changes are beyond the Company's control and could have a meaningful impact on its Consolidated Financial Statements.

The Company's selection of accounting methods, assumptions, and estimates could impact its financial statements and reported earnings. To comply with generally accepted accounting principles, management must sometimes exercise judgment in selecting, determining, and applying accounting methods, assumptions, and estimates. This can arise, for example, in the determination of the allowance for loan losses, the calculation of deferred tax assets, the evaluation of goodwill for potential impairments, or the determination of the fair value of assets or liabilities. Furthermore, accounting methods, assumptions and estimates are part of acquisition purchase accounting and the calculation of the fair value of assets and liabilities that have been purchased, including credit-impaired loans. The judgments required of management can involve difficult, subjective, or complex matters with a high degree of uncertainty, and several different judgments could be reasonable under the circumstances and yet result in significantly different results being reported. See "Critical Accounting Policies and Estimates" in Part II, Item 7 of this report beginning on page 46. If management's judgments are later determined to have been inaccurate, the Company may experience unexpected losses that could be substantial.

The Company's ability to successfully make opportunistic mergers and acquisitions is subject to significant risks, including the risk that government authorities will not provide the requisite approvals, the risk that integrating acquisitions may be more difficult, costly, or time consuming than expected, and the risk that the value of acquisitions may be less than anticipated. The Company may make opportunistic acquisitions of other financial-services companies or businesses from time to time. These acquisitions may be subject to regulatory approval, and there can be no assurance that the Company will be able to obtain that approval in a timely manner or at all. Even when the Company is able to obtain regulatory approval, the failure of other closing conditions to be satisfied or waived could delay the completion of an acquisition for a significant period of time or prevent it from occurring altogether. Any failure or delay in closing an acquisition could adversely affect the Company's reputation, business, results of operations, financial condition, or prospects.

Additionally, acquisitions involve numerous risks and uncertainties, including lower-than-expected performance or higher-than-expected costs, difficulties related to integration, diversion of management's attention from other business activities, changes in relationships with customers or counterparties, and the potential loss of key employees. An acquisition also could be dilutive to the Company's current stockholders if preferred stock, common stock, or securities convertible into preferred stock or common stock were issued to fully or partially pay or fund the purchase price. The Company, moreover, may not be successful in identifying acquisition candidates, integrating acquired companies or businesses, or realizing the expected value from acquisitions. There is significant competition for valuable acquisition targets, and the Company may not be able to acquire other companies or businesses on attractive terms or at all. There can be no assurance that the Company will pursue future acquisitions, and the Company's ability to grow and successfully compete in its markets and regions may be impaired if it chooses not to pursue, or is unable to successfully complete, acquisitions.

We face risks in connection with our strategic undertakings and new business initiatives. We are engaged, and may in the future engage, in strategic activities including acquisitions, joint ventures, partnerships, investments or other business growth initiatives or undertakings. There can be no assurance that we will successfully identify appropriate opportunities, that we will be able to negotiate or finance such activities or that such activities, if undertaken, will be successful. We are focused on our long-term growth and have undertaken various strategic activities and business initiatives, some of which may involve activities that are new to us. For example, in the future we may engage in or focus on new lines of business, financial technologies, and other activities that are outside of our current product offerings. These new initiatives may subject us to, among other risks, increased business, reputational and operational risk, as well as more complex legal, regulatory and compliance costs and

risks. Our ability to execute strategic activities and new business initiatives successfully will depend on a variety of factors. These factors likely will vary based on the nature of the activity but may include our success in integrating an acquired company or a new internally-developed growth initiative into our business, operations, services, products, personnel and systems, operating effectively with any partner with whom we elect to do business, meeting applicable regulatory requirements and obtaining applicable regulatory licenses or other approvals, hiring or retaining key employees, achieving anticipated synergies, meeting management's expectations, actually realizing the anticipated benefits of the activities, and overall general market conditions. Our ability to address these matters successfully cannot be assured. In addition, our strategic efforts may divert resources or management's attention from ongoing business operations and may subject us to additional regulatory scrutiny and potential liability. If we do not successfully execute a strategic undertaking, it could adversely affect our business, financial condition, results of operations, reputation or growth prospects.

ITEM 1B. UNRESOLVED STAFF COMMENTS

There are no unresolved comments from the staff of the SEC required to be disclosed herein as of the date of this report.

ITEM 2. PROPERTIES

The Company's headquarters building is located at 1010 Grand Boulevard in downtown Kansas City, Missouri. The building opened in July 1986 and all 250,000 square feet are occupied by departments and customer service functions of the Bank, as well as offices of the Company.

Other main facilities of the Bank in downtown Kansas City, Missouri are located at 928 Grand Boulevard (185,000 square feet); 906 Grand Boulevard (140,000 square feet); and 1008 Oak Street (180,000 square feet). Both the 928 Grand and 906 Grand buildings house administrative support functions. Within the 906 Grand building, approximately 8,000 square feet of space is leased to two small tenants. The 928 Grand building is connected to the 1010 Grand building by an enclosed elevated pedestrian walkway. The 1008 Oak building, which opened during the second quarter of 1999, houses the Company’s operations and data processing functions.

The Bank leases 52,000 square feet in the Hertz Building located at 2 South Broadway in the heart of the commercial sector of downtown St. Louis, Missouri. This location has a full-service banking center and is home to some operational and administrative support functions.

The Bank also leases 43,700 square feet on the first, second, third, and fifth floors of the 1670 Broadway building located in the financial district of downtown Denver, Colorado. The location has a full-service banking center and is home to additional operational and administrative support functions.

As of December 31, 2018, the Bank operated a total of 92 banking centers.

UMBFS leases approximately 95,000 square feet at 235 West Galena Street in Milwaukee, Wisconsin, for its fund services operations headquarters. Additionally, UMBFS leases 37,300 square feet at 2225 Washington Boulevard in Ogden, Utah, and 6,300 square feet in 223 Wilmington West Chester Pike in Chadds Ford, Pennsylvania.

Additional information with respect to properties, premises and equipment is presented in Note 1, “Summary of Significant Accounting Policies,” and Note 8, “Premises and Equipment,” in the Notes to the Consolidated Financial Statements in Item 8, pages 63 and 81 of this report, and is hereby incorporated by reference herein.

ITEM 3. LEGAL PROCEEDINGS

In the normal course of business, the Company and its subsidiaries are named defendants in various legal proceedings. In the opinion of management, after consultation with legal counsel, none of these proceedings are expected to have a material effect on the financial position, results of operations, or cash flows of the Company.

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

The Company's common stock is traded on the NASDAQ Global Select Stock Market under the symbol "UMBF." As of February 22, 2019, the Company had 2,349 shareholders of record. Information regarding the Company’s common stock for each quarterly period within the two most recent fiscal years is set forth in the table below.

Per Share	Three Months Ended			
	March	June	Sept	
2018	31	30	30	Dec 31
Dividend	$0.290	$0.290	$0.290	$0.300
Book value	43.31	43.96	44.20	45.37
Market price:				
High	78.27	82.14	80.39	73.14
Low	70.71	70.06	70.16	57.00
Close	72.39	76.23	70.90	60.97

Per Share	Three Months Ended			
	March	June	Sept	
2017	31	30	30	Dec 31
Dividend	$0.255	$0.255	$0.255	$0.275
Book value	40.34	41.42	42.15	43.72
Market price:				
High	81.55	78.67	76.98	77.72
Low	70.69	66.51	62.27	68.76
Close	75.31	74.86	74.49	71.92

Information concerning restrictions on the ability of the Company to pay dividends and the Company's subsidiaries to transfer funds to the Company is presented in Item 1, page 6 and Note 10, “Regulatory Requirements,” in the Notes to the Consolidated Financial Statements provided in Item 8, pages 83 through 84 of this report. Information concerning securities the Company issued under its equity compensation plans is contained in Item 12, pages 113 through 114 and in Note 11, “Employee Benefits,” in the Notes to the Consolidated Financial Statements provided in Item 8, pages 85 through 89 of this report.

Purchases of Equity Securities by the Issuer and Affiliated Purchasers

The following table provides information about common stock repurchase activity by the Company during the quarter ended December 31, 2018:

ISSUER PURCHASES OF EQUITY SECURITIES

Period	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Maximum Number of Shares that May Yet Be Purchased Under the Plans or Programs
October 1 - October 31, 2018	701,865	$ 60.58	701,865	1,023,572
November 1 - November 31, 2018	928	64.97	928	1,022,644
December 1 - December 31, 2018	78,917	59.58	78,917	943,727
Total	781,710	$ 60.49	781,710	

On April 25, 2017, the Company announced a plan to repurchase up to two million shares of common stock, which terminated on April 24, 2018. On April 24, 2018, the Company announced a plan to repurchase up to two million shares of common stock, which will terminate on April 23, 2019. On October 23, 2018 the Company entered into an agreement with Bank of America Merrill Lynch (BAML) to repurchase an aggregate of $50.0 million of the Company's common stock through an accelerated share repurchase agreement (the ASR). The

Company repurchased a total of 780,321 shares of its common stock, completing the ASR program in December 2018. The Company has not made any repurchases other than through this plan. Other than purchases pursuant to the ASR, all open market share purchases under the share repurchase plans are intended to be within the scope of Rule 10b-18 promulgated under the Exchange Act.

ITEM 6. SELECTED FINANCIAL DATA

For a discussion of factors that may materially affect the comparability of the information below, please see Item 7, Management's Discussion and Analysis of Financial Condition and Results of Operations, pages 21 through 48, of this report.

FIVE-YEAR FINANCIAL SUMMARY

(in thousands except per share data)

As of and for the years ended December 31,

	2018	2017	2016	2015	2014
EARNINGS					
Interest income	$731,961	$616,912	$523,031	$430,681	$363,871
Interest expense	121,515	57,999	27,708	18,614	13,816
Net interest income	610,446	558,913	495,323	412,067	350,055
Provision for loan losses	70,750	41,000	32,500	15,500	17,000
Noninterest income	401,698	423,562	402,511	370,659	368,235
Noninterest expense	717,800	705,129	666,745	638,938	582,472
Net income from continuing operations	196,260	182,976	153,634	96,558	91,145
AVERAGE BALANCES					
Assets	$20,999,877	$20,396,428	$19,592,685	$17,786,442	$15,998,893
Loans and loans held for sale	11,606,544	10,843,642	9,992,874	8,425,107	6,975,338
Total investment securities	7,413,776	7,632,965	7,665,012	7,330,246	7,053,837
Interest-bearing due from banks	419,768	351,293	410,163	664,752	843,134
Deposits	16,984,547	15,938,669	15,338,741	14,078,290	12,691,273
Long-term debt	79,189	76,299	81,905	58,571	6,059
Shareholders' equity	2,194,788	2,080,847	1,983,749	1,805,856	1,599,765
YEAR-END BALANCES					
Assets	$23,351,119	$21,771,583	$20,682,532	$19,094,245	$17,500,960
Loans and loans held for sale	12,181,342	11,281,973	10,545,662	9,431,350	7,466,418
Total investment securities	7,848,149	7,639,543	7,690,108	7,568,870	7,285,667
Interest-bearing due from banks	1,047,830	1,351,760	715,823	522,877	1,539,386
Deposits	19,281,260	18,023,000	16,570,614	15,092,752	13,616,859
Long-term debt	82,671	79,281	76,772	86,070	8,810
Shareholders' equity	2,228,470	2,181,531	1,962,384	1,893,694	1,643,758
PER SHARE DATA					
Earnings from continuing operations - basic	$3.98	$3.72	$3.15	$2.05	$2.03
Earnings from continuing operations - diluted	3.94	3.67	3.12	2.03	2.01
Cash dividends	1.17	1.04	0.99	0.95	0.91

Dividend payout ratio	29.40	%	27.96	%	31.43	%	46.34	%	44.83	%
Book value	$45.37		$43.72		$39.51		$38.34		$36.10	
Market price										
High	82.14		81.55		81.11		58.84		68.27	
Low	57.00		62.27		39.55		45.14		51.87	
Close	60.97		71.92		77.12		46.55		56.89	
Return on average assets	0.93	%	0.90	%	0.78	%	0.54	%	0.57	%
Return on average equity	8.94		8.79		7.74		5.35		5.70	
Average equity to average assets	10.45		10.20		10.12		10.15		10.00	
Total risk-based capital ratio	13.95		14.04		12.87		12.80		14.04	

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

Management’s Discussion and Analysis

This Management’s Discussion and Analysis highlights the material changes in the results of operations and changes in financial condition for each of the three years in the period ended December 31, 2018. It should be read in conjunction with the accompanying Consolidated Financial Statements, Notes to Consolidated Financial Statements, and other financial statistics appearing elsewhere in this Annual Report on Form 10-K. Results of operations for the periods included in this review are not necessarily indicative of results to be attained during any future period.

CAUTIONARY NOTICE ABOUT FORWARD-LOOKING STATEMENTS

From time to time the Company has made, and in the future will make, forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. These statements can be identified by the fact that they do not relate strictly to historical or current facts. Forward-looking statements often use words such as “believe,” “expect,” “anticipate,” “intend,” “estimate,” “project,” “outlook,” “forecast,” “target,” “trend,” “plan,” “goal,” or other words c meaning or future-tense or conditional verbs such as “may,” “will,” “should,” “would,” or “could.” Forward-looking statement convey the Company’s expectations, intentions, or forecasts about future events, circumstances, results, or aspirations.

This report, including any information incorporated by reference in this report, contains forward-looking statements. The Company also may make forward-looking statements in other documents that are filed or furnished with the SEC. In addition, the Company may make forward-looking statements orally or in writing to investors, analysts, members of the media, or others.

All forward-looking statements, by their nature, are subject to assumptions, risks, and uncertainties, which may change over time and many of which are beyond the Company’s control. You should not rely on any forward-looking statement as a prediction or guarantee about the future. Actual future objectives, strategies, plans, prospects, performance, conditions, or results may differ materially from those set forth in any forward-looking statement. While no list of assumptions, risks, or uncertainties could be complete, some of the factors that may cause actual results or other future events, circumstances, or aspirations to differ from those in forward-looking statements include:

- local, regional, national, or international business, economic, or political conditions or events;
- changes in laws or the regulatory environment, including as a result of recent financial-services and tax legislation or regulation;
- changes in monetary, fiscal, or trade laws or policies, including as a result of actions by central banks or supranational authorities;
- changes in accounting standards or policies;
- shifts in investor sentiment or behavior in the securities, capital, or other financial markets, including changes in market liquidity or volatility or changes in interest or currency rates;
- changes in spending, borrowing, or saving by businesses or households;
- the Company’s ability to effectively manage capital or liquidity or to effectively attract or deploy deposits;
- changes in any credit rating assigned to the Company or its affiliates;
- adverse publicity or other reputational harm to the Company;
- changes in the Company’s corporate strategies, the composition of its assets, or the way in which it funds those assets;
- the Company’s ability to develop, maintain, or market products or services or to absorb unanticipated costs or liabilities associated with those products or services;

- the Company's ability to innovate to anticipate the needs of current or future customers, to successfully compete in its chosen business lines, to increase or hold market share in changing competitive environments, or to deal with pricing or other competitive pressures;
- changes in the credit, liquidity, or other condition of the Company's customers, counterparties, or competitors;
- the Company's ability to effectively deal with economic, business, or market slowdowns or disruptions;
- judicial, regulatory, or administrative investigations, proceedings, disputes, or rulings that create uncertainty for, or are adverse to, the Company or the financial-services industry;
- the Company's ability to address changing or stricter regulatory or other governmental supervision or requirements;
- the Company's ability to maintain secure and functional financial, accounting, technology, data processing, or other operating systems or facilities, including its capacity to withstand cyber-attacks;
- the adequacy of the Company's corporate governance, risk-management framework, compliance programs, or internal controls, including its ability to control lapses or deficiencies in financial reporting or to effectively mitigate or manage operational risk;
- the efficacy of the Company's methods or models in assessing business strategies or opportunities or in valuing, measuring, monitoring, or managing positions or risk;
- the Company's ability to keep pace with changes in technology that affect the Company or its customers, counterparties, or competitors;
- mergers, acquisitions, or dispositions, including the Company's ability to integrate acquisitions and divest assets;
- the adequacy of the Company's succession planning for key executives or other personnel;
- the Company's ability to grow revenue, control expenses, or attract or retain qualified employees;
- natural or man-made disasters, calamities, or conflicts, including terrorist events; or
- other assumptions, risks, or uncertainties described in the Risk Factors (Item 1A), Management's Discussion and Analysis of Financial Condition and Results of Operations (Item 7), or the Notes to the Consolidated Financial Statements (Item 8) in this Annual Report on Form 10-K or described in any of the Company's annual, quarterly or current reports.

Any forward-looking statement made by the Company or on its behalf speaks only as of the date that it was made. The Company does not undertake to update any forward-looking statement to reflect the impact of events, circumstances, or results that arise after the date that the statement was made, except as required by applicable securities laws. You, however, should consult further disclosures (including disclosures of a forward-looking nature) that the Company may make in any subsequent Annual Report on Form 10-K, Quarterly Report on Form 10-Q, or Current Report on Form 8-K.

Results of Operations

Overview

The Company focuses on the following four core strategic objectives. Management believes these strategic objectives will guide its efforts to achieve its vision, to deliver the unparalleled customer experience, all while seeking to improve net income and strengthen the balance sheet while undertaking prudent risk management.

The first strategic objective is to continuously improve operating efficiencies. The Company has focused on identifying efficiencies that simplify our organizational and reporting structures, streamline back office functions and take advantage of synergies and newer technologies among various platforms and distribution networks. The Company has identified and expects to continue identifying ongoing efficiencies through the normal course of business that, when combined with increased revenue, will contribute to improved operating leverage. For 2018, total revenue increased 3.0 percent, while noninterest expense increased 1.8 percent, as compared to the previous year. As part of this initiative, the Company continues to invest in technological advances that it believes will help management drive operating leverage in the future through improved data analysis and automation. The Company

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also continues to evaluate core systems and will invest in enhancements that it believes will yield operating efficiencies.

The second strategic objective is to increase net interest income through profitable loan and deposit growth and the optimization of the balance sheet. For 2018, we made progress on this strategy, as illustrated by an increase in net interest income of $51.5 million, or 9.2 percent, as compared to the previous year. The Company has shown increased net interest income through the effects of increased interest rates and volumes, and the mix of average earning assets and a low cost of funds in its Consolidated Balance Sheets. Average loan balances increased $762.9 million, or 7.0 percent, from December 31, 2017. The funding for these assets was driven primarily by a 5.1 percent increase in average interest-bearing liabilities. Net interest margin, on a tax-equivalent basis, increased six basis points compared to the same period in 2017.

The third strategic objective is to grow the Company's revenue from noninterest sources. The Company has continued to emphasize its diverse operations throughout all economic cycles. This strategy has provided revenue diversity, helping to reduce the impact of sustained low interest rates, and positioned the Company to benefit in periods of growth. Noninterest income decreased $21.9 million, or 5.2 percent, to $401.7 million for the year ended December 31, 2018, compared to the same period in 2017. This decline was driven by a combination of lower market-driven revenues in bond trading income, customer and contract re-pricings in our institutional and asset servicing businesses, as well as an increase in card-based rewards and rebates expense recorded as contra-revenues in bankcard fees. This change is discussed in greater detail below under Noninterest income. The Company continues to emphasize its asset management, brokerage, bankcard services, healthcare services, institutional banking, and treasury management businesses. At December 31, 2018, noninterest income represented 39.7 percent of total revenues, as compared to 43.1 percent at December 31, 2017.

The fourth strategic objective is effective capital management. The Company places a significant emphasis on maintaining a strong capital position, which management believes promotes investor confidence, provides access to funding sources under favorable terms, and enhances the Company's ability to capitalize on business growth and acquisition opportunities. The Company continues to maximize shareholder value through a mix of reinvesting in organic growth, evaluating acquisition opportunities that complement the Company's strategies, increasing dividends over time, and appropriately utilizing a share repurchase program. At December 31, 2018, the Company had a total risk-based capital ratio of 13.95 percent and $2.2 billion in total shareholders' equity, an increase of $46.9 million, or 2.2 percent, compared to total shareholders' equity at December 31, 2017. The Company repurchased 1.1 million shares of common stock at an average price of $64.84 per share during 2018 and paid $58.3 million in dividends, which represents a 12.3 percent increase compared to dividends paid during 2017.

Earnings Summary

The Company recorded consolidated income from continuing operations of $196.3 million for the year-ended December 31, 2018. This represents a 7.3 percent increase over 2017. Income from continuing operations for 2017 was $183.0 million, or an increase of 19.1 percent compared to 2016. Basic earnings per share from continuing operations for the year ended December 31, 2018, were $3.98 per share compared to $3.72 per share in 2017, an increase of 7.0 percent. Basic earnings per share from continuing operations were $3.15 per share in 2016, or an increase of 18.1 percent from 2016 to 2017. Fully diluted earnings per share from continuing operations increased 7.4 percent from 2017 to 2018, and increased 17.6 percent from 2016 to 2017.

The Company's net interest income increased to $610.4 million in 2018 compared to $558.9 million in 2017 and $495.3 million in 2016. In total, a favorable volume variance coupled with a favorable rate variance, resulted in a $51.5 million increase in net interest income in 2018, compared to 2017. See Table 2 on page 27. The favorable volume variance on earning assets was predominantly driven by the increase in average loan balances of $762.9

million, or 7.0 percent, for 2018 compared to the same period in 2017. Net interest margin, on a tax-equivalent basis, increased to 3.21 percent for 2018, compared to 3.15 percent for the same period in 2017. The Company has seen an increase in the benefit from interest-free funds compared to 2017. The impact of this benefit increased 15 basis points compared to 2017 and is illustrated on Table 3 on page 28. The magnitude and duration of this impact will be largely dependent upon the FRB's policy decisions and market movements. See Table 20 in Item 7A on page 50 for an illustration of the impact of an interest rate increase or decrease on net interest income as of December 31, 2018.

The provision for loan loss totaled $70.8 million for the year-ended December 31, 2018, which is an increase of $29.8 million, or 72.6 percent, compared to the same period in 2017. This increase was driven primarily by

higher provision to cover the loss related to a single factoring credit relationship. See further discussion in "Provision and Allowance for Loan Losses" on page 28.

The Company had a decrease of $21.9 million, or 5.2 percent, in noninterest income in 2018, as compared to 2017, and an increase of $21.1 million, or 5.2 percent, in 2017, compared to 2016. The decrease in 2018 is primarily attributable to trading and investment banking, trust and securities processing, bankcard income, gains on sales of available-for-sale securities, and service charges on deposit accounts. The change in noninterest income in 2018 from 2017, and 2017 from 2016 is illustrated on Table 6 on page 31.

Noninterest expense increased in 2018 by $12.7 million, or 1.8 percent, compared to 2017 and increased by $38.4 million, or 5.8 percent, in 2017 compared to 2016. The increase in 2018 is primarily driven by increases in legal and consulting expense, salary and employee benefit expense, and processing fees, offset by a decrease in other expense. The increase in noninterest expense in 2018 from 2017, and 2017 from 2016 is illustrated on Table 7 on page 32.

Net Interest Income

Net interest income is a significant source of the Company's earnings and represents the amount by which interest income on earning assets exceeds the interest expense paid on liabilities. The volume of interest earning assets and the related funding sources, the overall mix of these assets and liabilities, and the interest rates paid on each affect net interest income. Table 2 summarizes the change in net interest income resulting from changes in volume and rates for 2018, 2017 and 2016.

Net interest margin, presented in Table 1 on page 25, is calculated as net interest income on a fully tax equivalent basis (FTE) as a percentage of average earning assets. Net interest income is presented on a tax-equivalent basis to adjust for the tax-exempt status of earnings from certain loans and investments, which are primarily obligations of state and local governments. A critical component of net interest income and related net interest margin is the percentage of earning assets funded by interest-free sources. Table 3 analyzes net interest margin for the three years ended December 31, 2018, 2017 and 2016. Net interest income, average balance sheet amounts and the corresponding yields earned and rates paid for the years 2016 through 2018 are presented in Table 1 below.

The following table presents, for the periods indicated, the average earning assets and resulting yields, as well as the average interest-bearing liabilities and resulting yields, expressed in both dollars and rates.

Table 1

THREE YEAR AVERAGE BALANCE SHEETS/YIELDS AND RATES (tax-equivalent basis)

(in millions)

	2018			2017		
	Average Balance	Interest Income/ Expense (1)	Rate Earned/ Paid (1)	Average Balance	Interest Income/ Expense (1)	Rate Earned/ Paid (1)
ASSETS						
Loans and loans held for sale (FTE) (2) (3)	$11,606.5	$ 559.4	4.82 %	$10,843.6	$ 461.3	4.25 %
Securities:						
Taxable	3,858.8	83.3	2.16	3,918.0	73.1	1.87
Tax-exempt (FTE)	3,505.6	94.1	2.68	3,658.0	112.5	3.08
Total securities	7,364.4	177.4	2.41	7,576.0	185.6	2.45
Federal funds sold and resell agreements	178.8	4.8	2.69	190.0	3.7	1.95
Interest-bearing due from banks	419.8	7.9	1.88	351.3	3.9	1.10
Other earning assets (FTE)	49.3	2.5	4.97	57.0	1.9	3.28
Total earning assets (FTE)	19,618.8	752.0	3.83	19,017.9	656.4	3.45
Allowance for loan losses	(100.9)			(97.2)		
Cash and due from banks	396.1			379.6		
Other assets	1,085.8			1,096.1		
Total assets	$20,999.8			$20,396.4		
LIABILITIES AND SHAREHOLDERS' EQUITY						
Interest-bearing demand and savings deposits	$10,113.3	$ 80.9	0.80 %	$8,819.4	$ 27.6	0.31 %
Time deposits under $250,000	355.3	3.8	1.07	373.6	2.8	0.75
Time deposits of $250,000 or more	687.4	7.4	1.08	809.5	6.0	0.74
Total interest bearing deposits	11,156.0	92.1	0.83	10,002.5	36.4	0.36
Long-term debt	79.2	4.7	5.93	76.3	3.7	4.85
Federal funds purchased and repurchase agreements	1,559.1	24.7	1.59	2,095.1	17.9	0.85
Total interest bearing liabilities	12,794.3	121.5	0.95	12,173.9	58.0	0.48
Noninterest bearing demand deposits	5,828.5			5,936.2		
Other	182.2			205.5		
Total	18,805.0			18,315.6		
Total shareholders' equity	2,194.8			2,080.8		
Total liabilities and shareholders' equity	$20,999.8			$20,396.4		
Net interest income (FTE)		$ 630.5			$ 598.4	

Net interest spread (FTE)	2.88	%	2.97	%
Net interest margin (FTE)	3.21	%	3.15	%

(1) Interest income and yields are stated on a fully tax-equivalent (FTE) basis, using a marginal tax rate of 21% for 2018, while a rate of 35% was used for 2017 and 2016. The tax-equivalent interest income and yields give effect to tax-exempt interest income net of the disallowance of interest expense, for federal income tax purposes related to certain tax-free assets. Rates earned/paid may not compute to the rates shown due to presentation in millions. The tax-equivalent interest income totaled $20.0 million, $39.5 million, and $31.0 million in 2018, 2017, and 2016, respectively.

(2) Loan fees are included in interest income. Such fees totaled $17.0 million, $15.4 million, and $13.3 million in 2018, 2017, and 2016, respectively.

(3) Loans on non-accrual are included in the computation of average balances. Interest income on these loans is also included in loan income.

THREE YEAR AVERAGE BALANCE SHEETS/YIELDS AND RATES (tax-equivalent basis)

(in millions)

	2016			
	Average Balance	Interest Income/ Expense [1]	Rate Earned/ Paid [1]	
ASSETS				
Loans and loans held for sale (FTE) [2] [3]	$ 9,992.9	$ 386.3	3.87	%
Securities:				
Taxable	4,545.0	73.6	1.62	
Tax-exempt (FTE)	3,077.6	88.3	2.87	
Total securities	7,622.6	161.9	2.12	
Federal funds sold and resell agreements	188.5	2.7	1.44	
Interest-bearing due from banks	410.2	2.3	0.57	
Other earning assets (FTE)	42.4	0.8	1.85	
Total earning assets (FTE)	18,256.6	554.0	3.03	
Allowance for loan losses	(85.2)			
Cash and due from banks	394.7			
Other assets	1,026.5			
Total assets	$ 19,592.6			
LIABILITIES AND SHAREHOLDERS' EQUITY				
Interest-bearing demand and savings deposits	$ 8,267.6	$ 11.4	0.14	%
Time deposits under $250,000	601.4	3.3	0.55	
Time deposits of $250,000 or more	563.7	3.2	0.57	
Total interest bearing deposits	9,432.7	17.9	0.19	
Short-term debt	3.8	—	—	
Long-term debt	81.9	3.2	3.91	
Federal funds purchased and repurchase agreements	2,005.6	6.6	0.33	
Total interest bearing liabilities	11,524.0	27.7	0.24	
Noninterest bearing demand deposits	5,906.0			
Other	178.9			
Total	17,608.9			
Total shareholders' equity	1,983.7			
Total liabilities and shareholders' equity	$ 19,592.6			
Net interest income (FTE)		$ 526.3		
Net interest spread (FTE)			2.79	%
Net interest margin (FTE)			2.88	%

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Table 2

RATE-VOLUME ANALYSIS (in thousands)

This analysis attributes changes in net interest income either to changes in average balances or to changes in average interest rates for earning assets and interest-bearing liabilities. The change in net interest income that is due to both volume and interest rate has been allocated to volume and interest rate in proportion to the relationship of the absolute dollar amount of the change in each. All interest rates are presented on a tax-equivalent basis and give effect to tax-exempt interest income net of the disallowance of interest expense for federal income tax purposes, related to certain tax-free assets. The loan average balances and rates include nonaccrual loans.

Average Volume		Average Rate			Increase (Decrease)		
2018	2017	2018	2017	2018 vs. 2017	Volume	Rate	Total
				Change in interest earned on:			
$11,606,544	$10,843,642	4.82%	4.25%	Loans	$33,952	$64,098	$98,050
				Securities:			
3,858,829	3,918,001	2.16	1.87	Taxable	(1,119)	11,327	10,208
3,505,602	3,657,951	2.68	3.08	Tax-exempt	245	747	992
178,801	190,074	2.69	1.95	Federal funds and resell agreements	(230)	1,338	1,108
419,768	351,293	1.88	1.10	Interest-bearing due from banks	870	3,169	4,039
49,345	57,013	4.97	3.28	Trading securities	(264)	916	652
19,618,889	19,017,974	3.83	3.45	Total	33,454	81,595	115,049
				Change in interest incurred on:			
11,156,002	10,002,497	0.83	0.36	Interest-bearing deposits	4,635	51,112	55,747
1,559,149	2,095,111	1.59	0.85	Federal funds and repurchase agreements	(5,483)	12,314	6,831
79,191	76,301	5.93	4.90	Notes payable	147	791	938
$12,794,342	$12,173,909	0.95%	0.48%	Total	(701)	64,217	63,516
				Net interest income	$34,155	$17,378	$51,533

Average Volume		Average Rate			Increase (Decrease)		
2017	2016	2017	2016	2017 vs. 2016	Volume	Rate	Total
				Change in interest earned on:			
$10,843,642	$9,992,874	4.25%	3.87%	Loans	$34,405	$40,622	$75,027
				Securities:			
3,918,001	4,545,013	1.87	1.62	Taxable	(10,884)	10,449	(435)
3,657,951	3,077,562	3.08	2.87	Tax-exempt	11,542	4,361	15,903
190,074	188,572	1.95	1.44	Federal funds and resell agreements	22	970	992
351,293	410,163	1.10	0.57	Interest-bearing due from banks	(378)	1,908	1,530
57,013	42,437	3.28	1.85	Trading securities	265	599	864
19,017,974	18,256,621	3.45	3.03	Total	34,972	58,909	93,881
				Change in interest incurred on:			
10,002,497	9,432,720	0.36	0.19	Interest-bearing deposits	1,144	17,274	18,418
2,095,111	2,005,631	0.85	0.33	Federal funds and repurchase agreements	304	11,078	11,382
76,301	85,658	4.90	3.79	Notes payable	(383)	874	491

$12,173,909	$11,524,009	0.48%	0.24%	Total	1,065	29,226	30,291
				Net interest income	$33,907	$29,683	$63,590

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Table 3

ANALYSIS OF NET INTEREST MARGIN (in thousands)

	2018		2017		2016	
Average earning assets	$19,618,889		$19,017,974		$18,256,621	
Interest-bearing liabilities	12,794,342		12,173,909		11,524,009	
Interest-free funds	$6,824,547		$6,844,065		$6,732,612	
Free funds ratio (interest free funds to average earning assets)	34.79	%	35.99	%	36.88	%
Tax-equivalent yield on earning assets	3.83	%	3.45	%	3.03	%
Cost of interest-bearing liabilities	0.95		0.48		0.24	
Net interest spread	2.88	%	2.97	%	2.79	%
Benefit of interest-free funds	0.33		0.18		0.09	
Net interest margin	3.21	%	3.15	%	2.88	%

The Company experienced an increase in net interest income of $51.5 million, or 9.2 percent, for the year-ended December 31, 2018, compared to 2017. This follows an increase of $63.6 million, or 12.8 percent, for the year-ended December 31, 2017, compared to 2016. Average earning assets for the year ended December 31, 2018 increased by $600.9 million, or 3.2 percent, compared to the same period in 2017. Net interest margin, on a tax-equivalent basis, increased to 3.21 percent for 2018 compared to 3.15 percent in 2017.

The Company funds a significant portion of its balance sheet with noninterest-bearing demand deposits. Noninterest-bearing demand deposits represented 34.6 percent, 37.9 percent and 40.2 percent of total outstanding deposits at December 31, 2018, 2017 and 2016, respectively. As illustrated in Table 3, the impact from these interest-free funds was 33 basis points in 2018, as compared to 18 basis points in 2017 and nine basis points in 2016.

The Company has experienced an increase in net interest income during 2018 due to a volume variance of $34.2 million and a rate variance of $17.4 million. The average rate on earning assets during 2018 has increased by 38 basis points, while the average rate on interest-bearing liabilities increased by 47 basis points, resulting in a nine basis point decrease in spread. The volume of loans has increased from an average of $10.8 billion in 2017 to an average of $11.6 billion in 2018. Loan-related earning assets tend to generate a higher spread than those earned in the Company's investment portfolio. By design, the Company's investment portfolio is moderate in duration and liquid in its composition of assets.

During 2019, approximately $1.1 billion of available for sale securities are expected to have principal repayments. This includes approximately $272 million which will have principal repayments during the first quarter of 2018. The available for sale investment portfolio had an average life of 56.8 months, 51.7 months, and 54.3 months as of December 31, 2018, 2017, and 2016, respectively.

Provision and Allowance for Loan Losses

The allowance for loan losses (ALL) represents management's judgment of the losses inherent in the Company's loan portfolio as of the balance sheet date. An analysis is performed quarterly to determine the appropriate balance of the ALL. The analysis reflects loan quality trends, including the levels of and trends related to non-accrual loans, past due loans, potential problem loans, criticized loans and net charge-offs or recoveries, among other factors. After the

balance sheet analysis is performed for the ALL, the provision for loan losses is computed as the amount required to adjust the ALL to the appropriate level.

Table 4 presents the components of the allowance by loan portfolio segment. The Company manages the ALL against the risk in the entire loan portfolio and therefore, the allocation of the ALL to a particular loan segment may change in the future. Management of the Company believes the present ALL is adequate considering the Company's loss experience, delinquency trends and current economic conditions. Future economic conditions and borrowers' ability to meet their obligations, however, are uncertainties which could affect the Company's ALL and/or need to change its current level of provision. For more information on loan portfolio segments and ALL methodology refer to Note 3, "Loans and Allowance for Loan Losses," in the Notes to the Consolidated Financial Statements.

Table 4

ALLOCATION OF ALLOWANCE FOR LOAN LOSSES (in thousands)

This table presents an allocation of the allowance for loan losses by loan portfolio segment, which represents the inherent probable loss derived by both quantitative and qualitative methods. The amounts presented are not necessarily indicative of actual future charge-offs in any particular category and are subject to change.

	December 31,				
Loan Category	2018	2017	2016	2015	2014
Commercial	$80,888	$81,156	$71,657	$63,847	$55,349
Real estate	13,664	9,312	10,569	8,220	10,725
Consumer	9,071	10,083	9,311	8,949	9,921
Leases	12	53	112	127	145
Total allowance	$103,635	$100,604	$91,649	$81,143	$76,140

Table 5 presents a five-year summary of the Company's ALL. Also, please see "Quantitative and Qualitative Disclosures About Market Risk—Credit Risk Management" on page 53 in this report for information relating to nonaccrual, past due, restructured loans, and other credit risk matters. For more information on loan portfolio segments and ALL methodology refer to Note 3, "Loans and Allowance for Loan Losses," in the Notes to the Consolidated Financial Statements.

As illustrated in Table 5 below, the ALL decreased as a percentage of total loans to 0.85 percent as of December 31, 2018, compared to 0.89 percent as of December 31, 2017. The provision for loan loss totaled $70.8 million for the year-ended December 31, 2018, which is an increase of $29.8 million, or 72.6 percent, compared to the same period in 2017. This increase was driven by higher provision to cover the loss related to a single factoring credit relationship, which has since entered into bankruptcy, as well as based on the factors noted above. The provision for loan losses totaled $41.0 million and $32.5 million for the years-ended December 31, 2017 and 2016, respectively.

Table 5

ANALYSIS OF ALLOWANCE FOR LOAN LOSSES (in thousands)

	2018	2017	2016	2015	2014
Allowance-beginning of year	$100,604	$91,649	$81,143	$76,140	$74,751
Provision for loan losses	70,750	41,000	32,500	15,500	17,000
Charge-offs:					
Commercial	(64,371)	(27,985)	(12,788)	(5,239)	(7,307)
Consumer					
Credit card	(8,601)	(8,681)	(8,436)	(8,555)	(10,104)
Other	(1,143)	(948)	(843)	(1,103)	(1,323)
Real estate	(3,428)	(992)	(6,756)	(214)	(259)
Total charge-offs	(77,543)	(38,606)	(28,823)	(15,111)	(18,993)
Recoveries:					
Commercial	6,753	3,522	3,596	1,824	848
Consumer					
Credit card	1,728	1,540	1,730	1,802	1,803
Other	898	533	518	667	687
Real estate	445	966	985	321	44
Total recoveries	9,824	6,561	6,829	4,614	3,382
Net charge-offs	(67,719)	(32,045)	(21,994)	(10,497)	(15,611)
Allowance-end of year	$103,635	$100,604	$91,649	$81,143	$76,140
Average loans, net of unearned interest	$11,604,633	$10,841,486	$9,986,151	$8,423,997	$6,974,246
Loans at end of year, net of unearned interest	12,178,150	11,280,514	10,540,383	9,430,761	7,465,794
Allowance to loans at year-end	0.85%	0.89%	0.87%	0.86%	1.02%
Allowance as a multiple of net charge-offs	1.53x	3.14x	4.17x	7.73x	4.88x
Net charge-offs to:					
Provision for loan losses	95.72%	78.16%	67.67%	67.72%	91.83%
Average loans	0.58	0.30	0.22	0.12	0.22

Noninterest Income

A key objective of the Company is the growth of noninterest income to provide a diverse source of revenue not directly tied to interest rates. Fee-based services are typically non-credit related and are not generally affected by fluctuations in interest rates. Noninterest income decreased in 2018 by $21.9 million, or 5.2 percent, compared to 2017 and increased in 2017 by $21.1 million, or 5.2 percent, compared to 2016. The decrease in 2018 is primarily attributable to trading and investment banking, trust and securities processing, bankcard income, gains on sales of available-for-sale securities, and service charges on deposit accounts. The increase in 2017 is primarily attributable to trust and securities processing, brokerage income, other income, and bankcard income.

The Company's fee-based services offer multiple products and services to customers which management believes will more closely align to the customer's product demand with the Company. The Company is currently emphasizing

fee-based services including trust and securities processing, bankcard, securities trading & brokerage and cash & treasury management. Management believes that it can offer these products and services both efficiently and profitably, as most have common platforms and support structures.

Table 6

SUMMARY OF NONINTEREST INCOME (in thousands)

	Year Ended December 31,			Dollar Change		Percent Change	
	2018	2017	2016	18-17	17-16	18-17	17-16
Trust and securities processing	$172,163	$176,646	$166,315	$(4,483)	$10,331	(2.5)%	6.2%
Trading and investment banking	15,584	23,183	21,422	(7,599)	1,761	(32.8)	8.2
Service charges on deposit accounts	84,287	87,680	86,662	(3,393)	1,018	(3.9)	1.2
Insurance fees and commissions	1,292	1,972	4,188	(680)	(2,216)	(34.5)	(52.9)
Brokerage fees	25,807	23,208	17,833	2,599	5,375	11.2	30.1
Bankcard fees	68,520	73,030	68,749	(4,510)	4,281	(6.2)	6.2
Gains on sales of securities available for sale, net	578	4,192	8,509	(3,614)	(4,317)	(86.2)	(50.7)
Other	33,467	33,651	28,833	(184)	4,818	(0.5)	16.7
Total noninterest income	$401,698	$423,562	$402,511	$(21,864)	$21,051	(5.2)%	5.2%

Noninterest income and the year-over-year changes in noninterest income are summarized in Table 6 above. The dollar change and percent change columns highlight the respective net increase or decrease in the categories of noninterest income in 2018 compared to 2017, and in 2017 compared to 2016.

Trust and securities processing income consists of fees earned on personal and corporate trust accounts, custody of securities services, trust investments and wealth management services, and mutual fund assets servicing. This income category decreased by $4.5 million, or 2.5 percent in 2018, compared to 2017, and increased by $10.3 million, or 6.2 percent, in 2017, compared to 2016. During 2018, fee income from fund services fees decrease $7.5 million and wealth management services decreased $1.0 million. These decreases were offset by an increase in corporate trust income of $4.0 million as compared to 2017. In 2017, fee income from wealth management services increased $5.3 million, fund administration and custody services increased $3.3 million, and corporate trust revenue increased $1.7 million, as compared to 2016.

Trading and investment banking income decreased $7.6 million, or 32.8 percent, in 2018 compared to 2017 and increased $1.8 million, or 8.2 percent, in 2017 compared to 2016. The decrease in 2018 compared to 2017 was driven by decreased bond trading income. Additionally, the Company liquidated seed investments in certain Scout funds in 2017, causing a decrease in 2018 from 2017, and an increase in 2017 from 2016.

Brokerage fees increased $2.6 million, or 11.2 percent, in 2018 compared to 2017 and increased $5.4 million, or 30.1 percent, in 2017 compared to 2016 primarily due to an increase in 12b-1 income driven by an increase in interest rates.

Bankcard fees decreased $4.5 million, or 6.2 percent, in 2018 compared to 2017, and increased $4.3 million, or 6.2 percent, in 2017 compared to 2016. The decrease in 2018 compared to 2017 was driven by increased rewards and rebate expense, partially offset by increased interchange revenue. The increase in 2017 compared to 2016 was driven by increased interchange income.

Gains on sales of securities available for sale decreased $3.6 million in 2018 compared to 2017 and decreased by $4.3 million in 2017 compared to 2016. The Company's goal in the management of its available-for-sale securities

portfolio is to maximize return within the Company's parameters of liquidity goals, interest rate risk and credit risk. This can result in differences from period to period in the amount of realized gains.

Other noninterest income decreased $0.2 million, or 0.5 percent, in 2018 compared to 2017 and increased $4.8 million, or 16.7 percent, in 2017 compared to 2016. The decrease from 2017 to 2018 was primarily due to a decrease in company-owned life insurance income, partially offset by gains on sales of assets.

Noninterest Expense

Noninterest expense increased in 2018 by $12.7 million, or 1.8 percent, compared to 2017 and increased in 2017 by $38.4 million, or 5.8 percent, compared to 2016. The main drivers of the increase from 2017 to 2018 were legal and consulting expense, salaries and employee benefits expense, processing fees, and equipment expense. The

main drivers of the increase from 2016 to 2017 were salaries and employee benefits expense, processing fees, and equipment expense. Table 7 below summarizes the components of noninterest expense and the respective year-over-year changes for each category.

Table 7

SUMMARY OF NONINTEREST EXPENSE (in thousands)

	Year Ended December 31,			Dollar Change		Percent Change	
	2018	2017	2016	18-17	17-16	18-17	17-16
Salaries and employee benefits	$419,091	$413,830	$390,059	$5,261	$23,771	1.3 %	6.1 %
Occupancy, net	45,239	44,462	44,255	777	207	1.7	0.5
Equipment	75,184	72,008	66,337	3,176	5,671	4.4	8.5
Supplies and services	16,103	17,173	18,535	(1,070)	(1,362)	(6.2)	(7.3)
Marketing and business development	24,372	21,469	21,208	2,903	261	13.5	1.2
Processing fees	46,977	42,331	36,005	4,646	6,326	11.0	17.6
Legal and consulting	29,859	23,406	20,801	6,453	2,605	27.6	12.5
Bankcard	17,514	19,471	20,757	(1,957)	(1,286)	(10.1)	(6.2)
Amortization of other intangible assets	5,764	7,326	8,695	(1,562)	(1,369)	(21.3)	(15.7)
Regulatory fees	12,695	15,527	14,178	(2,832)	1,349	(18.2)	9.5
Other	25,002	28,126	25,915	(3,124)	2,211	(11.1)	8.5
Total noninterest expense	$717,800	$705,129	$666,745	$12,671	$38,384	1.8 %	5.8 %

Salaries and employee benefits expense increased $5.3 million, or 1.3 percent, in 2018 compared to 2017 and $23.8 million, or 6.1 percent, in 2017 compared to 2016. In 2018, salary and wage expense increased $11.1 million, or 4.3 percent, and bonus and commission expense increased $1.7 million, or 2.2 percent. These increases were offset by decreased employee benefit expense of $7.6 million, or 10.1 percent driven by lower deferred compensation expense. From 2016 to 2017, salary and wage expense increased $9.9 million, or 4.0 percent, employee benefit expense increased $9.3 million, or 14.0 percent, and bonus and commission expense increased $4.6 million, or 6.1 percent.

Equipment expense increased $3.2 million, or 4.4 percent, and $5.7 million, or 8.5 percent in 2018 and 2017, respectively. This increase is driven by increased computer hardware and software expenses for the ongoing investments in digital channel and integrated platform solutions to support business growth and the continued modernization of its core systems in both years.

Processing fees expense increased $4.6 million, or 11.0 percent, in 2018 compared to 2017, and increased $6.3 million, or 17.6 percent, in 2017 compared to 2016. The increases in 2018 and 2017 are primarily driven by ongoing investments in digital channel and integrated platform solutions to support business growth and the continued modernization of its core systems.

Legal and consulting expense increased $6.5 million, or 27.6 percent, in 2018 compared to 2017 and $2.6 million, or 12.5 percent, in 2017 compared to 2016. The increase in 2018 was driven by an increase of $5.4 million in consulting expense and an increase of $1.1 million in legal and professional services expense. This increase in 2017 was driven by an increase of $1.4 million in consulting expense and an increase of $1.3 million in legal and professional services

expense.

Other noninterest expense decreased $3.1 million, or 11.1 percent, and increased $2.2 million, or 8.5 percent, in 2018 and 2017, respectively. The decrease in 2018 was driven by lower operational losses compared to 2017. The increase in 2017 was driven by increased contribution and derivative expense. The increase in 2017 was driven by increased contribution and derivative expense.

Income Taxes

Income tax expense for continuing operations totaled $27.3 million, $53.4 million and $45.0 million in 2018, 2017 and 2016, respectively. These amounts equate to effective tax rates of 12.2 percent, 22.6 percent, and 22.6 percent for 2018, 2017 and 2016, respectively. The decrease in effective rate from 2017 to 2018 is primarily a result of the Tax Cuts and Job Act (the Tax Act) which lowered the federal corporate income tax rate to 21 percent from

35 percent, effective January 1, 2018. The decrease is also attributable to a discrete tax benefit of $5.1 million related to 2017 federal provision-to-return adjustments. Of this amount, $5.0 million was due to the remeasurement of deferred tax assets and liabilities upon completion of the 2017 federal tax return during the fourth quarter of 2018. As of December 31, 2018, the accounting for the impact of the change in tax rate on deferred tax assets and liabilities is complete.

For further information on income taxes refer to Note 17, "Income Taxes," in the Notes to the Consolidated Financial Statements.

Business Segments

The Company has strategically aligned its operations into the following four reportable segments: Commercial Banking, Institutional Banking, Personal Banking, and Healthcare Services (collectively, the Business Segments). Senior executive officers regularly evaluate Business Segment financial results produced by the Company's internal reporting system in deciding how to allocate resources and assess performance for individual Business Segments. Previously, the Company had the following three Business Segments: Bank, Institutional Investment Management, and Asset Servicing. During 2017, the Company sold all of the outstanding stock of Scout, its institutional investment management subsidiary. As the operations of Scout are included in discontinued operations, the Company no longer presents such operations as one of its business segments. The management accounting system assigns balance sheet and income statement items to each Business Segment using methodologies that are refined on an ongoing basis.

Table 8

COMMERCIAL BANKING OPERATING RESULTS (in thousands)

	Year Ended December 31,		Dollar Change	Percent Change
	2018	2017	18-17	18-17
Net interest income	$380,266	$353,627	$26,639	7.5 %
Provision for loan losses	63,841	32,937	30,904	93.8
Noninterest income	74,931	82,221	(7,290)	(8.9)
Noninterest expense	253,740	250,308	3,432	1.4
Income before taxes	137,616	152,603	(14,987)	(9.8)
Income tax expense	16,824	34,460	(17,636)	(51.2)
Income from continuing operations	$120,792	$118,143	$2,649	2.2 %

For the year ended December 31, 2018, Commercial Banking income from continuing operations increased by $2.6 million, or 2.2 percent, to $120.8 million compared to the same period in 2017. Net interest income increased $26.6 million, or 7.5 percent, for the year ended December 31, 2018, compared to the same period in 2017, primarily driven by strong loan growth, increased interest rates, and earning asset mix changes. Provision for loan losses increased by $30.9 million as compared to 2017. This increase was driven by higher provision to cover the loss related to a single factoring credit relationship, which has since entered into bankruptcy, and is consistent with our methodology, which considers the inherent risk in our loan portfolio, as well as other qualitative factors, such as macroeconomic conditions, loan growth, loan impairment changes, loan risk grading changes, and net charge-off levels. Noninterest

income decreased $7.3 million, or 8.9 percent, over the same period in 2017 primarily driven by a decrease of $3.6 million in gains on securities available for sale and a decrease of $3.8 million in company-owned life insurance income. Noninterest expense increased $3.4 million, or 1.4 percent, to $253.7 million. This increase is primarily driven by increased salary and benefit expense and processing fees.

Table 9

INSTITUTIONAL BANKING OPERATING RESULTS (in thousands)

	Year Ended		Dollar	Percent
	December 31,		Change	Change
	2018	2017	18-17	18-17
Net interest income	$66,585	$51,977	$14,608	28.1 %
Provision for loan losses	1,335	1,461	(126)	(8.6)
Noninterest income	173,591	187,003	(13,412)	(7.2)
Noninterest expense	189,708	184,618	5,090	2.8
Income before taxes	49,133	52,901	(3,768)	(7.1)
Income tax expense	6,007	11,946	(5,939)	(49.7)
Income from continuing operations	$43,126	$40,955	$2,171	5.3 %

For the year ended December 31, 2018, Institutional Banking income from continuing operations increased $2.2 million, or 5.3 percent, compared to the same period last year. Net interest income increased $14.6 million, or 28.1 percent, compared to the same period last year, due to an increase in funds transfer pricing driven by higher interest rates. Provision for loan losses remained flat. Noninterest income decreased $13.4 million, or 7.2 percent. Asset servicing income declined $7.5 million primarily driven by the exit of a large asset manager client that consolidated all of their global service needs to one provider during 2018. Bond trading fees decreased $5.9 million from lower trading volume and deposit service charges decreased $3.9 million due to customer repricing. Additionally, there was a $1.4 million decrease on income from company-owned life insurance and a decrease of $0.8 million in bankcard income. These decreases were offset by increases in corporate trust income of $4.0 million and brokerage fees of $2.4 million. Noninterest expense increased $5.1 million, or 2.8 percent, primarily driven by an increase of $4.4 million in salary and employee benefits expense primarily from increased salary and wages. Furniture and equipment expense increased $2.1 million for increases in computer and hardware costs related to investments for digital and integrated platform solutions to support business growth and the continued ongoing modernization of the Company's core systems. These increases were partially offset by a decrease of $2.4 million in processing fees.

Table 10

PERSONAL BANKING OPERATING RESULTS (in thousands)

	Year Ended		Dollar	Percent
	December 31,		Change	Change
	2018	2017	18-17	18-17
Net interest income	$125,045	$122,304	$2,741	2.2 %
Provision for loan losses	5,574	6,602	(1,028)	(15.6)
Noninterest income	118,344	118,896	(552)	(0.5)
Noninterest expense	225,406	226,634	(1,228)	(0.5)
Income before taxes	12,409	7,964	4,445	55.8

Income tax expense	1,517	1,798	(281)	(15.6)
Income from continuing operations	$10,892	$6,166	$4,726	76.6 %

For the year ended December 31, 2018, Personal Banking income from continuing operations increased $4.7 million, or 76.6 percent, compared to the same period last year. Net interest income increased $2.7 million, or 2.2 percent, compared to the same period last year due to increased interest rates. Provision for loan losses declined $1.0 million, or 15.6 percent, consistent with our methodology, which considers the inherent risk in our loan portfolio, as well as other qualitative factors, such as macroeconomic conditions, loan growth, loan impairment changes, loan risk grading changes, and net charge-off levels. Noninterest income was relatively flat for the same period. Noninterest expense decreased $1.2 million, or 0.5 percent, primarily due to decreased bankcard administrative expenses of $1.1 million, decreased regulatory expense of $1.1 million, decreased other noninterest expense of $1.0 million, largely driven by fewer operational losses. These decreases were offset by increased marketing and business development expense of $1.4 million, driven by advertising expense from the recent deposit campaigns in the third quarter, and increased salary and employee benefits expense of $0.5 million.

Table 11

HEALTHCARE SERVICES OPERATING RESULTS (in thousands)

	Year Ended		Dollar	Percent
	December 31,		Change	Change
	2018	2017	18-17	18-17
Net interest income	$38,550	$31,005	$7,545	24.3 %
Provision for loan losses	—	—	—	—
Noninterest income	34,832	35,442	(610)	(1.7)
Noninterest expense	48,946	43,569	5,377	12.3
Income before taxes	24,436	22,878	1,558	6.8
Income tax expense	2,986	5,166	(2,180)	(42.2)
Income from continuing operations	$21,450	$17,712	$3,738	21.1 %

For the year ended December 31, 2018, Healthcare Services income from continuing operations increased $3.7 million, or 21.1 percent, compared to the same period last year. Net interest income increased $7.5 million, or 24.3 percent, compared to the same period last year, due to an increase in number of accounts and deposits, coupled with increased funds transfer pricing credits on deposits from higher interest rates. The impact of higher interest rates, increased competitive pressures from traditional and non-traditional participants, and industry consolidation will likely impact the future levels of net interest income in this segment. Noninterest income declined $0.6 million, or 1.7 percent, compared to the same period last year, in part driven by increased revenue share with our larger healthcare partners. This decrease is primarily driven by decreased bankcard fee income of $1.5 million due to lower interchange and decreased income from company-owned life insurance of $0.4 million, partially offset by increased service charges on deposit accounts of $1.7 million. Noninterest expense increased $5.4 million, or 12.3 percent, primarily due to increased technology, service, and overhead expenses of $4.3 million and increased salary and employee benefits expense of $0.6 million, and increased processing fees of $0.4 million.

Balance Sheet Analysis

Loans and Loans Held For Sale

Loans represent the Company’s largest source of interest income. Loan balances held for investment increased by $897.6 million, or 8.0 percent, in 2018. This increase was primarily driven by an increase of $675.4 million, or 14.8 percent, in commercial loans, $150.7 million, or 4.2 percent, in commercial real estate loans, and $74.7 million, or 10.4 percent in construction real estate loans.

Table 12

ANALYSIS OF LOANS BY TYPE (in thousands)

	December 31, 2018	2017	2016	2015	2014
Commercial	$5,228,402	$4,553,040	$4,410,806	$4,205,736	$3,814,009
Asset-based	380,738	336,614	225,878	219,244	—
Factoring	261,591	221,672	139,902	90,686	—
Commercial - credit card	166,334	172,291	146,735	125,361	115,709
Real estate - construction	792,565	717,849	741,804	416,568	256,006
Real estate - commercial	3,714,280	3,563,630	3,165,922	2,662,772	1,866,301
Leases	5,248	23,967	39,532	41,857	39,090
Total business-related	10,549,158	9,589,063	8,870,579	7,762,224	6,091,115
Real estate - residential	707,504	638,591	548,350	492,227	319,827
Real estate - HELOC	545,721	648,379	711,794	729,963	643,586
Consumer - credit card	230,982	252,697	270,098	291,570	310,296
Consumer - other	144,785	151,783	139,562	154,777	100,970
Total consumer-related	1,628,992	1,691,450	1,669,804	1,668,537	1,374,679
Loans before allowance and loans held for sale	12,178,150	11,280,513	10,540,383	9,430,761	7,465,794
Allowance for loan losses	(103,635)	(100,604)	(91,649)	(81,143)	(76,140)
Net loans	12,074,515	11,179,909	10,448,734	9,349,618	7,389,654
Loans held for sale	3,192	1,460	5,279	589	624
Net loans and loans held for sale	$12,077,707	$11,181,369	$10,454,013	$9,350,207	$7,390,278
As a % of total loans and loans held for sale					
Commercial	42.92 %	40.36 %	41.84 %	44.60 %	51.08 %
Asset-based	3.12	2.98	2.14	2.32	—
Factoring	2.15	1.96	1.33	0.96	—
Commercial - credit card	1.37	1.53	1.39	1.33	1.55
Real estate – construction	6.51	6.36	7.03	4.42	3.43
Real estate – commercial	30.49	31.59	30.02	28.23	25.00
Leases	0.04	0.21	0.37	0.44	0.52
Total business-related	86.60	84.99	84.12	82.30	81.58
Real estate - residential	5.81	5.65	5.20	5.22	4.28
Real estate - HELOC	4.48	5.75	6.75	7.74	8.62

Consumer - credit card	1.89		2.24		2.56		3.09		4.16	
Consumer - other	1.19		1.35		1.32		1.64		1.35	
Total consumer-related	13.37		14.99		15.83		17.69		18.41	
Loans held for sale	0.03		0.02		0.05		0.01		0.01	
Total loans and loans held for sale	100.00	%	100.00	%	100.00	%	100.00	%	100.00	%

Included in Table 12 is a five-year breakdown of loans by type. Business-related loans continue to represent the largest segment of the Company's loan portfolio, comprising approximately 86.6 percent and 85.0 percent of total loans and loans held for sale at the end of 2018 and 2017, respectively.

Commercial loans represent the largest percent of total loans. Commercial loans at December 31, 2018 have increased $675.4 million, or 14.8 percent, as compared to December 31, 2017, to 42.9 percent of total loans. Commercial loans represented 40.4 percent of total loans at December 31, 2017.

As a percentage of total loans, commercial real estate and construction real estate loans now comprise 37.0 percent of total loans compared to 37.9 percent in 2017. Commercial real estate loans increased $150.7 million, or 4.2 percent, and construction real estate loans increased $74.7 million, or 10.4 percent, compared to 2017. Generally, these loans are made for working capital or expansion purposes and are primarily secured by real estate with a maximum loan-to-value of 80 percent. Most of these properties are owner-occupied and/or have other collateral or guarantees as security.

Residential real estate increased $68.9 million, or 10.8 percent, and represented 5.8 percent of total loans. HELOC loans decreased $102.7 million, or 15.8 percent, and represent 4.5 percent of total loans.

Asset based loans increased $44.1 million, or 13.1 percent, and represented 3.1 percent of total loans as of December 31, 2018. Factoring loans increased $39.9 million, or 18.0 percent, and represented 2.2 percent of total loans as of December 31, 2018.

Nonaccrual, past due and restructured loans are discussed under "Quantitative and Qualitative Disclosure about Market Risk – Credit Risk Management" in Item 7A on page 53 of this report.

Investment Securities

The Company's investment portfolio contains trading, available-for-sale (AFS), and held-to-maturity (HTM) securities as well as FRB stock, Federal Home Loan Bank (FHLB) stock, and other miscellaneous investments. Investment securities totaled $7.8 billion as of December 31, 2018 and $7.6 billion as of December 31, 2017 and comprised 36.3 percent and 37.5 percent of the Company's earning assets, respectively, as of those dates.

The Company's AFS securities portfolio comprised 83.4 percent of the Company's investment securities portfolio at December 31, 2018, compared to 81.9 percent at year-end 2017. The Company's AFS securities portfolio provides liquidity as a result of the composition and average life of the underlying securities. This liquidity can be used to fund loan growth or to offset the outflow of traditional funding sources. The average life of the AFS securities portfolio increased from 51.7 months at December 31, 2017 to 56.8 months at December 31, 2018 due to portfolio mix changes and extension in the portfolio related to slower projected prepayments. In addition to providing a potential source of liquidity, the AFS securities portfolio can be used as a tool to manage interest rate sensitivity. The Company's goal in the management of its AFS securities portfolio is to maximize return within the Company's parameters of liquidity goals, interest rate risk and credit risk.

Management expects collateral pledging requirements for public funds, loan demand, and deposit funding to be the primary factors impacting changes in the level of AFS securities. There were $5.7 billion of AFS securities pledged to secure U.S. Government deposits, other public deposits, certain trust deposits, derivative transactions, and repurchase agreements at December 31, 2018. Of this amount, securities with a market value of $1.0 billion at December 31, 2018 were pledged at the Federal Reserve Discount Window but were unencumbered as of that date.

The Company's HTM securities portfolio consists of private placement bonds, which are issued primarily to refinance existing revenue bonds in the healthcare and education sectors. The HTM portfolio totaled $1.2 billion as of December 31, 2018, a decrease of $90.4 million, or 7.2 percent, from December 31, 2017. The average life of the HTM portfolio was 6.9 years at December 31, 2018, compared to 7.2 years at December 31, 2017.

The securities portfolio generates the Company's second largest component of interest income. The AFS and HTM securities portfolios achieved an average yield on a tax-equivalent basis of 2.41 percent for 2018, compared to 2.45 percent in 2017, and 2.12 percent in 2016. Securities available for sale had a net unrealized loss of $127.3 million at year-end, compared to a net unrealized loss of $75.4 million the preceding year. This market value change primarily reflects the impact of a larger portfolio size, longer average life, and rising market interest rates as of December 31, 2018, compared to December 31, 2017. These amounts are reflected, on an after-tax basis, in the

Company's Accumulated other comprehensive income (loss) in shareholders' equity, as an unrealized loss of $96.0 million at year-end 2018, compared to an unrealized loss of $44.5 million for 2017. The AFS securities portfolio contains securities that have unrealized losses and are not deemed to be other-than-temporarily impaired (see the table of these securities in Note 4, "Securities," in the Notes to the Consolidated Financial Statements on page 77 of this document). The unrealized losses in the Company's investments in direct obligations of U.S. Treasury obligations, U.S. government agencies, federal agency mortgage-backed securities, and municipal securities were caused by changes in interest rates. The Company does not have the intent to sell these securities and does not believe it is more likely than not that the Company will be required to sell these securities before a recovery of fair value. The Company expects to recover its cost basis in the securities and does not consider these investments to be other-than-temporarily impaired at December 31, 2018.

Included in Tables 13 and 14 are analyses of the cost, fair value and average yield (tax-equivalent basis) of securities available for sale and securities held to maturity.

Table 13

SECURITIES AVAILABLE FOR SALE (in thousands)

December 31, 2018	Amortized Cost	Fair Value
U.S. Treasury	$ 248,494	$ 247,130
U.S. Agencies	200	199
Mortgage-backed	3,914,289	3,812,211
State and political subdivisions	2,507,107	2,483,260
Total	$ 6,670,090	$ 6,542,800

December 31, 2017	Amortized Cost	Fair Value
U.S. Treasury	$ 40,092	$ 38,643
U.S. Agencies	14,762	14,752
Mortgage-backed	3,719,369	3,649,243
State and political subdivisions	2,546,517	2,542,673
Corporates	13,278	13,266
Total	$ 6,334,018	$ 6,258,577

December 31, 2016	Amortized Cost	Fair Value
U.S. Treasury	$ 95,315	$ 93,826
U.S. Agencies	198,158	198,177
Mortgage-backed	3,773,090	3,711,699
State and political subdivisions	2,425,155	2,395,757
Corporates	66,997	66,875
Total	$ 6,558,715	$ 6,466,334

	U.S. Treasury Securities		U.S. Agency Securities	
December 31, 2018		Weighted		Weighted

	Fair Value	Average Yield		Fair Value	Average Yield	
Due in one year or less	$184,916	2.66	%	$199	1.46	%
Due after 1 year through 5 years	52,874	2.08		—	—	
Due after 5 years through 10 years	9,340	1.48		—	—	
Due after 10 years	—	—		—	—	
Total	$247,130	2.49	%	$199	1.46	%

	Mortgage-backed Securities		State and Political Subdivisions	
		Weighted		Weighted
December 31, 2018	Fair Value	Average Yield	Fair Value	Average Yield
Due in one year or less	$32,859	2.26 %	$349,303	1.97 %
Due after 1 year through 5 years	2,756,639	2.27	877,224	2.24
Due after 5 years through 10 years	983,288	2.80	699,227	2.48
Due after 10 years	39,425	3.49	557,506	3.66
Total	$3,812,211	2.42 %	$2,483,260	2.59 %

	U.S. Treasury Securities		U.S. Agency Securities	
		Weighted		Weighted
December 31, 2017	Fair Value	Average Yield	Fair Value	Average Yield
Due in one year or less	$—	— %	$14,553	1.24 %
Due after 1 year through 5 years	29,223	1.21	199	1.46
Due after 5 years through 10 years	9,420	1.48	—	—
Due after 10 years	—	—	—	—
Total	$38,643	1.28 %	$14,752	1.24 %

	Mortgage-backed Securities		State and Political Subdivisions	
		Weighted		Weighted
December 31, 2017	Fair Value	Average Yield	Fair Value	Average Yield
Due in one year or less	$12,823	2.87 %	$260,957	2.06 %
Due after 1 year through 5 years	2,541,152	2.08	1,096,967	2.56
Due after 5 years through 10 years	1,057,436	2.27	822,801	2.91
Due after 10 years	37,832	3.17	361,948	3.44
Total	$3,649,243	2.15 %	$2,542,673	2.74 %

	Corporates	
		Weighted
December 31, 2017	Fair Value	Average Yield
Due in one year or less	$13,266	1.31 %
Due after 1 year through 5 years	—	—
Due after 5 years through 10 years	—	—
Due after 10 years	—	—
Total	$13,266	1.31 %

December 31, 2016	U.S. Treasury Securities Fair Value	Weighted Average Yield	U.S. Agency Securities Fair Value	Weighted Average Yield
Due in one year or less	$55,240	0.72 %	$181,209	0.83 %
Due after 1 year through 5 years	29,260	1.21	16,968	1.31
Due after 5 years through 10 years	9,326	1.48	—	—
Due after 10 years	—	—	—	—
Total	$93,826	0.95 %	$198,177	0.87 %

December 31, 2016	Mortgage-backed Securities Fair Value	Weighted Average Yield	State and Political Subdivisions Fair Value	Weighted Average Yield
Due in one year or less	$21,906	3.00 %	$221,261	1.99 %
Due after 1 year through 5 years	2,853,678	2.01	1,035,482	2.46
Due after 5 years through 10 years	812,041	1.98	853,368	2.83
Due after 10 years	24,074	3.18	285,646	3.05
Total	$3,711,699	2.02 %	$2,395,757	2.62 %

December 31, 2016	Corporates Fair Value	Weighted Average Yield	
Due in one year or less	$53,205	1.09	%
Due after 1 year through 5 years	13,670	1.31	
Due after 5 years through 10 years	—	—	
Due after 10 years	—	—	
Total	$66,875	1.13	%

Table 14

SECURITIES HELD TO MATURITY (in thousands)

December 31, 2018	Amortized Cost	Fair Value	Weighted Average Yield/Average Maturity	
Due in one year or less	$ 3,386	$3,395	2.02	%
Due after 1 year through 5 years	115,162	107,641	2.64	
Due after 5 years through 10 years	380,108	357,381	2.38	
Due over 10 years	671,990	602,115	2.74	
Total	$ 1,170,646	$1,070,532	2.61	%
December 31, 2017				
Due in one year or less	$ 2,275	$2,254	2.11	%
Due after 1 year through 5 years	100,648	100,925	2.61	
Due after 5 years through 10 years	372,234	363,123	2.29	
Due over 10 years	785,857	741,145	2.65	
Total	$ 1,261,014	$1,207,447	2.54	%
December 31, 2016				
Due in one year or less	$ 6,077	$5,135	2.13	%
Due after 1 year through 5 years	82,650	83,552	2.66	
Due after 5 years through 10 years	341,741	347,574	2.21	
Due over 10 years	685,464	669,766	2.59	
Total	$ 1,115,932	$1,106,027	2.48	%

FEDERAL RESERVE BANK STOCK AND OTHER SECURITIES (in thousands)

	Amortized Cost	Fair Value
2018		
FRB and FHLB stock	$ 33,262	$33,262
Other securities – marketable	—	4,385
Other securities – non-marketable	32,011	36,045
Total Federal Reserve Bank stock and other	$ 65,273	$73,692
2017		
FRB and FHLB stock	$ 33,262	$33,262
Other securities – marketable	3	4,640
Other securities – non-marketable	26,606	27,995
Total Federal Reserve Bank stock and other	$ 59,871	$65,897
2016		
FRB and FHLB stock	$ 33,262	$33,262
Other securities – marketable	4	9,952
Other securities – non-marketable	24,272	25,092
Total Federal Reserve Bank stock and other	$ 57,538	$68,306

Other marketable and non-marketable securities include PCM alternative investments in hedge funds and private equity funds, which are accounted for as equity-method investments. The fair value of other marketable securities includes alternative investment securities of $4.4 million at December 31, 2018, compared to $4.6 million at December 31, 2017. The fair value of other non-marketable securities includes the alternative investment securities fair value of $5.8 million and $3.4 million at December 31, 2018 and December 31, 2017, respectively.

Other Earning Assets

Federal funds transactions essentially are overnight loans between financial institutions, which allow for either the daily investment of excess funds or the daily borrowing of another institution's funds in order to meet short-term liquidity needs. The net borrowed position was $6.2 million at both December 31, 2018 and December 31, 2017.

The Bank buys and sells federal funds as agent for non-affiliated banks. Because the transactions are pursuant to agency arrangements, these transactions do not appear on the balance sheet and averaged $171.3 million in 2018 and $217.1 million in 2017.

At December 31, 2018, the Company held securities purchased under agreements to resell of $626.5 million compared to $186.5 million at December 31, 2017. The Company uses these instruments as short-term secured investments, in lieu of selling federal funds, or to acquire securities required for collateral purposes. Balances will fluctuate based on the Company's liquidity and investment decisions as well as the Company's correspondent bank borrowing levels. These investments averaged $172.1 million in 2018 and $186.8 million in 2017.

The Company also maintains an active securities trading inventory. The average holdings in the securities trading inventory in 2018 were $49.3 million, compared to $57.0 million in 2017, and were recorded at fair market value. As

discussed in “Quantitative and Qualitative Disclosures About Market Risk -- Trading Account” in Part II, Item 7A on page 52, the Company offsets the trading account securities by the sale of exchange-traded financial futures contracts, with both the trading account and futures contracts marked to market daily.

Interest-bearing due from banks totaled $1.0 billion as of December 31, 2018 compared to $1.4 billion as of December 31, 2017 and includes amounts due from the FRB and interest-bearing accounts held at other financial institutions. The amount due from the FRB averaged $396.0 million and $303.8 million during December 31, 2018 and 2017, respectively. The increase in the FRB balance from 2017 to 2018 is primarily due to an increase in public fund and institutional deposit balances. The interest-bearing accounts held at other financial institutions totaled $18.8 million and $28.2 million at December 31, 2018 and 2017, respectively.

Deposits and Borrowed Funds

Deposits represent the Company's primary funding source for its asset base. In addition to the core deposits garnered by the Company's retail branch structure, the Company continues to focus on its cash management services, as well as its asset management and mutual fund servicing businesses in order to attract and retain additional core deposits. Deposits totaled $19.3 billion at December 31, 2018 and $18.0 billion at December 31, 2017, an increase of $1.3 billion or 7.0 percent. Deposits averaged $17.0 billion in 2018, and $15.9 billion in 2017.

Noninterest-bearing demand deposits averaged $5.8 billion in 2018 and $5.9 billion in 2017. These deposits represented 34.3 percent of average deposits in 2018, compared to 37.2 percent in 2017. The Company's large commercial customer base provides a significant source of noninterest-bearing deposits. Many of these commercial accounts do not earn interest; however, they receive an earnings credit to offset the cost of other services provided by the Company.

Table 15

MATURITIES OF TIME DEPOSITS OF $250,000 OR MORE (in thousands)

	December 31,		
	2018	2017	2016
Maturing within 3 months	$426,912	$524,173	$295,395
After 3 months but within 6 months	34,880	116,491	111,043
After 6 months but within 12 months	35,918	44,986	47,664
After 12 months	55,134	46,624	68,030
Total	$552,844	$732,274	$522,132

Table 16

ANALYSIS OF AVERAGE DEPOSITS (in thousands)

	December 31,					
	2018		2017		2016	
Amount:						
Noninterest-bearing demand	$5,828,545		$5,936,172		$5,906,021	
Interest-bearing demand and savings	10,113,263		8,819,387		8,267,634	
Time deposits under $250,000	355,344		373,553		601,383	
Total core deposits	16,297,152		15,129,112		14,775,038	
Time deposits of $250,000 or more	687,395		809,557		563,703	
Total deposits	$16,984,547		$15,938,669		$15,338,741	
As a % of total deposits:						
Noninterest-bearing demand	34.32	%	37.24	%	38.50	%
Interest-bearing demand and savings	59.54		55.34		53.90	
Time deposits under $250,000	2.09		2.34		3.92	

Total core deposits	95.95		94.92		96.32	
Time deposits of $250,000 or more	4.05		5.08		3.68	
Total deposits	100.00	%	100.00	%	100.00	%

Repurchase agreements are transactions involving the exchange of investment funds by the customer for securities by the Company, under an agreement to repurchase the same issues at an agreed-upon price and date. Securities sold under agreements to repurchase and federal funds purchased totaled $1.5 billion at December 31, 2018, and $1.3 billion at December 31, 2017. These agreements averaged $1.6 billion in 2018 and $2.1 billion in 2017. The Company enters into these transactions with its downstream correspondent banks, commercial customers, and various trust, mutual fund, and local government relationships.

The Company is a member bank with the FHLB of Des Moines, and through this relationship, the Company owns $10.0 million of FHLB stock and has access to additional liquidity and funding sources through FHLB

advances. The Company's borrowing capacity is dependent upon the amount of collateral the Company places at the FHLB. Based on the collateral pledged, the Company had $814.6 million of borrowing capacity at the FHLB at December 31, 2018. The Company had no outstanding advances at FHLB Des Moines as of December 31, 2018.

Table 17

SHORT-TERM BORROWINGS (in thousands)

	2018 Amount	Rate	2017 Amount	Rate	2016 Amount	Rate
At December 31:						
Federal funds purchased	$6,679	2.42%	$11,334	1.27%	$419,843	0.50%
Repurchase agreements	1,512,241	2.08	1,249,370	1.10	1,437,094	0.45
Other	—	—	—	—	—	—
Total	$1,518,920	2.09%	$1,260,704	1.10%	$1,856,937	0.46%
Average for year:						
Federal funds purchased	$301,503	2.54%	$879,857	1.37%	$439,062	0.60%
Repurchase agreements	1,257,646	1.53	1,215,254	0.76	1,566,569	0.30
Other	3	—	3	—	3,753	0.72
Total	$1,559,152	1.59%	$2,095,114	0.85%	$2,009,384	0.33%
Maximum month-end balance:						
Federal funds purchased	$631,578		$1,737,252		$1,094,017	
Repurchase agreements	1,512,241		1,475,361		1,815,830	
Other	—		—		—	

Long-term debt totaled $82.7 million at December 31, 2018. The majority of the Company's long-term debt was assumed from the acquisition of Marquette and consists of debt obligations payable to four unconsolidated trusts (Marquette Capital Trust I, Marquette Capital Trust II, Marquette Capital Trust III, and Marquette Capital Trust IV) that previously issued trust preferred securities. These long-term debt obligations had an aggregate contractual balance of $103.1 million and had a carrying value of $69.3 million at December 31, 2018. Interest rates on trust preferred securities are tied to the three-month London Interbank Offered Rate (LIBOR) with spreads ranging from 133 basis points to 160 basis points, and reset quarterly. The trust preferred securities have maturity dates ranging from January 2036 to September 2036. For further information on long-term debt refer to Note 9, "Borrowed Funds," in the Notes to the Consolidated Financial Statements.

Capital Resources and Liquidity

The Company places a significant emphasis on the maintenance of a strong capital position, which it believes promotes investor confidence, provides access to funding sources under favorable terms, and enhances the Company's ability to capitalize on business growth and acquisition opportunities. Higher levels of liquidity, however, bear corresponding costs, measured in terms of lower yields on short-term, more liquid earning assets and higher expenses for extended liability maturities. The Company manages capital for each subsidiary based upon the subsidiary's respective risks and growth opportunities as well as regulatory requirements.

Total shareholders' equity increased $46.9 million, or 2.2 percent to $2.2 billion at December 31, 2018 as compared to December 31, 2017.

The Company’s Board of Directors (the Board) authorized, at its April 24, 2018 and April 25, 2017 meetings, the repurchase of up to two million shares of the Company’s common stock during the twelve months following each meeting (each a Repurchase Authorization). During 2018 and 2017, the Company acquired 1,136,594 shares and 217,071 shares, respectively, of its common stock pursuant to the applicable Repurchase Authorization. During 2018, the Company entered into an agreement with Bank of America Merrill Lynch (BAML) to repurchase an aggregate of $50.0 million of the Company’s common stock through an accelerated share repurchase agreement (the ASR). Under the ASR, the Company repurchased a total of 780,321 shares. The final settlement of the transactions under the ASR occurred in December 2018. The ASR was entered into pursuant to the April 24, 2018 Repurchase Authorization and the Company has not made any repurchase of its securities other than pursuant to the Repurchase Authorizations.

Through the Company's relationship with the FHLB of Des Moines, the Company owns $10.0 million of FHLB stock and has access to additional liquidity and funding sources through FHLB advances. The Company's borrowing capacity is dependent upon the amount of collateral the Company places at the FHLB. The Company's borrowing capacity with the FHLB was $814.6 million as of December 31, 2018. The Company had no outstanding FHLB advances at FHLB of Des Moines as of December 31, 2018.

Risk-based capital guidelines established by regulatory agencies set minimum capital standards based on the level of risk associated with a financial institution's assets. The Company has implemented the Basel III regulatory capital rules adopted by the FRB. Basel III capital rules include a minimum ratio of common equity tier 1 capital to risk-weighted assets of 4.5 percent and a minimum tier 1 risk-based capital ratio of 6 percent. A financial institution's total capital is also required to equal at least 8 percent of risk-weighted assets. The Basel III regulatory capital rules include transitional periods for various components of the rules that require full compliance for the Company by January 1, 2019, including a capital conservation buffer requirement of 2.5 percent of risk-weighted assets for which the transitional period began on January 1, 2016.

The risk-based capital guidelines indicate the specific risk weightings by type of asset. Certain off-balance sheet items (such as standby letters of credit and binding loan commitments) are multiplied by credit conversion factors to translate them into balance sheet equivalents before assigning them specific risk weightings. The Company is also required to maintain a leverage ratio equal to or greater than 4 percent. The leverage ratio is tier 1 core capital to total average assets less goodwill and intangibles. The Company's capital position as of December 31, 2018 is summarized in the table below and exceeded regulatory requirements.

For further discussion of capital and liquidity, see the "Quantitative and Qualitative Disclosures about Market Risk – Liquidity Risk" in Item 7A on page 54 of this report.

Table 18

RISK-BASED CAPITAL (in thousands)

This table computes risk-based capital in accordance with current regulatory guidelines. These guidelines as of December 31, 2018, excluded net unrealized gains or losses on securities available for sale from the computation of regulatory capital and the related risk-based capital ratios.

	Risk-Weighted Category					
	0%	20%	50%	100%	150%	Total
Risk-Weighted Assets						
Loans held for sale	$—	$—	$3,192	$—	$—	$3,192
Loans and leases	10,306	44,973	748,112	11,325,733	49,027	12,178,151
Securities available for sale	854,518	5,805,835	9,737	—	—	6,670,090
Securities held to maturity	—	28,524	1,142,122	—	—	1,170,646
Federal funds and resell agreements	—	500	—	—	—	500
Trading securities	—	3,776	37,974	19,261	—	61,011
Cash and due from banks	1,110,255	582,697	—	—	—	1,692,952
All other assets	23,530	19,434	26,343	902,604	—	971,911
Category totals	$1,998,609	$6,485,739	$1,967,480	$12,247,598	$49,027	$22,748,453
Risk-weighted totals	—	1,297,148	983,740	12,247,598	73,541	14,602,027
Off-balance-sheet items [3]	—	4,877	28,280	1,987,242	—	2,020,399

Total risk-weighted assets	$—	$1,302,025	$1,012,020	$14,234,840	$73,541	$16,622,426

	Total
Regulatory Capital	
Shareholders’ equity	$2,228,470
Less adjustments [1]	(86,001)
Common equity Tier 1/Tier 1 capital	2,142,469
Additional Tier 2 capital [2]	175,676
Total capital	$2,318,145

	Company	
Capital ratios		
Common Equity Tier 1 capital to risk-weighted assets	12.89	%
Tier 1 capital to risk-weighted assets	12.89	%
Total capital to risk-weighted assets	13.95	%
Leverage ratio (Tier 1 capital to total average assets less adjustments (1))	9.87	%

(1) Adjustments include a portion of goodwill and intangibles as well as unrealized gains/losses on available-for-sale securities.
(2) Includes the Company's ALL (inclusive of the reserve for off-balance sheet arrangements) and trust preferred subordinated notes.
(3) After credit conversion factor and risk weighting is applied.

For further discussion of regulatory capital requirements, see Note 10, "Regulatory Requirements" within the Notes to Consolidated Financial Statements under Item 8 on pages 83 through 84.

Commitments, Contractual Obligations and Off-balance Sheet Arrangements

The Company's main off-balance sheet arrangements are loan commitments, commercial and standby letters of credit, futures contracts and forward exchange contracts, which have maturity dates rather than payment due dates. These commitments and contingent liabilities are not required to be recorded on the Company's balance sheet. Since commitments associated with letters of credit and lending and financing arrangements may expire unused, the amounts shown do not necessarily reflect the actual future cash funding requirements. See Table 19 below, as well as Note 15, "Commitments, Contingencies and Guarantees" in the Notes to Consolidated Financial Statements under Item 8 on pages 94 through 96 for detailed information and further discussion of these arrangements. Management does not anticipate any material losses from its off-balance sheet arrangements.

Table 19

COMMITMENTS, CONTRACTUAL OBLIGATIONS AND OFF-BALANCE SHEET ARRANGEMENTS (in thousands)

The table below details the contractual obligations for the Company as of December 31, 2018, and includes principal payments only. The Company has no capital leases or long-term purchase obligations.

	Payments due by Period				
	Total	Less than 1 year	1-3 years	3-5 years	More than 5 years
Contractual Obligations					
Fed funds purchased and repurchase agreements	$1,518,920	$1,518,920	$—	$—	$—
Long-term debt obligations	82,671	2,180	6,607	2,238	71,646
Operating lease obligations	74,362	12,257	20,478	14,535	27,092
Time deposits	1,146,748	863,845	249,945	32,958	—
Total	$2,822,701	$2,397,202	$277,030	$49,731	$98,738

	Maturities due by Period				
	Total	Less than 1 year	1-3 years	3-5 years	More than 5 years
Commitments, Contingencies and Guarantees					
Commitments to extend credit for loans (excluding credit card loans)	$6,870,451	$3,045,082	$1,828,048	$1,052,059	$945,262
Commitments to extend credit under credit card loans	3,152,439	3,152,439	—	—	—
Commercial letters of credit	1,892	1,892	—	—	—
Standby letters of credit	298,915	202,274	83,800	3,874	8,967
Forward contracts	29,796	29,796	—	—	—
Spot foreign exchange contracts	11,183	11,183	—	—	—
Total	$10,364,676	$6,442,666	$1,911,848	$1,055,933	$954,229

As of December 31, 2018, our total liabilities for unrecognized tax benefits were $4.9 million. The Company cannot reasonably estimate the settlement of these liabilities. Therefore, these liabilities have been excluded from the table above. See Note 17, “Income Taxes,” in the Notes to the Consolidated Financial Statements for information regarding the liabilities associated with unrecognized tax benefits.

Critical Accounting Policies and Estimates

Management’s Discussion and Analysis of Financial Condition and Results of Operations discusses the Company’s Consolidated Financial Statements, which have been prepared in accordance with accounting principles generally accepted in the United States of America (GAAP). The preparation of these Consolidated Financial Statements requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and the disclosure of contingent liabilities at the date of the Consolidated Financial Statements and the reported amounts of revenues and expenses during the reporting period. On an on-going basis, management evaluates its estimates and judgments, including those related to customers and suppliers, allowance for loan losses, bad debts, investments, financing operations, long-lived assets, taxes, other contingencies and litigation. Management bases its estimates and judgments on historical experience and on various other factors that are believed to be reasonable under the circumstances, the results of which have formed the basis for making such judgments about the carrying value of assets and liabilities that are not readily apparent from other sources. Under different assumptions or conditions, actual results may differ from the recorded estimates.

Management believes that the Company’s critical accounting policies are those relating to: the allowance for loan losses, goodwill and other intangibles, revenue recognition, accounting for uncertainty in income taxes, and fair value measurements.

Allowance for Loan Losses

The Company’s allowance for loan losses represents management’s judgment of the loan losses inherent in the loan portfolio. The allowance is reviewed quarterly, considering both quantitative and qualitative factors such as historical trends, internal risk ratings, migration analysis, concentrations of credit, current economic conditions, loan growth and individual impairment testing.

Larger commercial loans are individually reviewed for potential impairment. For these loans, if management deems it probable that the borrower cannot meet its contractual obligations with respect to payment or timing such loans are deemed to be impaired under current accounting standards. Such loans are then reviewed for potential impairment based on management's estimate of the borrower's ability to repay the loan given the availability of cash flows, collateral and other legal options. Any allowance related to the impairment of an individually impaired loan is based on the present value of discounted expected future cash flows, the fair value of the underlying collateral, or the fair value of the loan. Based on this analysis, some loans that are classified as impaired do not have a specific allowance as the discounted expected future cash flows or the fair value of the underlying collateral exceeds the Company's basis in the impaired loan.

The Company also maintains an internal risk grading system for other loans not subject to individual impairment. An estimate of the inherent loan losses on such risk-graded loans is based on a migration analysis which computes the net charge-off experience related to each risk category.

An estimate of inherent losses is computed on remaining loans based on the type of loan. Each type of loan is segregated into a pool based on the nature of such loans. This includes remaining commercial loans that have a low risk grade, as well as other homogenous loans. Homogenous loans include automobile loans, credit card loans and other consumer loans. Allowances are established for each pool based on the loan type using historical loss rates, certain statistical measures and loan growth.

An estimate of the total inherent loss is based on the above three computations. From this an adjustment can be made based on other factors management considers to be important in evaluating the probable losses in the portfolio such as general economic conditions, loan trends, risk management and loan administration and changes in internal policies. For more information on loan portfolio segments and ALL methodology refer to Note 3, “Loans and Allowance for Loan Losses,” in the Notes to the Consolidated Financial Statements.

Goodwill and Other Intangibles

Goodwill is tested for impairment annually as of October 1 and more frequently whenever events or changes in circumstance indicate that it is more likely than not that the fair value of a reporting unit is less than its carrying value. To test goodwill for impairment, the Company performs a qualitative assessment of each reporting unit. If the Company determines, on the basis of qualitative factors, that the fair value of the reporting unit is more likely than not greater than the carrying amount, the quantitative impairment test is not required. Otherwise, the Company compares the fair value of its reporting units to their carrying amounts to determine if impairment exists and the amount of impairment loss. An impairment loss is measured as the excess of the carrying value of a reporting unit’s goodwill over its fair value. As a result of such impairment analysis, the Company did not recognize an impairment charge in 2018.

For customer-based identifiable intangibles, the Company amortizes the intangibles over their estimated useful lives of up to 17 years. When facts and circumstances indicate potential impairment of amortizing intangible assets, the Company evaluates the fair value of the asset and compares it to the carrying value for possible impairment. For more information see “Goodwill and Other Intangibles” in Note 7 in the Notes to the Consolidated Financial Statements.

Revenue Recognition

Revenue recognition includes the recording of interest on loans and securities and is recognized based on a rate multiplied by the principal amount outstanding and also includes the impact of the amortization of related premiums and discounts. Interest accrual is discontinued when, in the opinion of management, the likelihood of collection becomes doubtful, or the loan is past due for a period of ninety days or more unless the loan is both well-secured and in the process of collection. Other noninterest income is recognized when performance obligations are satisfied.

Income Taxes

The Company records a provision for income taxes for the anticipated tax consequences of our reported results of operations using the asset and liability method. Deferred income taxes are recognized by applying enacted statutory tax rates applicable to future years to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases as well as tax loss and tax credit carryforwards. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date. The measurement of deferred tax assets is reduced, if necessary, by a valuation allowance for any tax benefits for

which future realization is uncertain. Although the Company believes its assumptions, judgments and estimates are reasonable, changes in tax laws or our interpretation of tax laws and the resolution of any tax audits could significantly impact the amounts provided for income taxes in the consolidated financial statements.

Accounting for Uncertainty in Income Taxes

The Company is subject to income taxes in the U.S. federal and various state jurisdictions. The calculation of tax liabilities involves dealing with uncertainties in the application of complex tax laws and regulations in these jurisdictions. The Company records the financial statement effects of an income tax position when it is more likely than not, based on the technical merits, that it will be sustained upon examination. The estimate for any uncertain tax issue is based on management's best judgment. These estimates may change as a result of changes in tax laws and regulations, interpretations of law by taxing authorities, and income tax examinations among other factors. Due to the complexity of these uncertainties, the ultimate resolution may differ from the current estimate of the tax liabilities. These differences will be reflected as increases or decreases to Income tax expense in the period in which they are determined. See the discussion of "Liabilities Associated with Unrecognized Tax Benefits" under Note 17 in the Notes to the Consolidated Financial Statements.

Fair Value Measurements

Fair value is measured in accordance with GAAP, which defines fair value as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Valuation techniques used to measure fair value include the market approach, income approach and cost approach. The market approach uses prices or relevant information generated by market transactions involving identical or comparable assets or liabilities. The income approach involves discounting future amounts to a single present amount and is based on current market expectations about those future amounts. The cost approach is based on the amount that currently would be required to replace the service capacity of the asset.

GAAP establishes a fair value hierarchy, which prioritizes the inputs to valuation techniques used to measure fair value into three broad levels. The fair value hierarchy gives the highest priority to quoted prices in active markets for identical assets or liabilities (Level 1) and the lowest priority to unobservable inputs (Level 3). An instrument's categorization within the fair value hierarchy is based upon the lowest level of input that is significant to the instrument's fair value measurement. The three levels within the fair value hierarchy are described as follows:

Level 1 - Quoted prices (unadjusted) in active markets for identical assets or liabilities that are available at the measurement date.

Level 2 - Inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly. Level 2 inputs include: quoted prices for similar assets or liabilities in active markets; quoted prices for identical or similar assets or liabilities in markets that are not active; inputs other than quoted prices that are observable for the asset or liability; and inputs that are derived principally from or corroborated by observable market data by correlation or other means.

Level 3 - Unobservable inputs for the asset or liability for which there is little, if any, market activity at the measurement date. Unobservable inputs reflect assumptions about what market participants would use to price the asset or liability. The inputs are developed based on the best information available in the circumstances, which might include the Company's own financial data such as internally developed pricing models and discounted cash flow methodologies, as well as instruments for which the fair value determination requires significant management judgment.

The Company's fair value measurements involve various valuation techniques and models, which involve inputs that are observable, when available, and the most significant of which include available-for-sale and trading securities measured at fair value on a recurring basis.

Fair value pricing information obtained from third party data providers and pricing services for investment securities are reviewed for appropriateness on a periodic basis. The third party service providers are also analyzed to understand and evaluate the valuation methodologies utilized. This review includes an analysis of current market prices compared to pricing provided by the third party pricing service to assess the relative accuracy of the data provided.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Risk Management

Market risk is a broad term for the risk of economic loss due to adverse changes in the fair value of a financial instrument. These changes may be the result of various factors, including interest rates, foreign exchange prices,

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commodity prices, or equity prices. Financial instruments that are subject to market risk can be classified either as held for trading or held for purposes other than trading.

The Company is subject to market risk primarily through the effect of changes in interest rates of its assets held for purposes other than trading. The following discussion of interest rate risk, however, combines instruments held for trading and instruments held for purposes other than trading because the instruments held for trading represent such a small portion of the Company's portfolio that the interest rate risk associated with them is immaterial.

Interest Rate Risk

In the banking industry, a major risk exposure is changing interest rates. To minimize the effect of interest rate changes to net interest income and exposure levels to economic losses, the Company manages its exposure to changes in interest rates through asset and liability management within guidelines established by its Asset Liability Committee (ALCO) and approved by the Board. The ALCO is responsible for approving and ensuring compliance with asset/liability management policies, including interest rate exposure. The Company's primary method for measuring and analyzing consolidated interest rate risk is the Net Interest Income Simulation Analysis. The Company also uses a Net Portfolio Value model to measure market value risk under various rate change scenarios and a gap analysis to measure maturity and repricing relationships between interest-earning assets and interest-bearing liabilities at specific points in time. On a limited basis, the Company uses hedges such as swaps and futures contracts to manage interest rate risk on certain loans, trading securities, trust preferred securities, and deposits. See further information in Note 18 "Derivatives and Hedging Activities" in the Notes to the Company's Consolidated Financial Statements.

Overall, the Company attempts to manage interest rate risk by positioning the balance sheet to maximize net interest income while maintaining an acceptable level of interest rate and credit risk, remaining mindful of the relationship among profitability, liquidity, interest rate risk and credit risk.

Net Interest Income Modeling

The Company's primary interest rate risk tool, the Net Interest Income Simulation Analysis, measures interest rate risk and the effect of interest rate changes on net interest income and net interest margin. This analysis incorporates all of the Company's assets and liabilities together with assumptions that reflect the current interest rate environment. Through these simulations, management estimates the impact on net interest income of a 300 basis point upward or a 100 basis point downward gradual change (e.g. ramp) and immediate change (e.g. shock) of market interest rates over a two year period. In ramp scenarios, rates change gradually for a one year period and remain constant in year two. In shock scenarios, rates change immediately and the change is sustained for the remainder of the two year scenario horizon. Assumptions are made to project rates for new loans and deposits based on historical analysis, management outlook and repricing strategies. Asset prepayments and other market risks are developed from industry estimates of prepayment speeds and other market changes. The results of these simulations can be significantly influenced by assumptions utilized and management evaluates the sensitivity of the simulation results on a regular basis.

Table 20 shows the net interest income percentage increase or decrease over the next twelve and twenty-four month periods as of December 31, 2018 and 2017 based on hypothetical changes in interest rates and a constant sized balance sheet with runoff being replaced.

Table 20

MARKET RISK

	Hypothetical change in interest rate – Rate Ramp			
	Year One		Year Two	
	December 31, 2018 Percentage	December 31, 2017 Percentage	December 31, 2018 Percentage	December 31, 2017 Percentage
(basis points)	change	change	change	change
300	5.2 %	1.3 %	11.5 %	7.1 %
200	3.1	0.1	6.9	3.7
100	1.0	(1.1)	2.3	0.2
Static	—	—	—	—
(100)	(3.4)	(1.5)	(6.4)	(6.0)

	Hypothetical change in interest rate – Rate Shock			
	Year One		Year Two	
	December 31, 2018 Percentage	December 31, 2017 Percentage	December 31, 2018 Percentage	December 31, 2017 Percentage
(basis points)	change	change	change	change
300	11.9 %	6.1 %	13.8 %	10.5 %
200	7.6	3.3	8.5	5.9
100	3.3	0.5	3.1	1.4
Static	—	—	—	—
(100)	(6.2)	(5.3)	(7.5)	(9.3)

The Company is positioned slightly asset sensitive to changes in interest rates. Net interest income is predicted to increase in all upward rate scenarios and decrease in 100 bps down scenario. The increase in net interest income in rising rate scenarios is due to yields on earning assets increasing more due to changes in market rates than the cost of paying liabilities is projected to increase. Net interest income in the down 100 bps scenario is lower due to earning asset yields decreasing more relative to changes in market rates than liability expense. The Company's ability to price deposits in a rising rate environment consistent with our history is a key assumption in these scenarios.

Repricing Mismatch Analysis

The Company also evaluates its interest rate sensitivity position in an attempt to maintain a balance between the amount of interest-bearing assets and interest-bearing liabilities which are expected to mature or reprice at any point in time. While a traditional repricing mismatch analysis (gap analysis) provides a snapshot of interest rate risk, it does not take into consideration that assets and liabilities with similar repricing characteristics may not, in fact, reprice at the same time or the same degree. Also, it does not necessarily predict the impact of changes in general levels of interest rates on net interest income.

Table 21 is a static gap analysis, which presents the Company's assets and liabilities, based on their repricing or maturity characteristics and reflecting principal amortization. Table 22 presents the break-out of fixed and variable rate loans by repricing or maturity characteristics for each loan class.

Table 21

INTEREST RATE SENSITIVITY ANALYSIS (in millions)

	1-90 Days	91-180 Days	181-365 Days	Total	1-5 Years	Over 5 Years	Total
December 31, 2018							
Earning assets							
Loans	$7,280.3	$410.7	$645.8	$8,336.8	$3,077.4	$767.1	$12,181.3
Securities	1,556.6	252.0	648.2	2,456.8	2,760.4	2,569.9	7,787.1
Federal funds sold and resell agreements	627.0	—	—	627.0	—	—	627.0
Other	1,108.9	—	—	1,108.9	—	—	1,108.9
Total earning assets	$10,572.8	$662.7	$1,294.0	$12,529.5	$5,837.8	$3,337.0	$21,704.3
% of total earning assets	48.7 %	3.0 %	6.0 %	57.7 %	26.9 %	15.4 %	100.0 %
Funding sources							
Interest-bearing demand and savings	$2,040.2	$1,529.8	$3,059.7	$6,629.7	$393.9	$4,430.8	$11,454.4
Time deposits	582.4	118.8	162.6	863.8	268.5	14.4	1,146.7
Federal funds purchased and repurchase agreements	1,518.9	—	—	1,518.9	—	—	1,518.9
Borrowed funds	69.4	—	0.2	69.6	3.1	10.0	82.7
Noninterest-bearing sources	4,323.5	86.9	161.5	4,571.9	875.5	2,054.2	7,501.6
Total funding sources	$8,534.4	$1,735.5	$3,384.0	$13,653.9	$1,541.0	$6,509.4	$21,704.3
% of total earning assets	39.3 %	8.0 %	15.6 %	62.9 %	7.1 %	30.0 %	100.0 %
Interest sensitivity gap	$2,038.4	$(1,072.8)	$(2,090.0)	$(1,124.4)	$4,296.8	$(3,172.4)	
Cumulative gap	2,038.4	965.6	(1,124.4)	(1,124.4)	3,172.4	—	
As a % of total earning assets	9.4 %	4.4 %	(5.2)%	(5.2)%	14.6 %	— %	
Ratio of earning assets to funding sources	1.24	0.38	0.38	0.92	3.79	0.51	
Cumulative ratio of earning assets to funding sources							
2018	1.24	1.09	0.92	0.92	1.21	1.00	
2017	0.98	0.89	0.77	0.77	1.16	1.00	

Table 22

Maturities and Sensitivities to Changes in Interest Rates

This table details loan maturities by variable and fixed rates as of December 31, 2018 (in thousands):

	Due in one year or less	Due after one year through five years	Due after five years	Total
Variable Rate				
Commercial	$3,675,481	$147,350	$8,017	$3,830,848
Asset-based	378,045	—	—	378,045
Factoring	261,591	—	—	261,591
Commercial – Credit Card	166,334	—	—	166,334
Real Estate – Construction	677,627	15,814	783	694,224
Real Estate – Commercial	1,301,346	176,820	26,322	1,504,488
Real Estate – Residential	29,905	104,507	36,688	171,100
Real Estate – HELOC	320,920	195,157	660	516,737
Consumer – Credit Card	222,255	8,727	—	230,982
Consumer – Other	94,932	163	—	95,095
Leases	5,248	—	—	5,248
Total variable rate loans	7,133,684	648,538	72,470	7,854,692
Fixed Rate				
Commercial	437,971	891,791	67,792	1,397,554
Asset-based	—	2,693	—	2,693
Factoring	—	—	—	—
Commercial – Credit Card	—	—	—	—
Real Estate – Construction	13,252	59,788	25,301	98,341
Real Estate – Commercial	641,569	1,282,982	285,241	2,209,792
Real Estate – Residential	78,973	155,684	304,939	539,596
Real Estate – HELOC	4,350	14,235	10,399	28,984
Consumer – Credit Card	—	—	—	—
Consumer – Other	26,981	21,719	990	49,690
Leases	—	—	—	—
Total fixed rate loans	1,203,096	2,428,892	694,662	4,326,650
Total loans and loans held for sale	$8,336,780	$3,077,430	$767,132	$12,181,342

Trading Account

The Bank carries taxable governmental securities in a trading account that is maintained in accordance with Board-approved policy and procedures. The policy limits the amount and type of securities that can be carried in the trading account and requires compliance with any limits under applicable law and regulations, and mandates the use of a value-at-risk methodology to manage price volatility risks within financial parameters. The risk associated with the carrying of trading securities is offset by the sale of exchange-traded financial futures contracts, with both the trading account and futures contracts marked to market daily. This account had a balance of $61.0 million as of December 31, 2018, compared to $54.1 million as of December 31, 2017.

The Company is subject to market risk primarily through the effect of changes in interest rates of its assets held for purposes other than trading. The discussion in Table 21 above of interest rate risk, however, combines instruments held for trading and instruments held for purposes other than trading, because the instruments held for trading represent such a small portion of the Company's portfolio that the interest rate risk associated with them is immaterial.

Other Market Risk

The Company has minimal foreign currency risk as a result of foreign exchange contracts. See Note 10, "Commitments, Contingencies and Guarantees" in the Notes to the Consolidated Financial Statements.

Credit Risk Management

Credit risk represents the risk that a customer or counterparty may not perform in accordance with contractual terms. The Company utilizes a centralized credit administration function, which provides information on the Bank's risk levels, delinquencies, an internal ranking system and overall credit exposure. Loan requests are centrally reviewed to ensure the consistent application of the loan policy and standards. In addition, the Company has an internal loan review staff that operates independently of the Bank. This review team performs periodic examinations of the bank's loans for credit quality, documentation and loan administration. The respective regulatory authority of the Bank also reviews loan portfolios.

A primary indicator of credit quality and risk management is the level of nonperforming loans. Nonperforming loans include both nonaccrual loans and restructured loans on nonaccrual. The Company's nonperforming loans decreased $16.1 million to $43.0 million at December 31, 2018, compared to December 31, 2017. This decrease was primarily driven by five credits of approximately $3 million each from three different industries which were charged off during 2017. There was an immaterial amount of interest recognized on nonperforming loans during 2018, 2017, and 2016.

The Company had $3.3 million and $1.5 million of other real estate owned as of December 31, 2018 and 2017, respectively. Loans past due more than 90 days and still accruing interest totaled $6.0 million as of December 31, 2018, compared to $3.1 million as of December 31, 2017.

A loan is generally placed on nonaccrual status when payments are past due 90 days or more and/or when management has considerable doubt about the borrower's ability to repay on the terms originally contracted. The accrual of interest is discontinued and recorded thereafter only when actually received in cash.

Certain loans are restructured to provide a reduction or deferral of interest or principal due to deterioration in the financial condition of the respective borrowers. The Company had $21.1 million of restructured loans at December 31, 2018 and $41.0 million at December 31, 2017.

During 2018, the Company had net charge-offs of $67.7 million, an increase of $22.1 million as compared to the same period in 2017. This increase is largely attributable to a $48.1 million loss recognized on a single factoring credit relationship, which has since entered into bankruptcy.

Table 23

LOAN QUALITY (in thousands)

	December 31, 2018	2017	2016	2015	2014
Nonaccrual loans	$22,376	$37,731	$41,765	$45,589	$18,660
Restructured loans on nonaccrual	20,642	21,411	28,494	15,563	8,722
Total non-performing loans	43,018	59,142	70,259	61,152	27,382
Other real estate owned	3,338	1,501	194	3,307	394
Total non-performing assets	$46,356	$60,643	$70,453	$64,459	$27,776
Loans past due 90 days or more	$6,009	$3,091	$3,365	$7,324	$3,830
Restructured loans accruing	411	19,603	24,013	21,029	583
Allowance for loans losses	103,635	100,604	91,649	81,143	76,140
Ratios					
Non-performing loans as a % of loans	0.35 %	0.52 %	0.67 %	0.65 %	0.37 %
Non-performing assets as a % of loans plus other real estate owned	0.38	0.54	0.67	0.68	0.37
Non-performing assets as a % of total assets	0.20	0.28	0.34	0.34	0.16
Loans past due 90 days or more as a % of loans	0.05	0.03	0.03	0.08	0.05
Allowance for Loan Losses as a % of loans	0.85	0.89	0.87	0.86	1.02
Allowance for Loan Losses as a multiple of non-performing loans	2.41x	1.70x	1.30x	1.33x	2.78x

Liquidity Risk

Liquidity represents the Company’s ability to meet financial commitments through the maturity and sale of existing assets or availability of additional funds. The Company believes that the most important factor in the preservation of liquidity is maintaining public confidence that facilitates the retention and growth of a large, stable supply of core deposits and wholesale funds. Ultimately, the Company believes public confidence is generated through profitable operations, sound credit quality and a strong capital position. The primary source of liquidity for the Company is regularly scheduled payments on and maturity of assets, which include $6.5 billion of high-quality securities available for sale. The liquidity of the Company and the Bank is also enhanced by its activity in the federal funds market and by its core deposits. Additionally, management believes it can raise debt or equity capital on favorable terms in the future, should the need arise.

Another factor affecting liquidity is the amount of deposits and customer repurchase agreements that have pledging requirements. All customer repurchase agreements require collateral in the form of a security. The U.S. Government, other public entities, and certain trust depositors require the Company to pledge securities if their deposit balances are greater than the FDIC-insured deposit limitations. These pledging requirements affect liquidity risk in that the related security cannot otherwise be disposed due to the pledging restriction. At December 31, 2018, $5.7 billion, or 87.1 percent, of the securities available-for-sale were pledged or used as collateral, compared to $5.7 billion, or 91.3 percent, at December 31, 2017. However of these amounts, securities with a market value of $1.0 billion at December

31, 2018 and $1.8 billion at December 31, 2017, were pledged at the Federal Reserve Discount Window but were unencumbered as of those dates.

The Company also has other commercial commitments that may impact liquidity. These commitments include unused commitments to extend credit, standby letters of credit and financial guarantees, and commercial letters of credit. The total amount of these commercial commitments at December 31, 2018 was $10.3 billion. Since many of these commitments expire without being drawn upon, the total amount of these commercial commitments does not necessarily represent the future cash requirements of the Company.

The Company's cash requirements consist primarily of dividends to shareholders, debt service, operating expenses, and treasury stock purchases. Management fees and dividends received from bank and non-bank subsidiaries traditionally have been sufficient to satisfy these requirements and are expected to be sufficient in the future. The Bank is subject to various rules regarding payment of dividends to the Company. For the most part, the Bank can pay dividends at least equal to its current year's earnings without seeking prior regulatory approval. The

Company also uses cash to inject capital into the Bank and its non-Bank subsidiaries to maintain adequate capital as well as to fund strategic initiatives.

To enhance general working capital needs, the Company has a revolving line of credit with Wells Fargo Bank, N.A. which allows the Company to borrow up to $50.0 million for general working capital purposes. The interest rate applied to borrowed balances will be at the Company's option, either 1.00 percent above LIBOR or 1.75 percent below the prime rate on the date of an advance. The Company pays a 0.3 percent unused commitment fee for unused portions of the line of credit. The Company had no advances outstanding at December 31, 2018.

The Company is a member bank of the FHLB. The Company owns $10.0 million of FHLB stock and has access to additional liquidity and funding sources through FHLB advances. The Company has access to borrow up to $814.6 million through advances at the FHLB of Des Moines, but had no outstanding FHLB Des Moines advances as of December 31, 2018.

Operational Risk

Operational risk generally refers to the risk of loss resulting from the Company's operations, including those operations performed for the Company by third parties. This would include but is not limited to the risk of fraud by employees or persons outside the Company, the execution of unauthorized transactions by employees or others, errors relating to transaction processing, breaches of the internal control system and compliance requirements, and unplanned interruptions in service. This risk of loss also includes the potential legal or regulatory actions that could arise as a result of an operational deficiency, or as a result of noncompliance with applicable regulatory standards. Included in the legal and regulatory issues with which the Company must comply are a number of rules resulting from the enactment of the Sarbanes-Oxley Act of 2002, as amended.

The Company operates in many markets and relies on the ability of its employees and systems to properly process a high number of transactions. In the event of a breakdown in internal control systems, improper operation of systems or improper employee actions, the Company could suffer financial loss, face regulatory action and suffer damage to its reputation. In order to address this risk, management maintains a system of internal controls with the objective of providing proper transaction authorization and execution, safeguarding of assets from misuse or theft, and ensuring the reliability of financial and other data.

The Company maintains systems of internal controls that provide management with timely and accurate information about the Company's operations. These systems have been designed to manage operational risk at appropriate levels given the Company's financial strength, the environment in which it operates, and considering factors such as competition and regulation. The Company has also established procedures that are designed to ensure that policies relating to conduct, ethics and business practices are followed on a uniform basis. In certain cases, the Company has experienced losses from operational risk. Such losses have included the effects of operational errors that the Company has discovered and included as expense in the statement of income. While there can be no assurance that the Company will not suffer such losses in the future, management continually monitors and works to improve its internal controls, systems and corporate-wide processes and procedures.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Shareholders

UMB Financial Corporation and Subsidiaries:

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated balance sheets of UMB Financial Corporation and subsidiaries (the Company) as of December 31, 2018 and 2017, and the related consolidated statements of income, comprehensive income, changes in shareholders' equity, and cash flows for each of the years in the three year period ended December 31, 2018, and the related notes (collectively, the consolidated financial statements). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2018 and 2017, and the results of its operations and its cash flows for each of the years in the three year period ended December 31, 2018, 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, 2018, based on criteria established in Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission, and our report dated March 1, 2019 expressed an unqualified opinion on the effectiveness of the Company's internal control over financial reporting.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated 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 consolidated 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 consolidated 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 consolidated 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 consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ KPMG LLP

We have served as the Company's auditor since 2014.

Kansas City, Missouri
March 1, 2019

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UMB FINANCIAL CORPORATION

CONSOLIDATED BALANCE SHEETS

(dollars in thousands, except share and per share data)

	December 31,	
	2018	2017
ASSETS		
Loans	$12,178,150	$11,280,513
Allowance for loan losses	(103,635)	(100,604)
Net loans	12,074,515	11,179,909
Loans held for sale	3,192	1,460
Securities:		
Available for sale	6,542,800	6,258,577
Held to maturity (fair value of $1,070,532 and $1,207,447, respectively)	1,170,646	1,261,014
Trading securities	61,011	54,055
Other securities	73,692	65,897
Total investment securities	7,848,149	7,639,543
Federal funds sold and securities purchased under agreements to resell	627,001	191,601
Interest-bearing due from banks	1,047,830	1,351,760
Cash and due from banks	645,123	392,723
Premises and equipment, net	283,879	275,942
Accrued income	110,168	98,863
Goodwill	180,867	180,867
Other intangibles, net	15,003	20,257
Other assets	515,392	438,658
Total assets	$23,351,119	$21,771,583
LIABILITIES		
Deposits:		
Noninterest-bearing demand	$6,680,070	$6,839,171
Interest-bearing demand and savings	11,454,442	9,903,565
Time deposits under $250,000	593,904	547,990
Time deposits of $250,000 or more	552,844	732,274
Total deposits	19,281,260	18,023,000
Federal funds purchased and repurchase agreements	1,518,920	1,260,704
Long-term debt	82,671	79,281
Accrued expenses and taxes	177,731	191,464
Other liabilities	62,067	35,603
Total liabilities	21,122,649	19,590,052
SHAREHOLDERS' EQUITY		
Common stock, $1.00 par value; 80,000,000 shares authorized, 55,056,730 shares issued and 49,117,222 and 49,894,990 shares outstanding, respectively	55,057	55,057
Capital surplus	1,054,601	1,046,095

Retained earnings	1,488,421	1,338,110
Accumulated other comprehensive loss, net	(95,782)	(45,525)
Treasury stock, 5,939,508 and 5,161,740 shares, at cost, respectively	(273,827)	(212,206)
Total shareholders' equity	2,228,470	2,181,531
Total liabilities and shareholders' equity	$23,351,119	$21,771,583

See Notes to Consolidated Financial Statements.

UMB FINANCIAL CORPORATION

CONSOLIDATED STATEMENTS OF INCOME

(dollars in thousands, except share and per share data)

	Year Ended December 31,		
	2018	2017	2016
INTEREST INCOME			
Loans	$559,351	$461,301	$386,274
Securities:			
Taxable interest	83,333	73,125	73,560
Tax-exempt interest	74,411	73,419	57,516
Total securities income	157,744	146,544	131,076
Federal funds and resell agreements	4,808	3,700	2,708
Interest-bearing due from banks	7,910	3,871	2,341
Trading securities	2,148	1,496	632
Total interest income	731,961	616,912	523,031
INTEREST EXPENSE			
Deposits	92,101	36,354	17,936
Federal funds and repurchase agreements	24,737	17,906	6,524
Other	4,677	3,739	3,248
Total interest expense	121,515	57,999	27,708
Net interest income	610,446	558,913	495,323
Provision for loan losses	70,750	41,000	32,500
Net interest income after provision for loan losses	539,696	517,913	462,823
NONINTEREST INCOME			
Trust and securities processing	172,163	176,646	166,315
Trading and investment banking	15,584	23,183	21,422
Service charges on deposit accounts	84,287	87,680	86,662
Insurance fees and commissions	1,292	1,972	4,188
Brokerage fees	25,807	23,208	17,833
Bankcard fees	68,520	73,030	68,749
Gains on sales of securities available for sale, net	578	4,192	8,509
Other	33,467	33,651	28,833
Total noninterest income	401,698	423,562	402,511
NONINTEREST EXPENSE			
Salaries and employee benefits	419,091	413,830	390,059
Occupancy, net	45,239	44,462	44,255
Equipment	75,184	72,008	66,337
Supplies and services	16,103	17,173	18,535
Marketing and business development	24,372	21,469	21,208
Processing fees	46,977	42,331	36,005
Legal and consulting	29,859	23,406	20,801
Bankcard	17,514	19,471	20,757
Amortization of other intangible assets	5,764	7,326	8,695
Regulatory fees	12,695	15,527	14,178

Other	25,002	28,126	25,915
Total noninterest expense	717,800	705,129	666,745
Income before income taxes	223,594	236,346	198,589
Income tax expense	27,334	53,370	44,955
Income from continuing operations	196,260	182,976	153,634
Discontinued Operations			
(Loss) income from discontinued operations before taxes	(917)	101,226	8,415
Income tax (benefit) expense	(170)	37,097	3,248
(Loss) income from discontinued operations	(747)	64,129	5,167
NET INCOME	$195,513	$247,105	$158,801

PER SHARE DATA			
Basic:			
Income from continuing operations	$3.98	$3.72	$3.15
(Loss) income from discontinued operations	(0.01)	1.30	0.10
Net income – basic	3.97	5.02	3.25
Diluted:			
Income from continuing operations	3.94	3.67	3.12
(Loss) income from discontinued operations	(0.01)	1.29	0.10
Net income - diluted	3.93	4.96	3.22
Weighted average shares outstanding – basic	49,334,937	49,223,661	48,828,313
Weighted average shares outstanding – diluted	49,770,737	49,839,290	49,277,055

See Notes to Consolidated Financial Statements.

UMB FINANCIAL CORPORATION

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

(dollars in thousands)

	Year Ended December 31,		
	2018	2017	2016
Net income	$195,513	$247,105	$158,801
Other comprehensive (loss) income, net of tax:			
Unrealized gains and losses on debt securities:			
Change in unrealized holding gains and losses, net	(51,271)	21,139	(77,794)
Less: Reclassification adjustment for net gains included in net income	(578)	(4,192)	(8,509)
Change in unrealized gains and losses on debt securities during the period	(51,849)	16,947	(86,303)
Change in unrealized gains and losses on derivative hedges	1,906	(1,050)	(516)
Income tax benefit (expense)	12,735	(3,880)	32,995
Other comprehensive (loss) income before reclassifications	(37,208)	12,017	(53,824)
Amounts reclassified from accumulated other comprehensive income[1][2]	(13,049)	—	—
Net current-period other comprehensive (loss) income	(50,257)	12,017	(53,824)
Comprehensive income	$145,256	$259,122	$104,977

(1) See Note 2, “New Accounting Pronouncements,” for discussions of the Company’s adoption of Accounting Standards Update (ASU) No. 2016-01.

(2) See Note 2, “New Accounting Pronouncements,” for discussion of the Company’s adoption of ASU No. 2018-02.

See Notes to Consolidated Financial Statements.

UMB FINANCIAL CORPORATION

CONSOLIDATED STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY

(dollars in thousands, except per share data)

	Common Stock	Capital Surplus	Retained Earnings	Accumulated Other Comprehensive Loss	Treasury Stock	Total
Balance January 1, 2016	$55,057	$1,019,889	$1,033,990	$(3,718)	$(211,524)	$1,893,694
Total comprehensive income (loss)	—	—	158,801	(53,824)	—	104,977
Dividends ($0.99 per share)	—	—	(49,048)	—	—	(49,048)
Purchase of treasury stock	—	—	—	—	(16,367)	(16,367)
Issuance of equity awards	—	(3,011)	—	—	3,440	429
Recognition of equity based compensation	—	11,306	—	—	—	11,306
Sale of treasury stock	—	480	—	—	616	1,096
Exercise of stock options	—	3,417	—	—	12,398	15,815
Cumulative effect adjustment [1]	—	1,338	(856)	—	—	482
Balance December 31, 2016	$55,057	$1,033,419	$1,142,887	$(57,542)	$(211,437)	$1,962,384
Total comprehensive income	—	—	247,105	12,017	—	259,122
Dividends ($1.04 per share)	—	—	(51,882)	—	—	(51,882)
Purchase of treasury stock	—	—	—	—	(15,276)	(15,276)
Issuance of equity awards	—	(2,871)	—	—	3,343	472
Recognition of equity based compensation	—	12,844	—	—	—	12,844
Sale of treasury stock	—	608	—	—	512	1,120
Exercise of stock options	—	2,095	—	—	10,652	12,747
Balance December 31, 2017	$55,057	$1,046,095	$1,338,110	$(45,525)	$(212,206)	$2,181,531
Total comprehensive income (loss)	—	—	195,513	(50,257)	—	145,256
Reclassification of certain tax effects [2]	—	—	12,917	—	—	12,917
Dividends ($1.17 per share)	—	—	(58,264)	—	—	(58,264)
Purchase of treasury stock	—	(2,807)	—	—	(73,700)	(76,507)
Issuance of equity awards	—	(2,004)	—	—	2,499	495
Recognition of equity based compensation	—	10,579	—	—	—	10,579
Sale of treasury stock	—	524	—	—	538	1,062
Exercise of stock options	—	2,214	—	—	9,042	11,256
Cumulative effect adjustments [3]	—	—	145	—	—	145
Balance December 31, 2018	$55,057	$1,054,601	$1,488,421	$(95,782)	$(273,827)	$2,228,470

(1) Related to the adoption of ASU No. 2016-09. See Note 2, “New Accounting Pronouncements,” for further detail.

(2) Related to the adoption of ASU No. 2018-02. See Note 2, "New Accounting Pronouncements," for further detail.

(3) Related to the adoption of ASU Nos. 2016-01 and 2017-12. See Note 2, "New Accounting Pronouncements," for further detail.

See Notes to Consolidated Financial Statements.

UMB FINANCIAL CORPORATION

CONSOLIDATED STATEMENTS OF CASH FLOWS

(dollars in thousands)

	Year Ended December 31,		
	2018	2017	2016
OPERATING ACTIVITIES			
Net income	$195,513	$247,105	$158,801
Adjustments to reconcile net income to net cash provided by operating activities:			
Provision for loan losses	70,750	41,000	32,500
Net accretion of premiums and discounts from acquisition	(398)	(1,906)	(2,303)
Depreciation and amortization	53,116	54,875	54,556
Deferred income tax (benefit) expense	(20,261)	59,738	2,756
Net increase in trading securities and other earning assets	(9,889)	(10,805)	(12,420)
Gains on sales of securities available for sale, net	(578)	(4,192)	(8,509)
Gains on sales of assets	(2,721)	(103,346)	(762)
Amortization of securities premiums, net of discount accretion	43,773	48,101	54,467
Originations of loans held for sale	(59,687)	(65,163)	(92,438)
Gains on sales of loans held for sale, net	(1,183)	(1,561)	(1,774)
Proceeds from sales of loans held for sale	59,138	70,543	89,522
Equity based compensation	11,074	13,316	11,735
Net tax benefit related to equity compensation plans	2,364	3,612	1,073
Changes in:			
Accrued income	(11,305)	(9,201)	(8,918)
Accrued expenses and taxes	(13,747)	(40,806)	14,112
Other assets and liabilities, net	(18,862)	25,216	4,042
Net cash provided by operating activities	297,097	326,526	296,440
INVESTING ACTIVITIES			
Proceeds from maturities of securities held to maturity	114,550	87,595	48,539
Proceeds from sales of securities available for sale	95,525	578,517	951,264
Proceeds from maturities of securities available for sale	1,017,230	1,198,834	1,792,357
Purchases of securities held to maturity	(33,158)	(236,832)	(500,682)
Purchases of securities available for sale	(1,486,578)	(1,585,395)	(2,546,028)
Net increase in loans	(970,399)	(770,727)	(1,129,026)
Net (increase) decrease in fed funds sold and resell agreements	(435,400)	132,726	(150,700)
Net cash activity from acquisitions and divestitures	(8,907)	164,561	—
Net decrease in interest bearing balances due from other financial institutions	9,389	45,752	88,009
Purchases of premises and equipment	(57,940)	(36,447)	(50,841)
Proceeds from sales of premises and equipment	5,379	3,037	1,760
Purchases of bank-owned and company-owned life insurance	—	(62,800)	(7,095)
Proceeds from bank-owned life insurance death benefit	16	2,601	—
Net cash used in investing activities	(1,750,293)	(478,578)	(1,502,443)
FINANCING ACTIVITIES			

Net increase in demand and savings deposits	1,402,119	1,307,843	1,598,026
Net (decrease) increase in time deposits	(129,159)	144,543	(119,315)
Net increase (decrease) in fed funds purchased and repurchase agreements	258,216	(596,233)	38,875
Net decrease in short-term debt	—	—	(5,000)
Proceeds from long-term debt	4,000	3,003	1,500
Repayment of long-term debt	(1,653)	(1,524)	(11,703)
Payment of contingent consideration on acquisitions	—	—	(3,031)
Cash dividends paid	(58,279)	(51,876)	(49,038)
Proceeds from exercise of stock options and sales of treasury shares	12,318	13,867	16,911
Purchases of treasury stock	(76,507)	(15,276)	(16,367)
Net cash provided by financing activities	1,411,055	804,347	1,450,858
(Decrease) increase in cash and cash equivalents	(42,141)	652,295	244,855
Cash and cash equivalents at beginning of year	1,716,262	1,063,967	819,112
Cash and cash equivalents at end of year	$1,674,121	$1,716,262	$1,063,967
Supplemental disclosures:			
Income taxes paid	$63,127	$45,749	$44,076
Total interest paid	115,163	56,820	27,999

See Notes to Consolidated Financial Statements.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

UMB Financial Corporation is a bank holding company, which offers a wide range of banking and other financial services to its customers through its branches and offices in the states of Missouri, Kansas, Colorado, Illinois, Oklahoma, Texas, Arizona, Nebraska, Pennsylvania, South Dakota, Indiana, Utah, Minnesota, California, and Wisconsin. The preparation of consolidated financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amount of assets and liabilities and disclosure of contingent assets and liabilities at the date of the consolidated financial statements. These estimates and assumptions also impact reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates. Following is a summary of the more significant accounting policies to assist the reader in understanding the financial presentation.

Consolidation

The Company and its wholly owned subsidiaries are included in the Consolidated Financial Statements (references hereinafter to the "Company" in these Notes to Consolidated Financial Statements include wholly owned subsidiaries). Intercompany accounts and transactions have been eliminated in consolidation.

Revenue Recognition

Interest on loans and securities is recognized based on rate times the principal amount outstanding. This includes the impact of amortization of premiums and discounts. Interest accrual is discontinued when, in the opinion of management, the likelihood of collection becomes doubtful. Other noninterest income is recognized when performance obligations are satisfied.

Cash and cash equivalents

Cash and cash equivalents include Cash and due from banks and amounts due from the FRB. Cash on hand, cash items in the process of collection, and amounts due from correspondent banks are included in Cash and due from banks. Amounts due from the FRB are interest-bearing for all periods presented and are included in the Interest-bearing due from banks line on the Company's Consolidated Balance Sheets.

This table provides a summary of cash and cash equivalents as presented on the Consolidated Statements of Cash Flows as of December 31, 2018 and 2017 (in thousands):

	December 31,	
	2018	2017
Due from the FRB	$1,028,998	$1,323,539
Cash and due from banks	645,123	392,723
Cash and cash equivalents at end of year	$1,674,121	$1,716,262

Also included in the Interest-bearing due from banks line, but not considered cash and cash equivalents are interest-bearing accounts held at other financial institutions, which totaled $18.8 million and $28.2 million at December 31, 2018 and 2017, respectively.

Loans and Loans Held for Sale

Loans are classified by the portfolio segments of commercial, real estate, consumer, and leases. The portfolio segments are further disaggregated into the loan classes of commercial, asset-based, factoring, commercial credit card, real estate – construction, real estate – commercial, real estate – residential, real estate – HELOC, consumer – credit card, consumer – other, and leases.

A loan is considered to be impaired when management believes it is probable that it will be unable to collect all principal and interest due according to the contractual terms of the loan. If a loan is impaired, the Company records a valuation allowance equal to the carrying amount of the loan in excess of the present value of the estimated future cash flows discounted at the loan's effective rate, based on the loan's observable market price or the fair value of the collateral if the loan is collateral dependent.

A loan is accounted for as a troubled debt restructuring when a concession had been granted to a debtor experiencing financial difficulties. The Company's modifications generally include interest rate adjustments, and amortization and maturity date extensions. These modifications allow the debtor short-term cash relief to allow them to improve their financial condition. Restructured loans are individually evaluated for impairment as part of the allowance for loan loss analysis.

Loans, including those that are considered to be impaired and restructured, are evaluated regularly by management. Loans are considered delinquent when payment has not been received within 30 days of its contractual due date. Loans are placed on non-accrual status when the collection of interest or principal is 90 days or more past due, unless the loan is adequately secured and in the process of collection. When a loan is placed on non-accrual status, any interest previously accrued but not collected is reversed against current income. Loans may be returned to accrual status when all the principal and interest amounts contractually due are brought current and future payments are reasonably assured. Interest payments received on non-accrual loans are applied to principal unless the remaining principal balance has been determined to be fully collectible.

The adequacy of the allowance for loan losses is based on management's continuing evaluation of the pertinent factors underlying the quality of the loan portfolio, including actual loan loss experience, current economic conditions, detailed analysis of individual loans for which full collectability may not be assured, determination of the existence and realizable value of the collateral and guarantees securing such loans. The actual losses, notwithstanding such considerations, however, could differ from the amounts estimated by management.

The Company maintains a reserve, separate from the allowance for loan losses, to address the risk of loss associated with loan contingencies, which is included in the Accrued expenses and taxes line item in the Consolidated Balance Sheets. In order to maintain the reserve for off-balance sheet items at an appropriate level, a provision to increase or reduce the reserve is included in the Company's Consolidated Statements of Income. The level of the reserve will be adjusted as needed to maintain the reserve at a specified level in relation to contingent loan risk. The risk of loss arising from un-funded loan commitments has been assessed by dividing the contingencies into pools of similar loan commitments and by applying two factors to each pool. The gross amount of contingent exposure is first multiplied by a potential use factor to estimate the degree to which the unused commitments might reasonably be expected to be used in a time of high usage. The resultant figure is then multiplied by a factor to estimate the risk of loss assuming funding of these loans. The potential loss estimates for each segment of the portfolio are added to arrive at a total potential loss estimate that is used to set the reserve.

Purchased loans are recorded at estimated fair value at the acquisition date with no carryover of the related allowance. Purchased loans are segregated between those considered to be performing, non-purchased credit impaired loans (Non-PCI), and those with evidence of credit deterioration, purchased credit impaired loans (PCI). Purchased loans are considered impaired if there is evidence of credit deterioration and if it is probable, at acquisition, that all contractually required payments will not be collected.

Loans held for sale are carried at the lower of aggregate cost or market value. Loan fees (net of certain direct loan origination costs) on loans held for sale are deferred until the related loans are sold or repaid. Gains or losses on loan sales are recognized at the time of sale and determined using the specific identification method.

Securities

Debt securities available for sale principally include U.S. Treasury and agency securities, Government Sponsored Entity (GSE) mortgage-backed securities, certain securities of state and political subdivisions, and corporates. Debt securities classified as available for sale are measured at fair value. Unrealized holding gains and losses are excluded from earnings and reported in Accumulated other comprehensive income (loss) (AOCI) until realized. Realized gains

and losses on sales are computed by the specific identification method at the time of disposition and are shown separately as a component of noninterest income.

Securities held to maturity are carried at amortized historical cost based on management's intention, and the Company's ability to hold them to maturity. The Company classifies certain securities of state and political subdivisions as held to maturity.

Trading securities, acquired for subsequent sale to customers, are carried at fair value. Market adjustments, fees and gains or losses on the sale of trading securities are considered to be a normal part of operations and are included in trading and investment banking income.

Equity-method investments

The Company accounts for certain other investments using equity-method accounting. For non-marketable equity-method investments, the Company's proportionate share of the income or loss is recognized on a one-quarter lag. When transparency in pricing exists, other investments are considered marketable equity-method investments. For marketable equity-method investments, the Company recognizes its proportionate share of income or loss as of the date of the Company's Consolidated Financial Statements.

Goodwill and Other Intangibles

Goodwill is tested for impairment annually and more frequently whenever events or changes in circumstances indicate that it is more likely than not that the fair value of a reporting unit is less than its carrying value. To test goodwill for impairment, the Company performs a qualitative assessment of each reporting unit. If the Company determines, on the basis of qualitative factors, that the fair value of the reporting unit is more likely than not greater than the carrying amount, the quantitative impairment test is not required. Otherwise, the Company compares the fair value of its reporting units to their carrying amounts to determine if an impairment exists and the amount of impairment loss. An impairment loss is measured as the excess of the carrying value of a reporting unit's goodwill over its fair value. As a result of such impairment analysis, the Company has not recognized an impairment charge.

No goodwill impairments were recognized in 2018, 2017, or 2016. Other intangible assets are amortized over a period of up to 17 years and are evaluated for impairment when events or circumstances dictate. No intangible asset impairments were recognized in 2018, 2017, or 2016. The Company does not have any indefinite lived intangible assets.

Premises and Equipment

Premises and equipment are stated at cost less accumulated depreciation, which is computed primarily on the straight line method. Premises are depreciated over 15 to 40 year lives, while equipment is depreciated over lives of 3 to 20 years. Gains and losses from the sale of Premises and equipment are included in Other noninterest income and Other noninterest expense, respectively.

Impairment of Long-Lived Assets

Long-lived assets, including Premises and equipment, are reviewed for impairment whenever events or changes in circumstances indicate the carrying amount of an asset or group of assets may not be recoverable. The impairment review includes a comparison of future cash flows expected to be generated by the asset or group of assets to their current carrying value. If the carrying value of the asset or group of assets exceeds expected cash flows (undiscounted and without interest charges), an impairment loss is recognized to the extent the carrying value exceeds fair value. No impairments were recognized in 2018, 2017, or 2016.

Income Taxes

The Company accounts for income taxes under the asset and liability method, which requires the recognition of deferred tax assets and liabilities for the expected future tax consequences of events that have been included in the financial statements. Under this method, deferred tax assets and liabilities are measured based on the differences between the financial statement and tax basis of assets and liabilities using enacted tax rates in effect for the periods in which the differences are expected to reverse. The effect of a change in tax rates on deferred tax assets and liabilities is recognized in income in the period that includes the enactment date. The provision for deferred income taxes represents the change in the deferred income tax accounts during the year excluding the tax effect of the change in net

unrealized gain (loss) on securities available for sale.

The Company records deferred tax assets to the extent these assets will more likely than not be realized. All available evidence is considered in making such determination, including future reversals of existing taxable temporary differences, projected future taxable income, tax planning strategies and recent financial operations. A valuation allowance is recorded for the portion of deferred tax assets that are not more-likely-than-not to be realized, and any changes to the valuation allowance are recorded in income tax expense.

The Company records the financial statement effects of an income tax position when it is more likely than not, based on the technical merits, that it will be sustained upon examination. A tax position that meets the more-likely-

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than-not recognition threshold is measured and recorded as the largest amount of tax benefit that is greater than 50 percent likely of being realized upon ultimate settlement with a taxing authority. Previously recognized tax positions are derecognized in the first period in which it is no longer more likely than not that the tax position will be sustained. The benefit associated with previously unrecognized tax positions are generally recognized in the first period in which the more-likely-than-not threshold is met at the reporting date, the tax matter is ultimately settled through negotiation or litigation, or when the related statute of limitations for the relevant taxing authority to examine and challenge the tax position has expired. The recognition, derecognition and measurement of tax positions are based on management's best judgment given the facts, circumstance and information available at the reporting date.

The Company recognizes accrued interest related to unrecognized tax benefits in interest expense and penalties in other noninterest expense. Accrued interest and penalties are included within the related liability lines in the Consolidated Balance Sheets. For the year ended December 31, 2018, the Company has recognized an immaterial amount in interest and penalties related to the unrecognized tax benefits.

Derivatives

The Company records all derivatives on the Consolidated Balance Sheets at fair value. The accounting for changes in the fair value of derivatives depends on the intended use of the derivative, whether the Company has elected to designate a derivative in a hedging relationship and apply hedge accounting and whether the hedging relationship has satisfied the criteria necessary to apply hedge accounting. Currently, three of the Company's derivatives are designated in qualifying hedging relationships. However, the remainder of the Company's derivatives are not designated in qualifying hedging relationships, as the derivatives are not used to manage risks within the Company's assets or liabilities. All changes in fair value of the Company's non-designated derivatives are recognized directly in earnings. Changes in fair value of the Company's fair value hedges are recognized directly in earnings. Changes in fair value of the Company's cash flow hedges are recognized in AOCI.

Per Share Data

Basic income per share is computed based on the weighted average number of shares of common stock outstanding during each period. Diluted year-to-date income per share includes the dilutive effect of 435,800, 615,629, and 448,742 shares issuable upon the exercise of stock options and nonvested restricted shares granted by the Company that were outstanding at December 31, 2018, 2017, and 2016, respectively.

Options issued under employee benefit plans to purchase 125,765, 149,413, and 390,503 shares of common stock were outstanding at December 31, 2018, 2017, and 2016, respectively, but were not included in the computation of diluted earnings per share because the options were anti-dilutive.

Accounting for Stock-Based Compensation

The Company measures the cost of employee services received in exchange for an award of equity instruments based on the fair value of the award on the date of the grant. For stock options and restricted stock and service-based restricted stock unit awards, the grant date fair value is estimated using either an option-pricing model which is consistent with the terms of the award or an observed market price, if such a price exists. For performance-based restricted stock unit awards, the grant date fair value is based on the quoted price of our common stock on the grant date less the present value of expected dividends not received during the vesting period. Such cost is generally recognized over the vesting period during which an employee is required to provide service in exchange for the award and, in some cases, when performance metrics are met. The Company accounts for forfeitures of stock-based compensation on an actual basis as they occur.

2. NEW ACCOUNTING PRONOUNCEMENTS

Revenue Recognition In May 2014, the Financial Accounting Standards Board (FASB) issued ASU No. 2014-09, "Revenue from Contracts with Customers." The ASU replaced most existing revenue recognition guidance in U.S. GAAP when it became effective. In August 2015, the FASB issued ASU No. 2015-14, which deferred the effective date of ASU No. 2014-09 to annual reporting periods that begin after December 15, 2017. In March, April, and May 2016, the FASB issued implementation amendments to the May 2014 ASU (collectively, the amended guidance). The amended guidance affects any entity that enters into contracts with customers to transfer goods and services, unless those contracts are within the scope of other standards. The amended guidance specifically excludes

interest income, as well as other revenues associated with financial assets and liabilities, including loans, leases, securities, and derivatives. The amended guidance permits the use of either the full retrospective approach or a modified retrospective approach. The Company adopted the amended guidance using the modified retrospective approach on January 1, 2018. The adoption of this guidance had no impact on the Company's Consolidated Financial Statements, except for additional financial statement disclosures. See Note 13, "Revenue Recognition" for related disclosures.

Financial Instruments In January 2016, the FASB issued ASU No. 2016-01, "Recognition and Measurement of Financial Assets and Financial Liabilities." The amendment is intended to address certain aspects of recognition, measurement, presentation, and disclosure of financial instruments. The amendments in this update were adopted on January 1, 2018. Upon adoption, the Company recorded a cumulative effect adjustment to the Company's Consolidated Balance Sheets of $132 thousand as an increase to the opening balance of total shareholders' equity.

Leases In February 2016, the FASB issued ASU No. 2016-02, "Leases." In January and July 2018, the FASB issued implementation amendments to the February 2016 ASU (collectively, the amended guidance). The amended guidance changes the accounting treatment of leases, in that lessees will recognize most leases on-balance sheet. This will increase reported assets and liabilities, as lessees will be required to recognize a right-of-use asset along with a lease liability, measured on a discounted basis. Lessees are allowed to account for short-term leases (those with a term of twelve months or less) off-balance sheet. The amendments in this update are effective for fiscal years beginning after December 15, 2018, including interim periods within those fiscal years. The amended guidance allows an entity to choose either the effective date, or the beginning of the earliest comparative period presented in the financial statements, as its date of initial application. Early adoption is permitted. The Company will adopt the amended guidance on January 1, 2019 and use the effective date as the date of initial application. The Company does not anticipate that there will be a cumulative effect adjustment made to retained earnings as a result of adopting the amended guidance. The most significant effects of the adoption of this guidance will be additional financial statement disclosures. The Company expects to record a right-of-use asset of approximately $58 million and a lease liability of approximately $63 million to its Consolidated Balance Sheets as of January 1, 2019.

Extinguishments of Liabilities In March 2016, the FASB issued ASU No. 2016-04, "Recognition of Breakage for Certain Prepaid Stored-Value Products." The amendment is intended to reduce the diversity in practice related to the recognition of breakage. Breakage refers to the portion of a prepaid stored-value product, such as a gift card, that goes unused wholly or partially for an indefinite period of time. This amendment requires that breakage be accounted for consistent with the breakage guidance within ASU No. 2014-09, "Revenue from Contracts with Customers." The amendments in this update were adopted January 1, 2018 in conjunction with the adoption of ASU No. 2014-09, and the adoption had no impact on the Company's Consolidated Financial Statements.

Equity-Based Compensation In March 2016, the FASB issued ASU No. 2016-09, "Improvements to Employee Share-Based Payment Accounting." The amendment is part of the FASB's simplification initiative and is intended to simplify the accounting around share-based payment award transactions. The amendments include changing the recording of excess tax benefits from being recognized as a part of surplus capital to being charged directly to the income statement, changing the classification of excess tax benefits within the statement of cash flows, and allowing companies to account for forfeitures on an actual basis, as well as tax withholding changes. The amendment requires different transition methods for various components of the standard. The amendments in this update were effective for fiscal years beginning after December 15, 2016, including interim periods within those fiscal years. Early adoption was permitted.

In September 2016, the Company early adopted ASU No. 2016-09 with an effective date of January 1, 2016. As part of the adoption of this standard, the Company made an accounting policy election to account for forfeitures on an actual basis and discontinue the use of an estimated forfeiture approach. Additionally, the Company selected the

retrospective transition method for the reclassification of the "Net tax benefit related to equity compensation plans" from the financing section to the operating section of the Company's Consolidated Statement of Cash Flows. Upon adoption, the Company recorded a cumulative effect adjustment to the Company's Consolidated Balance Sheets of $482 thousand as an increase to the opening balance of total equity.

Credit Losses In June 2016, the FASB issued ASU 2016-13, "Measurement of Credit Losses on Financial Instruments." This update replaces the current incurred loss methodology for recognizing credit losses with a current expected credit loss model, which requires the measurement of all expected credit losses for financial assets held at the reporting date based on historical experience, current conditions, and reasonable and supportable forecasts. This amendment broadens the information that an entity must consider in developing its expected credit loss estimates.

Additionally, the update amends the accounting for credit losses for available-for-sale debt securities and purchased financial assets with a more-than-insignificant amount of credit deterioration since origination. This update requires enhanced disclosures to help investors and other financial statement users better understand significant estimates and judgments used in estimating credit losses, as well as the credit quality and underwriting standards of a company's loan portfolio. The amendments in this update are effective for fiscal years beginning after December 15, 2019, including interim periods within those fiscal years. Early adoption in fiscal years beginning after December 15, 2018 is permitted. The amendment requires the use of the modified retrospective approach for adoption. The Company is currently evaluating the impact that this standard will have on its Consolidated Financial Statements.

Statement of Cash Flows In August 2016, the FASB issued ASU 2016-15, "Classification of Certain Receipts and Cash Payments." This amendment adds to and clarifies existing guidance regarding the classification of certain cash receipts and payments in the statement of cash flows with the intent of reducing diversity in practice with respect to eight types of cash flows. The amendments in this update require full retrospective adoption. The amendments in this update were adopted on January 1, 2018 and did not have an impact on the Company's Consolidated Statement of Cash Flows.

Goodwill and Other Intangibles In January 2017, the FASB issued ASU 2017-04, "Simplifying the Test for Goodwill Impairment." The amendment eliminates Step 2 from the goodwill impairment test. The amendment also eliminates the requirement for any reporting unit with a zero or negative carrying amount to perform a qualitative test and, if it fails that qualitative test, to perform Step 2 of the goodwill impairment test. The amendments in this update were adopted on October 1, 2017. The adoption of this accounting pronouncement had no impact on the Company's Consolidated Financial Statements.

Derivatives and Hedging In August 2017, the FASB issued ASU 2017-12, "Targeted Improvements to Accounting for Hedging Activities." The purpose of this updated guidance is to better align financial reporting for hedging activities with the economic objectives of those activities. The amendments in this update are effective for fiscal years beginning after December 15, 2018, with early adoption, including adoption in an interim period, permitted, and require the modified retrospective transition approach as of the date of adoption. The Company early adopted ASU 2017-12 with an effective date of January 1, 2018. Upon adoption, the Company recorded a cumulative effect adjustment to the Company's Consolidated Balance Sheets of $13 thousand as an increase to the opening balance of total shareholders' equity.

Comprehensive Income In February 2018, the FASB issued ASU No. 2018-02, "Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income." Under existing U.S. GAAP, the effects of changes in tax rates and laws on deferred tax balances are recorded as a component of income tax expense in the period in which the law was enacted. When deferred tax balances related to items originally recorded in AOCI are adjusted, certain tax effects become stranded in AOCI. This amendment allows a reclassification from AOCI to retained earnings for stranded tax effects resulting from the Tax Cuts and Jobs Act (the Tax Act), and requires certain disclosures about stranded tax effects. The amendments in this update are effective for fiscal years beginning after December 15, 2018, and interim periods within those fiscal years. Early adoption, including adoption in any interim period, is permitted. The Company early adopted ASU 2018-02 using a security-by-security approach with an effective date of January 1, 2018. Upon adoption, the Company reclassified stranded tax effects totaling $12.9 million from AOCI to retained earnings.

3. LOANS AND ALLOWANCE FOR LOAN LOSSES

Loan Origination/Risk Management

The Company has certain lending policies and procedures in place that are designed to minimize the level of risk within the loan portfolio. Diversification of the loan portfolio manages the risk associated with fluctuations in economic conditions. Authority levels are established for the extension of credit to ensure consistency throughout the Company. It is necessary that policies, processes and practices implemented to control the risks of individual credit transactions and portfolio segments are sound and adhered to. The Company maintains an independent loan review department that reviews and validates the credit risk program on a continual basis. Management regularly evaluates the results of the loan reviews. The loan review process complements and reinforces the risk identification and assessment decisions made by lenders and credit personnel, as well as the Company’s policies and procedures.

Commercial loans are underwritten after evaluating and understanding the borrower’s ability to operate profitably and prudently expand its business. Commercial loans are made based on the identified cash flows of the

borrower and on the underlying collateral provided by the borrower. The cash flows of the borrower, however, may not be as expected and the collateral securing these loans may fluctuate in value. Most commercial loans are secured by the assets being financed or other business assets such as accounts receivable or inventory and may incorporate a personal guarantee. In the case of loans secured by accounts receivable, the availability of funds for the repayment of these loans may be substantially dependent on the ability of the borrower to collect amounts from its customers. Commercial credit cards are generally unsecured and are underwritten with criteria similar to commercial loans including an analysis of the borrower's cash flow, available business capital, and overall credit-worthiness of the borrower.

Asset-based loans are offered primarily in the form of revolving lines of credit to commercial borrowers that do not generally qualify for traditional bank financing. Asset-based loans are underwritten based primarily upon the value of the collateral pledged to secure the loan, rather than on the borrower's general financial condition as traditionally reflected by cash flow, balance sheet strength, operating results, and credit bureau ratings. The Company utilizes pre-loan due diligence techniques, monitoring disciplines, and loan management practices common within the asset-based lending industry to underwrite and manage loans with these borrowers.

Factoring loans provide working capital through the purchase and/or financing of accounts receivable to borrowers in the transportation industry and to commercial borrowers that do not generally qualify for traditional bank financing.

Commercial real estate loans are subject to underwriting standards and processes similar to commercial loans, in addition to those of real estate loans. These loans are viewed primarily as cash flow loans and secondarily as loans secured by real estate. Commercial real estate lending typically involves higher loan principal amounts, and the repayment of these loans is largely dependent on the successful operation of the property securing the loan or the business conducted on the property securing the loan. The Company requires an appraisal of the collateral be made at origination and on an as-needed basis, in conformity with current market conditions and regulatory requirements. The underwriting standards address both owner and non-owner occupied real estate.

Construction loans are underwritten using feasibility studies, independent appraisal reviews, sensitivity analysis or absorption and lease rates and financial analysis of the developers and property owners. Construction loans are based upon estimates of costs and value associated with the complete project. Construction loans often involve the disbursement of substantial funds with repayment substantially dependent on the success of the ultimate project. Sources of repayment for these types of loans may be pre-committed permanent loans, sales of developed property or an interim loan commitment from the Company until permanent financing is obtained. These loans are closely monitored by on-site inspections and are considered to have higher risks than other real estate loans due to their repayment being sensitive to interest rate changes, governmental regulation of real property, economic conditions, and the availability of long-term financing.

Underwriting standards for residential real estate and home equity loans are based on the borrower's loan-to-value percentage, collection remedies, and overall credit history.

Consumer loans are underwritten based on the borrower's repayment ability. The Company monitors delinquencies on all of its consumer loans and leases and periodically reviews the distribution of FICO scores relative to historical periods to monitor credit risk on its credit card loans. The underwriting and review practices combined with the relatively small loan amounts that are spread across many individual borrowers, minimizes risk. Consumer loans and leases that are 90 days past due or more are considered non-performing.

Credit risk is a potential loss resulting from nonpayment of either the primary or secondary exposure. Credit risk is mitigated with formal risk management practices and a thorough initial credit-granting process including consistent underwriting standards and approval process. Control factors or techniques to minimize credit risk include knowing

the client, understanding total exposure, analyzing the client and debtor's financial capacity, and monitoring the client's activities. Credit risk and portions of the portfolio risk are managed through concentration considerations, average risk ratings, and other aggregate characteristics.

Loan Aging Analysis

This table provides a summary of loan classes and an aging of past due loans at December 31, 2018 and 2017 (in thousands):

	December 31, 2018					
	30-89 Days Past Due and Accruing	Greater than 90 Days Past Due and Accruing	Non-Accrual Loans	Total Past Due	Current	Total Loans
Commercial:						
Commercial	$5,717	$ 133	$27,060	$32,910	$5,195,492	$5,228,402
Asset-based	—	—	—	—	380,738	380,738
Factoring	—	—	—	—	261,591	261,591
Commercial – credit card	490	90	—	580	165,754	166,334
Real estate:						
Real estate – construction	—	—	—	—	792,565	792,565
Real estate – commercial	7,385	90	11,662	19,137	3,695,143	3,714,280
Real estate – residential	246	3,750	807	4,803	702,701	707,504
Real estate – HELOC	764	—	2,776	3,540	542,181	545,721
Consumer:						
Consumer – credit card	2,022	1,945	648	4,615	226,367	230,982
Consumer – other	199	1	65	265	144,520	144,785
Leases	—	—	—	—	5,248	5,248
Total loans	$16,823	$ 6,009	$43,018	$65,850	$12,112,300	$12,178,150

	December 31, 2017					
	30-89 Days Past Due and Accruing	Greater than 90 Days Past Due and Accruing	Non-Accrual Loans	Total Past Due	Current	Total Loans
Commercial:						
Commercial	$11,216	$ 672	$38,644	$50,532	$4,502,508	$4,553,040

Asset-based	—	—	—	—	336,614	336,614
Factoring	—	—	—	—	221,672	221,672
Commercial – credit card	387	79	—	466	171,825	172,291
Real estate:						
Real estate – construction	6,666	243	93	7,002	710,847	717,849
Real estate – commercial	832	—	16,115	16,947	3,546,683	3,563,630
Real estate – residential	791	—	929	1,720	636,871	638,591
Real estate – HELOC	1,254	—	3,013	4,267	644,112	648,379
Consumer:						
Consumer – credit card	2,155	2,057	312	4,524	248,173	252,697
Consumer – other	835	40	36	911	150,872	151,783
Leases	—	—	—	—	23,967	23,967
Total loans	$24,136	$ 3,091	$59,142	$86,369	$11,194,144	$11,280,513

Loans are considered past due or delinquent when the contractual principal or interest due in accordance with the terms of the loan agreement remains unpaid after the due date of the scheduled payment. Non-accrual loans include troubled debt restructurings on non-accrual status. Loan delinquency for all loans is shown in the tables above at December 31, 2018 and December 31, 2017, respectively.

The Company sold residential real estate loans with proceeds of $59.1 million, $70.5 million, and $89.5 million in the secondary market without recourse during the periods ended December 31, 2018, 2017, and 2016, respectively.

The Company has ceased the recognition of interest on loans with a carrying value of $43.0 million and $59.1 million at December 31, 2018 and 2017, respectively. Restructured loans totaled $21.1 million and $41.0 million at December 31, 2018 and 2017, respectively. Loans 90 days past due and still accruing interest amounted to $6.0 million and $3.1 million at December 31, 2018 and 2017, respectively. There was an immaterial amount of interest recognized on impaired loans during 2018, 2017, and 2016.

Credit Quality Indicators

As part of the on-going monitoring of the credit quality of the Company's loan portfolio, management tracks certain credit quality indicators including trends related to the risk grading of specified classes of loans, net charge-offs, non-performing loans, and general economic conditions.

The Company utilizes a risk grading matrix to assign a rating to each of its commercial, commercial real estate, and construction real estate loans. The loan rankings are summarized into the following categories: Non-watch list, Watch, Special Mention, and Substandard. Any loan not classified in one of the categories described below is considered to be a Non-watch list loan. A description of the general characteristics of the loan ranking categories is as follows:

- Watch – This rating represents credit exposure that presents higher than average risk and warrants greater than routine attention by Company personnel due to conditions affecting the borrower, the Borrower's industry or the economic environment. These conditions have resulted in some degree of uncertainty that results in higher than average credit risk.
- Special Mention – This rating reflects a potential weakness that deserves management's close attention. If left uncorrected, these potential weaknesses may result in deterioration of the repayment prospects for the asset or the institution's credit position at some future date. The rating is not adversely classified and does not expose an institution to sufficient risk to warrant adverse classification.
- Substandard – This rating represents an asset inadequately protected by the current sound worth and paying capacity of the borrower or of the collateral pledged, if any. Assets so classified must have a well-defined weakness or weaknesses that jeopardize the liquidation of the debt. Loans in this category are characterized by the distinct possibility that the bank will sustain some loss if the deficiencies are not corrected. Loss potential, while existing in the aggregate amount of substandard assets, does not have to exist in individual assets classified substandard. This category may include loans where the collection of full principal is doubtful or remote.

All other classes of loans are generally evaluated and monitored based on payment activity. Non-performing loans include restructured loans on non-accrual and all other non-accrual loans.

This table provides an analysis of the credit risk profile of each loan class excluded from ASC 310-30, Loans and Debt Securities Purchased with Deteriorated Credit Quality, at December 31, 2018 and December 31, 2017 (in thousands):

Credit Exposure

Credit Risk Profile by Risk Rating

	Commercial		Asset-based		Factoring	
	December 31, 2018	December 31, 2017	December 31, 2018	December 31, 2017	December 31, 2018	December 31, 2017
Non-watch list	$4,788,234	$ 4,048,238	$296,719	$ 306,899	$260,727	$ 220,795
Watch	192,653	162,788	—	—	—	—
Special Mention	55,927	106,638	84,019	29,715	864	47
Substandard	191,588	235,376	—	—	—	830
Total	$5,228,402	$ 4,553,040	$380,738	$ 336,614	$261,591	$ 221,672

	Real estate – construction		Real estate – commercial	
	December 31, 2018	December 31, 2017	December 31, 2018	December 31, 2017
Non-watch list	$792,256	$ 716,830	$3,551,537	$ 3,434,982
Watch	204	631	64,998	50,715
Special Mention	—	—	32,826	35,940
Substandard	105	388	64,919	41,993
Total	$792,565	$ 717,849	$3,714,280	$ 3,563,630

Credit Exposure

Credit Risk Profile Based on Payment Activity

	Commercial – credit card		Real estate – residential		Real estate – HELOC	
	December 31, 2018	December 31, 2017	December 31, 2018	December 31, 2017	December 31, 2018	December 31, 2017
Performing	$166,334	$ 172,291	$706,697	$ 637,662	$542,945	$ 645,366
Non-performing	—	—	807	929	2,776	3,013
Total	$166,334	$ 172,291	$707,504	$ 638,591	$545,721	$ 648,379

	Consumer – credit card		Consumer – other		Leases	
	December 31, 2018	December 31, 2017	December 31, 2018	December 31, 2017	December 31, 2018	December 31, 2017
Performing	$230,334	$ 252,385	$144,720	$ 151,747	$5,248	$ 23,967
Non-performing	648	312	65	36	—	—
Total	$230,982	$ 252,697	$144,785	$ 151,783	$5,248	$ 23,967

Allowance for Loan Losses

The allowance for loan losses is a reserve established through a provision for loan losses charged to expense, which represents management's judgment of inherent probable losses within the Company's loan portfolio as of the balance sheet date. The allowance is necessary to reserve for estimated loan losses and risks inherent in the loan portfolio. Accordingly, the methodology is based on historical loss trends. The Company's process for determining the appropriate level of the allowance for loan losses is designed to account for credit deterioration as it occurs. The provision for probable loan losses reflects loan quality trends, including the levels of and trends related to non-accrual loans, past due loans, potential problem loans, criticized loans and net charge-offs or recoveries, among other factors.

The level of the allowance reflects management's continuing evaluation of industry concentrations, specific credit risks, loan loss experience, current loan portfolio quality, present economic, political and regulatory conditions and unidentified losses inherent in the current loan portfolio. Portions of the allowance may be allocated for specific loans; however, the entire allowance is available for any loan that, in management's judgment, should be charged off. While management utilizes its best judgment and information available, the adequacy of the allowance is dependent upon a variety of factors beyond the Company's control, including, among other things, the performance of the Company's loan portfolio, the economy, changes in interest rates and changes in the regulatory environment.

The Company's allowance for loan losses consists of specific valuation allowances and general valuation allowances based on historical loan loss experience for similar loans with similar characteristics and trends, general economic conditions and other qualitative risk factors both internal and external to the Company.

The allowances established for probable losses on specific loans are based on a regular analysis and evaluation of impaired loans. Loans are classified based on an internal risk grading process that evaluates the obligor's ability to repay, the underlying collateral, if any, and the economic environment and industry in which the borrower operates. When a loan is considered impaired, the loan is analyzed to determine the need, if any, to specifically allocate a portion of the allowance for loan losses to the loan. Specific valuation allowances are determined by

analyzing the borrower's ability to repay amounts owed, collateral deficiencies, the relative risk ranking of the loan and economic conditions affecting the borrower's industry.

General valuation allowances are calculated based on the historical loss experience of specific types of loans including an evaluation of the time span and volume of the actual charge-off. The Company calculates historical loss ratios for pools of similar loans with similar characteristics based on the proportion of actual charge-offs experienced to the total population of loans in the pool. The historical loss ratios are updated based on actual charge-off experience. A valuation allowance is established for each pool of similar loans based upon the product of the historical loss ratio, time span to charge-off, and the total dollar amount of the loans in the pool. The Company's pools of similar loans include similarly risk-graded groups of commercial loans, commercial real estate loans, commercial credit card, home equity loans, consumer real estate loans and consumer and other loans. The Company also considers a loan migration analysis for criticized loans. This analysis includes an assessment of the probability that a loan will move to a loss position based on its risk rating. The consumer credit card pool is evaluated based on delinquencies and credit scores. In addition, a portion of the allowance is determined by a review of qualitative factors by management, including concentrations of credit, current economic conditions, and loan growth.

Generally, the unsecured portion of a commercial or commercial real estate loan is charged-off when, after analyzing the borrower's financial condition, it is determined that the borrower is incapable of servicing the debt, little or no prospect for near term improvement exists, and no realistic and significant strengthening action is pending. For collateral dependent commercial or commercial real estate loans, an analysis is completed regarding the Company's collateral position to determine if the amounts due from the borrower are in excess of the calculated current fair value of the collateral. Specific allocations of the allowance for loan losses are made for any collateral deficiency. If a collateral deficiency is ultimately deemed to be uncollectible, the amount is charged-off. Revolving commercial loans (such as commercial credit cards) which are past due 90 cumulative days are classified as a loss and charged off.

Generally, a consumer loan, or a portion thereof, is charged-off in accordance with regulatory guidelines which provide that such loans be charged-off when the Company becomes aware of the loss, such as from a triggering event that may include but is not limited to new information about a borrower's intent and ability to repay the loan, bankruptcy, fraud, or death. However, the charge-off timeframe should not exceed the specified delinquency time frames, which state that closed-end retail loans (such as real estate mortgages, home equity loans and consumer installment loans) that become past due 120 cumulative days and open-end retail loans (such as home equity lines of credit and consumer credit cards) that become past due 180 cumulative days are classified as a loss and charged-off.

ALLOWANCE FOR LOAN LOSSES AND RECORDED INVESTMENT IN LOANS

This table provides a rollforward of the allowance for loan losses by portfolio segment for the year ended December 31, 2018 (in thousands):

	Year Ended December 31, 2018				
	Commercial	Real estate	Consumer	Leases	Total
Allowance for loan losses:					
Beginning balance	$81,156	$9,312	$10,083	$53	$100,604
Charge-offs	(64,371)	(3,428)	(9,744)	—	(77,543)
Recoveries	6,753	445	2,626	—	9,824
Provision	57,350	7,335	6,106	(41)	70,750
Ending Balance	$80,888	$13,664	$9,071	$12	$103,635
Ending Balance: individually evaluated for impairment	$4,605	$106	$—	$—	$4,711
Ending Balance: collectively evaluated for impairment	76,283	13,558	9,071	12	98,924
Loans:					
Ending Balance: loans	$6,037,065	$5,760,070	$375,767	$5,248	$12,178,150
Ending Balance: individually evaluated for impairment	31,006	8,233	—	—	39,239
Ending Balance: collectively evaluated for impairment	6,006,059	5,751,837	375,767	5,248	12,138,911

This table provides a rollforward of the allowance for loan losses by portfolio segment for the year ended December 31, 2017 (in thousands):

	Year Ended December 31, 2017				
	Commercial	Real estate	Consumer	Leases	Total
Allowance for loan losses:					
Beginning balance	$71,657	$10,569	$9,311	$112	$91,649
Charge-offs	(27,985)	(992)	(9,629)	—	(38,606)
Recoveries	3,522	966	2,073	—	6,561
Provision	33,962	(1,231)	8,328	(59)	41,000
Ending Balance	$81,156	$9,312	$10,083	$53	$100,604
Ending Balance: individually evaluated for impairment	$6,605	$78	$—	$—	$6,683
Ending Balance: collectively evaluated for	74,551	9,234	10,083	53	93,921

impairment					
Loans:					
Ending Balance: loans	$5,283,617	$5,568,449	$404,480	$23,967	$11,280,513
Ending Balance: individually evaluated for impairment	61,820	12,956	—	—	74,776
Ending Balance: collectively evaluated for impairment	5,221,797	5,555,493	404,480	23,967	11,205,737

This table provides a rollforward of the allowance for loan losses by portfolio segment for the year ended December 31, 2016 (in thousands):

	Year Ended December 31, 2016				
	Commercial	Real estate	Consumer	Leases	Total
Allowance for loan losses:					
Beginning balance	$63,847	$8,220	$8,949	$127	$81,143
Charge-offs	(12,788)	(6,756)	(9,279)	—	(28,823)
Recoveries	3,596	985	2,248	—	6,829
Provision	17,002	8,120	7,393	(15)	32,500
Ending Balance	$71,657	$10,569	$9,311	$112	$91,649
Ending Balance: individually evaluated for impairment	$7,866	$68	$—	$—	$7,934
Ending Balance: collectively evaluated for impairment	63,791	10,501	9,311	112	83,715
Ending Balance: PCI Loans	—	—	—	—	—
Loans:					
Ending Balance: loans	$4,923,321	$5,167,870	$409,660	$39,532	$10,540,383
Ending Balance: individually evaluated for impairment	74,351	13,314	—	—	87,665
Ending Balance: collectively evaluated for impairment	4,848,970	5,154,556	408,860	39,532	10,451,918
Ending Balance: PCI Loans	—	—	800	—	800

Impaired Loans

This table provides an analysis of impaired loans by class for the year ended December 31, 2018 (in thousands):

	As of December 31, 2018					
	Unpaid Principal Balance	Recorded Investment with No Allowance	Recorded Investment with Allowance	Total Recorded Investment	Related Allowance	Average Recorded Investment
Commercial:						
Commercial	$40,402	$ 16,470	$ 14,536	$ 31,006	$ 4,605	$ 43,335
Asset-based	—	—	—	—	—	—
Factoring	—	—	—	—	—	275

Commercial – credit card	—	—	—	—	—	—
Real estate:						
Real estate – construction	—	—	—	—	—	55
Real estate – commercial	10,856	7,776	165	7,941	28	11,279
Real estate – residential	304	197	95	292	78	303
Real estate – HELOC	—	—	—	—	—	—
Consumer:						
Consumer – credit card	—	—	—	—	—	—
Consumer – other	—	—	—	—	—	—
Leases	—	—	—	—	—	—
Total	$51,562	$ 24,443	$ 14,796	$ 39,239	$ 4,711	$ 55,247

This table provides an analysis of impaired loans by class for the year ended December 31, 2017 (in thousands):

	As of December 31, 2017					
	Unpaid Principal Balance	Recorded Investment with No Allowance	Recorded Investment with Allowance	Total Recorded Investment	Related Allowance	Average Recorded Investment
Commercial:						
Commercial	$84,749	$ 44,525	$ 16,465	$ 60,990	$ 6,299	$ 65,385
Asset-based	—	—	—	—	—	—
Factoring	830	—	830	830	306	207
Commercial – credit card	—	—	—	—	—	—
Real estate:						
Real estate – construction	108	93	—	93	—	148
Real estate – commercial	16,284	7,968	4,477	12,445	3	10,506
Real estate – residential	427	321	97	418	75	221
Real estate – HELOC	—	—	—	—	—	—
Consumer:						
Consumer – credit card	—	—	—	—	—	—
Consumer – other	—	—	—	—	—	8
Leases	—	—	—	—	—	—
Total	$102,398	$ 52,907	$ 21,869	$ 74,776	$ 6,683	$ 76,475

This table provides an analysis of impaired loans by class for the year ended December 31, 2016 (in thousands):

	As of December 31, 2016					
	Unpaid Principal Balance	Recorded Investment with No Allowance	Recorded Investment with Allowance	Total Recorded Investment	Related Allowance	Average Recorded Investment
Commercial:						
Commercial	$80,405	$ 43,260	$ 31,091	$ 74,351	$ 7,866	$ 69,776
Asset-based	—	—	—	—	—	—
Factoring	—	—	—	—	—	—
Commercial – credit card	—	—	—	—	—	—
Real estate:						
Real estate – construction	510	181	113	294	68	405
Real estate – commercial	18,107	12,303	487	12,790	—	8,956

Real estate – residential	231	230	—	230	—	520
Real estate – HELOC	—	—	—	—	—	79
Consumer:						
Consumer – credit card	—	—	—	—	—	—
Consumer – other	—	—	—	—	—	1,981
Leases	—	—	—	—	—	—
Total	$99,253	$ 55,974	$ 31,691	$ 87,665	$ 7,934	$ 81,717

Troubled Debt Restructurings

A loan modification is considered a troubled debt restructuring (TDR) when a concession had been granted to a debtor experiencing financial difficulties. The Company's modifications generally include interest rate adjustments, principal reductions, and amortization and maturity date extensions. These modifications allow the debtor short-term cash relief to allow them to improve their financial condition. The Company's restructured loans are individually evaluated for impairment and evaluated as part of the allowance for loan loss as described above in the Allowance for Loan Losses section of this note.

The Company had no commitments to lend to borrowers with loan modifications classified as TDRs as of December 31, 2018, but did have $3.1 million in commitments to lend to borrowers with loan modifications classified as TDRs as of December 31, 2017. The Company monitors loan payments on an on-going basis to determine if a loan is considered to have a payment default. Determination of payment default involves analyzing the economic conditions that exist for each customer and their ability to generate positive cash flows during the loan term. During the year ended December 31, 2018, there were no TDRs with payment defaults. There was an immaterial amount of interest recognized on loans classified as TDRs during 2018 and 2017.

For the year ended December 31, 2018, the Company had three commercial TDRs with pre- and post-modification loan balances of $6.7 million, and one residential real estate TDR with a pre-modification loan balance of $93 thousand and a post-modification loan balance of $92 thousand. For the year ended December 31, 2017, the Company had one commercial TDR with a pre- and post-modification loan balance of $7.2 million, and one residential real estate TDR with a pre-modification loan balance of $97 thousand and a post-modification loan balance of $98 thousand.

4. SECURITIES

Securities Available for Sale

This table provides detailed information about securities available for sale at December 31, 2018 and 2017 (in thousands):

2018	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
U.S. Treasury	$248,494	$ 192	$(1,556)	$247,130
U.S. Agencies	200	—	(1)	199
Mortgage-backed	3,914,289	6,145	(108,223)	3,812,211
State and political subdivisions	2,507,107	7,643	(31,490)	2,483,260
Total	$6,670,090	$ 13,980	$(141,270)	$6,542,800

2017	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
U.S. Treasury	$40,092	$ —	$ (1,449)	$38,643
U.S. Agencies	14,762	—	(10)	14,752
Mortgage-backed	3,719,369	1,914	(72,040)	3,649,243
State and political subdivisions	2,546,517	11,965	(15,809)	2,542,673
Corporates	13,278	—	(12)	13,266
Total	$6,334,018	$ 13,879	$ (89,320)	$6,258,577

The following table presents contractual maturity information for securities available for sale at December 31, 2018 (in thousands):

	Amortized Cost	Fair Value
Due in 1 year or less	$534,750	$534,418
Due after 1 year through 5 years	936,651	930,098
Due after 5 years through 10 years	723,908	708,567
Due after 10 years	560,492	557,506
Total	2,755,801	2,730,589
Mortgage-backed securities	3,914,289	3,812,211
Total securities available for sale	$6,670,090	$6,542,800

Securities may be disposed of before contractual maturities due to sales by the Company or because borrowers may have the right to call or prepay obligations with or without call or prepayment penalties.

Proceeds from the sales of securities available for sale were $95.5 million, $578.5 million, and $951.3 million for 2018, 2017, and 2016, respectively. Securities transactions resulted in gross realized gains of $581 thousand for

2018, $4.2 million for 2017, and $8.5 million for 2016. The gross realized losses were $3 thousand for 2018, $10 thousand for 2017, and $1 thousand for 2016.

Securities available for sale with a fair value of $5.7 billion at both December 31, 2018 and December 31, 2017, were pledged to secure U.S. Government deposits, other public deposits, certain trust deposits, derivative transactions, and repurchase agreements. Of this amount, securities with a fair value of $1.0 billion at December 31, 2018 and $1.8 billion at December 31, 2017 were pledged at the Federal Reserve Discount Window but were unencumbered as of those dates.

The following table shows the Company's available for sale investments' gross unrealized losses and fair value, aggregated by investment category and length of time that individual securities have been in a continuous unrealized loss position, at December 31, 2018 and 2017 (in thousands).

	Less than 12 months		12 months or more		Total	
2018	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses
Description of Securities						
U.S. Treasury	$18,775	$ (4)	$38,552	$(1,552)	$57,327	$(1,556)
U.S. Agencies	—	—	199	(1)	199	(1)
Mortgage-backed	228,406	(1,256)	3,007,233	(106,967)	3,235,639	(108,223)
State and political subdivisions	371,394	(1,490)	1,419,875	(30,000)	1,791,269	(31,490)
Total temporarily-impaired debt securities available for sale	$618,575	$ (2,750)	$4,465,859	$(138,520)	$5,084,434	$(141,270)

	Less than 12 months		12 months or more		Total	
2017	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses
Description of Securities						
U.S. Treasury	$9,851	$ (64)	$28,792	$ (1,385)	$38,643	$ (1,449)
U.S. Agencies	14,553	(10)	—	—	14,553	(10)
Mortgage-backed	1,990,006	(19,980)	1,562,333	(52,060)	3,552,339	(72,040)
State and political subdivisions	1,076,930	(7,325)	376,560	(8,484)	1,453,490	(15,809)
Corporates	13,266	(12)	—	—	13,266	(12)
Total temporarily-impaired debt securities available for sale	$3,104,606	$ (27,391)	$1,967,685	$ (61,929)	$5,072,291	$ (89,320)

The unrealized losses in the Company's investments in U.S. treasury obligations, U.S. government agencies, GSE mortgage-backed securities, municipal securities, and corporates were caused by changes in the interest rate environment. The Company does not have the intent to sell these securities and does not believe it is more likely than not that the Company will be required to sell these securities before a recovery of amortized cost. The Company

expects to recover its cost basis in the securities and does not consider these investments to be other-than-temporarily impaired at December 31, 2018.

Securities Held to Maturity

The following table shows the Company's held to maturity investments' amortized cost, fair value, and gross unrealized gains and losses at December 31, 2018 and net unrealized gains, aggregated by maturity category, at December 31, 2017, respectively (in thousands).

2018	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
State and political subdivisions:				
Due in 1 year or less	$3,386	$ 38	$(29)	$3,395
Due after 1 year through 5 years	115,162	467	(7,988)	107,641
Due after 5 years through 10 years	380,108	1,894	(24,621)	357,381
Due after 10 years	671,990	2,163	(72,038)	602,115
Total state and political subdivisions	$1,170,646	$ 4,562	$(104,676)	$1,070,532

2017	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
State and political subdivisions:				
Due in 1 year or less	$2,275	$ 3	$ (24)	$2,254
Due after 1 year through 5 years	100,648	3,111	(2,834)	100,925
Due after 5 years through 10 years	372,234	5,006	(14,117)	363,123
Due after 10 years	785,857	6,952	(51,664)	741,145
Total state and political subdivisions	$1,261,014	$ 15,072	$ (68,639)	$1,207,447

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.

There were no sales of securities held to maturity during 2018, 2017, or 2016.

The unrealized losses in the Company's held to maturity portfolio were caused by changes in the interest rate environment. The underlying bonds are subject to a risk-ranking process similar to the Company's loan portfolio and evaluated for impairment if deemed necessary. The Company does not have the intent to sell these securities and does not believe it is more likely than not that the Company will be required to sell these securities before a recovery of amortized cost. The Company expects to recover its cost basis in the securities and does not consider these investments to be other-than-temporarily impaired as of December 31, 2018.

Trading Securities

The net unrealized loss on trading securities at December 31, 2018 was $18 thousand. The net unrealized gains on trading securities at December 31, 2017 and 2016 were $188 thousand and $233 thousand, respectively. Net unrealized gains/losses are included in trading and investment banking income on the Consolidated Statements of Income. Securities sold not yet purchased totaled $27.2 million and $4.1 million at December 31, 2018 and 2017, respectively, and are classified within the Other liabilities line of the Company's Consolidated Balance Sheets.

Other Securities

The table below provides detailed information for Federal Reserve Bank stock and Federal Home Loan Bank stock and other securities at December 31, 2018 and 2017 (in thousands):

2018	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
FRB and FHLB stock	$ 33,262	$ —	$ —	$33,262
Other securities – marketable	—	4,385	—	4,385
Other securities – non-marketable	32,011	4,034	—	36,045
Total Federal Reserve Bank stock and other	$ 65,273	$ 8,419	$ —	$73,692

Gross Gross

2017	Amortized Cost	Unrealized Gains	Unrealized Losses	Fair Value
FRB and FHLB stock	$ 33,262	$ —	$ —	$33,262
Other securities – marketable	3	4,637	—	4,640
Other securities – non-marketable	26,606	1,389	—	27,995
Total Federal Reserve Bank stock and other	$ 59,871	$ 6,026	$ —	$65,897

Investment in FRB stock is based on the capital structure of the investing bank, and investment in FHLB stock is mainly tied to the level of borrowings from the FHLB. These holdings are carried at cost. Other marketable and non-marketable securities include PCM alternative investments in hedge funds and private equity funds, which are accounted for as equity-method investments. The fair value of other marketable securities includes alternative

investment securities of $4.4 million at December 31, 2018 and $4.6 million at December 31, 2017. The fair value of other non-marketable securities includes alternative investment securities of $5.8 million at December 31, 2018 and $3.4 million at December 31, 2017. Unrealized gains or losses on alternative investments are recognized in the Other noninterest income line of the Company's Consolidated Statements of Income.

5. SECURITIES PURCHASED UNDER AGREEMENTS TO RESELL

The Company regularly enters into agreements for the purchase of securities with simultaneous agreements to resell (resell agreements). The agreements permit the Company to sell or repledge these securities. Resell agreements were $626.5 million and $186.5 million at December 31, 2018 and 2017, respectively. The Company obtains possession of collateral with a market value equal to or in excess of the principal amount loaned under resell agreements.

6. LOANS TO OFFICERS AND DIRECTORS

Certain executive officers and directors of the Company and the Bank, including companies in which those persons are principal holders of equity securities or are general partners, borrow in the normal course of business from the Bank. All such loans have been made on substantially the same terms, including interest rates and collateral, as those prevailing at the same time for comparable transactions with unrelated parties. In addition, all such loans are current as to repayment terms. During the year ended December 31, 2017, changes in the composition of the Bank board of directors resulted in a reduction of $101.0 million in the reportable loans to officers and directors.

For the years 2018 and 2017, an analysis of activity with respect to such aggregate loans to related parties appears below (in thousands):

	Year Ended December 31,	
	2018	2017
Balance – beginning of year	$187,662	$321,392
New loans	83,978	61,697
Repayments	(14,065)	(94,378)
Reduction due to change in reportable loans	—	(101,049)
Balance – end of year	$257,575	$187,662

7. GOODWILL AND OTHER INTANGIBLES

Changes in the carrying amount of goodwill for the years ended December 31, 2018 and December 31, 2017 by operating segment are as follows (in thousands):

	Commercial Banking	Institutional Banking	Personal Banking	Healthcare Services	Total
Balances as of January 1, 2018	$ 59,419	$ 51,332	$70,116	$ —	$180,867
Balances as of December 31, 2018	$ 59,419	$ 51,332	$70,116	$ —	$180,867
Balances as of January 1, 2017	$ 59,419	$ 98,861	$70,116	$ —	$228,396

Discontinued assets	—	(47,529)	—	—	(47,529)
Balances as of December 31, 2017	$ 59,419	$ 51,332	$ 70,116	$ —	$ 180,867

Following are the intangible assets that continue to be subject to amortization as of December 31, 2018 and 2017 (in thousands):

	As of December 31, 2018		
	Core Deposit Intangible Assets	Customer Relationships	Total
Gross Carrying Amount	$50,059	$ 71,852	$121,911
Accumulated Amortization	44,998	61,910	106,908
Net Carrying Amounts	$5,061	$ 9,942	$15,003

	As of December 31, 2017		
	Core Deposit Intangible Assets	Customer Relationships	Total
Gross Carrying Amount	$50,059	$ 71,342	$121,401
Accumulated Amortization	42,209	58,935	101,144
Net Carrying Amounts	$7,850	$ 12,407	$20,257

Amortization expense for the years ended December 31, 2018, 2017, and 2016 was $5.8 million, $7.3 million and $8.7 million, respectively. The following table discloses the estimated amortization expense of intangible assets in future years (in thousands):

For the year ending December 31, 2019	$4,785
For the year ending December 31, 2020	3,830
For the year ending December 31, 2021	2,825
For the year ending December 31, 2022	1,886
For the year ending December 31, 2023	1,167

8. PREMISES AND EQUIPMENT

Premises and equipment consisted of the following (in thousands):

	December 31,	
	2018	2017
Land	$44,580	$46,415
Buildings and leasehold improvements	344,267	328,384
Equipment	159,717	148,425

Software	209,877	186,269
Total	758,441	709,493
Accumulated depreciation	(320,476)	(300,103)
Accumulated amortization	(154,086)	(133,448)
Premises and equipment, net	$283,879	$275,942

Premises and equipment depreciation and amortization expenses were $47.4 million in 2018, $45.6 million in 2017, and $41.9 million in 2016. Rental and operating lease expenses were $14.8 million in 2018, $14.8 million in 2017, and $14.6 million in 2016.

Minimum future rental commitments as of December 31, 2018, for all non-cancelable operating leases are as follows (in thousands):

2019	$12,257
2020	11,592
2021	8,886
2022	8,078
2023	6,457
Thereafter	27,092
Total	$74,362

9. BORROWED FUNDS

The components of the Company's long-term debt are as follows (in thousands):

	December 31,	
	2018	2017
Trust Preferred Securities:		
Marquette Capital Trust I subordinated debentures 3.77% due 2036	$16,914	$16,636
Marquette Capital Trust II subordinated debentures 3.77% due 2036	17,548	17,285
Marquette Capital Trust III subordinated debentures 4.32% due 2036	6,906	6,804
Marquette Capital Trust IV subordinated debentures 4.39% due 2036	27,960	27,560
Kansas Equity Fund IX, L.P. 0% due 2023	64	133
Kansas Equity Fund X, L.P. 0% due 2021	141	207
St. Louis Equity Fund 2007 L.L.C. 0% due 2019	13	13
St. Louis Equity Fund 2012 L.L.C. 0% due 2020	84	163
St. Louis Equity Fund 2013 L.L.C. 0% due 2021	562	859
St. Louis Equity Fund 2014 L.L.C. 0% due 2022	912	1,209
St. Louis Equity Fund 2015, L.L.C. 0% due 2023	604	759
MHEG Community Fund 41, L.P. 0% due 2024	545	680
MHEG Community Fund 43, L.P. 0% due 2026	979	1,165
MHEG Community Fund 45, L.P. 0% due 2027	1,174	1,353
MHEG Community Fund 47, L.P. 0% due 2028	1,414	1,485
MHEG Community Fund 49, L.P. 0% due 2034	2,951	2,970
MHEG Community Fund 50, L.P. 0% due 2035	2,970	—
Open Prairie Rural Opportunities Fund, L.P. 0% due 2022	930	—
Total long-term debt	$82,671	$79,281

Aggregate annual repayments of long-term debt at December 31, 2018, are as follows (in thousands):

2019	$2,180

2020	3,801
2021	2,806
2022	1,349
2023	889
Thereafter	71,646
Total	$82,671

The Company assumed long-term debt obligations from the acquisition of Marquette and consists of debt obligations payable to four unconsolidated trusts (Marquette Capital Trust I, Marquette Capital Trust II, Marquette Capital Trust III, and Marquette Capital Trust IV) that previously issued trust preferred securities. These long-term debt obligations had an aggregate contractual balance of $103.1 million and had a carrying value of $69.3 million as of December 31, 2018. Interest rates on trust preferred securities are tied to the three-month LIBOR rate with spreads ranging from 133 basis points to 160 basis points and reset quarterly. The trust preferred securities have maturity dates ranging from January 2036 to September 2036.

The Company is a member bank of the FHLB of Des Moines. Through this relationship, the Company purchased $10.0 million of FHLB stock and has access to additional liquidity and funding sources through FHLB advances. The Company's borrowing capacity is dependent upon the amount of collateral the Company places at the FHLB. The Company's borrowing capacity with the FHLB was $814.6 million as of December 31, 2018. The Company had no outstanding FHLB advances at FHLB of Des Moines as of December 31, 2018.

The Company has a revolving line of credit with Wells Fargo Bank, N.A. which allows the Company to borrow up to $50.0 million for general working capital purposes. The interest rate applied to borrowed balances will be at the Company's option either 1.00 percent above LIBOR or 1.75 percent below the prime rate on the date of an advance. The Company pays 0.3 percent unused commitment fee for unused portions of the line of credit. The Company currently has no outstanding balance on this line of credit.

The Company enters into sales of securities with simultaneous agreements to repurchase (repurchase agreements). The Company utilizes repurchase agreements to facilitate the needs of customers and to facilitate secured short-term funding needs. Repurchase agreements are stated at the amount of cash received in connection with the transaction. The Company monitors collateral levels on a continuous basis and may be required to provide additional collateral based on the fair value of the underlying securities. Securities pledged as collateral under repurchase agreements are maintained with the Company's safekeeping agents. The amounts received under these agreements represent short-term borrowings. The amount outstanding at December 31, 2018, was $1.5 billion (with accrued interest payable of $174 thousand). The amount outstanding at December 31, 2017, was $1.2 billion (with accrued interest payable of $197 thousand).

The carrying amounts and market values of the securities and the related repurchase liabilities and weighted average interest rates of the repurchase liabilities (grouped by maturity of the repurchase agreements) were as follows as of December 31, 2018 (in thousands):

	As of December 31, 2018		
	Securities Fair Market Value	Repurchase Liabilities	Weighted Average Interest Rate
Maturity of the Repurchase Liabilities			
2 to 30 days	$1,529,683	$1,511,991	2.08 %
Over 90 Days	251	250	0.03
Total	$1,529,934	$1,512,241	2.08 %

The table below presents the remaining contractual maturities of repurchase agreements outstanding at December 31, 2018, in addition to the various types of marketable securities that have been pledged as collateral for these borrowings (in thousands).

	As of December 31, 2018 Remaining Contractual Maturities of the Agreements		
Repurchase agreements, secured by:	2-29 days	Over 90 Days	Total
U.S. Treasury	$181,531	$ —	$181,531

U.S. Agency	1,330,460	250	1,330,710
Total repurchase agreements	$1,511,991	$ 250	$1,512,241

10. REGULATORY REQUIREMENTS

Payment of dividends by the Bank to the parent company is subject to various regulatory restrictions. For national banks, the governing regulatory agency must approve the declaration of any dividends generally in excess of the sum of net income for that year and retained net income for the preceding two years.

The Bank maintains a reserve balance with the FRB as required by law. During 2018, this amount averaged $396.0 million, compared to $303.8 million in 2017.

At December 31, 2018, the Company is required to have minimum common equity tier 1, tier 1, and total capital ratios of 4.5%, 6.0% and 8.0%, respectively. The Company's actual ratios at that date were 12.89%, 12.89%

and 13.95%, respectively. The Company is required to have a minimum leverage ratio of 4.0%, and the leverage ratio at December 31, 2018, was 9.87%.

As of December 31, 2018, the most recent notification from the OCC categorized the Bank as well capitalized under the regulatory framework for prompt corrective action. To be categorized as well-capitalized the Bank must maintain total risk-based, tier 1 risk-based, common equity tier 1, and tier 1 leverage ratios of 10.0%, 8.0%, 6.5%, and 5.0%, respectively. There are no conditions or events that have occurred since the receipt of the most recent notification that management believes have changed the Bank's categorization.

In addition, under amendments to the BHCA introduced by the Dodd-Frank Act and commonly known as the Volcker Rule, the Company and its subsidiaries are subject to extensive limits on proprietary trading and on owning or sponsoring hedge funds and private-equity funds. The limits on proprietary trading are largely focused on purchases or sales of financial instruments by a banking entity as principal primarily for the purpose of short-term resale, benefitting from actual or expected short-term price movements, or realizing short-term arbitrage profits. The limits on owning or sponsoring hedge funds and private-equity funds are designed to ensure that banking entities generally maintain only small positions in managed or advised funds and are not exposed to significant losses arising directly or indirectly from them. The Volcker Rule also provides for increased capital charges, quantitative limits, rigorous compliance programs, and other restrictions on permitted proprietary trading and fund activities, including a prohibition on transactions with a covered fund that would constitute a covered transaction under Sections 23A and 23B of the Federal Reserve Act. The fund activities of the Company and its subsidiaries are in conformance with the Volcker Rule, which became effective July 21, 2015.

Actual capital amounts as well as required and well-capitalized common equity tier 1, tier 1, total and tier 1 leverage ratios as of December 31, 2018 and 2017 for the Company and the Bank are as follows (in thousands):

	2018					
			For Capital Adequacy Purposes		To Be Well Capitalized Under Prompt Corrective Action Provisions	
	Actual Amount	Ratio	Amount	Ratio	Amount	Ratio
Common Equity Tier 1 Capital:						
UMB Financial Corporation	$2,142,469	12.89%	$748,009	4.50%	$N/A	N/A %
UMB Bank, n. a.	1,921,615	11.65	742,322	4.50	1,072,243	6.50
Tier 1 Capital:						
UMB Financial Corporation	2,142,469	12.89	997,346	6.00	N/A	N/A
UMB Bank, n. a.	1,921,615	11.65	989,763	6.00	1,319,683	8.00
Total Capital:						
UMB Financial Corporation	2,318,145	13.95	1,329,794	8.00	N/A	N/A
UMB Bank, n. a.	2,027,962	12.29	1,319,683	8.00	1,649,604	10.00
Tier 1 Leverage:						
UMB Financial Corporation	2,142,469	9.87	867,879	4.00	N/A	N/A
UMB Bank, n. a.	1,921,615	8.85	868,916	4.00	1,086,145	5.00
	2017					
Common Equity Tier 1 Capital:						
UMB Financial Corporation	$2,041,504	12.95%	$709,309	4.50%	$N/A	N/A %

UMB Bank, n. a.	1,750,297	11.19	704,062	4.50	1,016,979	6.50
Tier 1 Capital:						
UMB Financial Corporation	2,041,504	12.95	945,746	6.00	N/A	N/A
UMB Bank, n. a.	1,750,297	11.19	938,750	6.00	1,251,666	8.00
Total Capital:						
UMB Financial Corporation	2,213,050	14.04	1,260,994	8.00	N/A	N/A
UMB Bank, n. a.	1,853,558	11.85	1,251,666	8.00	1,564,583	10.00
Tier 1 Leverage:						
UMB Financial Corporation	2,041,504	9.94	821,527	4.00	N/A	N/A
UMB Bank, n. a.	1,750,297	8.57	816,859	4.00	1,021,073	5.00

11. EMPLOYEE BENEFITS

The Company has a discretionary noncontributory profit sharing plan, which features an employee stock ownership plan. This plan is for the benefit of substantially all eligible officers and employees of the Company and its subsidiaries. The Company has accrued and anticipates making a discretionary payment of $1.5 million in March 2019, for 2018. A $4.0 million contribution was paid in 2018, for 2017. A $1.5 million contribution was paid in 2017, for 2016.

The Company has a qualified 401(k) profit sharing plan that permits participants to make contributions by salary deduction. The Company made a matching contribution to this plan of $6.8 million in 2018, for 2017 and $6.7 million in 2017, for 2016. In 2018, the Company changed the timing of matching contributions from annually to every pay period. As a result, the Company made matching contributions to the plan of $9.1 million in 2018 for current year activity, and anticipates making an additional matching contribution of $0.1 million in January 2019, for 2018.

The Company recognized $1.5 million, $2.5 million, and $2.1 million in expense related to outstanding stock options and $8.2 million, $10.4 million, and $9.2 million in expense related to outstanding restricted stock and restricted stock unit grants for the years ended December 31, 2018, 2017, and 2016, respectively. The Company had $2.2 million of unrecognized compensation expense related to the outstanding options and $14.8 million of unrecognized compensation expense related to outstanding restricted stock and restricted stock unit grants at December 31, 2018.

2002 Incentive Stock Option Plan

On April 18, 2002, the shareholders of the Company approved the 2002 Incentive Stock Options Plan (the 2002 Plan), which provides incentive options to certain key employees to receive up to 2 million common shares of the Company. All options that are issued under the 2002 Plan terminate after 10 years (except for any option granted to a person holding more than 10 percent of the Company’s stock, in which case the option terminates after five years). All options issued prior to 2005, under the 2002 Plan, could not be exercised until at least four years and 11 months after the date they are granted. Options issued in 2006, 2007, and 2008 under the 2002 Plan, have a vesting schedule of 50 percent after three years; 75 percent after four years and 100 percent after four years and 11 months. Except under circumstances of death, disability or certain retirements, the options cannot be exercised after the grantee has left the employment of the Company or its subsidiaries. The exercise period for an option may be accelerated upon the optionee’s qualified disability, retirement or death. All options expire at the end of the exercise period. Options are granted at exercise prices of no less than 100 percent of the fair market value of the underlying shares based on the fair value of the option at date of grant. On January 25, 2011, the Board amended and froze the 2002 Plan such that no shares of Company stock shall thereafter be available for grants under the 2002 Plan. Existing awards granted under the 2002 Plan will continue in accordance with their terms under the 2002 Plan. The 2002 Plan expired without modification on April 17, 2012.

The table below discloses the information relating to option activity in 2018, under the 2002 Plan:

	Number of Shares	Weighted Average Price Per Share	Weighted Average Remaining Contractual Term	Aggregate Intrinsic Value
Stock Options Under the 2002 Plan				
Outstanding - December 31, 2017	31,686	$ 40.93		

Granted	—		—			
Expired	(938)		40.93			
Exercised	(30,748)		40.93			
Outstanding - December 31, 2018	—	$	—	—	$	—
Exercisable - December 31, 2018	—	$	—	—	$	—

No options were granted under the 2002 Plan during 2018, 2017, or 2016. The total intrinsic value of options exercised during the year ended December 31, 2018, 2017, and 2016 was $0.9 million, $2.0 million, and $2.3 million, respectively. As of December 31, 2018, there was no unrecognized compensation cost related to the nonvested options.

Long-Term Incentive Compensation Plan

At the April 26, 2005 shareholders' meeting, the shareholders of the Company approved the UMB Financial Corporation Long-Term Incentive Compensation Plan (LTIP) which became effective as of January 1, 2005. The LTIP permits the issuance to selected officers of the Company service-based restricted stock grants, performance-based restricted stock grants and non-qualified stock options. Service-based restricted stock grants contain a service requirement. The performance-based restricted grants contain performance and service requirements. The non-qualified stock option grants contain a service requirement.

At the April 23, 2013 shareholders' meeting, the shareholders of the Company approved amendments to the LTIP Plan, including increasing the number of shares of the Company's stock reserved for issuance under the Plan from 5.25 million shares to 7.44 million shares. Additionally, the shareholders approved increasing the maximum benefits any one eligible employee may receive under the plan during any one fiscal year from $1 million to $2 million taking into account the value of all stock options and restricted stock received.

The service-based restricted stock grants contain a service requirement with varying vesting schedules. The majority of these grants issued prior to 2016 utilize a vesting schedule in which 50 percent of the shares vest after three years of service, 75 percent after four years of service and 100 percent after five years of service. The majority of these grants issued in 2016 and beyond utilize a vesting schedule in which 50 percent of the shares vest after two years of service, 75 percent after three years of service and 100 percent after four years of service. Certain other grants utilize vesting schedules in which the grants vest ratably over the requisite service period or contain a three-year cliff vesting.

The performance-based restricted stock grants contain a service and a performance requirement. The performance requirement is based on a predetermined performance requirement over a three year period. The service requirement portion is a three year cliff vesting. If the performance requirement is not met, the participants do not receive the shares.

The dividends on service and performance-based restricted stock grants are treated as two separate transactions. First, cash dividends are paid on the restricted stock. Those cash dividends are then paid to purchase additional shares of restricted stock. Dividends earned as additional shares of restricted stock have the same terms as the associated grant. The dividends paid on the stock are recorded as a reduction to retained earnings (similar to all dividend transactions).

The table below discloses the status of the service-based restricted shares during 2018:

	Number of Shares	Weighted Average Grant Date Fair Value
Service-Based Restricted Stock		
Nonvested - December 31, 2017	470,133	$ 55.39
Granted	136,170	72.30
Canceled	(45,591)	59.96
Vested	(195,425)	50.22
Nonvested - December 31, 2018	365,287	$ 63.89

As of December 31, 2018, there was $13.9 million of unrecognized compensation cost related to the nonvested shares. The cost is expected to be recognized over a period of 2.3 years. Total fair value of shares vested during the year ended December 31, 2018, 2017, and 2016 was $14.5 million, $9.9 million, and $7.4 million, respectively.

The table below discloses the status of the performance-based restricted shares during 2018:

	Number of Shares	Weighted Average Grant Date Fair Value
Performance-Based Restricted Stock		
Nonvested - December 31, 2017	135,214	$ 57.22
Granted	—	—
Canceled	(24,872)	57.79
Vested	(34,128)	51.42
Nonvested - December 31, 2018	76,214	$ 59.62

As of December 31, 2018, there was $0.9 million of unrecognized compensation cost related to the nonvested shares. The cost is expected to be recognized over a period of 1.0 years. Total fair value of shares vested during the years ended December 31, 2018, 2017 and 2016, was $2.6 million, $1.4 million and $1.0 million, respectively.

The non-qualified stock options carry a service requirement and grants issued prior to 2016 will vest 50 percent after three years, 75 percent after four years and 100 percent after five years, while grants issued in 2016 and beyond will vest 50 percent after two years, 75 percent after three years and 100 percent after four years.

The table below discloses the information relating to non-qualified option activity in 2018 under the LTIP:

	Number of Shares	Weighted Average Price Per Share	Weighted Average Remaining Contractual Term	Aggregate Intrinsic Value
Stock Options Under the LTIP				
Outstanding - December 31, 2017	1,047,461	$ 52.13		
Granted	—	—		
Canceled	(76,530)	58.05		
Expired	(1,929)	52.57		
Exercised	(215,358)	46.42		
Outstanding - December 31, 2018	753,644	$ 53.16	5.6	$ 5,882,568
Exercisable - December 31, 2018	421,802	$ 47.71	4.5	$ 5,593,676

The Company uses the Black-Scholes pricing model to determine the fair value of its options. The assumptions for stock-based awards in the past three years utilized in the model are shown in the table below.

	2018	2017	2016
Black-Scholes pricing model:			

Weighted average fair value of the granted option	$ —	$17.88	$9.90
Weighted average risk-free interest rate	—	1.29 %	1.30 %
Expected option life in years	—	6.25	6.25
Expected volatility	—	24.41 %	25.71 %
Expected dividend yield	—	2.03 %	2.02 %

The expected option life is derived from historical exercise patterns and represents the amount of time that options granted are expected to be outstanding. The expected volatility is based on historical volatilities of the Company's stock. The risk-free interest rate for periods within the contractual life of the option is based on the U.S. Treasury yield curve in effect at the time of grant.

There were no options granted during 2018. The weighted average grant-date fair value of options granted during the years 2017 and 2016 was $17.88 and $9.90, respectively. The total intrinsic value of options exercised during the years ended December 31, 2018, 2017, and 2016, was $6.1 million, $8.1 million and $5.8 million, respectively. As of December 31, 2018, there was $2.2 million of unrecognized compensation cost related to the nonvested options. The cost is expected to be recognized over a period of 1.6 years.

Cash received from options exercised under all share based compensation plans was $11.3 million, $12.7 million, and $15.8 million for the years ended December 31, 2018, 2017, and 2016, respectively. The tax benefit realized for stock options exercised was $2.4 million, $3.6 million, and $1.1 million for the years ended December 31, 2018, 2017, and 2016, respectively.

The Company has no specific policy to repurchase common shares to mitigate the dilutive impact of options; however, the Company has historically made adequate discretionary repurchases of common shares in an amount that exceeds stock option exercise activity. See a description of the Company's share repurchase plan in Note 14, "Common Stock and Earnings Per Share," in the Notes to the Consolidated Financial Statements provided in Item 8, page 94 of this report.

Omnibus Incentive Compensation Plan

At the April 24, 2018 shareholders' meeting, the shareholders of the Company approved the UMB Financial Corporation Omnibus Incentive Compensation Plan (OICP) which became effective as of April 24, 2018. The OICP permits the issuance to key employees of the Company various types of awards, including stock options, restricted stock and restricted stock units, performance awards and other stock-based awards. In 2018, stock-based compensation under the OICP was issued in the form of restricted stock awards, restricted stock units and performance stock units. Restricted stock awards do not contain a service or performance requirement and were vested immediately upon grant. Service-based restricted stock unit awards contain a service requirement and the performance-based restricted stock unit awards contain performance and service requirements. The number of shares of the Company's stock reserved for issuance under the Plan is 5.40 million shares. The maximum benefits any one eligible employee may receive under the Plan during any one fiscal year is $1 million.

The service-based restricted stock unit awards are payable in shares of stock and contain a service requirement with either a two year cliff vesting or a three year graded vesting schedule in which 50 percent of the units vest after two years of service and the remaining 50 percent vest after three years of service.

The performance-based restricted stock unit awards are payable in shares of stock and contain a service and a performance requirement. The performance requirement is based on two predetermined performance requirements over a three year period. The service requirement portion is a three year cliff vesting. If the performance requirement is not met, the participants do not receive the shares.

The dividends on service-based restricted stock grants and service-based restricted stock units are treated as two separate transactions. First, cash dividends are paid on the restricted stock or stock units. Those cash dividends are then paid to purchase additional shares of restricted stock or stock units. Dividends earned as additional shares of restricted stock or stock units have the same terms as the associated grant. The dividends paid on the stock are recorded as a reduction to retained earnings (similar to all dividend transactions). Dividends are not paid on performance-based restricted stock units.

The table below discloses the status of the restricted stock awards during 2018:

	Number of Shares	Weighted Average Price Per Share
Service Based Restricted Stock Under the OICP		
Nonvested - December 31, 2017	—	$ —

Granted	240	74.24
Canceled	—	—
Vested	(240)	74.24
Nonvested - December 31, 2018	—	$ —

As of December 31, 2018, there was no unrecognized compensation cost related to the restricted stock awards. Total fair value of shares vested during the year ended December 31, 2018, was $18 thousand.

The table below discloses the status of the service-based restricted stock units during 2018:

	Number of Units	Weighted Average Price Per Unit
Service Based Restricted Stock Units Under the OICP		
Nonvested - December 31, 2017	—	$ —
Granted	14,257	71.98
Canceled	—	—
Vested	—	—
Nonvested - December 31, 2018	14,257	$ 71.98

As of December 31, 2018, there was $0.9 million of unrecognized compensation cost related to the nonvested units. The cost is expected to be recognized over a period of 2.6 years. There were no units vested during 2018.

The table below discloses the status of the performance-based restricted stock units during 2018:

	Number of Units	Weighted Average Price Per Unit
Performance Based Restricted Stock Units Under the OICP		
Nonvested - December 31, 2017	—	$ —
Granted	45,030	76.68
Canceled	(6,015)	76.68
Vested	—	—
Nonvested - December 31, 2018	39,015	$ 76.68

As of December 31, 2018, there was $2.3 million of unrecognized compensation cost related to the nonvested units. The cost is expected to be recognized over a period of 2.0 years. There were no units vested during 2018.

12. BUSINESS SEGMENT REPORTING

The Company has strategically aligned its operations into the following four reportable segments: Commercial Banking, Institutional Banking, Personal Banking, and Healthcare Services (collectively, the Business Segments). Senior executive officers regularly evaluate Business Segment financial results produced by the Company’s internal reporting system in deciding how to allocate resources and assess performance for individual Business Segments. Previously, the Company had the following three Business Segments: Bank, Institutional Investment Management, and Asset Servicing. During 2017, the Company sold all of the outstanding stock of Scout, its institutional investment management subsidiary. As the operations of Scout are included in discontinued operations, the Company no longer presents such operations as one of its business segments. The Company’s reportable Business Segments include certain corporate overhead, technology and service costs that are allocated based on methodologies that are applied consistently between periods. For comparability purposes, amounts in all periods are based on methodologies in effect at December 31, 2018. Previously reported results have been reclassified in this filing to conform to the current organizational structure.

The following summaries provide information about the activities of each segment:

Commercial Banking serves the commercial lending and leasing, capital markets, and treasury management needs of the Company's mid-market businesses and governmental entities by offering various products and services. Such services include commercial loans, commercial credit cards, letters of credit, loan syndication services, consultative services, and a variety of financial options for companies that need non-traditional banking services. Capital markets services include asset-based financing, asset securitization, equity and mezzanine financing, factoring, private and public placement of senior debt, as well as merger and acquisition consulting. Treasury management services include depository services, account reconciliation services, electronic fund transfer services, controlled disbursements, lockbox services, and remote deposit capture services.

Institutional Banking is a combination of banking services, fund services, and asset management services provided to institutional clients. This segment also provides mutual fund cash management, international payments,

corporate trust and escrow services, as well as correspondent banking and investment banking. Products and services include bond trading transactions, cash letter collections, investment portfolio accounting and safekeeping, reporting for asset/liability management, and Federal funds transactions. Institutional Banking also includes UMBFS, which provides fund administration and accounting, investor services and transfer agency, marketing and distribution, custody, and alternative investment services.

Personal Banking combines consumer services and asset management provided to personal clients. This segment combines the Company's consumer bank with the individual investment and wealth management solutions. The range of services offered to UMB clients varies from a basic checking account to estate planning and trust services. Products and services include the Company's bank branches, call center, internet banking and ATM network, deposit accounts, retail credit cards, private banking, installment loans, home equity lines of credit, residential mortgages, small business loans, brokerage services, and insurance services in addition to a full spectrum of investment advisory, trust, and custody services.

Healthcare Services provides healthcare payment solutions including custodial services for health savings accounts (HSAs) and private label, multipurpose debit cards to insurance carriers, third-party administrators, software companies, employers, and financial institutions.

BUSINESS SEGMENT INFORMATION

Segment financial results were as follows (in thousands):

	Year Ended December 31, 2018				
	Commercial Banking	Institutional Banking	Personal Banking	Healthcare Services	Total
Net interest income	$380,266	$66,585	$125,045	$38,550	$610,446
Provision for loan losses	63,841	1,335	5,574	—	70,750
Noninterest income	74,931	173,591	118,344	34,832	401,698
Noninterest expense	253,740	189,708	225,406	48,946	717,800
Income before taxes	137,616	49,133	12,409	24,436	223,594
Income tax expense	16,824	6,007	1,517	2,986	27,334
Income from continuing operations	$120,792	$43,126	$10,892	$21,450	$196,260
Average assets	$9,856,000	$3,995,000	$4,959,000	$2,190,000	$21,000,000

	Year Ended December 31, 2017				
	Commercial Banking	Institutional Banking	Personal Banking	Healthcare Services	Total
Net interest income	$353,627	$51,977	$122,304	$31,005	$558,913
Provision for loan losses	32,937	1,461	6,602	—	41,000
Noninterest income	82,221	187,003	118,896	35,442	423,562
Noninterest expense	250,308	184,618	226,634	43,569	705,129
Income before taxes	152,603	52,901	7,964	22,878	236,346
Income tax expense	34,460	11,946	1,798	5,166	53,370
Income from continuing operations	$118,143	$40,955	$6,166	$17,712	$182,976
Average assets	$9,717,000	$3,622,000	$5,160,000	$1,897,000	$20,396,000

	Year Ended December 31, 2016				
	Commercial Banking	Institutional Banking	Personal Banking	Healthcare Services	Total
Net interest income	$308,852	$39,272	$122,896	$24,303	$495,323
Provision for loan losses	22,730	410	9,360	—	$32,500
Noninterest income	76,756	171,543	121,250	32,962	$402,511
Noninterest expense	227,161	165,539	236,808	37,237	$666,745
Income (loss) before taxes	135,717	44,866	(2,022)	20,028	198,589
Income tax expense (benefit)	30,722	10,157	(458)	4,534	44,955
Income (loss) from continuing operations	$104,995	$34,709	$(1,564)	$15,494	$153,634
Average assets	$8,683,000	$4,199,000	$5,216,000	$1,495,000	$19,593,000

13. REVENUE RECOGNITION

As of January 1, 2018, the Company adopted ASU No. 2014-09, Revenue from Contracts with Customers – ASC 606 and all subsequent ASUs that modified ASC 606. The Company has elected to apply the ASU and all related ASUs using the modified retrospective approach. The implementation of the guidance had no material impact on the measurement or recognition of revenue of either current or prior periods.

The following is a description of the principal activities from which the Company generates revenue that are within the scope of ASC 606:

Trust and securities processing - Trust and securities processing income consists of fees earned on personal and corporate trust accounts, custody of securities services, trust investments and wealth management services, and mutual fund and alternative asset servicing. The performance obligations related to this revenue include items such as performing full bond trustee service administration, investment advisory services, custody and record-keeping services, and fund administrative and accounting services. These fees are part of long-term contractual agreements and the performance obligations are satisfied upon completion of service and fees are generally a fixed flat monthly rate or based on a percentage of the account's market value per the contract with the customer. These fees are primarily recorded within the Company's Institutional and Personal Banking segments.

Trading and investment banking - Trading and investment banking income consists of income earned related to the Company's trading securities portfolio, including futures hedging, dividends, bond underwriting, and other securities incomes. The vast majority of this revenue is recognized in accordance with ASC 320, Debt and Equity Securities, and is out of the scope of ASC 606. A portion of trading and investment banking represents fees earned for management fees, commissions, and underwriting of corporate bond issuances. The performance obligations related to these fees include reviewing the credit worthiness of the customer, ensuring appropriate regulatory approval and participating in due diligence. The fees are fixed per the bond prospectus and the performance obligations are satisfied upon registration approval of the bonds by the applicable regulatory agencies. Revenue is recognized at the point in time upon completion of service and when approval is granted by the regulators.

Service charges on deposits - Service charges on deposit accounts represent monthly analysis fees recognized for the services related to customer deposit accounts, including account maintenance and depository transactions processing fees. Commercial Banking and Institutional Banking depository accounts charge fees in accordance with the customer's pricing schedule while Personal Banking account holders are generally charged a flat service fee per month. Deposit service charges for the Healthcare Services segment are priced according to either standard pricing schedules with individual account holders or according to service agreements between the Company and employer groups or third party administrators. The Company satisfies the performance obligation related to providing depository accounts monthly as transactions are processed and deposit service charge revenue is recorded

monthly. These fees are recognized within all Business Segments.

Insurance fees and commissions – Insurance fees and commissions includes all insurance-related fees earned, including commissions for individual life, variable life, group life, health, group health, fixed annuity, and variable annuity insurance contracts. The performance obligations related to these revenues primarily represent the placement of insurance policies with the insurance company partners. The fees are based on the contracts with insurance company partners and the performance obligations are satisfied when the terms of the policy have been agreed to and the insurance policy becomes effective.

Brokerage fees – Brokerage fees represent income earned related to providing brokerage transaction services, including commissions on equity and commodity trades, and fees for investment management, advisory and administration. The performance obligations related to transaction services are executing the specified trade and are priced according to the customer's fee schedule. Such income is recognized at a point in time as the trade occurs and the performance obligation is fulfilled. The performance obligations related to investment management, advisory and administration include allocating customer assets across a wide range of mutual funds and other investments, on-going account monitoring and re-balancing of the portfolio. These performance obligations are satisfied over time and the related revenue is calculated monthly based on the assets under management of each customer. All material performance obligations are satisfied as of the end of each accounting period.

Bankcard fees – Bankcard fees primarily represent income earned from interchange revenue from MasterCard and Visa for the Company's processing of debit, credit, HSA, and flexible spending account transactions. Additionally, the Company earns income and incentives related to various referrals of customers to card programs. The performance obligation for interchange revenue is the processing of each transaction through the Company's access to the banking system. This performance obligation is completed for each individual transaction and income is recognized per transaction in accordance with interchange rates established by MasterCard and Visa. The performance obligations for various referral and incentive programs include either referring customers to certain card products or issuing exclusively branded cards for certain customer segments. The pricing of these incentive and referral programs are in accordance with the agreement with the individual card partner. These performance obligations are completed as the referrals are made or over a period of time when the Company is exclusively issuing branded cards. For the years ended December 31, 2018, 2017 and 2016, the Company also has approximately $36.0 million, $27.8 million, and $29.0 million of expense, respectively, recorded within the Bankcard fees line on the Company's Consolidated Income Statements related to rebates and rewards programs that are outside of the scope of ASC 606. All material performance obligations are satisfied as of the end of each accounting period.

Gains on sales of securities available for sale, net – In the regular course of business, the Company recognizes gains on the sale of available for sale securities. These gains are recognized in accordance with ASC 320, Debt and Equity Securities, and are outside of the scope of ASC 606.

Other income – The Company recognizes other miscellaneous income through a variety of other revenue streams, the most material of which include letter of credit fees, certain loan origination fees, gains on the sale of assets, gains and losses on equity-method investments, derivative income, and bank-owned and company-owned life insurance income. These revenue streams are outside of the scope of ASC 606 and are recognized in accordance with the applicable U.S. GAAP. The remainder of Other income is primarily earned through transactions with personal banking customers, including wire transfer service charges, stop payment charges, and fees for items like money orders and cashier's checks. The performance obligations of these types of fees are satisfied as transactions are completed and revenue is recognized upon transaction execution according to established fee schedules with the customers.

The Company had no material contract assets, contract liabilities, or remaining performance obligations as of December 31, 2018. Total receivables from revenue recognized under the scope of ASC 606 were $52.2 million and $53.5 million as of December 31, 2018 and December 31, 2017, respectively. These receivables are included as part of the Other assets line on the Company's Consolidated Balance Sheets.

The following tables depict the disaggregation of revenue according to revenue stream and Business Segment for the three years ended December 31, 2018, 2017, and 2016. As stated in Note 12, "Business Segment Reporting," for comparability purposes, amounts in all periods are based on methodologies in effect at December 31, 2018 and previously reported results have been reclassified in this filing to confirm to the current organizational structure. Disaggregated revenue is as follows (in thousands):

	Year Ended December 31, 2018					
NONINTEREST INCOME	Commercial Banking	Institutional Banking	Personal Banking	Healthcare Services	Revenue (Expense) out of Scope of ASC 606	Total
Trust and securities processing	$—	$ 107,236	$64,927	$ —	$ —	$172,163
Trading and investment banking	—	—	—	—	15,584	15,584
Service charges on deposit accounts	30,313	25,174	11,551	17,123	126	84,287
Insurance fees and commissions	—	—	1,292	—	—	1,292
Brokerage fees	194	17,026	8,587	—	—	25,807
Bankcard fees	59,596	5,816	22,080	16,264	(35,236)	68,520
Gains on sales of securities available for sale, net	—	—	—	—	578	578
Other	2,660	618	7,273	743	22,173	33,467
Total Noninterest income	$92,763	$ 155,870	$115,710	$ 34,130	$ 3,225	$401,698

	Year Ended December 31, 2017					
NONINTEREST INCOME	Commercial Banking	Institutional Banking	Personal Banking	Healthcare Services	Revenue (Expense) out of Scope of ASC 606	Total
Trust and securities processing	$—	$ 110,237	$66,409	$ —	$ —	$176,646
Trading and investment banking	—	712	—	—	22,471	23,183
Service charges on deposit accounts	31,251	29,043	11,818	15,454	114	87,680
Insurance fees and commissions	—	—	1,972	—	—	1,972
Brokerage fees	160	14,630	8,415	3	—	23,208
Bankcard fees	53,239	6,176	22,918	17,791	(27,094)	73,030
Gains on sales of securities available for sale, net	—	—	—	—	4,192	4,192
Other	2,354	601	3,708	399	26,589	33,651
Total Noninterest income	$87,004	$ 161,399	$115,240	$ 33,647	$ 26,272	$423,562

	Year Ended December 31, 2016					
NONINTEREST INCOME	Commercial Banking	Institutional Banking	Personal Banking	Healthcare Services	Revenue (Expense) out of Scope of ASC 606	Total
Trust and securities processing	$7	$ 105,130	$61,178	$ —	$ —	$166,315
Trading and investment banking	—	—	—	—	21,422	21,422
Service charges on deposit accounts	33,009	28,484	12,213	12,750	206	86,662
Insurance fees and commissions	—	—	4,188	—	—	4,188
Brokerage fees	221	9,100	8,494	18	—	17,833
Bankcard fees	47,839	2,912	27,255	18,677	(27,934)	68,749
Gains on sales of securities available for sale, net	—	—	—	—	8,509	8,509
Other	2,563	708	3,289	160	22,113	28,833
Total Noninterest income	$83,639	$ 146,334	$116,617	$ 31,605	$ 24,316	$402,511

14. COMMON STOCK AND EARNINGS PER SHARE

The following table summarizes the share transactions for the three years ended December 31, 2018 (in thousands, except for share data):

	Shares Issued	Shares in Treasury
Balance December 31, 2015	55,056,730	(5,660,364)
Purchase of Treasury Stock	—	(399,677)
Sale of Treasury Stock	—	21,036
Issued for stock options & restricted stock	—	655,331
Balance December 31, 2016	55,056,730	(5,383,674)
Purchase of Treasury Stock	—	(245,982)
Sale of Treasury Stock	—	14,908
Issued for stock options & restricted stock	—	453,008
Balance December 31, 2017	55,056,730	(5,161,740)
Accelerated Share Repurchase Program	—	(780,321)
Purchase of Treasury Stock	—	(401,038)
Sale of Treasury Stock	—	14,631
Issued for stock options & restricted stock	—	388,960
Balance December 31, 2018	55,056,730	(5,939,508)

The Board authorized the repurchase of up to 2 million shares of common stock annually at its 2016, 2017 and 2018 meetings. During 2018, the Company entered into an agreement with BAML to repurchase an aggregate of $50.0 million of the Company’s common stock through an ASR. Under the ASR, the Company repurchased a total of 780,321 shares. The final settlement of the transactions under the ASR occurred in December 2018. Other than purchases pursuant to the ASR, all share purchases pursuant to the Repurchase Authorizations are intended to be within the scope of Rule 10b-18 promulgated under the Exchange Act. Rule 10b-18 provides a safe harbor for purchases in a given day if the Company satisfies the manner, timing and volume conditions of the rule when purchasing its own common shares. The Company has not made any repurchase of its securities other than pursuant to the Repurchase Authorizations.

Basic earnings per share are computed by dividing income available to common shareholders by the weighted average number of shares outstanding during the year. Diluted earnings per share gives effect to all potential common shares that were outstanding during the year.

The shares used in the calculation of basic and diluted earnings per share, are shown below:

	For the Years Ended December 31,		
	2018	2017	2016
Weighted average basic common shares outstanding	49,334,937	49,223,661	48,828,313
Dilutive effect of stock options and restricted stock	435,800	615,629	448,742

Weighted average diluted common shares outstanding	49,770,737	49,839,290	49,277,055

15. COMMITMENTS, CONTINGENCIES AND GUARANTEES

In the normal course of business, the Company is a party to financial instruments with off-balance-sheet risk in order to meet the financing needs of its customers and to reduce its own exposure to fluctuations in interest rates. These financial instruments include commitments to extend credit, commercial letters of credit, standby letters of credit, and futures contracts. These instruments involve, to varying degrees, elements of credit and interest rate risk in excess of the amount recognized in the Consolidated Balance Sheets. The contract or notional amount of those instruments reflects the extent of involvement the Company has in particular classes of financial instruments.

The Company's exposure to credit loss in the event of nonperformance by the other party to the financial instruments for commitments to extend credit, commercial letters of credit, and standby letters of credit is

represented by the contract or notional amount of those instruments. The Company uses the same credit policies in making commitments and conditional obligations as it does for on-balance-sheet instruments.

Commitments to extend credit are agreements to lend to a customer as long as there is no violation of any condition established in the agreement. These conditions generally include, but are not limited to, each customer being current as to repayment terms of existing loans and no deterioration in the customer's financial condition. Commitments generally have fixed expiration dates or other termination clauses and may require payment of a fee. The interest rate is generally a variable rate. If the commitment has a fixed interest rate, the rate is generally not set until such time as credit is extended. For credit card customers, the Company has the right to change or terminate terms or conditions of the credit card account at any time. Since a large portion of the commitments and unused credit card lines are never actually drawn upon, the total commitment amount does not necessarily represent future cash requirements. The Company evaluates each customer's creditworthiness on an individual basis. The amount of collateral obtained, if deemed necessary by the Company upon extension of credit, is based on management's credit evaluation. Collateral pledged by customers varies but may include accounts receivable, inventory, real estate, plant and equipment, stock, securities and certificates of deposit.

Commercial letters of credit are issued specifically to facilitate trade or commerce. Under the terms of a commercial letter of credit, as a general rule, drafts will be drawn when the underlying transaction is consummated as intended.

Standby letters of credit are conditional commitments issued by the Company payable upon the non-performance of a customer's obligation to a third party. The Company issues standby letters of credit for terms ranging from three months to six years. The Company generally requires the customer to pledge collateral to support the letter of credit. The maximum liability to the Company under standby letters of credit at December 31, 2018 and 2017, was $298.9 million and $316.1 million, respectively. As of December 31, 2018 and 2017, standby letters of credit totaling $36.5 million and $42.5 million, respectively, were with related parties to the Company.

The credit risk involved in issuing letters of credit is essentially the same as that involved in extending loan facilities. The Company holds collateral supporting those commitments when deemed necessary. Collateral varies but may include such items as those described for commitments to extend credit.

Futures contracts are contracts for delayed delivery of securities or money market instruments in which the seller agrees to make delivery at a specified future date, of a specified instrument, at a specified yield. Risks arise from the possible inability of counterparties to meet the terms of their contracts and from movement in securities values and interest rates. Instruments used in trading activities are carried at market value and gains and losses on futures contracts are settled in cash daily. Any changes in the market value are recognized in trading and investment banking income.

The Company uses contracts to offset interest rate risk on specific securities held in the trading portfolio. As of December 31, 2018 and 2017, there were no notional amounts outstanding for these contracts. There were no open futures contract positions during the year ended December 31, 2018 or 2017. There was no net futures activity for the year ended December 31, 2018. Net futures activity resulted in losses of $6 thousand and $142 thousand for 2017 and 2016, respectively. The Company controls the credit risk of its futures contracts through credit approvals, limits and monitoring procedures.

The Company also enters into foreign exchange contracts on a limited basis. For operating purposes, the Company maintains certain balances in foreign banks. Foreign exchange contracts are purchased on a monthly basis to avoid foreign exchange risk on these foreign balances. The Company will also enter into foreign exchange contracts to facilitate foreign exchange needs of customers. The Company will enter into a contract to buy or sell a foreign currency at a future date only as part of a contract to sell or buy the foreign currency at the same future date to a

customer. During 2018, contracts to purchase and to sell foreign currency averaged approximately $23.9 million compared to $36.8 million during 2017. The net gains on these foreign exchange contracts for 2018, 2017 and 2016 were $2.1 million, $1.9 million and $1.6 million, respectively.

With respect to group concentrations of credit risk, most of the Company's business activity is with customers in the states of Missouri, Kansas, Colorado, Oklahoma, Nebraska, Arizona, Illinois, and Texas. At December 31, 2018, the Company did not have any significant credit concentrations in any particular industry.

The following table summarizes the Company's off-balance sheet financial instruments as described above (in thousands):

	Contract or Notional Amount December 31,	
	2018	2017
Commitments to extend credit for loans (excluding credit card loans)	$6,870,451	$6,689,467
Commitments to extend credit under credit card loans	3,152,439	2,975,507
Commercial letters of credit	1,892	813
Standby letters of credit	298,915	316,054
Forward contracts	29,796	29,007
Spot foreign exchange contracts	11,183	628

16. DIVESTITURES

On November 17, 2017, the Company closed the sale of all of the outstanding stock of Scout, its institutional investment management subsidiary, for $172.5 million in cash, which was subject to customary post-closing purchase adjustments. The gain recorded on the disposal of Scout was $103.6 million.

This table summarizes the components of income from discontinued operations, net of taxes, for the years ended December 31, 2018, 2017, and 2016 presented in the Consolidated Statements of Income (in thousands):

	For the years ended December 31,		
	2018	2017	2016
Total noninterest income	$—	$63,416	$73,564
Total noninterest expense	917	65,834	65,149
(Loss) income from discontinued operations	(917)	(2,418)	8,415
Gain on the disposal of discontinued operations	—	103,644	—
Total (loss) income from discontinued operations	(917)	101,226	8,415
Income tax (benefit) expense	(170)	37,097	3,248
Net (loss) income on discontinued operations	$(747)	$64,129	$5,167

The components of net cash provided by operating and investing activities of discontinued operations included in the Consolidated Statements of Cash Flows are as follows (in thousands):

	For the years ended December 31,		
	2018	2017	2016
(Loss) income from discontinued operations	$(747)	$64,129	$5,167
Gain on the disposal of discontinued operations	—	(103,644)	—

Depreciation and amortization	—	1,647	3,596
Net cash (used in) provided by operating activities of discontinued operations	$(747)	$(37,868)	$8,763

Proceeds on disposal of discontinued operations	$—	$167,183	$—
Net cash provided by investing activities of discontinued operations	$—	$167,183	$—

17. INCOME TAXES

On December 22, 2017, the U.S. government enacted comprehensive tax legislation commonly referred to as the Tax Cuts and Jobs Act (the Tax Act). The Tax Act includes numerous changes to existing tax law, including among other things, a permanent reduction in the federal corporate income tax rate from 35% to 21% effective January 1, 2018. The Company recognized the income tax effects of the Tax Act in its 2017 financial statements, and upon completion of the 2017 tax return, recorded a favorable provision-to-return adjustment in its 2018 financial

statements. As of December 31, 2018, we consider the accounting for the effects of the rate change on our deferred tax balances to be complete.

Income taxes on continuing operations produce effective income tax rates of 12.2 percent in 2018, 22.6 percent in 2017, and 22.6 percent in 2016. These percentages are computed by dividing income tax expense by Income from continuing operations before income taxes.

Income tax expense from continuing operations includes the following components (in thousands):

	Year Ended December 31,		
	2018	2017	2016
Current tax			
Federal	$43,027	$(8,260)	$41,860
State	4,568	1,889	1,570
Total current tax expense (benefit)	47,595	(6,371)	43,430
Deferred tax			
Federal	(19,355)	57,851	1,145
State	(906)	1,890	380
Total deferred tax (benefit) expense	(20,261)	59,741	1,525
Total tax expense	$27,334	$53,370	$44,955

Income taxes from discontinued operations produce effective income tax rates of 18.5 percent in 2018, 36.6 percent in 2017, and 38.6 percent in 2016. These percentages are computed by dividing income tax expense by Income from discontinued operations before income taxes.

Income tax expense from discontinued operations includes the following components (in thousands):

	Year Ended December 31,		
	2018	2017	2016
Current tax			
Federal	$(154)	$35,169	$1,759
State	(16)	1,930	258
Total current tax (benefit) expense	(170)	37,099	2,017
Deferred tax			
Federal	—	260	1,187
State	—	(262)	44
Total deferred tax (benefit) expense	—	(2)	1,231
Total tax (benefit) expense	$(170)	$37,097	$3,248

The reconciliation between the income tax expense and the amount computed by applying the statutory federal tax rate of 21% for 2018 and 35% for 2017 and 2016 to income from continuing operations before income taxes is as follows (in thousands):

	Year Ended December 31,		
	2018	2017	2016
Statutory federal income tax expense	$46,955	$82,721	$69,506
Tax-exempt interest income	(15,525)	(25,697)	(20,196)
Tax-exempt life insurance related income	(1,744)	(5,769)	(3,405)
Meals, entertainment and related expenses	1,547	1,380	1,323
State and local income taxes, net of federal tax benefits	2,767	2,439	1,365
Impacts related to the 2017 Tax Act	(4,974)	2,997	—
Equity-based compensation	(2,364)	(3,297)	(1,095)
Federal tax credits, net of amortization of LIHTC[(1)] investments	(1,135)	(1,119)	(2,480)
Other	1,807	(285)	(63)
Total tax expense	$27,334	$53,370	$44,955

(1) Low income housing tax credits

In preparing its tax returns, the Company is required to interpret tax laws and regulations to determine its taxable income. Periodically, the Company is subject to examinations by various taxing authorities that may give rise to differing interpretations of these laws. Upon examination, agreement of tax liabilities between the Company and the multiple tax jurisdictions in which the Company files tax returns may ultimately be different. The Company is in the examination process with the Internal Revenue Service for tax years 2014 and 2015 and with one state taxing authority for tax years 2015 and 2016. The Company believes the aggregate amount of any additional liabilities that may result from these examinations, if any, will not have a material adverse effect on the financial condition, results of operations, or cash flows of the Company.

Deferred income taxes result from differences between the carrying value of assets and liabilities measured for financial reporting and the tax basis of assets and liabilities for income tax return purposes.

The significant components of deferred tax assets and liabilities are reflected in the following table (in thousands):

	December 31,	
	2018	2017
Deferred tax assets:		
Net unrealized loss on securities available for sale	$31,260	$18,023
Loans, principally due to allowance for loan losses	25,104	23,646
Equity-based compensation	5,167	4,975
Accrued expenses	21,090	17,248
Miscellaneous	3,810	3,762
Total deferred tax assets before valuation allowance	86,431	67,654
Valuation allowance	(2,150)	(3,498)
Total deferred tax assets	84,281	64,156
Deferred tax liabilities:		
Real Estate Investment Trust dividend	—	(32,591)
Land, buildings and equipment	(28,383)	(17,783)
Original issue discount	(3,002)	(2,580)
Partnership investments	(3,369)	(1,005)
Trust preferred securities	(8,374)	(7,202)
Intangibles	(10,071)	(5,769)
Miscellaneous	(3,935)	(3,117)
Total deferred tax liabilities	(57,134)	(70,047)
Net deferred tax asset (liability)	$27,147	$(5,891)

The Company had various state net operating loss carryforwards of approximately $1.2 million as of December 31, 2018. These net operating losses expire at various times between 2019 and 2038. The Company has a full valuation allowance for a majority of these state net operating losses as they are not expected to be realized. In addition, the Company has a valuation allowance of $1.0 million to reduce certain other state deferred tax assets to the amount of tax benefit management believes it will more likely than not realize.

The net deferred tax asset at December 31, 2018 is included in the Other assets line of the Company's Consolidated Balance Sheets while the net deferred tax liability at December 31, 2017 is included in the Accrued expenses and taxes line of the Company's Consolidated Balance Sheets.

The Company and its subsidiaries file income tax returns in the U.S. federal jurisdiction and various states. With few exceptions, the Company is no longer subject to U.S. federal, state and local income tax examinations by tax authorities for tax years prior to 2014 in the jurisdictions in which it files.

Liabilities Associated With Unrecognized Tax Benefits

The gross amount of unrecognized tax benefits totaled $4.9 million and $3.8 million at December 31, 2018 and 2017, respectively. The total amount of unrecognized tax benefits, net of associated deferred tax benefit, that would impact the effective tax rate, if recognized, would be $3.8 million and $3.0 million at December 31, 2018 and December 31, 2017, respectively. The unrecognized tax benefits relate to state tax positions that have a

corresponding federal tax benefit. While it is expected that the amount of unrecognized tax benefits will change in the next twelve months, the Company does not expect this change to have a material impact on the financial condition, results of operations, or cash flows of the Company.

A reconciliation of the beginning and ending amount of unrecognized tax benefits is as follows (in thousands):

	December 31,	
	2018	2017
Unrecognized tax benefits - opening balance	$3,846	$4,375
Gross increases - tax positions in prior period	—	323
Gross decreases - tax positions in prior period	(1,373)	—
Gross increases - current-period tax positions	2,874	228
Lapse of statute of limitations	(488)	(1,080)
Unrecognized tax benefits - ending balance	$4,859	$3,846

18. DERIVATIVES AND HEDGING ACTIVITIES

Risk Management Objective of Using Derivatives

The Company is exposed to certain risks arising from both its business operations and economic conditions. The Company principally manages its exposures to a wide variety of business and operational risks through management of its core business activities. The Company manages economic risks, including interest rate, liquidity, and credit risk, primarily by managing the amount, sources, and duration of its assets and liabilities. Specifically, the Company enters into derivative financial instruments to manage exposures that arise from business activities that result in the receipt or payment of future known and uncertain cash amounts, the values of which are determined by interest rates. The Company's derivative financial instruments are used to manage differences in the amount, timing, and duration of the Company's known or expected cash receipts and its known or expected cash payments principally related to certain fixed rate assets and liabilities. The Company also has interest rate derivatives that result from a service provided to certain qualifying customers and, therefore, are not used to manage interest rate risk of the Company's assets or liabilities. The Company has entered into an offsetting position for each of these derivative instruments with a matching instrument from another financial institution in order to minimize its net risk exposure resulting from such transactions.

Fair Values of Derivative Instruments on the Consolidated Balance Sheets

The table below presents the fair value of the Company's derivative financial instruments as of December 31, 2018 and 2017. The Company's derivative assets and derivative liabilities are located within Other Assets and Other Liabilities, respectively, on the Company's Consolidated Balance Sheets.

Derivatives fair values are determined using valuation techniques including discounted cash flow analysis on the expected cash flows from each derivative. This analysis reflects the contractual terms of the derivatives, including the period to maturity, and uses observable market-based inputs, including interest rate curves, foreign exchange rates, and implied volatilities. The Company incorporates credit valuation adjustments to appropriately reflect both its own nonperformance risk and the respective counterparty's nonperformance risk in the fair value measurements. In adjusting the fair value of its derivatives contracts for the effect of nonperformance risk, the Company has considered the impact of netting and any applicable credit enhancements, such as collateral postings, thresholds, mutual puts, and

guarantees.

This table provides a summary of the fair value of the Company's derivative assets and liabilities as of December 31, 2018 and December 31, 2017 (in thousands):

	Derivative Assets December 31,		Derivative Liabilities December 31,	
Fair Value	2018	2017	2018	2017
Interest Rate Products:				
Derivatives not designated as hedging instruments	$9,339	$10,116	$5,498	$7,326
Derivatives designated as hedging instruments	—	33	15	1,580
Total	$9,339	$10,149	$5,513	$8,906

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Fair Value Hedges of Interest Rate Risk

The Company is exposed to changes in the fair value of certain of its fixed rate assets and liabilities due to changes in the benchmark interest rate, LIBOR. Interest rate swaps designated as fair value hedges involve either making fixed rate payments to a counterparty in exchange for the Company receiving variable rate payments, or making variable rate payments to a counterparty in exchange for the Company receiving fixed rate payments, over the life of the agreements without the exchange of the underlying notional amount. As of December 31, 2018, the Company had one interest rate swap with a notional amount of $5.6 million that was designated as a fair value hedge of interest rate risk associated with the Company's fixed rate loan assets.

For derivatives designated and that qualify as fair value hedges, the gain or loss on the derivative as well as the offsetting loss or gain on the hedged item attributable to the hedged risk are recognized in earnings.

Cash Flow Hedges of Interest Rate Risk

The Company is exposed to changes in the fair value of certain of its variable-rate liabilities due to changes in the benchmark interest rate, LIBOR. Interest rate swaps designated as cash flow hedges involve the receipt of variable amounts from a counterparty in exchange for the Company making fixed-rate payments over the life of the agreements without exchange of the underlying notional amount. As of December 31, 2018, the Company had two interest rate swaps with a notional amount of $51.5 million that were designated as cash flow hedges of interest rate risk associated with the Company's variable rate subordinated debentures issued by Marquette Capital Trusts III and IV. For derivatives designated and that qualify as cash flow hedges, the change in fair value is recorded in AOCI and is subsequently reclassified into earnings in the period that the hedged forecasted transaction affects earnings. Amounts reported in AOCI related to derivatives will be reclassified to Interest expense as interest payments are received or paid on the Company's derivatives. The Company expects to reclassify $13 thousand from AOCI to Interest expense during the next 12 months. As of December 31, 2018, the Company is hedging its exposure to the variability in future cash flows for forecasted transactions over a maximum period of 17.72 years.

Non-designated Hedges

The remainder of the Company's derivatives are not designated in qualifying hedging relationships. Derivatives not designated as hedges are not speculative and result from a service the Company provides to certain customers. The Company executes interest rate swaps with commercial banking customers to facilitate their respective risk management strategies. Those interest rate swaps are simultaneously offset by interest rate swaps that the Company executes with a third party, such that the Company minimizes its net risk exposure resulting from such transactions. As the interest rate swaps associated with this program do not meet hedge accounting requirements, changes in the fair value of both the customer swaps and the offsetting swaps are recognized directly in earnings. As of December 31, 2018, the Company had 110 interest rate swaps with an aggregate notional amount of $1.3 billion related to this program.

Effect of Derivative Instruments on the Consolidated Statements of Income and Consolidated Statements of Comprehensive Income

This table provides a summary of the amount of gain or loss recognized in Other noninterest expense in the Consolidated Statements of Income for the years ended December 31, 2018, 2017, and 2016 related to the Company's derivative assets and liabilities (in thousands):

	Amount of Gain (Loss) Recognized For the Year Ended December 31,		
	2018	2017	2016
Interest Rate Products			
Derivatives not designated as hedging instruments	$(94)	$(579)	$195
Total	$(94)	$(579)	$195
Interest Rate Products			
Derivatives designated as fair value hedging instruments			
Fair value adjustments on derivatives	$59	$(189)	$(181)
Fair value adjustments on hedged items	(58)	193	186
Total	$1	$4	$5

This table provides a summary of the amount of gain or loss recognized in AOCI in the Consolidated Statements of Comprehensive Income for the years ended December 31, 2018, 2017, and 2016 related to the Company's derivative assets and liabilities (in thousands):

	Amount of Gain (Loss) Recognized in Other Comprehensive Income on Derivatives For the Year Ended December 31,		
Derivatives in Cash Flow Hedging Relationships	2018	2017	2016
Interest rate products			
Derivatives designated as cash flow hedging instruments	$1,906	$(1,050)	$(516)
Total	$1,906	$(1,050)	$(516)

Credit-risk-related Contingent Features

The Company has agreements with certain of its derivative counterparties that contain a provision where if the Company defaults on any of its indebtedness, including default where repayment of the indebtedness has not been accelerated by the lender, then the Company could also be declared in default on its derivative obligations.

As of December 31, 2018, the termination value of derivatives in a net liability position, which includes accrued interest, related to these agreements was $2.2 million. The Company has minimum collateral posting thresholds with certain of its derivative counterparties. As of December 31, 2018 the Company had posted $2.6 million of collateral. If the Company had breached any of these provisions at December 31, 2018, it could have been required to settle its obligations under the agreements at the termination value.

19. DISCLOSURES ABOUT FAIR VALUE OF FINANCIAL INSTRUMENTS

The following table presents information about the Company's assets measured at fair value on a recurring basis as of December 31, 2018, and indicates the fair value hierarchy of the valuation techniques utilized by the Company to determine such fair value.

Fair values determined by Level 1 inputs utilize quoted prices in active markets for identical assets and liabilities that the Company has the ability to access. Fair values determined by Level 2 inputs utilize inputs other than quoted prices included in Level 1 that are observable for the asset or liability, either directly or indirectly. Level 2 inputs include quoted prices for similar assets or liabilities in active markets, and inputs other than quoted prices that are observable for the asset or liability, such as interest rates and yield curves that are observable at commonly quoted intervals. Level 3 inputs are unobservable inputs for the asset or liability, and include situations where there is little, if any, market activity for the asset or liability. In certain cases, the inputs used to measure fair value may fall into different levels of the hierarchy. In such cases, the fair value is determined based on the lowest level input that is significant to the fair value measurement in its entirety.

Assets and liabilities measured at fair value on a recurring basis as of December 31, 2018 and 2017 (in thousands):

	Fair Value Measurement at December 31, 2018 Using			
Description	December 31, 2018	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets				
U.S. Treasury	$—	$ —	$—	$ —
U.S. Agencies	3,063	—	3,063	—
Mortgage-backed	713	—	713	—
State and political subdivisions	37,974	—	37,974	—
Corporates	7,125	7,125	—	—
Trading - other	12,136	12,136	—	—
Trading securities	61,011	19,261	41,750	—
U.S. Treasury	247,130	247,130	—	—
U.S. Agencies	199	—	199	—
Mortgage-backed	3,812,211	—	3,812,211	—
State and political subdivisions	2,483,260	—	2,483,260	—
Available for sale securities	6,542,800	247,130	6,295,670	—
Company-owned life insurance	54,152	—	54,152	—
Bank-owned life insurance	273,553	—	273,553	—
Derivatives	9,339	—	9,339	—
Total	$6,940,855	$ 266,391	$6,674,464	$ —
Liabilities				
Deferred compensation	$50,063	$ 50,063	$—	$ —
Derivatives	5,513	—	5,513	—
Securities sold not yet purchased	27,238	—	27,238	—
Total	$82,814	$ 50,063	$32,751	$ —

	Fair Value Measurement at December 31, 2017 Using			
Description	December 31 2017	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Assets				
U.S. Treasury	$18	$ 18	$—	$ —
U.S. Agencies	9,976	—	9,976	—
Mortgage-backed	1,949	—	1,949	—
State and political subdivisions	27,114	—	27,114	—
Corporates	1,885	1,885	—	—
Trading - other	13,113	12,434	679	—
Trading securities	54,055	14,337	39,718	—
U.S. Treasury	38,643	38,643	—	—
U.S. Agencies	14,752	—	14,752	—
Mortgage-backed	3,649,243	—	3,649,243	—
State and political subdivisions	2,542,673	—	2,542,673	—
Corporates	13,266	13,266	—	—
Available for sale securities	6,258,577	51,909	6,206,668	—
Company-owned life insurance	53,577	—	53,577	—
Bank-owned life insurance	265,823	—	265,823	—
Derivatives	10,149	—	10,149	—
Total	$6,642,181	$ 66,246	$6,575,935	$ —
Liabilities				
Deferred compensation	$50,963	$ 50,963	$—	$ —
Derivatives	8,906	$ —	8,906	—
Securities sold not yet purchased	4,130	—	4,130	—
Total	$63,999	$ 50,963	$13,036	$ —

Valuation methods for instruments measured at fair value on a recurring basis

The following methods and assumptions were used to estimate the fair value of each class of financial instruments measured on a recurring basis:

Trading Securities Fair values for trading securities (including financial futures), are based on quoted market prices where available. If quoted market prices are not available, fair value is estimated using quoted market prices for similar securities.

Securities Available for Sale Fair values are based on quoted market prices or dealer quotes, if available. If a quoted market price is not available, fair value is estimated using quoted market prices for similar securities. Prices are provided by third-party pricing services and are based on observable market inputs. On an annual basis, the Company compares a sample of these prices to other independent sources for the same securities. Additionally, throughout the year if securities are sold, comparisons are made between the pricing services prices and the market prices at which the securities were sold. Variances are analyzed, and, if appropriate, additional research is conducted with the third-party pricing services. Based on this research, the pricing services may affirm or revise their quoted price. No significant adjustments have been made to the prices provided by the pricing services. The pricing services also provide documentation on an ongoing basis that includes reference data, inputs and methodology by asset class, which

is reviewed to ensure that security placement within the fair value hierarchy is appropriate.

Company-owned Life Insurance Fair value is equal to the cash surrender value of the life insurance policies.

Bank-owned Life Insurance Fair value is equal to the cash surrender value of the life insurance policies.

Derivatives Fair values are determined using valuation techniques including discounted cash flow analysis on the expected cash flows of each derivative. This analysis reflects the contractual terms of the derivatives, including the period to maturity, and uses observable market-based inputs, including interest rate curves, foreign exchange

rates, and implied volatilities. The Company incorporates credit valuation adjustments to appropriately reflect both its own nonperformance risk and the respective counterparty's nonperformance risk in the fair value measurements. In adjusting the fair value of its derivative contracts for the effect of nonperformance risk, the Company has considered the impact of netting and any applicable credit enhancements, such as collateral postings, thresholds, mutual puts, and guarantees.

Deferred Compensation Fair values are based on quoted market prices.

Securities sold not yet purchased Fair values are based on quoted market prices or dealer quotes, if available. If a quoted market price is not available, fair value is estimated using quoted market prices for similar securities. Prices are provided by third-party pricing services and are based on observable market inputs.

Assets measured at fair value on a non-recurring basis as of December 31, 2018 and 2017 (in thousands):

		Fair Value Measurement at December 31, 2018 Using			
Description	December 31, 2018	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total Gains Recognized During the Twelve Months Ended December 31
Impaired loans	$ 10,085	$ —	$ —	$ 10,085	$ 1,972
Other real estate owned	3,132	—	—	3,132	6
Total	$ 13,217	$ —	$ —	$ 13,217	$ 1,978

		Fair Value Measurement at December 31, 2017 Using			
Description	December 31, 2017	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total Gains Recognized During the Twelve Months Ended December 31
Impaired loans	$ 15,186	$ —	$ —	$ 15,186	$ 1,251
Other real estate owned	1,488	—	—	1,488	13
Total	$ 16,674	$ —	$ —	$ 16,674	$ 1,264

Valuation methods for instruments measured at fair value on a nonrecurring basis

The following methods and assumptions were used to estimate the fair value of each class of financial instruments measured on a non-recurring basis:

Impaired loans While the overall loan portfolio is not carried at fair value, adjustments are recorded on certain loans to reflect write-downs that are based on the external appraisal value of the underlying collateral. The external appraisals are generally based on recent sales of comparable properties which are then adjusted for the unique characteristics of the property being valued. In the case of non-real estate collateral, reliance is placed on a variety of sources, including external estimates of value and judgments based on the experience and expertise of internal specialists within the Company’s property management group and the Company’s credit department. The valuation of the impaired loans is reviewed on a quarterly basis. Because many of these inputs are not observable, the measurements are classified as Level 3.

Other real estate owned Other real estate owned consists of loan collateral which has been repossessed through foreclosure. This collateral is comprised of commercial and residential real estate and other non-real estate property, including auto, recreational and marine vehicles. Other real estate owned is recorded as held for sale initially at the lower of the loan balance or fair value of the collateral. The initial valuation of the foreclosed property is obtained through an appraisal process similar to the process described in the impaired loans paragraph above. Subsequent to foreclosure, valuations are reviewed quarterly and updated periodically, and the assets may be marked down further, reflecting a new cost basis. Fair value measurements may be based upon appraisals, third-party price opinions, or internally developed pricing methods and those measurements are classified as Level 3.

Goodwill Valuation of goodwill to determine impairment is performed annually, or more frequently if there is an event or circumstance that would indicate impairment may have occurred. The process involves calculations to determine the fair value of each reporting unit on a stand-alone basis. A combination of formulas using current market multiples, based on recent sales of financial institutions within the Company's geographic marketplace, is used to estimate the fair value of each reporting unit. That fair value is compared to the carrying amount of the reporting unit, including its recorded goodwill. Impairment is considered to have occurred if the fair value of the reporting unit is lower than the carrying amount of the reporting unit. The fair value of the Company's common stock relative to its computed book value per share is also considered as part of the overall evaluation. These measurements are classified as Level 3.

Fair value disclosures require disclosure of the fair value of financial assets and financial liabilities, including those financial assets and financial liabilities that are not measured and reported at fair value on a recurring basis or non-recurring basis.

The estimated fair value of the Company's financial instruments at December 31, 2018 and 2017 are as follows (in thousands):

	Fair Value Measurement at December 31, 2018 Using				
	Carrying Amount	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total Estimated Fair Value
FINANCIAL ASSETS					
Cash and short-term investments	$2,319,954	$ 1,693,453	$626,501	$ —	$ 2,319,954
Securities available for sale	6,542,800	247,130	6,295,670	—	6,542,800
Securities held to maturity	1,170,646	—	1,070,532	—	1,070,532
Trading securities	61,011	19,261	41,750	—	61,011
Other securities	73,692	—	73,692	—	73,692
Loans (exclusive of allowance for loan loss)	12,181,342	—	12,190,599	—	12,190,599
Derivatives	9,339	—	9,339	—	9,339
FINANCIAL LIABILITIES					
Demand and savings deposits	18,134,512	18,134,512	—	—	18,134,512
Time deposits	1,146,748	—	1,146,748	—	1,146,748
Other borrowings	1,518,920	6,679	1,512,241	—	1,518,920
Long-term debt	82,671	—	82,818	—	82,818
Derivatives	5,513	—	5,513	—	5,513
OFF-BALANCE SHEET ARRANGEMENTS					
Commitments to extend credit for loans					5,425
Commercial letters of credit					115
Standby letters of credit					2,658

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	Fair Value Measurement at December 31, 2017 Using				
	Carrying Amount	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total Estimated Fair Value
FINANCIAL ASSETS					
Cash and short-term investments	$1,936,084	$ 1,749,618	$186,466	$ —	$ 1,936,084
Securities available for sale	6,258,577	51,909	6,206,668	—	6,258,577
Securities held to maturity	1,261,014	—	1,207,447	—	1,207,447
Trading securities	54,055	14,337	39,718	—	54,055
Other securities	65,897	—	65,897	—	65,897
Loans (exclusive of allowance for loan loss)	11,281,973	—	11,318,764	—	11,318,764
Derivatives	10,149	—	10,149	—	10,149
FINANCIAL LIABILITIES					
Demand and savings deposits	16,742,736	16,742,736	—	—	16,742,736
Time deposits	1,280,264	—	1,280,264	—	1,280,264
Other borrowings	1,260,704	11,334	1,249,370	—	1,260,704
Long-term debt	79,281	—	79,496	—	79,496
Derivatives	8,906	—	8,906	—	8,906
OFF-BALANCE SHEET ARRANGEMENTS					
Commitments to extend credit for loans					6,654
Commercial letters of credit					136
Standby letters of credit					2,514

Cash and short-term investments The carrying amounts of cash and due from banks, federal funds sold and resell agreements are reasonable estimates of their fair values.

Securities held to maturity Fair value of held-to-maturity securities are estimated by discounting the future cash flows using current market rates.

Other securities Amount consists of FRB and FHLB stock held by the Company, PCM equity-method investments, and other miscellaneous investments. The fair value of FRB and FHLB stock is considered to be the carrying value as no readily determinable market exists for these investments because they can only be redeemed with the FRB or FHLB. The fair value of PCM marketable equity-method investments are based on quoted market prices used to estimate the value of the underlying investment. For non-marketable equity-method investments, the Company's proportionate share of the income or loss is recognized on a one-quarter lag based on the valuation of the underlying investments.

Loans Fair values are estimated for portfolios with similar financial characteristics. Loans are segregated by type, such as commercial, real estate, consumer, and credit card. Each loan category is further segmented into fixed and variable interest rate categories. The fair value of loans are based on quoted market prices for similar instruments or estimated using discounting the future cash flow analysis. The discount rates used are estimated using comparable market rates for similar types of instruments adjusted to be commensurate with the credit risk, overhead costs, and

optionality of such instruments.

Demand and savings deposits The fair value of demand deposits and savings accounts is the amount payable on demand at December 31, 2018 and 2017.

Time deposits The fair value of fixed-maturity certificates of deposit is estimated by discounting the future cash flows using the rates that are currently offered for deposits of similar remaining maturities.

Other borrowings The carrying amounts of federal funds purchased, repurchase agreements and other short-term debt are reasonable estimates of their fair value because of the short-term nature of their maturities.

Long-term debt Rates currently available to the Company for debt with similar terms and remaining maturities are used to estimate fair value of existing debt.

Other off-balance sheet instruments The fair value of loan commitments and letters of credit are determined based on the fees currently charged to enter into similar agreements, taking into account the remaining terms of the agreement and the present creditworthiness of the counterparties. Neither the fees earned during the year on these instruments nor their fair value at year-end are significant to the Company's consolidated financial position.

20. PARENT COMPANY FINANCIAL INFORMATION

UMB FINANCIAL CORPORATION

BALANCE SHEETS (in thousands)

	December 31,	
	2018	2017
ASSETS		
Investment in subsidiaries:		
Banks	$1,934,082	$1,815,953
Non-banks	156,529	149,145
Total investment in subsidiaries	2,090,611	1,965,098
Goodwill on purchased affiliates	5,011	5,011
Cash	165,771	260,621
Securities available for sale and other	82,792	68,550
Total assets	$2,344,185	$2,299,280
LIABILITIES AND SHAREHOLDERS' EQUITY		
Long-term debt	$69,329	$68,285
Accrued expenses and other	46,386	49,464
Total liabilities	115,715	117,749
Shareholders' equity	2,228,470	2,181,531
Total liabilities and shareholders' equity	$2,344,185	$2,299,280

STATEMENTS OF INCOME AND COMPREHENSIVE INCOME (in thousands)

	Year Ended December 31,		
	2018	2017	2016
INCOME			
Dividends and income received from subsidiaries	$47,250	$55,000	$47,000
Service fees from subsidiaries	50,858	43,691	40,579
Other	651	10,390	4,207
Total income	98,759	109,081	91,786
EXPENSE			
Salaries and employee benefits	46,707	43,716	38,198
Other	19,149	18,652	20,436
Total expense	65,856	62,368	58,634
Income before income taxes and equity in undistributed earnings of subsidiaries	32,903	46,713	33,152
Income tax benefit	(4,432)	(1,202)	(3,903)
Income before equity in undistributed earnings of subsidiaries	37,335	47,915	37,055
Equity in undistributed earnings of subsidiaries:			
Banks	156,771	140,873	119,551
Non-Banks	2,154	(5,812)	(2,972)
Income from continuing operations	196,260	182,976	153,634
(Loss) income from discontinued operations	(747)	64,129	5,167
Net income	$195,513	$247,105	$158,801
Other comprehensive (loss) income	(50,257)	12,017	(53,824)
Comprehensive income	$145,256	$259,122	$104,977

STATEMENTS OF CASH FLOWS (in thousands)

	Year Ended December 31,		
	2018	2017	2016
OPERATING ACTIVITIES			
Net income	$195,513	$247,105	$158,801
Adjustments to reconcile net income to cash provided by operating activities:			
Equity in earnings of subsidiaries	(206,175)	(146,367)	(163,993)
Dividends received from subsidiaries	47,250	96,391	54,000
Depreciation and amortization	486	424	457
Equity based compensation	11,073	13,316	11,735
Net tax benefit related to equity compensation plans	2,364	3,612	1,073
Gains on sales of assets	—	(103,715)	—
Changes in other assets and liabilities, net	(5,994)	5,424	(11,717)
Net cash provided by operating activities	44,517	116,190	50,356
INVESTING ACTIVITIES			
Net capital investment in subsidiaries	(17,961)	(37,474)	(10,006)
Net cash activity from divestitures and acquisitions	—	168,361	—
Net decrease (increase) in securities available for sale	1,062	1,575	(1,034)
Net cash (used in) provided by investing activities	(16,899)	132,462	(11,040)
FINANCING ACTIVITIES			
Cash dividends paid	(58,279)	(51,876)	(49,038)
Proceeds from exercise of stock options and sales of treasury stock	12,318	13,867	16,911
Purchases of treasury stock	(76,507)	(15,276)	(16,367)
Net cash used in financing activities	(122,468)	(53,285)	(48,494)
Net (decrease) increase in cash	(94,850)	195,367	(9,178)
Cash and cash equivalents at beginning of period	260,621	65,254	74,432
Cash and cash equivalents at end of period	$165,771	$260,621	$65,254

21. SUMMARY OF OPERATING RESULTS BY QUARTER (unaudited) (in thousands except per share data)

	Three Months Ended			
2018	March 31	June 30	Sept 30	Dec 31
Interest income	$167,665	$176,480	$185,097	$202,719
Interest expense	19,743	26,254	34,607	40,911
Net interest income	147,922	150,226	150,490	161,808
Provision for loan losses	10,000	7,000	5,750	48,000
Noninterest income	105,525	100,289	100,885	94,999
Noninterest expense	175,876	177,218	180,385	184,321
Income tax expense (benefit)	10,038	10,873	7,391	(968)
Net income from continuing operations	$57,533	$55,424	$57,849	$25,454

2017	March 31	June 30	Sept 30	Dec 31
Interest income	$144,690	$151,211	$157,895	$163,116
Interest expense	10,375	13,817	17,037	16,770
Net interest income	134,315	137,394	140,858	146,346
Provision for loan losses	9,000	14,500	11,500	6,000
Noninterest income	102,917	110,306	104,306	106,033
Noninterest expense	173,810	176,939	171,821	182,559
Income tax expense	12,446	11,490	12,971	16,463
Net income from continuing operations	$41,976	$44,771	$48,872	$47,357

Per Share	Three Months Ended			
2018	March 31	June 30	Sept 30	Dec 31
Net income from continuing operations - basic	$1.16	$1.12	$1.17	$0.52
Net income from continuing operations - diluted	1.15	1.11	1.16	0.52
Dividend	0.290	0.290	0.290	0.300
Book value	43.31	43.96	44.20	45.37

Per Share				
2017	March 31	June 30	Sept 30	Dec 31
Net income from continuing operations - basic	$ 0.85	$0.91	$0.99	$0.96
Net income from continuing operations - diluted	0.84	0.90	0.98	0.95
Dividend	0.255	0.255	0.255	0.275
Book value	40.34	41.42	42.15	43.72

ITEM 9. CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 9A. CONTROLS AND PROCEDURES

Disclosure Controls and Procedures At the end of the period covered by this Annual Report on Form 10-K, the Company's Chief Executive Officer and Chief Financial Officer have each evaluated the effectiveness of the Company's "Disclosure Controls and Procedures" (as defined in Rule 13a-15(e) of the Exchange Act) and have concluded that the Company's Disclosure Controls and Procedures were effective as of the end of the period covered by this Annual Report on Form 10-K.

Management's Report on Internal Control Over Financial Reporting Management of the Company is responsible for establishing and maintaining adequate "internal control over financial reporting," as such term is defined in Rule 13a-15(f) promulgated under the Exchange Act. Under the supervision and with the participation of management, including the Chief Executive Officer and Chief Financial Officer of the Company, and effected by the Board, management and other personnel, an evaluation of the effectiveness of internal control over financial reporting was

conducted based on the criteria established by the Committee of Sponsoring Organizations of the Treadway Commission's Internal Control - Integrated Framework (2013).

Because of its inherent limitations, internal control over financial reporting may not prevent or detect all 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. In addition, given the Company’s size, operations and footprint, lapses or deficiencies in internal controls may occur from time to time.

Based on the evaluation under the framework in Internal Control - Integrated Framework (2013), management (with the participation of the Company’s Chief Executive Officer and Chief Financial Officer) under the oversight of the Board of Directors, has concluded that internal control over financial reporting was effective at the end of the period covered by this Annual Report on Form 10-K. KPMG LLP, the independent registered public

accounting firm that audited the financial statements included within this report, has issued an attestation report on the effectiveness of internal control over financial reporting at the end of the period covered by this report. KPMG LLP's attestation report is set forth below.

Changes in Internal Control Over Financial Reporting During the fourth quarter of 2018, the Company identified a material weakness in internal control related to the identification of impaired loans within the factoring portfolio resulting from the lack of experience of factoring credit personnel related to a specialized factoring relationship and ineffective monitoring of those circumstances within the factoring portfolio. As a result of this material weakness, a single factoring credit was not identified as impaired, and therefore was not evaluated for potential impairment, on a timely basis. The borrower subsequently entered into bankruptcy. Based primarily on preliminary, non-binding bids for the purchase of the assets of the borrower in the bankruptcy, the Company determined to charge off the entire $48.1 million exposure related to this factoring relationship during the fourth quarter.

After a review of the factoring portfolios by the Chief Risk Officer and Loan Review Personnel, the Company determined that there were no additional impaired loans other than the one previously identified. The Company implemented measures to remediate the material weakness, including the following changes to internal controls:

- We implemented quarterly targeted reviews of the factoring portfolio by Loan Review Personnel,
- We increased credit administration’s (i) oversight of the factoring portfolio and (ii) supervision of personnel responsible for servicing the factoring portfolio, and
- We assessed the personnel responsible for servicing factoring relationships and made changes necessary to ensure they are experienced, qualified credit managers who consistently apply Company policies and practices designed to monitor and evaluate the factoring portfolio.

Following the implementation of the measures described above, management concluded that the material weakness was remediated and the Company’s internal control over financial reporting was effective as of December 31, 2018.

Other than the above, there were no other changes in the Company’s internal control over financial reporting occurred during the last quarter of the period covered by this Annual Report on Form 10-K that has materially affected, or is reasonably likely to materially affect, the Company’s internal control over financial reporting.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

To the Board of Directors and Shareholders
UMB Financial Corporation:

Opinion on Internal Control Over Financial Reporting

We have audited UMB Financial Corporation's (the Company) internal control over financial reporting as of December 31, 2018, based on criteria established in Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission. In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2018, based on criteria established in Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission.

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, 2018 and 2017, the related consolidated statements of income, comprehensive income, changes in shareholders' equity, and cash flows for each of the years in the three-year period ended December 31, 2018, and the related notes (collectively, the consolidated financial statements), and our report dated March 1, 2019 expressed an unqualified opinion on those consolidated financial statements.

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 Management's Report on Internal Control Over Financial Reporting. 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 of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included 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 Limitation 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/ KPMG LLP

Kansas City, Missouri

March 1, 2019

ITEM 9B. OTHER INFORMATION

None.

PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The information required by this item relating to executive officers is included in Part I of this Annual Report on Form 10-K (pages 8 and 9) under the caption "Executive Officers of the Registrants."

The information required by this item regarding Directors is incorporated herein by reference to information to be included under the caption "Proposal #1: Election of Directors" of the Company's Proxy Statement for the Annual Meeting of Shareholders to be held on April 23, 2019 (the 2019 Annual Meeting of Shareholders), which will be provided to shareholders within 120 days after December 31, 2018.

The information required by this item regarding the Audit Committee and the Audit Committee financial experts is incorporated herein by reference to information to be included under the caption "Corporate Governance – Committees of the Board of Directors – Audit Committee" of the Company's Proxy Statement for the 2019 Annual Meeting of Shareholders, which will be provided to shareholders within 120 days after December 31, 2018.

The information required by this item concerning Section 16(a) beneficial ownership reporting compliance is incorporated herein by reference to information to be included under the caption "Stock Ownership – Section 16(a) Beneficial Ownership Reporting Compliance" of the Company's Proxy Statement for the 2019 Annual Meeting of Shareholders, which will be provided to shareholders within 120 days after December 31, 2018.

The Company has adopted a code of ethics that applies to all directors, officers and employees, including its chief executive officer, chief financial officer and chief accounting officer. You can find the Company's code of ethics on its website by going to the following address: www.umb.com/aboutumb/investorrelations. The Company will post on its website any amendments or waivers to its code of ethics that are required to be disclosed under the rules of either the SEC or NASDAQ. A copy of the code of ethics will be provided, at no charge, to any person requesting the same, by written notice sent to the Company's Corporate Secretary, 6th floor, 1010 Grand Blvd., Kansas City, Missouri 64106.

ITEM 11. EXECUTIVE COMPENSATION

The information required by this item is incorporated herein by reference to information to be included under the Executive Compensation sections of the Company's Proxy Statement for the 2019 Annual Meeting of Shareholders, which will be provided to shareholders within 120 days after December 31, 2018.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

Security Ownership of Certain Beneficial Owners

The information required by this item is incorporated herein by reference to the Company's 2019 Proxy Statement to information to be included under the caption "Stock Ownership - Principal Shareholders," which will be provided to shareholders within 120 days after December 31, 2018.

Security Ownership of Management

The information required by this item is incorporated herein by reference to the Company's Proxy Statement for the 2019 Annual Meeting of Shareholders, which will be provided to shareholders within 120 days after December 31, 2018, under the caption "Stock Ownership – Stock Owned by Directors, Nominees, and Executive Officers."

The following table summarizes shares authorized for issuance under the Company’s equity compensation plans.

Plan Category	Number of securities to be issued upon exercise of outstanding options, warrants and rights (a)	Weighted average exercise price of outstanding options, warrants and rights (b)	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a)) (c)
Equity compensation plans approved by security holders			
2002 Incentive Stock Option Plan	—	$ —	None
2005 Long Term Incentive Plan	735,644	53.16	None
2018 Omnibus Incentive Compensation Plan	None	None	3,031,084
Equity compensation plans not approved by security holders	None	None	None
Total	735,644	$ 53.16	3,031,084

For additional information concerning the Company’s equity compensation plans, see Note 11, “Employee Benefits,” in the Notes to the Consolidated Financial Statements provided in Item 8, pages 85 through 89 of this report.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

The information required by this item is incorporated herein by reference to the information to be provided under the captions “Corporate Governance – Transactions with Related Persons”, “Corporate Governance – The Board of Directors – Independent Directors” and “Corporate Governance – Committees of the Board of Directors” of the Company's Proxy Statement for the 2019 Annual Meeting of Shareholders, which will be provided to shareholders within 120 days after December 31, 2018.

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

The information required by this item is incorporated herein by reference to the information to be provided under the caption "Proposal #3: Ratification of the Corporate Audit Committee’s Engagement of KPMG LLP as UMB’s Independent Public Accounting Firm for 2019” of the Company's Proxy Statement for the 2019 Annual Meeting of Shareholders, which will be provided to shareholders within 120 days after December 31, 2018.

PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

Consolidated Financial Statements and Financial Statement Schedules

The following Consolidated Financial Statements of the Company are included in Item 8 of this Annual Report on Form 10-K.

Consolidated Balance Sheets as of December 31, 2018 and 2017

Consolidated Statements of Income for the Three Years Ended December 31, 2018

Consolidated Statements of Comprehensive Income for the Three Years Ended December 31, 2018

Consolidated Statements of Changes in Shareholders' Equity for the Three Years Ended December 31, 2018

Consolidated Statements of Cash Flows for the Three Years Ended December 31, 2018

Notes to Consolidated Financial Statements

Independent Auditors' Report

Condensed Consolidated Financial Statements for the parent company only may be found in Item 8 above. All other schedules have been omitted because the required information is presented in the Consolidated Financial Statements or in the notes thereto, the amounts involved are not significant or the required subject matter is not applicable.

Exhibits

The following Exhibit Index lists the Exhibits to Form 10-K:

3.1	Restated Articles of Incorporation (incorporated by reference to Exhibit 3.1 to the Company’s Quarterly Report on Form 10-Q for the quarter ended March 31, 2006 and filed with the Commission on May 9, 2006).
3.2	Bylaws, amended as of October 28, 2014 (incorporated by reference to Exhibit 3.2 to the Company’s Quarterly Report on Form 10-Q for the quarter ended June 30, 2016 and filed with the Commission on August 2, 2016).
4.1	Description of the capital stock included in the Registration Statement on Form 8-A (incorporated by reference to the Registration Statement on Form 8-A dated May 1, 2018 and filed with the Commission on May 1, 2018).
4.2	Description of the capital stock included in the Registration Statement on Form S-3 (incorporated by reference to the Registration Statement on Form S-3 dated April 5, 2016 and filed with the Commission on April 5, 2016).
10.1	2002 Incentive Stock Option Plan, amended and restated as of April 22, 2008 (incorporated by reference to Appendix B of the Company’s Proxy Statement for the Company’s April 22, 2008 Annual Meeting filed with the Commission on March 17, 2008).
10.2	UMB Financial Corporation Long-Term Incentive Compensation Plan amended and restated as of April 23, 2013 (incorporated by reference to Appendix A of the Company’s Proxy Statement for the Company’s April 23, 2013 Annual Meeting filed with the Commission on March 13, 2013).
10.3	Deferred Compensation Plan, dated as of December 1, 2008 (incorporated by reference to Exhibit 10.3 to the Company’s Form 10-K for December 31, 2017 and filed with the Commission on February 22, 2018).

10.4 UMBF 2005 Short-Term Incentive Plan (incorporated by reference to Exhibit 10.7 to the Company's Form 10-K for December 31, 2004 and filed with the Commission on March 14, 2005).

10.5 Form of 2016 Performance-Based Restricted Stock Award Agreement for the UMB Financial Corporation Long-Term Incentive Compensation Plan (incorporated by reference to Exhibit 10.1 to the Company's Quarterly Report on Form 10Q filed with the Commission on August 2, 2016).

10.6 Form of 2016 Service-Based Restricted Stock Award Agreement for the UMB Financial Corporation Long-Term Incentive Compensation Plan (incorporated by reference to Exhibit 10.2 to the Company's Quarterly Report on Form 10Q filed with the Commission on August 2, 2016).

10.7	Form of 2016 Stock Option Award Agreement for the UMB Financial Corporation Long-Term Incentive Compensation Plan (incorporated by reference to Exhibit 10.3 to the Company's Quarterly Report on Form 10Q filed with the Commission on August 2, 2016).
10.8	UMBF Omnibus Incentive Compensation Plan (incorporated by reference to Appendix A of the Company's Proxy Statement for the Company's April 24, 2018 Annual Meeting filed with the Commission on March 13, 2018).
10.9	Agreement and Release between the Bank and Michael Hagedorn, filed herewith.
21.1	Subsidiaries of the Registrant filed herewith.
23.1	Consent of Independent Auditors – KPMG LLP filed herewith.
24.1	Power of Attorney filed herewith.
31.1	CEO Certification pursuant to Section 302 of the Sarbanes-Oxley Act filed herewith.
31.2	CFO Certification pursuant to Section 302 of the Sarbanes-Oxley Act filed herewith.
32.1	CEO Certification pursuant to Section 906 of the Sarbanes-Oxley Act filed herewith.
32.2	CFO Certification pursuant to Section 906 of the Sarbanes-Oxley Act filed herewith.
101.INS	XBRL Instance filed herewith.
101.SCH	XBRL Taxonomy Extension Schema filed herewith.
101.CAL	XBRL Taxonomy Extension Calculation filed herewith.
101.DEF	XBRL Taxonomy Extension Definition filed herewith.
101.LAB	XBRL Taxonomy Extension Labels filed herewith.
101.PRE	XBRL Taxonomy Extension Presentation filed herewith.

ITEM 16. FORM 10-K SUMMARY

None.

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 March 1, 2019.

UMB FINANCIAL CORPORATION

/s/ J. Mariner Kemper
J. Mariner Kemper
Chairman of the Board,
Chief Executive Officer

/s/ Ram Shankar
Ram Shankar
Chief Financial Officer

/s/ Brian J. Walker
Brian J. Walker
Chief Accounting Officer

Date: March 1, 2019

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant and in the capacities on the date indicated.

Robin C. Beery Robin C. Beery	Director	Kevin C. Gallagher Kevin C. Gallagher	Director
Greg M. Graves Greg M. Graves	Director	Alexander C. Kemper Alexander C. Kemper	Director
Gordon E. Lansford Gordon E. Lansford	Director	Timothy R. Murphy Timothy R. Murphy	Director
Kris A. Robbins Kris A. Robbins	Director	L. Joshua Sosland L. Joshua Sosland	Director
Dylan E. Taylor Dylan E. Taylor	Director	Paul Uhlmann III Paul Uhlmann III	Director
Leroy J. Williams Leroy J. Williams	Director	/s/ J. Mariner Kemper J. Mariner Kemper	Director, Chairman of the Board, Chief Executive Officer

Attorney-in-Fact for each
director