COMMERCE BANCSHARES INC /MO/
Form 10-K
February 21, 2019
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UNITED STATES
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549
FORM 10-K

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

For the Fiscal Year Ended December 31, 2018 — Commission File No. 0-2989

COMMERCE BANCSHARES, INC.
(Exact name of registrant as specified in its charter)

Missouri	43-0889454
(State of Incorporation)	(IRS Employer Identification No.)
1000 Walnut,	
Kansas City, MO	64106
	(Zip Code)
(Address of principal executive offices)	(Zip Code)

(816) 234-2000
(Registrant's telephone number, including area code)
Securities registered pursuant to Section 12(b) of the Act:

Title of class	Name of exchange on which registered
$5 Par Value Common Stock	NASDAQ Global Select Market
Depositary Shares, each representing a 1/1000th interest in a share of 6.0% Series B Non-Cumulative Perpetual Preferred Stock	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 þ No o
Indicate by check mark if the Registrant is not required to file reports pursuant to Section 13 or 15(d) of the Act. Yes o No þ
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 þ No o
Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted and posted 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 and post such files). Yes þ No o
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. o
Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, smaller reporting company, or an emerging growth company. See the definitions of “large accelerated filer,” “accelerated filer,” “smaller reporting company,” and "emerging growth company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer þ	Accelerated filer o	Non-accelerated filer o	Smaller reporting company o	Emerging growth company o
		(Do not check if a smaller reporting company)		

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. o
Indicate by check mark whether the Registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).
Yes o No þ
As of June 30, 2018, the aggregate market value of the voting stock held by non-affiliates of the Registrant was approximately $6,364,000,000.
As of February 14, 2019, there were 110,901,627 shares of Registrant’s $5 Par Value Common Stock outstanding.
DOCUMENTS INCORPORATED BY REFERENCE
Portions of the Registrant’s definitive proxy statement for its 2019 annual meeting of shareholders, which will be filed within 120 days of December 31, 2018, are incorporated by reference into Part III of this Report.

Commerce Bancshares, Inc.

Form 10-K

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PART I

Item 1. BUSINESS

General

Commerce Bancshares, Inc., a bank holding company as defined in the Bank Holding Company Act of 1956, as amended, was incorporated under the laws of Missouri on August 4, 1966. Through a second tier wholly-owned bank holding company, it owns all the outstanding capital stock of Commerce Bank (the “Bank”), which is headquartered in Missouri. The Bank engages in general banking business, providing a broad range of retail, mortgage banking, corporate, investment, trust, and asset management products and services to individuals and businesses. Commerce Bancshares, Inc. also owns, directly or through the Bank, various non-banking subsidiaries. Their activities include private equity investment, securities brokerage, insurance agency, and leasing activities. A list of Commerce Bancshares, Inc.'s subsidiaries is included as Exhibit 21.

Commerce Bancshares, Inc. and its subsidiaries (collectively, the "Company") is one of the nation’s top 50 bank holding companies, based on asset size. At December 31, 2018, the Company had consolidated assets of $25.5 billion, loans of $14.1 billion, deposits of $20.3 billion, and equity of $2.9 billion. The Company’s operations are consolidated for purposes of preparing the Company’s consolidated financial statements. The Company's principal markets, which are served by 169 branch facilities, are located throughout Missouri, Kansas, and central Illinois, as well as Tulsa and Oklahoma City, Oklahoma and Denver, Colorado. Its two largest markets are St. Louis and Kansas City, which serve as central hubs for the Company. The Company also has offices supporting its commercial customers in Dallas, Houston, Cincinnati, Nashville, Des Moines, Indianapolis, and Grand Rapids, and operates a payments business with sales representatives covering the continental United States of America (“U.S.”).

The Company’s goal is to be the preferred provider of financial services in its communities, based on strong customer relationships built through providing top quality service with a strong risk management culture, and employing a strong balance sheet with industry-leading capital levels. The Company operates under a super-community banking format which incorporates large bank product offerings coupled with deep local market knowledge, augmented by experienced, centralized support in select, critical areas. The Company’s focus on local markets is supported by an experienced team of bankers assigned to each market coupled with industry specialists. The Company also uses regional advisory boards, comprised of local business persons, professionals and other community representatives, who assist the Company in responding to local banking needs. In addition to this local market, community-based focus, the Company offers sophisticated financial products usually only available at much larger financial institutions.

The markets the Bank serves, being mainly located in the lower Midwest, provide natural sites for production and distribution facilities and serve as transportation hubs. The economy has been well-diversified in these markets with many major industries represented, including telecommunications, automobile, technology, financial services, aircraft and general manufacturing, health care, numerous service industries, and food and agricultural production. The real estate lending operations of the Bank are predominantly centered in its lower Midwestern markets. Historically, these markets have tended to be less volatile than in other parts of the country. Management believes the diversity and nature of the Bank’s markets has a mitigating effect on real estate loan losses in these markets.

From time to time, the Company evaluates the potential acquisition of various financial institutions. In addition, the Company regularly considers the purchase and disposition of real estate assets and branch locations as situations dictate. The Company seeks merger or acquisition partners that are culturally similar, have experienced management and either possess significant market presence or have potential for improved profitability through financial management, economies of scale and expanded services. The Company has not completed any bank acquisitions since 2013.

Employees

The Company employed 4,570 persons on a full-time basis and 299 persons on a part-time basis at December 31, 2018. The Company provides a comprehensive array of flexible benefit programs to its employees with a focus on financial and physical wellness. The Company's financial benefits package includes a company-matching 401(k) savings plan, a 529 college savings plan, and educational and adoption assistance programs. The Company's physical wellness package includes health, dental, vision, life and various other insurances, as well as a wellness program that incentivizes employees to live a healthy and balanced lifestyle. The Company has developed several training and development programs designed to challenge and develop the management and leadership skills of employees, promote collaboration amongst various internal departments and geographic locations, and share best-practices to meet the needs of customers and communities. The Company has also developed numerous training courses targeted to develop interpersonal and technical skills, as well as, to provide training on new banking regulations. None of the Company's employees are represented by collective bargaining agreements.

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Competition

The Company operates in the highly competitive environment of financial services. The Company regularly faces competition from banks, savings and loan associations, credit unions, brokerage companies, mortgage companies, insurance companies, trust companies, credit card companies, private equity firms, leasing companies, securities brokers and dealers, financial technology companies, e-commerce companies, mutual fund companies, and other companies providing financial services. Some of these competitors are not subject to the same regulatory restrictions as domestic banks and bank holding companies. Some other competitors are significantly larger than the Company, and therefore have greater economies of scale, greater financial resources, higher lending limits, and may offer products and services that the Company does not provide. The Company competes by providing a broad offering of products and services to support the needs of customers, matched with a strong commitment to customer service. The Company also competes based on quality, innovation, convenience of locations, reputation, industry knowledge, and price. In its two largest markets, the Company has approximately 13% of the deposit market share in Kansas City and approximately 9% of the deposit market share in St. Louis.

Operating Segments

The Company is managed in three operating segments: Commercial, Consumer, and Wealth. The Commercial segment provides a full array of corporate lending, merchant and commercial bank card products, leasing, and international services, as well as business and government deposit, investment, and cash management services. The Consumer segment includes the retail branch network, consumer installment lending, personal mortgage banking, and consumer debit and credit bank card activities. The Wealth segment provides traditional trust and estate planning services, brokerage services, and advisory and discretionary investment portfolio management services to both personal and institutional corporate customers. In 2018, the Commercial, Consumer and Wealth segments contributed 57%, 21% and 22% of total segment pre-tax income, respectively. Additional information relating to operating segments can be found on pages 48 and 95.

Government Policies

The Company's operations are affected by federal and state legislative changes, by the United States government, and by policies of various regulatory authorities, including those of the numerous states in which they operate. These include, for example, the statutory minimum legal lending rates, domestic monetary policies of the Board of Governors of the Federal Reserve System, United States fiscal policy, international currency regulations and monetary policies, the U.S. Patriot Act, and capital adequacy and liquidity constraints imposed by federal and state bank regulatory agencies.

Supervision and Regulation

The following information summarizes existing laws and regulations that materially affect the Company's operations. It does not discuss all provisions of these laws and regulations, and it does not include all laws and regulations that affect the Company presently or may affect the Company in the future.

General

The Company, as a bank holding company, is primarily regulated by the Board of Governors of the Federal Reserve System under the Bank Holding Company Act of 1956, as amended (BHC Act). Under the BHC Act, the Federal Reserve Board’s prior approval is required in any case in which the Company proposes to acquire all or substantially all the assets of any bank, acquire direct or indirect ownership or control of more than 5% of the voting shares of any bank, or merge or consolidate with any other bank holding company. With certain exceptions, the BHC Act also prohibits the Company from acquiring direct or indirect ownership or control of more than 5% of any class of voting shares of any non-banking company. Under the BHC Act, the Company may not engage in any business other than managing and controlling banks or furnishing certain specified services to subsidiaries, and may not acquire voting control of non-banking companies unless the Federal Reserve Board determines such businesses and services to be closely related to banking. When reviewing bank acquisition applications for approval, the Federal Reserve Board considers, among other things, the Bank’s record in meeting the credit needs of the communities it serves in

accordance with the Community Reinvestment Act of 1977, as amended (CRA). Under the terms of the CRA, banks have a continuing obligation, consistent with safe and sound operation, to help meet the credit needs of their communities, including providing credit to individuals residing in low- and moderate-income areas. The Bank has a current CRA rating of “outstanding.”

The Company is required to file various reports and additional information with the Federal Reserve Board. The Federal Reserve Board regularly performs examinations of the Company. The Bank is a state-chartered Federal Reserve member bank and is subject to regulation, supervision and examination by the Federal Reserve Bank of Kansas City and the Missouri Division of Finance. The Bank is also subject to regulation by the Federal Deposit Insurance Corporation (FDIC). In addition, there are numerous other federal and state laws and regulations which control the activities of the Company, including requirements and limitations relating to capital and reserve requirements, permissible investments and lines of business, transactions with affiliates, loan limits, mergers and acquisitions, issuance of securities, dividend payments, and extensions of credit. The Bank is subject to

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federal and state consumer protection laws, including laws designed to protect customers and promote fair lending. These laws include the Equal Credit Opportunity Act, the Fair Credit Reporting Act, the Truth in Lending Act, the Home Mortgage Disclosure Act, the Real Estate Settlement Procedures Act, and their respective state law counterparts. If the Company fails to comply with these or other applicable laws and regulations, it may be subject to civil monetary penalties, imposition of cease and desist orders or other written directives, removal of management and, in certain circumstances, criminal penalties. This regulatory framework is intended primarily for the protection of depositors and the preservation of the federal deposit insurance funds. Statutory and regulatory controls increase a bank holding company's cost of doing business and limit the options of its management to employ assets and maximize income.

In addition to its regulatory powers, the Federal Reserve Bank affects the conditions under which the Company operates by its influence over the national supply of bank credit. The Federal Reserve Board employs open market operations in U.S. government securities and oversees changes in the discount rate on bank borrowings, changes in the federal funds rate on overnight inter-bank borrowings, and changes in reserve requirements on bank deposits in implementing its monetary policy objectives. These methods are used in varying combinations to influence the overall level of the interest rates charged on loans and paid for deposits, the price of the dollar in foreign exchange markets, and the level of inflation. The monetary policies of the Federal Reserve have a significant effect on the operating results of financial institutions, most notably on the interest rate environment. In view of changing conditions in the national economy and in the money markets, as well as the effect of credit policies of monetary and fiscal authorities, the Company makes no prediction as to possible future changes in interest rates, deposit levels or loan demand, or their effect on the financial statements of the Company.

The financial industry operates under laws and regulations that are under regular review by various agencies and legislatures and are subject to change. The Company currently operates as a bank holding company, as defined by the Gramm-Leach-Bliley Financial Modernization Act of 1999 (GLB Act), and the Bank qualifies as a financial subsidiary under the GLB Act, which allows it to engage in investment banking, insurance agency, brokerage, and underwriting activities that were not available to banks prior to the GLB Act. The GLB Act also included privacy provisions that limit banks' abilities to disclose non-public information about customers to non-affiliated entities.

The Company must also comply with the requirements of the Bank Secrecy Act (BSA). The BSA is designed to help fight drug trafficking, money laundering, and other crimes. Compliance is monitored by the Federal Reserve. The BSA was enacted to prevent banks and other financial service providers from being used as intermediaries for, or to hide the transfer or deposit of money derived from, criminal activity. Since its passage, the BSA has been amended several times. These amendments include the Money Laundering Control Act of 1986 which made money laundering a criminal act, as well as the Money Laundering Suppression Act of 1994 which required regulators to develop enhanced examination procedures and increased examiner training to improve the identification of money laundering schemes in financial institutions.

The USA PATRIOT Act, established in 2001, substantially broadened the scope of U.S. anti-money laundering laws and regulations by imposing significant new compliance and due diligence obligations, creating new crimes and penalties and expanding the extra-territorial jurisdiction of the U.S. The regulations impose obligations on financial institutions to maintain appropriate policies, procedures and controls to detect, prevent, and report money laundering and terrorist financing. The regulations include significant penalties for non-compliance.

The Company is subject to regulation under the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2011 (Dodd-Frank Act). Among its many provisions, the Dodd-Frank Act required stress-testing for certain financial services companies and established a new council of "systemic risk" regulators. The Dodd Frank Act also established the Consumer Financial Protection Bureau (CFPB) which is authorized to supervise certain financial services companies and has responsibility to implement, examine for compliance with, and enforce "Federal consumer financial

law." The Company is subject to examinations by the CFPB. The Dodd-Frank Act, through Title VI, commonly known as the Volcker Rule, placed trading restrictions on financial institutions and separated investment banking, private equity and proprietary trading (hedge fund) sections of financial institutions from their consumer lending arms. The Volcker Rule also restricts financial institutions from investing in and sponsoring certain types of investments.

In May 2018, the Economic Growth, Regulatory Relief, and Consumer Protection Act was signed into law which provides a number of limited amendments to the Dodd-Frank Act. Notable provisions of the legislation include: an increase in the asset threshold from $50 billion to $250 billion, above which the Federal Reserve is required to apply enhanced prudential standards; an exemption from the Volker Rule for insured depository institutions with less than $10 billion in consolidated assets; modifications to the Liquidity Coverage and Supplementary Leverage ratios; and the elimination of Dodd-Frank company-run stress tests for banks and bank holding companies with less than $250 billion in assets. While most of these provisions affect institutions larger than the Company, the Company is no longer required to prepare stress testing as specified by the Dodd-Frank Act.

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Subsidiary Bank

Under Federal Reserve policy, the bank holding company, Commerce Bancshares, Inc. (the "Parent"), is expected to act as a source of financial strength to its bank subsidiary and to commit resources to support it in circumstances when it might not otherwise do so. In addition, loans by a bank holding company to any of its subsidiary banks are subordinate in right of payment to deposits and to certain other indebtedness of such subsidiary banks. In the event of a bank holding company's bankruptcy, any commitment by the bank holding company to a federal bank regulatory agency to maintain the capital of a subsidiary bank will be assumed by the bankruptcy trustee and entitled to a priority of payment.

Deposit Insurance

Substantially all of the deposits held by the Bank are insured up to applicable limits (generally $250,000 per depositor for each account ownership category) by the Deposit Insurance Fund (DIF) of the FDIC and are subject to deposit insurance assessments to maintain the DIF. In 2011, the FDIC released a final rule to implement provisions of the Dodd-Frank Act that affect deposit insurance assessments. Among other things, the Dodd-Frank Act raised the minimum designated reserve ratio from 1.15% to 1.35% of estimated insured deposits, removed the upper limit of the designated reserve ratio, required that the designated reserve ratio reach 1.35% by September 30, 2020, and required that the FDIC offset the effect of increasing the minimum designated reserve ratio on depository institutions with total assets of less than $10 billion. The Dodd-Frank Act provided the FDIC flexibility in the implementation of the increase in the designated reserve ratio, but it will ultimately result in increased deposit insurance costs to the Company. The Dodd-Frank Act also required that the FDIC redefine the assessment base to average consolidated assets minus average tangible equity.

On June 30, 2016, the DIF rose above the 1.15%, resulting in a reduction of the initial assessment rate for all banks and implementing a 4.5 basis point surcharge on insured depository institutions with total consolidated assets of $10 billion or more. Effective October 1, 2018, this surcharge was eliminated as the DIF reached its required level of 1.35% of estimated insured deposits. This had the effect of reducing the Company's insurance costs by $1.5 million in the fourth quarter of 2018.

Payment of Dividends

The Federal Reserve Board may prohibit the payment of cash dividends to shareholders by bank holding companies if their actions constitute unsafe or unsound practices. The principal source of the Parent's cash revenues is cash dividends paid by the Bank. The amount of dividends paid by the Bank in any calendar year is limited to the net profit of the current year combined with the retained net profits of the preceding two years, and permission must be obtained from the Federal Reserve Board for dividends exceeding these amounts. The payment of dividends by the Bank may also be affected by factors such as the maintenance of adequate capital.

Capital Adequacy

The Company is required to comply with the capital adequacy standards established by the Federal Reserve, which are based on the risk levels of assets and off-balance sheet financial instruments. Capital adequacy guidelines and prompt corrective action regulations involve quantitative measures of assets, liabilities, and certain off-balance sheet items calculated under regulatory accounting practices. Capital amounts and classifications are also subject to judgments by regulators regarding qualitative components, risk weightings, and other factors.

A new comprehensive capital framework was established by the Basel Committee on Banking Supervision, which was effective for large and internationally active U.S. banks and bank holding companies on January 1, 2015. A key goal of the new framework, known as "Basel III," was to strengthen the capital resources of banking organizations during normal and challenging business environments. Basel III increased minimum requirements for both the quantity and quality of capital held by banking organizations. The rule includes a new minimum ratio of common equity Tier 1 capital to risk-weighted assets of 4.5% and a common equity Tier 1 capital conservation buffer of 2.5%

of risk-weighted assets. The capital conservation buffer, which is being phased in during 2016-2019, is intended to absorb losses during periods of economic stress. Failure to maintain the buffer will result in constraints on dividends, equity repurchases and executive compensation. The rule also adjusted the methodology for calculating risk-weighted assets to enhance risk sensitivity. At December 31, 2018, the Company met all capital adequacy requirements under Basel III on a fully phased-in basis as if such requirements had been in effect.

The Federal Deposit Insurance Corporation Improvement Act (FDICIA) requires each federal banking agency to take prompt corrective action to resolve the problems of insured depository institutions, including but not limited to those that fall below one or more prescribed minimum capital ratios. Pursuant to FDICIA, the FDIC promulgated regulations defining the following five categories in which an insured depository institution will be placed, based on the level of its capital ratios: well-capitalized, adequately capitalized, undercapitalized, significantly undercapitalized, and critically undercapitalized. Under the prompt corrective action provisions of FDICIA, an insured depository institution generally will be classified as well-capitalized (under

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the Basel III rules mentioned above) if it has a Tier 1 capital ratio of at least 8%, a common equity Tier 1 capital ratio of at least 6.5%, a total capital ratio of at least 10%, and a Tier 1 leverage ratio of at least 5%. An institution that, based upon its capital levels, is classified as “well-capitalized,” “adequately capitalized,” or “undercapitalized,” may be treated as though it were in the next lower capital category if the appropriate federal banking agency, after notice and opportunity for hearing, determines that an unsafe or unsound condition, or an unsafe or unsound practice warrants such treatment. At each successive lower capital category, an insured depository institution is subject to more restrictions and prohibitions, including restrictions on growth, restrictions on interest rates paid on deposits, restrictions or prohibitions on payment of dividends, and restrictions on the acceptance of brokered deposits. Furthermore, if a bank is classified in one of the undercapitalized categories, it is required to submit a capital restoration plan to the federal bank regulator, and the holding company must guarantee the performance of that plan. The Bank has consistently maintained regulatory capital ratios at or above the “well-capitalized” standards.

Stress Testing
As required by the Dodd-Frank Act, the Company performed stress tests as specified by the Federal Reserve requirement and published results beginning in 2014 through 2017. On May 24, 2018, the Economic Growth, Regulatory Relief, and Consumer Protection Act was enacted, which eliminated the required stress testing under the Dodd-Frank Act for banks with consolidated assets of less than $100 billion. The Company continues to perform periodic stress-testing based on its own internal criteria.

Executive and Incentive Compensation
Guidelines adopted by federal banking agencies prohibit excessive compensation as an unsafe and unsound practice, and describe compensation as "excessive" when the amounts paid are unreasonable or disproportionate to the services performed by an executive officer, employee, director or principal shareholder. The Federal Reserve Board has issued comprehensive guidance on incentive compensation intended to ensure that the incentive compensation policies do not undermine safety and soundness by encouraging excessive risk taking. This guidance covers all employees that have the ability to materially affect the risk profile of an organization, either individually or as part of a group, based on key principles that (i) incentives do not encourage risk-taking beyond the organization's ability to identify and manage risk, (ii) compensation arrangements are compatible with effective internal controls and risk management, and (iii) compensation arrangements are supported by strong corporate governance, including active and effective board oversight. Deficiencies in compensation practices may affect supervisory ratings and enforcement actions may be taken if incentive compensation arrangements pose a risk to safety and soundness.

Transactions with Affiliates
The Federal Reserve Board regulates transactions between the Bank and its subsidiaries. Generally, the Federal Reserve Act and Regulation W, as amended by the Dodd-Frank Act, limit the Company’s banking subsidiary and its subsidiaries to lending and other “covered transactions” with affiliates. The aggregate amount of covered transactions a banking subsidiary or its subsidiaries may enter into with an affiliate may not exceed 10% of the capital stock and surplus of the banking subsidiary. The aggregate amount of covered transactions with all affiliates may not exceed 20% of the capital stock and surplus of the banking subsidiary.

Covered transactions with affiliates are also subject to collateralization requirements and must be conducted on arm’s length terms. Covered transactions include (a) a loan or extension of credit by the banking subsidiary, including derivative contracts, (b) a purchase of securities issued to a banking subsidiary, (c) a purchase of assets by the banking subsidiary unless otherwise exempted by the Federal Reserve, (d) acceptance of securities issued by an affiliate to the banking subsidiary as collateral for a loan, and (e) the issuance of a guarantee, acceptance or letter of credit by the banking subsidiary on behalf of an affiliate.

Certain transactions with the Company's directors, officers or controlling persons are also subject to conflicts of interest regulations. Among other things, these regulations require that loans to such persons and their related interests

be made on terms substantially the same as for loans to unaffiliated individuals, and must not create an abnormal risk of repayment or other unfavorable features for the financial institution. See Note 2 to the consolidated financial statements for additional information on loans to related parties.

Available Information

The Company's principal offices are located at 1000 Walnut Street, Kansas City, Missouri (telephone number 816-234-2000). The Company makes available free of charge, through its website at www.commercebank.com, reports filed with the Securities and Exchange Commission as soon as reasonably practicable after the electronic filing. These filings include the annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and all amendments to those reports.

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Statistical Disclosure

The information required by Securities Act Guide 3 — "Statistical Disclosure by Bank Holding Companies" is located on the pages noted below.

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Item 1a. RISK FACTORS

Making or continuing an investment in securities issued by Commerce Bancshares, Inc., including its common and preferred stock, involves certain risks that you should carefully consider. If any of the following risks actually occur, its business, financial condition or results of operations could be negatively affected, the market price for your securities could decline, and you could lose all or a part of your investment. Further, to the extent that any of the information contained in this Annual Report on Form 10-K constitutes forward-looking statements, the risk factors set forth below also are cautionary statements identifying important factors that could cause the Company's actual results to differ materially from those expressed in any forward-looking statements made by or on behalf of Commerce Bancshares, Inc.

Difficult market conditions may affect the Company's industry.

The concentration of the Company's banking business in the United States particularly exposes it to downturns in the U.S. economy. While current economic conditions are favorable, there remain risks in that environment.

In particular, the Company may face the following risks in connection with market conditions:

- In the current national environment, positive trends in job growth, unemployment levels, consumer confidence, and credit conditions are expected to continue, but the current recovery is historically long, there has been recent stock market volatility, and consumer debt has been increasing. Further, the U.S. economy is affected by global economic events and conditions, including recent U.S. trade disputes with various countries. Although the Company does not hold foreign debt or have significant activities with foreign customers, the global economy, the strength of the U.S. dollar, and oil prices may ultimately affect interest rates, business import/export activity, capital expenditures by businesses, and investor confidence. Unfavorable changes in these factors may result in declines in consumer credit usage, adverse changes in payment patterns, reduced loan demand, and higher loan delinquencies and default rates. These could impact the Company's future loan losses and provision for loan losses, as a significant part of the Company's business includes consumer and credit card lending.
- In addition to the results above, a slowdown in economic activity may cause declines in financial services activity, including declines in bank card, corporate cash management and other fee businesses, as well as the fees earned by the Company on such transactions.
- The process used to estimate losses inherent in the Company's loan portfolio requires difficult, subjective, and complex judgments, including consideration of economic conditions and how these economic predictions might impair the ability of its borrowers to repay their loans. If an instance occurs that renders these predictions no longer capable of accurate estimation, this may in turn impact the reliability of the process.
- Competition in the industry could intensify as a result of the increasing consolidation of financial services companies in connection with current market conditions, thereby reducing market prices for various products and services which could in turn reduce the Company's revenues.

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The performance of the Company is dependent on the economic conditions of the markets in which the Company operates.
The Company’s success is heavily influenced by the general economic conditions of the specific markets in which it operates. Unlike larger national or other regional banks that are more geographically diversified, the Company provides financial services primarily throughout the states of Missouri, Kansas, central Illinois, Oklahoma, and Colorado. It also has a growing presence in additional states through its commercial banking offices in: Texas, Iowa, Indiana, Michigan, Ohio, and Tennessee. As the Company does not have a significant banking presence in other parts of the country, a prolonged economic downturn in these markets could have a material adverse effect on the Company’s financial condition and results of operations.

The Company operates in a highly competitive industry and market area.
The Company operates in the financial services industry and has numerous competitors including other banks and insurance companies, securities dealers, brokers, trust and investment companies, mortgage bankers, and financial technology companies. Consolidation among financial service providers and new changes in technology, product offerings and regulation continue to challenge the Company's marketplace position. As consolidation occurs, larger regional and national banks may enter the Company's markets and add to existing competition. Large, national financial institutions have substantial capital, technology and marketing resources. These new competitors may lower fees to grow market share, which could result in a loss of customers and lower fee revenue for the Company. They may have greater access to capital at a lower cost than the Company, and may have higher loan limits, both of which may adversely affect the Company’s ability to compete effectively. The Company must continue to make investments in its products and delivery systems to stay competitive with the industry, or its financial performance may suffer.

The soundness of other financial institutions could adversely affect the Company.
The Company’s ability to engage in routine funding transactions could be adversely affected by the actions and commercial soundness of other financial institution counterparties. Financial services institutions are interrelated because of trading, clearing, counterparty or other relationships. The Company has exposure to many different industries and counterparties and routinely executes transactions with counterparties in the financial industry, including brokers and dealers, commercial banks, investment banks, mutual funds, and other institutional clients. Transactions with these institutions include overnight and term borrowings, interest rate swap agreements, securities purchased and sold, short-term investments, and other such transactions. Because of this exposure, defaults by, or rumors or questions about, one or more financial services institutions or the financial services industry in general, could lead to market-wide liquidity problems and defaults by other institutions. Many of these transactions expose the Company to credit risk in the event of default of its counterparty or client, while other transactions expose the Company to liquidity risks should funding sources quickly disappear. In addition, the Company’s credit risk may be exacerbated when the collateral held cannot be realized or is liquidated at prices not sufficient to recover the full amount of the exposure due to the Company. Any such losses could materially and adversely affect results of operations.

The Company is subject to increasingly extensive government regulation and supervision.
As part of the financial services industry, the Company has been subject to increasingly extensive federal and state regulation and supervision over the past several years. Banking regulations are primarily intended to protect depositors’ funds, federal deposit insurance funds, and the banking system, not shareholders. These regulations affect the Company’s lending practices, capital structure, investment practices, dividend policy, and growth, among other things. Congress and federal regulatory agencies continually review banking laws, regulations, and policies for possible changes. Changes to statutes, regulations, or regulatory policies, including changes in interpretation or implementation of statutes, regulations, or policies, could affect the Company in substantial and unpredictable ways. Such changes could subject the Company to additional costs, limit the types of financial services and products it may offer, and/or increase the ability of non-banks to offer competing financial services and products, among other things. Failure to comply with laws, regulations, or policies could result in sanctions by regulatory agencies, civil money

penalties, and/or reputation damage, which could have a material adverse effect on the Company's business, financial condition, and results of operations. While the Company has policies and procedures designed to prevent any such violations, there can be no assurance that such violations will not occur.

Significant changes in federal monetary policy could materially affect the Company's business.
The Federal Reserve System regulates the supply of money and credit in the United States. Its policies determine in large part the cost of funds for lending and interest rates earned on loans and paid on borrowings and interest-bearing deposits. Credit conditions are influenced by its open market operations in U.S. government securities, changes in the member bank discount rate, and bank reserve requirements. Changes in Federal Reserve Board policies are beyond the Company's control and difficult to predict, and such changes may result in lower interest margins and a lack of demand for credit products.

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The Company is subject to both interest rate and liquidity risk.
With oversight from its Asset-Liability Management Committee, the Company devotes substantial resources to monitoring its liquidity and interest rate risk on a monthly basis. The Company's net interest income is the largest source of overall revenue to the Company, representing 62% of total revenue for the year ended December 31, 2018. The interest rate environment in which the Company operates fluctuates in response to general economic conditions and policies of various governmental and regulatory agencies, particularly the Federal Reserve Board, which regulates the supply of money and credit in the U.S. Changes in monetary policy, including changes in interest rates, will influence loan originations, deposit generation, demand for investments and revenues, and costs for earning assets and liabilities, and could significantly impact the Company’s net interest income.

The Federal Reserve Board raised the benchmark interest rate four times during 2018 for a total of 100 basis points. Future economic conditions or other factors could shift monetary policy resulting in no additional rate increases in 2019 or decreases in the benchmark rate. Furthermore, changes in interest rates could result in unanticipated changes to customer deposit balances and funding costs, and affect the Company’s source of funds for future loan growth.

The Company has a significant number of loans, derivative contracts, borrowings and other financial instruments with attributes that are either directly or indirectly dependent on LIBOR. In 2017, the U.K. Financial Conduct Authority announced that LIBOR is to be transitioned to alternative rates during the next four years. U.S. regulatory authorities have voiced similar support for phasing out LIBOR. The impact of alternatives to LIBOR on the valuations, pricing and operation of the Company's financial instruments is not yet known.

The Company’s asset valuation may include methodologies, models, estimations and assumptions which are subject to differing interpretations and could result in changes to asset valuations that may materially adversely affect its results of operations or financial condition.
The Company uses estimates, assumptions, and judgments when certain financial assets and liabilities are measured and reported at fair value. Assets and liabilities carried at fair value inherently result in greater financial statement volatility. Fair values and the information used to record valuation adjustments for certain assets and liabilities are based on quoted market prices and/or other observable inputs provided by independent third-party sources, when available. When such third-party information is not available, fair value is estimated primarily by using cash flow and other financial modeling techniques utilizing assumptions such as credit quality, liquidity, interest rates and other relevant inputs. Changes in underlying factors, assumptions, or estimates in any of these areas could materially impact the Company’s future financial condition and results of operations. Furthermore, if models used to calculate fair value of financial instruments are inadequate or inaccurate due to flaws in their design or execution, upon sale, the Company may not realize the cash flows of a financial instrument as modeled and could incur material, unexpected losses.

During periods of market disruption, including periods of significantly rising or high interest rates, rapidly widening credit spreads or illiquidity, it may be difficult to value certain assets if trading becomes less frequent and/or market data becomes less observable. There may be certain asset classes in active markets with significant observable data that become illiquid due to the current financial environment. In such cases, certain asset valuations may require more subjectivity and management judgment. As such, valuations may include inputs and assumptions that are less observable or require greater estimation. Further, rapidly changing and unprecedented credit and equity market conditions could materially impact the valuation of assets as reported within the Company’s consolidated financial statements, and the period-to-period changes in value could vary significantly. Decreases in value may have a material adverse effect on results of operations or financial condition.

The Company’s investment portfolio values may be adversely impacted by deterioration in the credit quality of underlying collateral within the various categories of investment securities it owns.
The Company generally invests in securities issued by municipal entities, government-backed agencies or privately issued securities, with collateral that are highly rated and evaluated at the time of purchase, however, these securities

are subject to changes in market value due to changing interest rates and implied credit spreads. While the Company maintains rigorous risk management practices over bonds issued by municipalities, credit deterioration in these bonds could occur and result in losses. Certain mortgage and asset-backed securities (which are collateralized by residential mortgages, credit cards, automobiles, mobile homes or other assets) may decline in value due to actual or expected deterioration in the underlying collateral. Under accounting rules, when the impairment is due to declining expected cash flows, some portion of the impairment, depending on the Company’s intent to sell and the likelihood of being required to sell before recovery, must be recognized in current earnings. This could result in significant losses.

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Future loan losses could increase.
The Company maintains an allowance for loan losses that represents management's best estimate of probable losses that have been incurred at the balance sheet date within the existing portfolio of loans. The level of the allowance reflects management's continuing evaluation of industry concentrations, specific credit risks, loan loss experience, including emergence periods, current loan portfolio quality, present economic, political, and regulatory conditions, and unidentified losses inherent in the current loan portfolio. Although the loan losses have been stable during the past several years, an unforeseen deterioration of financial market conditions could result in larger loan losses, which may negatively affect the Company's results of operations and could further increase levels of its allowance for loan losses. In addition, the Company's allowance level is subject to review by regulatory agencies, and that review could result in adjustments to the allowance for loan losses. See the section captioned "Allowance for Loan Losses" in Item 7, Management's Discussion and Analysis of Financial Condition and Results of Operations, of this report for further discussion related to the Company's process for determining the appropriate level of the allowance for probable loan losses.

In 2016, the Financial Accounting Standards Board (FASB) issued a new accounting standard "Measurement of Credit Losses on Financial Instruments" (ASU 2016-13), which is effective January 1, 2020. This new standard significantly alters the way the reserve for credit losses is determined. The new standard utilizes a life of loan loss concept and will require significant operational changes, especially in data collection and analysis. While an implementation plan has been established and much progress has been made to date, the impact to the Company's current reserve for credit losses from this new standard is not yet determined. Due to the significant changes required by this new standard, it is possible that higher reserves could be required resulting in reduced capital and earnings.

New lines of business or new products and services may subject the Company to additional risk.
From time to time, the Company may implement new lines of business or offer new products and services within existing lines of business. There are substantial risks and uncertainties associated with these efforts, particularly in instances where the markets are not fully developed. In developing and marketing new lines of business and new products or services, the Company may invest significant time and resources. Initial timetables for the introduction and development of new lines of business and new products or services may not be achieved and price and profitability targets may not prove feasible. External factors, such as compliance with regulations, competitive alternatives and shifting market preferences may also impact the successful implementation of a new line of business or a new product or service. Furthermore, any new line of business, or new product or service, could have a significant impact on the effectiveness of the Company's system of internal controls. Failure to successfully manage these risks in the development and implementation of new lines of business and new products or services could have a material adverse effect on the Company's financial condition and results of operations.

A successful cyber attack or other computer system breach could significantly harm the Company, its reputation and its customers.
The Company relies heavily on communications and information systems to conduct its business, and as part of its business, the Company maintains significant amounts of data about its customers and the products they use. Information security risks continue to increase due to new technologies, the increasing use of the Internet and telecommunication technologies (including mobile devices) to conduct financial and other business transactions, and the increased sophistication and activities of organized crime, perpetrators of fraud, hackers, and others. The Company makes significant investments in various technology to identify and prevent intrusions into its information system. The Company also has policies and procedures designed to prevent or limit the effect of failure, interruption or security breach of its information systems and performs regular audits using both internal and outside resources. However, there can be no assurances that any such failures, interruptions or security breaches will not occur, or if they do occur, that they will be adequately addressed. In addition to unauthorized access, denial-of-service attacks, or other operational disruptions could overwhelm Company websites and prevent the Company from adequately serving customers. Should any of the Company's systems become compromised or customer information be obtained by

unauthorized parties, the reputation of the Company could be damaged, relationships with existing customers may be impaired, and the Company could be subject to lawsuits, all of which could result in lost business and have a material adverse effect on the Company's business, financial condition and results of operations.

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The Company’s operations rely on certain external vendors.
The Company relies on third-party vendors to provide products and services necessary to maintain day-to-day operations. For example, the Company outsources a portion of its information systems, communication, data management, and transaction processing to third parties. Accordingly, the Company is exposed to the risk that these vendors might not perform in accordance with the contracted arrangements or service level agreements because of changes in the vendor’s organizational structure, financial condition, support for existing products and services, or strategic focus. Such failure to perform could be disruptive to the Company’s operations, which could have a materially adverse impact on its business, results of operations and financial condition. These third parties are also sources of risk associated with operational errors, system interruptions or breaches and unauthorized disclosure of confidential information. If the vendors encounter any of these issues, the Company could be exposed to disruption of service, damage to reputation and litigation. Because the Company is an issuer of both debit and credit cards, it is periodically exposed to losses related to security breaches which occur at retailers that are unaffiliated with the Company (e.g., customer card data being compromised at retail stores). These losses include, but are not limited to, costs and expenses for card reissuance as well as losses resulting from fraudulent card transactions.

The Company continually encounters technological change.
The financial services industry is continually undergoing rapid technological change with frequent introductions of new technology-driven products and services, including the entrance of financial technology companies offering new financial service products. The Company regularly upgrades or replaces core technological systems and is currently in the process of replacing its core deposit system, which is a significant project. The effective use of technology increases efficiency and enables financial institutions to better serve customers and reduce costs. The Company’s future success depends, in part, upon its ability to address the needs of its customers by using technology to provide products and services that will satisfy customer demands, as well as to create additional efficiencies in the Company’s operations. Many of the Company’s competitors have substantially greater resources to invest in technological improvements. The Company may encounter significant problems or may not be able to effectively implement new technology-driven products, including the core deposit system, and services, or be successful in marketing the new products and services to its customers. These problems might include significant time delays, cost overruns, loss of key people, and technological system failures. Failure to successfully keep pace with technological change affecting the financial services industry or failure to successfully complete the replacement of the core deposit system, or another core technological system, could have a material adverse effect on the Company’s business, financial condition and results of operations.

Commerce Bancshares, Inc. relies on dividends from its subsidiary bank for most of its revenue.
Commerce Bancshares, Inc. is a separate and distinct legal entity from its banking and other subsidiaries. It receives substantially all of its revenue from dividends from its subsidiary bank. These dividends, which are limited by various federal and state regulations, are the principal source of funds to pay dividends on its preferred and common stock and to meet its other cash needs. In the event the subsidiary bank is unable to pay dividends, the Company may not be able to pay dividends or other obligations, which would have a material adverse effect on the Company's financial condition and results of operations.

The Company must attract and retain skilled employees.
The Company’s success depends, in large part, on its ability to attract and retain key people. Competition for the best people can be intense, and the Company spends considerable time and resources attracting, hiring, and retaining qualified people for its various business lines and support units. The unexpected loss of the services of one or more of the Company’s key personnel could have a material adverse impact on the Company’s business because of their skills, knowledge of the Company’s market, and years of industry experience, as well as the difficulty of promptly finding qualified replacement personnel.

Item 1b. UNRESOLVED STAFF COMMENTS

None

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Item 2. PROPERTIES

The main offices of the Bank are located in the larger metropolitan areas of its markets in various multi-story office buildings. The Bank owns its main offices and leases unoccupied premises to the public. The larger office buildings include:

Building	Net rentable square footage	% occupied in total	% occupied by Bank
922 Walnut Kansas City, MO	256,000	95 %	93 %
1000 Walnut Kansas City, MO	391,000	86	46
811 Main Kansas City, MO	237,000	100	100
8000 Forsyth Clayton, MO	178,000	100	100
1551 N. Waterfront Pkwy Wichita, KS	124,000	96	34

The Company has an additional 164 branch locations in Missouri, Illinois, Kansas, Oklahoma and Colorado which are owned or leased, and 151 off-site ATM locations.

Item 3. LEGAL PROCEEDINGS

The information required by this item is set forth in Item 8 under Note 20, Commitments, Contingencies and Guarantees on page 120.

Item 4. MINE SAFETY DISCLOSURES

Not applicable

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Executive Officers of the Registrant

The following are the executive officers of the Company as of February 21, 2019, each of whom is designated annually. There are no arrangements or understandings between any of the persons so named and any other person pursuant to which such person was designated an executive officer.

Name and Age	Positions with Registrant
Jeffery D. Aberdeen, 64	Controller of the Company since December 1995. He is also Controller of the Company's subsidiary bank, Commerce Bank.
Kevin G. Barth, 58	Executive Vice President of the Company since April 2005, and Community President and Chief Executive Officer of Commerce Bank since October 1998. Senior Vice President of the Company and Officer of Commerce Bank prior thereto.
Jeffrey M. Burik, 60	Senior Vice President of the Company since February 2013. Executive Vice President of Commerce Bank since November 2007.
Daniel D. Callahan, 62	Executive Vice President and Chief Credit Officer of the Company since December 2010 and Senior Vice President of the Company prior thereto. Executive Vice President of Commerce Bank since May 2003.
Sara E. Foster, 58	Executive Vice President of the Company since February 2012 and Senior Vice President of the Company prior thereto. Executive Vice President of Commerce Bank since January 2016 and Senior Vice President of Commerce Bank prior thereto.
John K. Handy, 55	Executive Vice President of the Company since January 2018 and Senior Vice President of the Company prior thereto. Community President and Chief Executive Officer of Commerce Bank since January 2018 and Senior Vice President of Commerce Bank prior thereto.
Robert S. Holmes, 55	Executive Vice President of the Company since April 2015, and Community President and Chief Executive Officer of Commerce Bank since January 2016. Prior to his employment with Commerce Bank in March 2015, he was employed at a Midwest regional bank where he served as managing director and head of Regional Banking.
Patricia R. Kellerhals, 61	Senior Vice President of the Company since February 2016 and Vice President of the Company prior thereto. Executive Vice President of Commerce Bank since 2005.
David W. Kemper, 68	Executive Chairman of the Company and of the Board of Directors of the Company since August 2018. Prior thereto, he was Chief Executive Officer of the Company and Chairman of the Board of Directors of the Company. He was President of the Company from April 1982 until February 2013. He is the brother of Jonathan M. Kemper (a former Vice Chairman of the Company), and father of John W. Kemper, President and Chief Executive Officer of the Company.
John W. Kemper, 41	Chief Executive Officer of the Company and Chairman and Chief Executive Officer of Commerce Bank since August 2018. Prior thereto, he was Chief Operating Officer of the Company. President of the Company since February 2013 and President of Commerce Bank since March 2013. Member of Board of Directors since September 2015. He is the son of David W. Kemper, Executive Chairman of the Company and nephew of Jonathan M. Kemper (a former Vice Chairman of the Company).

Charles G. Kim, 58	Chief Financial Officer of the Company since July 2009. Executive Vice President of the Company since April 1995 and Executive Vice President of Commerce Bank since January 2004. Prior thereto, he was Senior Vice President of Commerce Bank.
Douglas D. Neff, 50	Senior Vice President of the Company since January 2019 and Chairman and Chief Executive Officer of Commerce Bank Southwest Region since 2013.
Paula S. Petersen, 52	Senior Vice President of the Company since July 2016 and Executive Vice President of Commerce Bank since March 2012.
David L. Roller, 48	Senior Vice President of the Company since July 2016 and Senior Vice President of Commerce Bank since September 2010.

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PART II

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

Commerce Bancshares, Inc.
Common Stock Data
Commerce Bancshares, Inc. common shares are listed on the Nasdaq Global Select Market (NASDAQ) under the symbol CBSH. The Company had 3,664 common shareholders of record as of December 31, 2018. Certain of the Company's shares are held in "nominee" or "street" name and the number of beneficial owners of such shares is approximately 58,500.

Performance Graph
The following graph presents a comparison of Company (CBSH) performance to the indices named below. It assumes $100 invested on December 31, 2013 with dividends invested on a cumulative total shareholder return basis.

	2013	2014	2015	2016	2017	2018
Commerce (CBSH)	100.00	103.68	108.62	157.84	162.62	174.88
NASDAQ OMX Global-Bank	100.00	111.83	114.30	144.63	171.24	143.15
S&P 500	100.00	113.68	115.24	128.98	157.12	150.22

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The following table sets forth information about the Company’s purchases of its $5 par value common stock, its only class of common stock registered pursuant to Section 12 of the Exchange Act, during the fourth quarter of 2018.

Period	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Program	Maximum Number that May Yet Be Purchased Under the Program
October 1—31, 2018	140,934	$62.14	140,934	2,687,186
November 1—30, 2018	167,286	$65.37	167,286	2,519,900
December 1—31, 2018	270,337	$59.05	270,337	2,249,563
Total	578,557	$61.63	578,557	2,249,563

The Company’s stock purchases shown above were made under authorizations by the Board of Directors. Under the most recent authorization in October 2015 of 5,000,000 shares, 2,249,563 shares remained available for purchase at December 31, 2018.

Item 6. SELECTED FINANCIAL DATA

The required information is set forth below in Item 7.

Item 7. MANAGEMENT’S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

Forward-Looking Statements

This report may contain “forward-looking statements” that are subject to risks and uncertainties and include information about possible or assumed future results of operations. Many possible events or factors could affect the future financial results and performance of Commerce Bancshares, Inc. and its subsidiaries (the "Company"). This could cause results or performance to differ materially from those expressed in the forward-looking statements. Words such as “expects”, “anticipates”, “believes”, “estimates”, variations of such words and other similar expressions are intended to identify such forward-looking statements. These statements are not guarantees of future performance and involve certain risks, uncertainties and assumptions which are difficult to predict. Therefore, actual outcomes and results may differ materially from what is expressed or forecasted in, or implied by, such forward-looking statements. Readers should not rely solely on the forward-looking statements and should consider all uncertainties and risks discussed throughout this report. Forward-looking statements speak only as of the date they are made. The Company does not undertake to update forward-looking statements to reflect circumstances or events that occur after the date the forward-looking statements are made or to reflect the occurrence of unanticipated events. Such possible events or factors include the risk factors identified in Item 1a Risk Factors and the following: changes in economic conditions in the Company’s market area; changes in policies by regulatory agencies, governmental legislation and regulation; fluctuations in interest rates; changes in liquidity requirements; demand for loans in the Company’s market area; changes in accounting and tax principles; estimates made on income taxes; failure of litigation settlement agreements to become final in accordance with their terms; and competition with other entities that offer financial services.

Overview

The Company operates as a super-community bank and offers a broad range of financial products to consumer and commercial customers, delivered with a focus on high-quality, personalized service. It is the largest bank holding company headquartered in Missouri, with its principal offices in Kansas City and St. Louis, Missouri. Customers are served from 320 locations in Missouri, Kansas, Illinois, Oklahoma and Colorado and commercial offices throughout

the nation's midsection. A variety of delivery platforms are utilized, including an extensive network of branches and ATM machines, full-featured online banking, and a central contact center.

The core of the Company’s competitive advantage is its focus on the local markets in which it operates, its offering of competitive, sophisticated financial products, and its concentration on relationship banking and high-touch service. In order to enhance shareholder value, the Company targets core revenue growth. To achieve this growth, the Company focuses on strategies that will expand new and existing customer relationships, offer opportunities for controlled expansion in additional markets, utilize improved technology, and enhance customer satisfaction.

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Various indicators are used by management in evaluating the Company's financial condition and operating performance. Among these indicators are the following:

- Net income and earnings per share — Net income attributable to Commerce Bancshares, Inc. was $433.5 million, an increase of 35.7% compared to the previous year. The return on average assets was 1.76% in 2018, and the return on average common equity was 16.16%. Diluted earnings per share increased 37.0% in 2018 compared to 2017.
- Total revenue — Total revenue is comprised of net interest income and non-interest income. Total revenue in 2018 increased $130.2 million, or 10.9% over 2017, driven by growth in net interest income and non-interest income of $90.1 million and $40.1 million, respectively. The growth in net interest income in 2018 was mainly due to higher rates on interest earning assets, which grew 44 basis points over 2017 rates, partially offset by higher rates on interest-bearing liabilities, which grew 15 basis points in 2018 over the prior year. Growth in non-interest income resulted principally from increases in bank card fees, trust fees, and deposit fees.
- Non-interest expense — Total non-interest expense decreased .9% this year compared to 2017, mainly due to $32.0 million of donations made to a related foundation during 2017, which did not recur in 2018. Excluding these donations, non-interest expense grew 3.6% in the current year, primarily driven by higher expense for salaries and benefits.
- Asset quality — Net loan charge-offs totaled $42.3 million in 2018, an increase of $650 thousand over those recorded in 2017, and averaged .30% of loans compared to .31% in the previous year. Total non-performing assets, which include non-accrual loans and foreclosed real estate, amounted to $13.9 million at December 31, 2018, compared to $12.7 million at December 31, 2017, and represented .10% of loans outstanding at December 31, 2018.
- Shareholder return — During 2018, the Company paid cash dividends of $.895 per share on its common stock, representing an increase of 9.7% over the previous year, and paid dividends of 6% on its preferred stock. In 2018, the Company issued its 25th consecutive annual 5% common stock dividend, and in January 2019, the Company's Board of Directors authorized an increase of 16% in the common cash dividend. In 2018, the Company purchased 1,193,960 shares of treasury stock.

The following discussion and analysis should be read in conjunction with the consolidated financial statements and related notes. The historical trends reflected in the financial information presented below are not necessarily reflective of anticipated future results.

Key Ratios

	2018	2017	2016	2015	2014
(Based on average balances)					
Return on total assets	1.76 %	1.28 %	1.12 %	1.11 %	1.15 %
Return on common equity	16.16	12.46	11.33	11.43	11.65
Equity to total assets	11.24	10.53	10.16	10.00	10.10
Loans to deposits (1)	69.27	66.18	63.71	61.44	59.91
Non-interest bearing deposits to total deposits	33.43	34.85	34.67	35.12	33.73
Net yield on interest earning assets (tax equivalent basis)	3.53	3.20	3.04	2.94	3.00
(Based on end of period data)					
Non-interest income to revenue (2)	37.83	39.88	41.09	41.40	41.31
Efficiency ratio (3)	55.58	62.18	61.04	61.42	61.00
Tier I common risk-based capital ratio (4)	14.22	12.65	11.62	11.52	NA
Tier I risk-based capital ratio (4)	14.98	13.41	12.38	12.33	13.74%
Total risk-based capital ratio (4)	15.82	14.35	13.32	13.28	14.86
Tier I leverage ratio (4)	11.52	10.39	9.55	9.23	9.36
Tangible common equity to tangible assets ratio (5)	10.45	9.84	8.66	8.48	8.55
Common cash dividend payout ratio	23.61	29.52	32.69	33.35	32.69

(1) Includes loans held for sale.
(2) Revenue includes net interest income and non-interest income.

(3) The efficiency ratio is calculated as non-interest expense (excluding intangibles amortization) as a percent of revenue.

(4) Risk-based capital information at December 31, 2018, 2017, 2016 and 2015 was prepared under Basel III requirements, which were effective January 1, 2015. Risk-based capital information for prior years was prepared under Basel I requirements.

(5) The tangible common equity to tangible assets ratio is a measurement which management believes is a useful indicator of capital adequacy and utilization. It provides a meaningful basis for period to period and company to company comparisons, and also assist regulators, investors and analysts in analyzing the financial position of the Company. Tangible common equity and tangible assets are non-GAAP measures and should not be viewed as substitutes for, or superior to, data prepared in accordance with GAAP.

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The following table is a reconciliation of the GAAP financial measures of total equity and total assets to the non-GAAP measures of total tangible common equity and total tangible assets.

(Dollars in thousands)	2018	2017	2016	2015	2014
Total equity	$2,937,149	$2,718,184	$2,501,132	$2,367,418	$2,334,246
Less non-controlling interest	5,851	1,624	5,349	5,428	4,053
Less preferred stock	144,784	144,784	144,784	144,784	144,784
Less goodwill	138,921	138,921	138,921	138,921	138,921
Less core deposit premium	2,316	2,965	3,841	5,031	6,572
Total tangible common equity (a)	$2,645,277	$2,429,890	$2,208,237	$2,073,254	$2,039,916
Total assets	$25,463,842	$24,833,415	$25,641,424	$24,604,962	$23,994,280
Less goodwill	138,921	138,921	138,921	138,921	138,921
Less core deposit premium	2,316	2,965	3,841	5,031	6,572
Total tangible assets (b)	$25,322,605	$24,691,529	$25,498,662	$24,461,010	$23,848,787
Tangible common equity to tangible assets ratio (a)/(b)	10.45 %	9.84 %	8.66 %	8.48 %	8.55 %

Selected Financial Data

(In thousands, except per share data)	2018	2017	2016	2015	2014
Net interest income	$823,825	$733,679	$680,049	$634,320	$620,204
Provision for loan losses	42,694	45,244	36,318	28,727	29,531
Non-interest income	501,341	461,263	446,556	422,444	410,393
Investment securities gains (losses), net	(488)	25,051	(53)	6,320	14,124
Non-interest expense	737,821	744,343	689,229	650,792	630,757
Net income attributable to Commerce Bancshares, Inc.	433,542	319,383	275,391	263,730	261,754
Net income available to common shareholders	424,542	310,383	266,391	254,730	257,704
Net income per common share-basic*	3.79	2.77	2.38	2.21	2.16
Net income per common share-diluted*	3.78	2.76	2.37	2.21	2.15
Cash dividends on common stock	100,238	91,619	87,070	84,961	84,241
Cash dividends per common share*	.895	.816	.777	.740	.705
Market price per common share*	56.37	53.18	52.44	36.75	35.78
Book value per common share*	25.13	22.99	21.07	19.75	18.70
Common shares outstanding*	111,331	111,946	111,861	112,551	117,087
Total assets	25,463,842	24,833,415	25,641,424	24,604,962	23,994,280
Loans, including held for sale	14,160,992	14,005,072	13,427,192	12,444,299	11,469,238
Investment securities	8,698,666	8,893,307	9,770,986	9,901,680	9,645,792
Deposits	20,323,659	20,425,446	21,101,095	19,978,853	19,475,778
Long-term debt	8,702	1,758	102,049	103,818	104,058
Equity	2,937,149	2,718,184	2,501,132	2,367,418	2,334,246
Non-performing assets	13,949	12,664	14,649	29,394	46,251

*Restated for the 5% stock dividend distributed in December 2018.

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Results of Operations

(Dollars in thousands)	2018	2017	2016	$ Change '18-'17	$ Change '17-'16	% Change '18-'17	% Change '17-'16
Net interest income	$823,825	$733,679	$680,049	$90,146	$53,630	12.3 %	7.9 %
Provision for loan losses	(42,694)	(45,244)	(36,318)	(2,550)	8,926	(5.6)	24.6
Non-interest income	501,341	461,263	446,556	40,078	14,707	8.7	3.3
Investment securities gains (losses), net	(488)	25,051	(53)	(25,539)	25,104	N.M.	N.M.
Non-interest expense	(737,821)	(744,343)	(689,229)	(6,522)	55,114	(.9)	8.0
Income taxes	(105,949)	(110,506)	(124,151)	(4,557)	(13,645)	(4.1)	(11.0)
Non-controlling interest expense	(4,672)	(517)	(1,463)	4,155	(946)	N.M.	(64.7)
Net income attributable to Commerce Bancshares, Inc.	433,542	319,383	275,391	114,159	43,992	35.7	16.0
Preferred stock dividends	(9,000)	(9,000)	(9,000)	—	—	N.M.	N.M.
Net income available to common shareholders	$424,542	$310,383	$266,391	$114,159	$43,992	36.8 %	16.5 %

N.M. - Not meaningful.

Net income attributable to Commerce Bancshares, Inc. (net income) for 2018 was $433.5 million, an increase of $114.2 million, or 35.7%, compared to $319.4 million in 2017. Diluted income per common share increased 37.0% to $3.78 in 2018, compared to $2.76 in 2017. The growth in net income resulted from increases of $90.1 million in net interest income and $40.1 million in non-interest income, as well as decreases of $6.5 million in non-interest expense, $4.6 million in income tax expense and $2.6 million in the provision for loan losses. These increases in net income were partly offset by a $25.5 million decrease in investment securities gains. The return on average assets was 1.76% in 2018 compared to 1.28% in 2017, and the return on average common equity was 16.16% in 2018 compared to 12.46% in 2017. At December 31, 2018, the ratio of tangible common equity to assets increased to 10.45%, compared to 9.84% at year end 2017.

During 2018, the increase in net interest income mainly resulted from increased rates on the Company's loan and investment portfolios, partially offset by higher rates paid on interest-bearing deposits and borrowings. Total rates earned on average earning assets grew 44 basis points this year, while funding costs for deposits and borrowings increased by 15 basis points. Non-interest income grew 8.7% in 2018, primarily from growth in bank card, trust and deposit fee income. Investment securities net losses in 2018 were mainly comprised of net losses on sales of available for sale debt securities of $9.7 million and a $8.9 million adjustment to recognize dividend income on a liquidated equity security. These losses were offset by realized and unrealized net gains on the Company's portfolio of private equity securities of $13.8 million, as well as gains of $4.3 million on sales and fair value adjustments on equity securities. Additionally, net securities gains in 2017 included a gain of $32.0 million on the appreciation of securities donated to a related foundation, which did not recur in 2018.

Non-interest expense declined $6.5 million in 2018 compared to 2017, with the decrease resulting from a $32.0 million donation of appreciated securities to a charitable organization in 2017 that did not recur in 2018. This decrease in non-interest expense was partly offset by increases in salaries and benefits, data processing and software, and marketing expense, which increased $19.9 million, $5.0 million, and $4.2 million, respectively. The provision for loan losses totaled $42.7 million, a decrease of $2.6 million from the previous year.

Net income attributable to Commerce Bancshares, Inc. for 2017 was $319.4 million, an increase of $44.0 million, or 16.0%, compared to $275.4 million in 2016. Diluted income per common share increased 16.5% to $2.76 in 2017, compared to $2.37 in 2016. The increase in net income resulted from increases of $53.6 million in net interest income, $14.7 million in non-interest income, and $25.1 million in investment securities gains, as well as a decrease of $13.6 million in income tax expense. These increases in net income were partly offset by increases of $55.1 million in non-interest expense and $8.9 million in the provision for loan losses. The return on average assets was 1.28% in 2017

compared to 1.12% in 2016, and the return on average common equity was 12.46% in 2017 compared to 11.33% in 2016. At December 31, 2017, the ratio of tangible common equity to assets increased to 9.84%, compared to 8.66% at year end 2016.

During 2017, net interest income increased $53.6 million compared to 2016. This increase reflected growth of $53.9 million in interest on loans, resulting from higher average balances and loan yields. In addition, interest on investment securities grew by $7.5 million due to higher rates earned, which included $2.0 million in additional inflation income earned on the Company's portfolio of U.S. Treasury inflation-protected securities (TIPS). Interest expense on deposits and borrowings rose by $10.7 million largely due to higher average rates paid. The provision for loan losses increased $8.9 million over the previous year, totaling $45.2 million in 2017, and was $3.6 million higher than net loan charge-offs. Net charge-offs increased by $9.7 million in 2017 compared

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to 2016, mainly due to higher net charge-offs on consumer credit card loans and lower net recoveries on construction and business real estate loans.

Non-interest income in 2017 was $461.3 million, an increase of $14.7 million, or 3.3%, compared to $446.6 million in 2016. This increase resulted mainly from growth in trust fees, deposit account fees, and loan fees and sales, which increased $13.4 million, $3.7 million, and $2.5 million, respectively. Non-interest expense in 2017 was $744.3 million, an increase of $55.1 million over $689.2 million in 2016. The increase in non-interest expense included a $21.0 million, or 4.9%, increase in salaries and benefits expense due to higher full-time salaries, incentive compensation, and payroll taxes. As mentioned above, expense in 2017 also included $32.0 million of contribution expense resulting from the donation of appreciated securities to a charitable foundation. Investment securities net gains in 2017 totaled $25.1 million, largely resulting from these donations.

The Company distributed a 5% stock dividend for the 25th consecutive year on December 17, 2018. All per share and average share data in this report has been restated for the 2018 stock dividend.

Critical Accounting Policies
The Company's consolidated financial statements are prepared based on the application of certain accounting policies, the most significant of which are described in Note 1 to the consolidated financial statements. Certain of these policies require numerous estimates and strategic or economic assumptions that may prove inaccurate or be subject to variations which may significantly affect the Company's reported results and financial position for the current period or future periods. The use of estimates, assumptions, and judgments are necessary when financial assets and liabilities are required to be recorded at, or adjusted to reflect, fair value. Current economic conditions may require the use of additional estimates, and some estimates may be subject to a greater degree of uncertainty due to the current instability of the economy. The Company has identified several policies as being critical because they require management to make particularly difficult, subjective and/or complex judgments about matters that are inherently uncertain and because of the likelihood that materially different amounts would be reported under different conditions or using different assumptions. These policies relate to the allowance for loan losses, fair value measurement, and accounting for income taxes.

Allowance for Loan Losses
The Company performs periodic and systematic detailed reviews of its loan portfolio to assess overall collectability. The level of the allowance for loan losses reflects the Company's estimate of the losses inherent in the loan portfolio at any point in time. While these estimates are based on substantive methods for determining allowance requirements, actual outcomes may differ significantly from estimated results, especially when determining allowances for business, construction and business real estate loans. These loans are normally larger and more complex, and their collection rates are harder to predict. Personal banking loans, including personal real estate, credit card and consumer loans, are individually smaller and perform in a more homogenous manner, making loss estimates more predictable. Further discussion of the methodology used in establishing the allowance is provided in the Allowance for Loan Losses section of Item 7 and in Note 1 to the consolidated financial statements.

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

Fair value is an estimate of the exchange price that would be received to sell an asset or paid to transfer a liability in an orderly transaction (i.e., not a forced transaction, such as a liquidation or distressed sale) between market participants at the measurement date and is based on the assumptions market participants would use when pricing an asset or liability. Fair value measurement and disclosure guidance establishes a three-level hierarchy for disclosure of assets and liabilities recorded at fair value. The fair value hierarchy, the extent to which fair value is used to measure assets and liabilities and the valuation methodologies and key inputs used are discussed in Note 16 on Fair Value Measurements.

At December 31, 2018, assets and liabilities measured using observable inputs that are classified as either Level 1 or Level 2 represented 98.9% and 99.6% of total assets and liabilities recorded at fair value, respectively. Valuations generated from model-based techniques that use at least one significant assumption not observable in the market are considered Level 3, and the Company's Level 3 assets totaled $100.4 million, or 1.2% of total assets recorded at fair value on a recurring basis. Unobservable assumptions reflect estimates of assumptions market participants would use in pricing the asset or liability. Fair value measurements for assets

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and liabilities where limited or no observable market data exists often involves significant judgments about assumptions, such as determining an appropriate discount rate that factors in both liquidity and risk premiums, and in many cases may not reflect amounts exchanged in a current sale of the financial instrument. In addition, changes in market conditions may reduce the availability of quoted prices or observable data. For example, reduced liquidity in the capital markets or changes in secondary market activities could result in observable market inputs becoming unavailable. Therefore, when market data is not available, the Corporation would use valuation techniques requiring more management judgment to estimate the appropriate fair value.

Accounting for Income Taxes

Accrued income taxes represent the net amount of current income taxes which are expected to be paid attributable to operations as of the balance sheet date. Deferred income taxes represent the expected future tax consequences of events that have been recognized in the financial statements or income tax returns. Deferred tax assets and liabilities are measured using the enacted tax rates that are expected to apply to taxable income when such assets and liabilities are anticipated to be settled or realized. Current and deferred income taxes are reported as either a component of other assets or other liabilities in the consolidated balance sheets, depending on whether the balances are assets or liabilities. Judgment is required in applying generally accepted accounting principles in accounting for income taxes. The Company regularly monitors taxing authorities for changes in laws and regulations and their interpretations by the judicial systems. The aforementioned changes, as well as any changes that may result from the resolution of income tax examinations by federal and state taxing authorities, may impact the estimate of accrued income taxes and could materially impact the Company’s financial position and results of operations.

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Net Interest Income

Net interest income, the largest source of revenue, results from the Company's lending, investing, borrowing, and deposit gathering activities. It is affected by both changes in the level of interest rates and changes in the amounts and mix of interest earning assets and interest bearing liabilities. The following table summarizes the changes in net interest income on a fully taxable equivalent basis, by major category of interest earning assets and interest bearing liabilities, identifying changes related to volumes and rates. Changes not solely due to volume or rate changes are allocated to rate.

(In thousands)	2018 Change due to Average Volume	2018 Change due to Average Rate	2018 Total	2017 Change due to Average Volume	2017 Change due to Average Rate	2017 Total
Interest income, fully taxable equivalent basis						
Loans:						
Business	$4,235	$25,921	$30,156	$5,190	$15,053	$20,243
Real estate- construction and land	3,614	8,511	12,125	3,628	6,235	9,863
Real estate - business	1,637	13,870	15,507	9,284	3,420	12,704
Real estate - personal	2,765	2,333	5,098	3,114	(264)	2,850
Consumer	(1,018)	9,027	8,009	3,441	2,548	5,989
Revolving home equity	(735)	2,732	1,997	(669)	1,388	719
Consumer credit card	2,956	984	3,940	(654)	2,975	2,321
Total interest on loans	13,454	63,378	76,832	23,334	31,355	54,689
Loans held for sale	154	144	298	(368)	51	(317)
Investment securities:						
U.S. government and federal agency obligations	146	1,877	2,023	3,831	238	4,069
Government-sponsored enterprise obligations	(2,331)	1,108	(1,223)	(3,108)	(2,744)	(5,852)
State and municipal obligations	(11,184)	(8,022)	(19,206)	(1,191)	3	(1,188)
Mortgage-backed securities	9,931	12,132	22,063	7,771	(1,036)	6,735
Asset-backed securities	(11,051)	8,517	(2,534)	(4,884)	6,295	1,411
Other securities	734	11,382	12,116	(1,151)	4,199	3,048
Total interest on investment securities	(13,755)	26,994	13,239	1,268	6,955	8,223
Federal funds sold and short-term securities purchased under agreements to resell	105	184	289	36	116	152
Long-term securities purchased under agreements to resell	186	255	441	(1,765)	3,661	1,896
Interest earning deposits with banks	1,206	2,804	4,010	97	1,153	1,250
Total interest income	1,350	93,759	95,109	22,602	43,291	65,893
Interest expense						
Interest bearing deposits:						
Savings	57	(65)	(8)	53	5	58
Interest checking and money market	328	10,174	10,502	235	2,650	2,885
Certificates of deposit of less than $100,000	(264)	834	570	(272)	108	(164)
Certificates of deposit of $100,000 and over	(2,393)	6,192	3,799	(439)	2,753	2,314
Federal funds purchased and securities sold under agreements to repurchase	48	9,778	9,826	463	6,051	6,514
Other borrowings	(3,041)	—	(3,041)	(1,955)	1,073	(882)
Total interest expense	(5,265)	26,913	21,648	(1,915)	12,640	10,725
Net interest income, fully taxable equivalent basis	$6,615	$66,846	$73,461	$24,517	$30,651	$55,168

Net interest income totaled $823.8 million in 2018, increasing $90.1 million, or 12.3%, compared to $733.7 million in 2017. On a tax equivalent (T/E) basis, net interest income totaled $840.1 million, and increased $73.5 million over 2017. This increase included growth of $76.8 million in loan interest income (T/E), resulting from higher average balances and higher rates earned. In addition, interest earned on investment securities increased $13.2 million, mainly due to higher rates earned and the receipt of $8.9 million in dividend income during the second quarter of 2018, which was related to a liquidated equity security that was carried at fair value. Interest expense on deposits and borrowings combined was $65.4 million and increased $21.6 million, mostly due to higher rates paid. The net yield on earning assets (T/E) was 3.53% in 2018 compared with 3.19% in 2017.

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During 2018, loan interest income (T/E) grew $76.8 million over 2017 mainly due to higher rates earned coupled with increased average balances for most loan categories. The average tax equivalent rate earned on the loan portfolio increased 46 basis points to 4.53% in 2018 compared to 4.07% in 2017. The higher rates earned on the loan portfolio were partly related to continued actions taken by the Federal Reserve to raise short-term interest rates, which enabled much of the Company's loan portfolio to re-price higher. In addition, average loan balances increased 2.3%, or $314.4 million, this year. Increased interest on business loans was the main driver of overall higher loan interest income, mostly due to higher rates, as many of these loans contain variable interest rate terms. Average business loan balances also grew $131.0 million this year. Increases in average balances and rates on construction and business real estate loans drove interest income growth a combined $27.6 million this year. Interest on personal real estate loans increased $5.1 million as average balances were higher by $74.1 million or 3.7%, and the average rate grew 11 basis points. Interest on consumer loans grew $8.0 million over the prior year as the average rate earned increased 45 basis points, but was partly offset by a decline in average balances of $25.6 million. Consumer credit card loan interest was higher by $3.9 million due to growth of $24.9 million in average balances, coupled with a 13 basis point increase in the average rate earned.

Tax equivalent interest income on total investment securities increased $13.2 million during 2018, as the average rate earned increased 33 basis points, while average balances declined $661.6 million. The average rate on the total investment portfolio was 2.84% in 2018 compared to 2.51% in 2017, while the average balance of the total investment securities portfolio (excluding unrealized fair value adjustments on available for sale debt securities) was $8.8 billion in 2018 compared to an average balance of $9.5 billion in 2017. The increase in interest income was mainly due to higher interest earned on mortgage-backed securities, coupled with increased interest and dividend income on equity and other securities. These increases were partly offset lower interest earned on state and municipal securities. Interest income on mortgage-backed securities increased $22.1 million, due to an increase in average balances of $419.0 million and an increase of 29 basis points in the average rate earned. Interest income on equity securities increased due to $8.9 million in dividend income during the second quarter of 2018 (mentioned previously), while interest on other securities increased $1.9 million due to an increase in receipts of non-recurring equity investment dividends during 2018. Interest earned on U.S. government securities grew $2.0 million, which included growth of $2.1 million in inflation income on the Company's treasury inflation-protected securities (TIPS). Partly offsetting these increases in interest income were declines of $19.2 million, $2.5 million and $1.2 million in interest earned on state and municipal, asset-backed and government-sponsored enterprise (GSE) securities, respectively. The decline in state and municipal interest resulted from a decline of $310.0 million in average balances coupled with a lower tax equivalent rate due to tax law changes in 2018. Asset-backed securities interest decreased mainly due to a decline of $627.9 million in average balances, partly offset by higher average rates. Interest earned on GSE's declined mainly due to lower average balances, partly offset by growth in the average rate. Interest earned on deposits with banks increased $4.0 million mainly due to an 88 basis point increase in average rates earned and an increase of $112.7 million in average balances.

During 2018, interest expense on deposits increased $14.9 million over 2017 and resulted mainly from an 11 basis point increase in the overall average rate paid on deposits. Interest expense on interest checking and money market accounts increased $10.5 million due to higher rates paid, which rose nine basis points. The growth in interest expense on certificates of deposit was largely due to higher rates paid on certificates of deposit over $100,000, which increased 54 basis points, partly offset by lower total average certificate of deposit balances, which fell $363.3 million, or 17.5%. The overall rate paid on total deposits increased from .23% in 2017 to .34% in the current year. Interest expense on borrowings increased due to higher rates paid on customer repurchase agreements, partly offset by the elimination of all Federal Home Loan Bank (FHLB) borrowings in 2018. The overall average rate incurred on all interest bearing liabilities was .44% in 2018, compared to .29% in 2017.

During 2017, net interest income totaled $733.7 million, increasing $53.6 million, or 7.9%, compared to $680.0 million in 2016. On a tax equivalent (T/E) basis, net interest income totaled $766.6 million and increased $55.2 million over 2016. This increase included growth of $54.7 million in loan interest, resulting from higher average loan

balances and higher rates earned. In addition, interest earned on investment securities increased $8.2 million, mainly due to higher rates earned. Interest expense on deposits and borrowings combined was $43.7 million and increased $10.7 million compared to 2016 largely due to higher rates paid. The net yield on earning assets (T/E) was 3.19% in 2017 compared to 3.04% in 2016.

During 2017, loan interest income (T/E) grew $54.7 million over 2016 due to average loan growth of $683.9 million, or 5.3%. The average tax equivalent rate earned on the loan portfolio was 4.07% in 2017 compared to 3.86% in 2016. Similar to 2018, the higher rates earned on the loan portfolio were partly related to increases in interest rate levels taken by the Federal Reserve during 2017. The largest increase in loan interest occurred in business loans, which was higher by $20.2 million as a result of growth in the average rate earned of 31 basis points. Also contributing to the increase were higher average business loan balances of $179.5 million, or 3.9%, as growth trends continued in commercial and industrial, tax-free, and lease loans. Construction and land loan interest grew $9.9 million due to a 71 basis point increase in average rates and a $103.1 million, or 13.2%, increase in average balances. Business real estate interest was higher by $12.7 million as a result of an increase in average balances of $253.7 million, or 10.4%, along with an increase in average rates of 13 basis points. Interest earned on consumer loans increased $6.0 million over the prior year as the average rate increased 12 basis points and average balances increased $89.2 million. Personal real estate

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loan interest was higher by $2.9 million and resulted from growth in average balances of $83.3 million. Interest on consumer credit card loans rose $2.3 million due to a 40 basis point increase in the average rate earned.

Tax equivalent interest income on total investment securities increased $8.2 million during 2017, as the average rate earned increased nine basis points, while total average balances declined slightly. The average rate earned on the total investment portfolio was 2.51% in 2017 compared to 2.42% in 2016, while the average balance of the total investment securities portfolio (excluding unrealized fair value adjustments on available for sale debt securities) was approximately $9.5 billion during both years. The increase in interest income was mainly due to higher interest earned on U.S. government obligations, mortgage-backed securities, and other securities. Interest earned on U.S. government securities grew $4.1 million, which included growth of $2.0 million in inflation-adjusted interest on TIPS. In addition, average balances rose $179.9 million, or 24.5%. Interest income on mortgage-backed securities increased $6.7 million, due to an increase in average balances of $323.8 million, partly offset by a decline of three basis points in the average rate earned. Interest earned on asset-backed securities increased $1.4 million, mainly due to an increase of 30 basis points in the average rate earned, partly offset by a decline in average balances of $334.5 million. Interest income on other securities increased $2.9 million, largely due to one-time interest payments received on a private equity investment in 2017. Partly offsetting these increases in interest income were declines of $5.9 million and $1.2 million in interest on GSE and state and municipal securities, respectively. The decline in GSE interest resulted from a $139.4 million decline in average balances, coupled with a rate decrease of 61 basis points, while state and municipal interest was lower due to a decrease of $33.0 million in average balances. Interest earned on deposits with banks increased $1.3 million mainly due to a 55 basis point increase in average rates earned. Interest on long-term securities purchased under resell agreements increased $1.9 million in 2017 compared to 2016 due to an increase in the average rate of 53 basis points, partly offset by a $103.2 million decrease in the average balances of these instruments.

During 2017, interest expense on deposits increased $5.1 million over 2016. This growth was comprised of higher interest expense on money market and interest checking accounts of $2.9 million and higher interest expense on certificates of deposit of $2.2 million. The increase in money market and interest checking interest expense resulted mainly from higher average rates paid, which rose three basis points. The growth in certificate of deposit interest expense was largely due to higher rates paid on certificates of deposit over $100,000, which increased 19 basis points, partly offset by lower total average certificate of deposit balances, which fell $139.6 million, or 6.3%. The overall rate paid on total deposits increased from .19% in 2016 to .23% in the current year. Interest expense on borrowings increased $5.6 million, due to higher average rates paid on repurchase agreements during 2017, partly offset by lower FHLB borrowings. The overall average rate incurred on all interest bearing liabilities was .29% in 2017, compared to .22% in 2016.

Provision for Loan Losses

The provision for loan losses is recorded to bring the allowance for loan losses to a level deemed adequate by management based on the factors mentioned in the “Allowance for Loan Losses” section of this discussion. The provision for loan losses totaled $42.7 million in 2018, a decrease of $2.6 million from the 2017 provision of $45.2 million. In 2017, the provision exceeded net loan charge-offs by $3.6 million, increasing the allowance for loan losses by the same amount, whereas the 2018 provision was $400 thousand greater than net loan charge-offs for the year. Net loan charge-offs for the year totaled $42.3 million and increased $650 thousand compared to $41.6 million in 2017. The increase in net loan charge-offs over the previous year was mainly the result of higher net charge-offs on business loans, which increased $724 thousand and was largely the result of a charge-off recorded on one larger loan. In addition, consumer credit card net charge-offs increased $325 thousand, while construction loan net recoveries declined $556 thousand. Partly offsetting these increases in net charge-offs were lower net charge-offs on consumer loans, which decreased $693 thousand from the prior year. The allowance for loan losses totaled $159.9 million at December 31, 2018, an increase of $400 thousand compared to the prior year, and represented 1.13% of outstanding loans at year end 2018, compared to 1.14% at year end 2017.

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Non-Interest Income

(Dollars in thousands)	2018	2017	2016	% Change '18-'17	% Change '17-'16
Bank card transaction fees	$171,576	$155,100	$154,043	10.6 %	0.7 %
Trust fees	147,964	135,159	121,795	9.5	11.0
Deposit account charges and other fees	94,517	90,060	86,394	4.9	4.2
Capital market fees	7,721	7,996	10,655	(3.4)	(25.0)
Consumer brokerage services	15,807	14,630	13,784	8.0	6.1
Loan fees and sales	12,723	13,948	11,412	(8.8)	22.2
Other	51,033	44,370	48,473	15.0	(8.5)
Total non-interest income	$501,341	$461,263	$446,556	8.7 %	3.3 %
Non-interest income as a % of total revenue*	37.8 %	38.6 %	39.6 %		
Total revenue per full-time equivalent employee	$276.4	$248.9	$235.5		

*Total revenue is calculated as net interest income plus non-interest income.

Non-interest income totaled $501.3 million, an increase of $40.1 million, or 8.7%, compared to $461.3 million in 2017. Bank card fees increased $16.5 million, or 10.6%, over the prior year, as a result of growth in net debit card fees of $4.1 million and net corporate card fees of $14.8 million. These increases were partly offset by declines in net credit card fees of $1.6 million and net merchant fees of $836 thousand. The table below is a summary of bank card transaction fees for the last three years.

(Dollars in thousands)	2018	2017	2016	% Change '18-'17	% Change '17-'16
Net debit card fees	$39,738	$35,636	$33,441	11.5 %	6.6 %
Net credit card fees	12,965	14,576	14,834	(11.1)	(1.7)
Net merchant fees	19,233	20,069	23,043	(4.2)	(12.9)
Net corporate card fees	99,640	84,819	82,725	17.5	2.5
Total bank card transaction fees	$171,576	$155,100	$154,043	10.6 %	0.7 %

Trust fee income increased $12.8 million, or 9.5%, as a result of continued growth in both personal (up 11.1%) and institutional (up 6.4%) trust fees. The market value of total customer trust assets totaled $50.0 billion at year end 2018, which was an increase of 2.7% over year end 2017 balances. Deposit account fees increased $4.5 million, or 4.9%, mainly due to growth of $2.4 million in corporate cash management fees, $1.1 million in deposit account service charges and $892 thousand in overdraft and return item fees. In 2018, corporate cash management fees comprised 40.7% of total deposit fees, while overdraft fees comprised 33.3% of total deposit fees. Capital market fees declined $275 thousand, or 3.4%, due to continued lower sales volumes, while consumer brokerage services revenue increased $1.2 million, or 8.0%, mainly due to growth in advisory and fixed annuity fees. Loan fees and sales decreased $1.2 million, or 8.8%, from the prior year mainly due to declines mortgage banking revenue as a result of lower originations of fixed-rate loans in 2018. Total mortgage banking revenue totaled $8.2 million in 2018 compared to $9.2 million in 2017. Other non-interest income increased $6.7 million, or 15.0%, over the prior year, mainly due to gains of $6.6 million recorded on the sale of branch properties in 2018. In addition, cash sweep commissions, interest rate swap fees, and fees from sales of tax credits increased $1.6 million, $2.1 million, and $1.6 million, respectively, over 2017. These increases were partly offset by lower gains of $1.1 million on sales of leased assets to customers upon lease termination.

During 2017, non-interest income increased $14.7 million, or 3.3%, to $461.3 million compared to $446.6 million in 2016. Bank card fees increased $1.1 million, or .7%, over 2016. This growth included increases of $2.2 million, or 6.6%, in net debit card fees and $2.1 million, or 2.5%, in net corporate card fees, partly offset by a decline of $3.0 million, or 12.9%, in net merchant fees. Trust fee income increased $13.4 million, or 11.0%, as a result of growth in both personal (up 10.3%) and institutional (up 11.9%) trust fees. The market value of total customer trust assets

totaled $48.7 billion at year end 2017, which was an increase of 13.1% over year end 2016 balances. Deposit account fees increased $3.7 million, or 4.2%, mainly due to growth in service charges on deposits of $2.5 million, or 12.1%. In addition, overdraft fees increased $1.2 million, or 4.2%, while corporate cash management fees were flat. Capital market fees declined $2.7 million, or 25.0%, due to lower sales volumes, while consumer brokerage services revenue increased $846 thousand, or 6.1%, due to growth in advisory fees. Loan fees and sales increased $2.5 million in 2017 compared to 2016, mainly due to higher mortgage banking revenue. Other non-interest income decreased $4.1 million, or 8.5%, from 2016. This decrease was due in part to a decline in interest rate swap fees of $3.9 million due to lower origination volume. In addition, a large gain on a branch sale and a trust settlement were recorded in 2016, which did not recur in 2017. These declines were partly offset by higher gains of $1.2 million on sales of leased assets to customers upon lease termination.

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Investment Securities Gains (Losses), Net

(In thousands)	2018	2017	2016
Net gains (losses) on sales of available for sale debt securities	$ (9,653)	$ (9,695)	$ 109
Net gains on sales of equity securities	1,759	10,643	1,904
Fair value adjustments on equity securities	2,542	—	—
Adjustment for dividend income on a liquidated equity investment	(8,917)	—	—
Donations of equity securities	—	31,074	—
Net gains (losses) on sales and fair value adjustments of private equity investments	13,849	(6,332)	(1,796)
Other	(68)	(639)	(270)
Total investment securities gains (losses), net	$ (488)	$ 25,051	$ (53)

Net gains and losses on investment securities during 2018, 2017 and 2016 are shown in the table above. Included in these amounts are gains and losses arising from sales of securities from the Company’s available for sale debt portfolio, including credit-related losses on debt securities identified as other-than-temporarily impaired. Also shown are gains and losses relating to private equity investments, which are primarily held by the Parent’s majority-owned private equity subsidiaries. These include fair value adjustments, in addition to gains and losses realized upon disposition. The portions of private equity investment gains and losses that are attributable to minority interests are reported as non-controlling interest in the consolidated statements of income, and resulted in expense of $2.8 million in 2018, compared to income of $575 thousand in 2017 and expense of $573 thousand in 2016.

Net securities losses of $488 thousand were recorded in 2018, which included $9.7 million in net losses realized on bond sales resulting from the Company's sale of approximately $680 million (book value) of bonds, mainly mortgage and asset-backed securities, as part of a strategy to extend the duration of the securities portfolio and improve net interest margins. Net securities losses also included $8.9 million in losses related to an adjustment for dividend income on a liquidated investment. These losses were offset by net gains totaling $13.8 million of fair value adjustments on private equity investments, in addition to fair value adjustments and net gains realized on sales of equity investments.

Net securities gains of $25.1 million were recorded in 2017, which included $31.1 million in gains realized upon donation of appreciated stock and $10.6 million in net gains realized on sales of equity securities. These gains were offset by net losses of $9.7 million realized on sales of available for sale debt securities, resulting from the Company's sale of approximately $790 million of bonds, mainly mortgage and asset-backed securities. Additionally, net securities losses included $499 thousand in net losses realized on the sale of private equity investments and $5.8 million in losses related to fair value adjustments on private equity investments.

Net securities losses of $53 thousand were recorded in 2016. The 2016 net loss included $1.9 million in gains realized upon dispositions of private equity investments, offset by net losses in fair value totaling $3.7 million on the Company's private equity investment portfolio. Additionally, the Company realized gains on sales of equity securities, including a $1.8 million gain resulting from the Parent's withdrawal from a private equity fund as required under the Volcker Rule investment prohibitions.

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Non-Interest Expense

(Dollars in thousands)	2018	2017	2016	% Change '18-'17	% Change '17-'16
Salaries	$396,897	$380,945	$360,840	4.2 %	5.6 %
Employee benefits	71,297	67,376	66,470	5.8	1.4
Net occupancy	46,044	45,612	46,290	.9	(1.5)
Equipment	18,125	18,568	19,141	(2.4)	(3.0)
Supplies and communication	20,637	22,790	24,135	(9.4)	(5.6)
Data processing and software	85,978	80,998	79,589	6.1	1.8
Marketing	20,548	16,325	16,032	25.9	1.8
Deposit insurance	11,546	13,986	13,327	(17.4)	4.9
Community service	2,445	34,377	3,906	(92.9)	N.M.
Other	64,304	63,366	59,499	1.5	6.5
Total non-interest expense	$737,821	$744,343	$689,229	(.9)%	8.0 %
Efficiency ratio	55.6 %	62.2 %	61.0 %		
Salaries and benefits as a % of total non-interest expense	63.5 %	60.2 %	62.0 %		
Number of full-time equivalent employees	4,795	4,800	4,784		

Non-interest expense was $737.8 million in 2018, a decrease of $6.5 million, or .9%, from the previous year. Salaries and benefits expense increased $19.9 million, or 4.4%, mainly due to higher full-time salaries and medical expense. Growth in salaries expense was driven by increases in full-time salaries in information technology, consumer, wealth, commercial and other support units, while incentive compensation expense declined slightly from 2017. Full-time equivalent employees totaled 4,795 at December 31, 2018, reflecting a small decrease from 2017. Occupancy expense increased $432 thousand, or .9%, mainly due to higher rent, utilities and building services expense, while equipment expense decreased $443 thousand, or 2.4%, due to lower equipment depreciation expense. Supplies and communication expense decreased $2.2 million, or 9.4%, mainly due to lower voice and data network costs. Data processing and software expense increased $5.0 million, or 6.1%, primarily due to higher third party processing costs. Marketing expense increased $4.2 million, or 25.9%, due to new bank card initiatives and consumer marketing initiatives in 2018. Deposit insurance expense declined $2.4 million, or 17.4%, from the prior year mainly due to decreases in average assets, a lower assessment rate, and the elimination of the special FDIC surcharge in the fourth quarter of 2018. Community service costs decreased $31.9 million due to the contribution of appreciated securities to a related foundation in 2017, which did not recur in 2018. Other non-interest expense increased $938 thousand, or 1.5%, over the prior year mainly due to higher costs for professional fees (up $2.4 million) and directors fees (up $936 thousand). These increases were partly offset by lower bank card fraud losses (down $961 thousand).

In 2017, non-interest expense was $744.3 million, an increase of $55.1 million, or 8.0%, over 2016. Salaries and benefits expense increased $21.0 million, or 4.9%, mainly due to higher full-time salaries, incentive compensation, and payroll taxes. Incentive compensation included the accrual of a discretionary bonus of $3.3 million in December 2017 that was paid to approximately 75% of all employees. Growth in salaries expense resulted partly from staffing additions in commercial and consumer, information technology, and other support units. Full-time equivalent employees totaled 4,800 at December 31, 2017, an increase of .3% over 2016. Occupancy expense decreased $678 thousand, mainly due to higher net rental income and lower demolition costs on a branch replacement project. Supplies and communication expense decreased by $1.3 million, or 5.6%, mainly due to reissuance costs for new chip cards distributed to customers in 2016 and lower office supplies expense. Data processing and software expense increased $1.4 million, or 1.8%, mainly due to higher online subscription services and outsourced data provider fees, partly offset by lower bank card processing costs. Equipment expense decreased by $573 thousand, or 3.0%, while deposit insurance expense was higher by $659 thousand, or 4.9%, due to higher insurance rates. Costs for marketing increased slightly compared to 2016. Community service costs increased $30.5 million due to the contribution of $32.0 million of appreciated securities to a related foundation during 2017. Other non-interest expense increased $3.9

million, or 6.5%, over 2016 mainly due to higher costs for legal and professional fees (up $1.2 million), impairment losses on surplus branch sites (up $1.2 million), and lower deferred origination costs (down $1.5 million).

Income Taxes

Income tax expense was $105.9 million in 2018, compared to $110.5 million in 2017 and $124.2 million in 2016. The effective tax rate, including the effect of non-controlling interest, was 19.6% in 2018 compared to 25.7% in 2017 and 31.1% in 2016.

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Due to the enactment of new federal tax reform legislation in December 2017, federal tax rates were lowered from 35% to 21%, which lowered the Company's effective tax rate in 2018. Additionally, the Company adopted ASU 2016-09, "Improvements to Employee Share-Based Payment Accounting," on January 1, 2017, which requires all excess tax benefits (net of tax deficiencies) to be recognized as income tax expense or benefit in the income statement. The amount of excess tax benefits (net of tax deficiencies) recognized as a reduction to income tax expense totaled $4.7 million and $7.3 million in 2018 and 2017, respectively. In 2017, the Company also recorded income tax benefits of $11.8 million resulting from the contribution of appreciated securities to a charitable foundation.

Financial Condition

Loan Portfolio Analysis

Classifications of consolidated loans by major category at December 31 for each of the past five years are shown in the table below. This portfolio consists of loans which were acquired or originated with the intent of holding to their maturity. Loans held for sale are separately discussed in a following section. A schedule of average balances invested in each loan category below appears on page 54.

	Balance at December 31				
(In thousands)	2018	2017	2016	2015	2014
Commercial:					
Business	$5,106,427	$4,958,554	$4,776,365	$4,397,893	$3,969,952
Real estate — construction and land	869,659	968,820	791,236	624,070	403,507
Real estate — business	2,875,788	2,697,452	2,643,374	2,355,544	2,288,215
Personal banking:					
Real estate — personal	2,127,083	2,062,787	2,010,397	1,915,953	1,883,092
Consumer	1,955,572	2,104,487	1,990,801	1,924,365	1,705,134
Revolving home equity	376,399	400,587	413,634	432,981	430,873
Consumer credit card	814,134	783,864	776,465	779,744	782,370
Overdrafts	15,236	7,123	10,464	6,142	6,095
Total loans	$14,140,298	$13,983,674	$13,412,736	$12,436,692	$11,469,238

The contractual maturities of business and real estate loan categories at December 31, 2018, and a breakdown of those loans between fixed rate and floating rate loans are as follows.

	Principal Payments Due			
(In thousands)	In One Year or Less	After One Year Through Five Years	After Five Years	Total
Business	$2,503,345	$2,153,729	$449,353	$5,106,427
Real estate — construction and land	524,674	322,426	22,559	869,659
Real estate — business	516,579	1,750,781	608,428	2,875,788
Real estate — personal	165,134	510,971	1,450,978	2,127,083
Total business and real estate loans	$3,709,732	$4,737,907	$2,531,318	$10,978,957
Business and real estate loans:				
Loans with fixed rates	23.8 %	48.4 %	55.2 %	41.7 %
Loans with floating rates	76.2 %	51.6 %	44.8 %	58.3 %
Total business and real estate loans	100.0 %	100.0 %	100.0 %	100.0 %

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The following table shows loan balances at December 31, 2018, segregated between those with fixed interest rates and those with variable rates that fluctuate with an index.

(In thousands)	Fixed Rate Loans	Variable Rate Loans	Total	% Variable Rate Loans
Business	$1,856,806	$3,249,621	$5,106,427	63.6 %
Real estate — construction and land	46,693	822,966	869,659	94.6
Real estate — business	1,224,106	1,651,682	2,875,788	57.4
Real estate — personal	1,445,600	681,483	2,127,083	32.0
Consumer	1,373,478	582,094	1,955,572	29.8
Revolving home equity	7,171	369,228	376,399	98.1
Consumer credit card	61,878	752,256	814,134	92.4
Overdrafts	15,236	—	15,236	—
Total loans	$6,030,968	$8,109,330	$14,140,298	57.3 %

Total loans at December 31, 2018 were $14.1 billion, an increase of $156.6 million, or 1.1%, over balances at December 31, 2017. The growth in loans during 2018 occurred in the business, business real estate, personal real estate, credit card and overdraft loan categories, while construction, consumer and revolving home equity loans declined from the prior year. Business loans increased $147.9 million, or 3.0%, reflecting growth in commercial and industrial loans, while commercial card and tax-advantaged lending declined. Business real estate loans increased $178.3 million, or 6.6%, due to the improved loan demand and the transfer of certain outstanding construction loans into this category. Construction loans decreased $99.2 million, or 10.2% mainly due to pay downs on certain completed projects and transfers to the business real estate loan category. Personal real estate loans increased $64.3 million, or 3.1%, on origination growth and demand for adjustable rate mortgages, which are retained on the balance sheet. The Company sells certain long-term fixed rate mortgage loans to the secondary market, and loan sales in 2018 totaled $193.5 million, compared to $199.8 million in 2017. Consumer loans decreased $148.9 million, or 7.1%, due to declines in automobile, fixed rate home equity and other consumer loans, along with continued run off of marine and recreational vehicle loan balances. Consumer credit card loans increased $30.3 million, or 3.9%, as a result of new account activity, while revolving home equity loan balances declined $24.2 million compared to balances at year end 2017.

The Company currently holds approximately 30% of its loan portfolio in the Kansas City market, 29% in the St. Louis market, and 41% in other regional markets. The portfolio is diversified from a business and retail standpoint, with 63% in loans to businesses and 37% in loans to consumers. The Company believes a diversified approach to loan portfolio management, strong underwriting criteria and an aversion toward credit concentrations, from an industry, geographic and product perspective, have contributed to low levels of problem loans and loan losses experienced over the last several years.

The Company participates in credits of large, publicly traded companies which are defined by regulation as shared national credits, or SNCs. Regulations define SNCs as loans exceeding $100 million that are shared by three or more financial institutions. The Company typically participates in these loans when business operations are maintained in the local communities or regional markets and opportunities to provide other banking services are present. At December 31, 2018, the balance of SNC loans totaled approximately $830.2 million, with an additional $1.3 billion in unfunded commitments.

Commercial Loans

Business

Total business loans amounted to $5.1 billion at December 31, 2018 and include loans used mainly to fund customer accounts receivable, inventories, and capital expenditures. The business loan portfolio includes tax-advantaged loans and leases which carry tax free interest rates. These loans totaled $902.5 million at December 31, 2018, a decline of $32.6 million, or 3.5%, from December 31, 2017 balances. The business loan portfolio also includes direct financing and sales type leases totaling $557.3 million, which are used by commercial customers to finance capital purchases ranging from computer equipment to office and transportation equipment. These leases increased $25.8 million, or 4.9%, over 2017. The Company has outstanding energy-related loans totaling $143.8 million at December 31, 2018, which are further discussed on page 38. Also included in the business portfolio are corporate card loans, which totaled $297.0 million at December 31, 2018 and are made in conjunction with the Company’s corporate card business for corporate trade purchases. Corporate card loans are made to corporate, non-profit and government customers nationwide, but have very short-term maturities, which limit risk.

Business loans, excluding corporate card loans, are made primarily to customers in the regional trade area of the Company, generally the central Midwest, encompassing the states of Missouri, Kansas, Illinois, and nearby Midwestern markets, including

Iowa, Oklahoma, Colorado, Texas and Ohio. This portfolio is diversified from an industry standpoint and includes businesses engaged in manufacturing, wholesaling, retailing, agribusiness, insurance, financial services, public utilities, health care, and other service businesses. Emphasis is upon middle-market and community businesses with known local management and financial stability. Consistent with management's strategy and emphasis upon relationship banking, most borrowing customers also maintain deposit accounts and utilize other banking services. Net loan charge-offs in this category totaled $2.1 million in 2018 (mainly representing a charge-off on one larger loan placed on non-accrual late in the year), compared to net loan charge-offs of $1.4 million recorded in 2017. Non-accrual business loans were $9.0 million (.2% of business loans) at December 31, 2018 compared to $5.9 million at December 31, 2017.

Real Estate-Construction and Land
The portfolio of loans in this category amounted to $869.7 million at December 31, 2018, which was a decrease of $99.2 million, or 10.2%, from the prior year and comprised 6.2% of the Company's total loan portfolio. Commercial construction and land development loans totaled $664.6 million, or 76.4% of total construction loans at December 31, 2018. These loans decreased $101.3 million from 2017 year end balances; driving the decline in the total construction portfolio. Commercial construction loans are made during the construction phase for small and medium-sized office and medical buildings, manufacturing and warehouse facilities, apartment complexes, shopping centers, hotels and motels, and other commercial properties. Commercial land development loans relate to land owned or developed for use in conjunction with business properties. Residential construction and land development loans at December 31, 2018 totaled $205.1 million, or 23.6% of total construction loans. A stable construction market has contributed to improved loss trends, with net loan recoveries of $635 thousand and $1.2 million recorded in 2018 and 2017, respectively.

Real Estate-Business
Total business real estate loans were $2.9 billion at December 31, 2018 and comprised 20.3% of the Company's total loan portfolio. This category includes mortgage loans for small and medium-sized office and medical buildings, manufacturing and warehouse facilities, shopping centers, hotels and motels, churches, and other commercial properties. The business real estate borrowers and/or properties are generally located in local and regional markets where Commerce does business, and emphasis is placed on owner-occupied lending (36.1% of this portfolio), which presents lower risk levels. Additional information about business real estate loans by borrower is presented on page 36. At December 31, 2018, non-accrual balances amounted to $1.7 million, or .1% of business real estate loans, down from $2.7 million at year end 2017. The Company experienced net loan recoveries of $378 thousand in 2018, compared to net loan recoveries of $203 thousand in 2017.

Personal Banking Loans
Real Estate-Personal
At December 31, 2018, there were $2.1 billion in outstanding personal real estate loans, which comprised 15.0% of the Company's total loan portfolio. The mortgage loans in this category are mainly for owner-occupied residential properties. The Company originates both adjustable and fixed rate mortgage loans, and at December 31, 2018, 32% of the portfolio was comprised of adjustable rate loans, while 68% was comprised of fixed rate loans. The Company does not purchase any loans from outside parties or brokers, and has never maintained or promoted subprime or reduced-document products. Levels of mortgage loan origination activity increased slightly in 2018, with originations of $563.0 million in 2018 compared with $560.8 million in 2017. Net loans retained by the Company increased $64.3 million, driven by increased demand for adjustable rate mortgage loans, which the Company retains, while loans sold to the secondary market decreased $6.3 million. The loan sales were made under a 2015 initiative to originate and sell certain long term fixed rate loans, resulting in sales of $199.8 million in 2017 and $193.5 million in 2018. The Company has experienced lower loan losses in this category than many others in the industry and believes this is partly because of its conservative underwriting culture, stable markets, and the fact that it does not offer subprime lending products or purchase loans from brokers. Net loan recoveries for 2018 amounted to $335 thousand, compared

to net loan recoveries of $305 thousand in the previous year. The non-accrual balances of loans in this category decreased to $1.8 million at December 31, 2018, compared to $2.5 million at year end 2017.

Consumer

Consumer loans consist of private banking, automobile, motorcycle, marine, tractor/trailer, recreational vehicle (RV), fixed rate home equity, patient health care financing and other types of consumer loans. These loans totaled $2.0 billion at year end 2018. Approximately 47% of the consumer portfolio consists of automobile loans, 20% in private banking loans, 5% in motorcycle loans, 14% in fixed rate home equity loans, 9% in heathcare financing loans and 3% in marine and RV loans. Total consumer loans decreased $148.9 million at year end in 2018 compared to year end 2017. Declines of $99.4 million in automobile loan originations, $28.5 million in fixed rate home equity loans, $20.9 million in marine and RV loans and $42.2 million in motorcycle loans were partly offset by growth of $25.3 million in patient health care financing and $12.4 million in private banking loans.

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Also, auto loans totaling $25.9 million were sold to another institution this year. Net charge-offs on total consumer loans were $9.3 million in 2018, compared to $10.0 million in 2017, averaging .5% of consumer loans in both years. Consumer loan net charge-offs included marine and RV loan net charge-offs of $710 thousand, which were 1.2% of average marine and RV loans in 2018, compared to 1.4% in 2017.

Revolving Home Equity

Revolving home equity loans, of which 98% are adjustable rate loans, totaled $376.4 million at year end 2018. An additional $709.4 million was available in unused lines of credit, which can be drawn at the discretion of the borrower. Home equity loans are secured mainly by second mortgages (and less frequently, first mortgages) on residential property of the borrower. The underwriting terms for the home equity line product permit borrowing availability, in the aggregate, generally up to 80% or 90% of the appraised value of the collateral property at the time of origination. Net charge-offs totaled $55 thousand in 2018, compared to $185 thousand in 2017.

Consumer Credit Card

Total consumer credit card loans amounted to $814.1 million at December 31, 2018 and comprised 5.8% of the Company’s total loan portfolio. The credit card portfolio is concentrated within regional markets served by the Company. The Company offers a variety of credit card products, including affinity cards, rewards cards, and standard and premium credit cards, and emphasizes its credit card relationship product, Special Connections. Approximately 41% of the households that own a Commerce credit card product also maintain a deposit relationship with the subsidiary bank. At December 31, 2018, approximately 92% of the outstanding credit card loan balances had a floating interest rate, compared to 91% in the prior year. Net charge-offs amounted to $30.6 million in 2018, an increase of $325 thousand over $30.3 million in 2017.

Loans Held for Sale

At December 31, 2018, loans held for sale were comprised of certain long-term fixed rate personal real estate loans and loans extended to students while attending colleges and universities. The personal real estate loans are carried at fair value and totaled $13.5 million at December 31, 2018. The student loans, carried at the lower of cost or fair value, totaled $7.2 million at December 31, 2018. Both of these portfolios are further discussed in Note 2 to the consolidated financial statements.

Allowance for Loan Losses

The Company has an established process to determine the amount of the allowance for loan losses which assesses the risks and losses inherent in its portfolio. This process provides an allowance consisting of a specific allowance component based on certain individually evaluated loans and a general component based on estimates of reserves needed for pools of loans.

Loans subject to individual evaluation generally consist of business, construction, business real estate and personal real estate loans on non-accrual status, and include troubled debt restructurings that are on non-accrual status. These non-accrual loans are evaluated individually for impairment based on factors such as payment history, borrower financial condition and collateral. For collateral dependent loans, appraisals of collateral (including exit costs) are normally obtained annually but discounted based on date last received and market conditions. From these evaluations of expected cash flows and collateral values, specific allowances are determined.

Loans which are not individually evaluated are segregated by loan type and sub-type and are collectively evaluated. These loans include commercial loans (business, construction and business real estate) which have been graded pass, special mention, or substandard, and also includes all personal banking loans except personal real estate loans on non-accrual status. Collectively-evaluated loans include certain troubled debt restructurings with similar risk characteristics. Allowances for both personal banking and commercial loans use methods which consider historical and current loss trends, loss emergence periods, delinquencies, industry concentrations and unique risks. Economic conditions throughout the Company's market place, as monitored by Company credit officers, are also considered in

the allowance determination process.

The Company's estimate of the allowance for loan losses and the corresponding provision for loan losses rest upon various judgments and assumptions made by management. In addition to past loan loss experience, various qualitative factors are considered, such as current loan portfolio composition and characteristics, trends in delinquencies, portfolio risk ratings, levels of non-performing assets, credit concentrations, collateral values, and prevailing regional and national economic conditions. The Company has internal credit administration and loan review staff that continuously review loan quality and report the results of their reviews and examinations to the Company's senior management and Board of Directors. Such reviews also assist management in establishing the level of the allowance. In using this process and the information available, management must consider various assumptions and exercise considerable judgment to determine the overall level of the allowance for loan losses. Because of these subjective factors, actual outcomes of inherent losses can differ from original estimates. The Company's subsidiary bank continues

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to be subject to examination by several regulatory agencies, and examinations are conducted throughout the year, targeting various segments of the loan portfolio for review. Refer to Note 1 to the consolidated financial statements for additional discussion on the allowance and charge-off policies.

At December 31, 2018, the allowance for loan losses was $159.9 million, compared to $159.5 million at December 31, 2017. The percentage of allowance to loans decreased slightly to 1.13% at December 31, 2018 compared to 1.14% at year end 2017. Total loans delinquent 90 days or more and still accruing were $16.7 million at December 31, 2018, a decrease of $1.5 million compared to year end 2017, mainly driven by a $2.2 million decrease in personal real estate loans delinquent 90 days or more, partly offset by an increase of $1.5 million in consumer credit card loan delinquencies. Non-accrual loans at December 31, 2018 were $12.5 million, an increase of $553 thousand over the prior year, mainly due to an increase in business non-accrual loans of $3.0 million. This increase was partially offset by decreases in business real estate and consumer non-accrual loans of $1.0 million and $834 thousand, respectively. The 2018 year end balance of non-accrual loans was comprised of $9.0 million of business loans, $1.7 million of business real estate loans and $1.8 million of personal real estate loans.

Net loan charge-offs totaled $42.3 million in 2018, representing a $650 thousand increase compared to net charge-offs of $41.6 million in 2017. The increase was largely due to higher business loan net charge-offs of $724 thousand and was mainly the result of a charge-off recorded on one larger loan, which was subsequently placed on non-accrual. In addition, consumer credit card loan net charge-offs increased $325 thousand, while net recoveries on construction loans declined $556 thousand. Partly offsetting these increases in net charge-offs were lower net loan charge-offs of $693 thousand on consumer loans. Consumer credit card net charge-offs were 3.98% of average consumer credit card loans in 2018 compared to 4.07% in 2017. Consumer credit card loan net charge-offs as a percentage of total net charge-offs decreased to 72.3% in 2018 compared to 72.6% in 2017. Consumer loan net charge-offs were .46% of average consumer loans in 2018, compared to .49% in 2017, and represented 22.0% of total net loan charge-offs in 2018.

The ratio of net charge-offs to total average loans outstanding in 2018 was .30%, compared to .31% in 2017 and .25% in 2016. The provision for loan losses in 2018 was $42.7 million, compared to provisions of $45.2 million in 2017 and $36.3 million in 2016.

The Company considers the allowance for loan losses of $159.9 million adequate to cover losses inherent in the loan portfolio at December 31, 2018.

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The schedules which follow summarize the relationship between loan balances and activity in the allowance for loan losses:

	Years Ended December 31				
(Dollars in thousands)	2018	2017	2016	2015	2014
Loans outstanding at end of year[(A)]	$14,140,298	$13,983,674	$13,412,736	$12,436,692	$11,469,238
Average loans outstanding[(A)]	$13,926,079	$13,611,699	$12,927,778	$11,869,276	$11,260,233
Allowance for loan losses:					
Balance at beginning of year	$159,532	$155,932	$151,532	$156,532	$161,532
Additions to allowance through charges to expense	42,694	45,244	36,318	28,727	29,531
Loans charged off:					
Business	3,144	2,410	2,549	2,295	2,646
Real estate — construction and land		1	515	499	794
Real estate — business	20	127	194	1,263	1,108
Real estate — personal	176	417	556	1,037	844
Consumer	12,897	13,415	12,711	11,708	12,214
Revolving home equity	357	488	860	722	783
Consumer credit card	36,931	36,114	31,616	31,326	32,424
Overdrafts	2,296	2,207	1,977	2,200	1,960
Total loans charged off	55,821	55,179	50,978	51,050	52,773
Recoveries of loans previously charged off:					
Business	1,042	1,032	1,933	2,683	2,181
Real estate — construction and land	635	1,192	4,227	1,761	2,323
Real estate — business	398	330	1,475	1,396	681
Real estate — personal	511	722	562	596	317
Consumer	3,611	3,436	3,664	3,430	3,409
Revolving home equity	302	303	375	320	743
Consumer credit card	6,353	5,861	6,186	6,287	7,702
Overdrafts	675	659	638	850	886
Total recoveries	13,527	13,535	19,060	17,323	18,242
Net loans charged off	42,294	41,644	31,918	33,727	34,531
Balance at end of year	$159,932	$159,532	$155,932	$151,532	$156,532
Ratio of allowance to loans at end of year	1.13%	1.14%	1.16%	1.22%	1.36%
Ratio of provision to average loans outstanding	.31%	.33%	.28%	.24%	.26%

(A) Net of unearned income, before deducting allowance for loan losses, excluding loans held for sale.

	Years Ended December 31				
	2018	2017	2016	2015	2014
Ratio of net charge-offs (recoveries) to average loans outstanding, by loan category:					
Business	.04%	.03%	.01%	(.01)%	.01%
Real estate — construction and land	(.07)	(.14)	(.48)	(.26)	(.37)
Real estate — business	(.01)	(.01)	(.05)	(.01)	.02
Real estate — personal	(.02)	(.02)	—	.02	.03
Consumer	.46	.49	.46	.45	.54
Revolving home equity	.01	.05	.12	.09	.01
Consumer credit card	3.98	4.07	3.39	3.35	3.28
Overdrafts	33.93	33.71	28.42	24.93	21.97

Ratio of total net charge-offs to total average loans outstanding	.30 %	.31 %	.25 %	.28 %	.31 %

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The following schedule provides a breakdown of the allowance for loan losses by loan category and the percentage of each loan category to total loans outstanding at year end.

(Dollars in thousands)	2018		2017		2016		2015		2014	
	Loan Loss Allowance Allocation	% of Loans to Total Loans	Loan Loss Allowance Allocation	% of Loans to Total Loans	Loan Loss Allowance Allocation	% of Loans to Total Loans	Loan Loss Allowance Allocation	% of Loans to Total Loans	Loan Loss Allowance Allocation	% of Loans to Total Loans
Business	$42,890	36.1 %	$44,462	35.4 %	$43,910	35.6 %	$43,617	35.4 %	$40,881	34.6 %
RE — construction and land	22,515	6.2	24,432	6.9	21,841	5.9	16,312	5.0	13,584	3.5
RE — business	27,717	20.3	24,810	19.3	25,610	19.7	22,157	18.9	35,157	20.0
RE — personal	3,250	15.0	4,201	14.8	4,110	15.0	6,680	15.4	7,343	16.4
Consumer	18,007	13.8	19,509	15.0	18,935	14.8	21,717	15.5	16,822	14.9
Revolving home equity	825	2.7	1,189	2.9	1,164	3.1	1,393	3.5	2,472	3.7
Consumer credit card	43,755	5.8	40,052	5.6	39,530	5.8	38,764	6.3	39,541	6.8
Overdrafts	973	.1	877	.1	832	.1	892	—	732	.1
Total	$159,932	100.0 %	$159,532	100.0 %	$155,932	100.0 %	$151,532	100.0 %	$156,532	100.0 %

Risk Elements of Loan Portfolio

Management reviews the loan portfolio continuously for evidence of problem loans. During the ordinary course of business, management becomes aware of borrowers that may not be able to meet the contractual requirements of loan agreements. Such loans are placed under close supervision with consideration given to placing the loan on non-accrual status, the need for an additional allowance for loan loss, and (if appropriate) partial or full loan charge-off. Loans are placed on non-accrual status when management does not expect to collect payments consistent with acceptable and agreed upon terms of repayment. After a loan is placed on non-accrual status, any interest previously accrued but not yet collected is reversed against current income. Interest is included in income only as received and only after all previous loan charge-offs have been recovered, so long as management is satisfied there is no impairment of collateral values. The loan is returned to accrual status only when the borrower has brought all past due principal and interest payments current, and, in the opinion of management, the borrower has demonstrated the ability to make future payments of principal and interest as scheduled. Loans that are 90 days past due as to principal and/or interest payments are generally placed on non-accrual, unless they are both well-secured and in the process of collection, or they are comprised of those personal banking loans that are exempt under regulatory rules from being classified as non-accrual. Consumer installment loans and related accrued interest are normally charged down to the fair value of related collateral (or are charged off in full if no collateral) once the loans are more than 120 days delinquent. Credit card loans and the related accrued interest are charged off when the receivable is more than 180 days past due.

The following schedule shows non-performing assets and loans past due 90 days and still accruing interest.

	December 31				
(Dollars in thousands)	2018	2017	2016	2015	2014
Total non-accrual loans	$12,536	$11,983	$14,283	$26,575	$40,775
Real estate acquired in foreclosure	1,413	681	366	2,819	5,476
Total non-performing assets	$13,949	$12,664	$14,649	$29,394	$46,251
Non-performing assets as a percentage of total loans	.10 %	.09 %	.11 %	.24 %	.40 %
Non-performing assets as a percentage of total assets	.05 %	.05 %	.06 %	.12 %	.19 %
Loans past due 90 days and still accruing interest	$16,658	$18,127	$16,396	$16,467	$13,658

The table below shows the effect on interest income in 2018 of loans on non-accrual status at year end.

(In thousands)	
Gross amount of interest that would have been recorded at original rate	$1,339
Interest that was reflected in income	392
Interest income not recognized	$947

Non-accrual loans, which are also classified as impaired, totaled $12.5 million at year end 2018, an increase of $553 thousand from the balance at year end 2017. The increase from December 31, 2017 occurred mainly in business loans, which increased $3.0 million but was partially offset by decreases in business real estate, consumer, and personal real estate non-accrual loans. At December 31, 2018, non-accrual loans were comprised primarily of business (71.7%), personal real estate (14.6%), and business real estate (13.7%) loans. Foreclosed real estate totaled $1.4 million at December 31, 2018, an increase of $732 thousand when compared to December 31, 2017. Total non-performing assets remain low compared to the overall banking industry in 2018, with

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the non-performing loans to total loans ratio at .10% at December 31, 2018. Total loans past due 90 days or more and still accruing interest were $16.7 million as of December 31, 2018, a decrease of $1.5 million when compared to December 31, 2017. Balances by class for non-accrual loans and loans past due 90 days and still accruing interest are shown in the "Delinquent and non-accrual loans" section of Note 2 to the consolidated financial statements.

In addition to the non-performing and past due loans mentioned above, the Company also has identified loans for which management has concerns about the ability of the borrowers to meet existing repayment terms. They are classified as substandard under the Company’s internal rating system. The loans are generally secured by either real estate or other borrower assets, reducing the potential for loss should they become non-performing. Although these loans are generally identified as potential problem loans, they may never become non-performing. Such loans totaled $145.7 million at December 31, 2018, compared with $213.4 million at December 31, 2017, resulting in a decrease of $67.7 million. The decrease in potential problem loans was seen in all loan classes but was largely driven by a $55.4 million decline in business loans, mainly due to loans paying off and the upgrade of certain large commercial and industrial and lease loans.

	December 31	
(In thousands)	2018	2017
Potential problem loans:		
Business	$98,009	$153,417
Real estate – construction and land	1,211	2,702
Real estate – business	44,854	51,134
Real estate – personal	1,586	6,121
Total potential problem loans	$145,660	$213,374

At December 31, 2018, the Company had $75.8 million of loans whose terms have been modified or restructured under a troubled debt restructuring. These loans have been extended to borrowers who are experiencing financial difficulty and who have been granted a concession, as defined by accounting guidance, and are further discussed in the "Troubled debt restructurings" section in Note 2 to the consolidated financial statements. This balance includes certain commercial loans totaling $50.9 million which are classified as substandard and included in the table above because of this classification.

Loans with Special Risk Characteristics

Management relies primarily on an internal risk rating system, in addition to delinquency status, to assess risk in the loan portfolio, and these statistics are presented in Note 2 to the consolidated financial statements. However, certain types of loans are considered at high risk of loss due to their terms, location, or special conditions. Construction and land loans and business real estate loans are subject to higher risk because of the impact that volatile interest rates and a changing economy can have on real estate value, and because of the potential volatility of the real estate industry. Certain personal real estate products (residential first mortgages and home equity loans) have contractual features that could increase credit exposure in a market of declining real estate prices, when interest rates are steadily increasing, or when a geographic area experiences an economic downturn. For these personal real estate loans, higher risks could exist when 1) loan terms require a minimum monthly payment that covers only interest, or 2) loan-to-collateral value (LTV) ratios at origination are above 80%, with no private mortgage insurance. Information presented below for personal real estate and home equity loans is based on LTV ratios which were calculated with valuations at loan origination date. The Company does not attempt to obtain updated appraisals or valuations unless the loans become significantly delinquent or are in the process of being foreclosed upon. For credit monitoring purposes, the Company analyzes delinquency information and current FICO scores. For home equity loans, the line utilization is also analyzed. This has remained an effective means of evaluating credit trends and identifying problem loans, partly because the Company offers standard, conservative lending products.

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Real Estate - Construction and Land Loans

The Company's portfolio of construction loans, as shown in the table below, amounted to 6.2% of total loans outstanding at December 31, 2018. The largest component of construction and land loans was commercial construction, which decreased $98.0 million during the year ended December 31, 2018. At December 31, 2018, multi-family residential construction loans totaled approximately $146.6 million, or 23.5%, of the commercial construction loan portfolio.

(Dollars in thousands)	December 31, 2018	% of Total	% of Total Loans	December 31, 2017	% of Total	% of Total Loans
Residential land and land development	$ 81,740	9.4 %	.6 %	$ 81,859	8.5 %	.6 %
Residential construction	123,369	14.2	.9	121,138	12.5	.9
Commercial land and land development	45,180	5.2	.3	48,474	5.0	.3
Commercial construction	619,370	71.2	4.4	717,349	74.0	5.1
Total real estate – construction and land loans	$ 869,659	100.0 %	6.2 %	$ 968,820	100.0 %	6.9 %

Real Estate – Business Loans

Total business real estate loans were $2.9 billion at December 31, 2018 and comprised 20.3% of the Company's total loan portfolio. These loans include properties such as manufacturing and warehouse buildings, small office and medical buildings, churches, hotels and motels, shopping centers, and other commercial properties. Approximately 36.1% of these loans were for owner-occupied real estate properties, which present lower risk profiles.

(Dollars in thousands)	December 31, 2018	% of Total	% of Total Loans	December 31, 2017	% of Total	% of Total Loans
Owner-occupied	$ 1,038,589	36.1 %	7.3 %	$ 1,010,786	37.5 %	7.2 %
Multi-family	408,151	14.2	2.9	298,605	11.1	2.1
Office	356,733	12.4	2.5	373,301	13.8	2.7
Retail	307,915	10.7	2.2	338,937	12.6	2.4
Hotels	209,693	7.3	1.5	181,704	6.7	1.3
Farm	160,935	5.6	1.1	161,972	6.0	1.2
Industrial	109,391	3.8	.8	73,078	2.7	.5
Other	284,381	9.9	2.0	259,069	9.6	1.9
Total real estate - business loans	$ 2,875,788	100.0 %	20.3 %	$ 2,697,452	100.0 %	19.3 %

Real Estate - Personal Loans

The Company's $2.1 billion personal real estate loan portfolio is composed mainly of residential first mortgage real estate loans. The majority of this portfolio is comprised of approximately $1.9 billion of loans made to the retail customer base and includes both adjustable rate and fixed rate mortgage loans. As shown in Note 2 to the consolidated financial statements, 2.9% of this portfolio has FICO scores of less than 660, and delinquency levels have been low. Loans of approximately $31.6 million in this personal real estate portfolio were structured with interest only payments. Interest only loans are typically made to high net-worth borrowers and generally have low LTV ratios at origination or have additional collateral pledged to secure the loan. Therefore, they are not perceived to represent above normal credit risk. Loans originated with interest only payments were not made to "qualify" the borrower for a lower payment amount. A small portion of the total portfolio is comprised of personal real estate loans made to individuals employed by commercial customers which totaled $201.7 million at December 31, 2018.

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The following table presents information about the retail-based personal real estate loan portfolio for 2018 and 2017.

(Dollars in thousands)	2018 Principal Outstanding at December 31	% of Loan Portfolio	2017 Principal Outstanding at December 31	% of Loan Portfolio
Loans with interest only payments	$31,613	1.6 %	$29,919	1.6 %
Loans with no insurance and LTV:				
Between 80% and 90%	111,164	5.7	110,272	5.9
Between 90% and 95%	30,595	1.6	28,774	1.6
Over 95%	46,624	2.4	44,529	2.4
Over 80% LTV with no insurance	188,383	9.7	183,575	9.9
Total loan portfolio from which above loans were identified	1,947,202		1,855,779	

Revolving Home Equity Loans

The Company also has revolving home equity loans that are generally collateralized by residential real estate. Most of these loans (91.7%) are written with terms requiring interest only monthly payments. These loans are offered in three main product lines: LTV up to 80%, 80% to 90%, and 90% to 100%. As shown in the following tables, the percentage of loans with LTV ratios greater than 80% has remained a small segment of this portfolio, and delinquencies have been low and stable. The weighted average FICO score for the total current portfolio balance is 793. At maturity, the accounts are re-underwritten and if they qualify under the Company's credit, collateral and capacity policies, the borrower is given the option to renew the line of credit or to convert the outstanding balance to an amortizing loan. If criteria are not met, amortization is required, or the borrower may pay off the loan. Over the next three years, approximately 9% of the Company's current outstanding balances are expected to mature. Of these balances, 89% have a FICO score above 700. The Company does not expect a significant increase in losses as these loans mature, due to their high FICO scores, low LTVs, and low historical loss levels.

(Dollars in thousands)	Principal Outstanding at December 31, 2018	*	New Lines Originated During 2018	*	Unused Portion of Available Lines at December 31, 2018	*	Balances Over 30 Days Past Due	*
Loans with interest only payments	$ 345,302	91.7 %	$198,875	52.8 %	$692,293	183.9 %	$1,274	.3 %
Loans with LTV:								
Between 80% and 90%	40,327	10.7	19,608	5.2	38,960	10.4	375	.1
Over 90%	4,785	1.3	675	.2	4,176	1.1	56	—
Over 80% LTV	45,112	12.0	20,283	5.4	43,136	11.5	431	.1
Total loan portfolio from which above loans were identified	376,399		209,569		725,733			

* Percentage of total principal outstanding of $376.4 million at December 31, 2018.

(Dollars in thousands)	Principal Outstanding at December 31, 2017	*	New Lines Originated During 2017	*	Unused Portion of Available Lines at December 31, 2017	*	Balances Over 30 Days Past Due	*
Loans with interest only payments	$ 369,846	92.3 %	$160,111	40.0 %	$680,826	170.0 %	$2,977	.7 %

Loans with LTV:								
Between 80% and 90%	43,493	10.9	19,537	4.9	40,750	10.2	514	.1
Over 90%	7,849	1.9	—	—	5,452	1.3	85	—
Over 80% LTV	51,342	12.8	19,537	4.9	46,202	11.5	599	.1
Total loan portfolio from which above loans were identified	400,587		172,511		713,934			

* Percentage of total principal outstanding of $400.6 million at December 31, 2017.

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Other Consumer Loans

Within the consumer loan portfolio are several direct and indirect product lines comprised mainly of loans secured by automobiles, motorcycles, marine, and RVs. Outstanding balances for auto loans were $910.5 million and $1.0 billion at December 31, 2018 and 2017, respectively. The balances over 30 days past due amounted to $17.8 million at December 31, 2018, compared to $18.4 million at the end of 2017, and comprised 2.0% of the outstanding balances of these loans at December 31, 2018 compared to 1.8% at December 31, 2017. For the year ended December 31, 2018, $365.0 million of new auto loans were originated, compared to $464.3 million during 2017. At December 31, 2018, the automobile loan portfolio had a weighted average FICO score of 757.

Outstanding balances for motorcycle loans were $89.4 million at December 31, 2018, compared to $129.5 million at December 31, 2017. The balances over 30 days past due amounted to $2.1 million and $2.5 million at December 31, 2018 and 2017, respectively, and comprised 2.4% of the outstanding balances of these loans at December 31, 2018, compared to 1.9% at December 31, 2017. For the year ended December 31, 2018, $15.0 million of new motorcycle loans were originated, compared to $55.3 million during 2017.

Marine and RV loan production has been significantly curtailed since 2008 with few new originations. While loss rates have remained low over the last five years, the loss ratios experienced for marine and RV loans in 2017 increased over the prior year and have been higher than for other consumer loan products, at 1.2% and 1.4% in 2018 and 2017, respectively. Balances over 30 days past due for marine and RV loans increased $1.6 million at year end 2018 compared to 2017.

The table below provides the total outstanding principal and other data for this group of direct and indirect lending products at December 31, 2018 and 2017.

	2018			2017		
(In thousands)	Principal Outstanding at December 31	New Loans Originated	Balances Over 30 Days Past Due	Principal Outstanding at December 31	New Loans Originated	Balances Over 30 Days Past Due
Automobiles	$910,478	$ 364,955	$ 17,790	$ 1,009,880	$ 464,253	$ 18,396
Motorcycles	89,443	14,992	2,109	129,530	55,253	2,496
Marine	13,003	1,603	647	17,776	997	846
RV	37,914	1,276	1,887	54,070	29	109
Total	$ 1,050,838	$ 382,826	$ 22,433	$ 1,211,256	$ 520,532	$ 21,847

Additionally, the Company offers low promotional rates on selected consumer credit card products. Out of a portfolio at December 31, 2018 of $814.1 million in consumer credit card loans outstanding, approximately $188.7 million, or 23.2%, carried a low promotional rate. Within the next six months, $74.3 million of these loans are scheduled to convert to the ongoing higher contractual rate. To mitigate some of the risk involved with this credit card product, the Company performs credit checks and detailed analysis of the customer borrowing profile before approving the loan application. Management believes that the risks in the consumer loan portfolio are reasonable and the anticipated loss ratios are within acceptable parameters.

Energy Lending

The Company's energy lending portfolio was comprised of lending to the petroleum and natural gas sectors and totaled $143.8 million at December 31, 2018, an increase of $9.3 million from year end 2017, as shown in the table below.

(In thousands)	December 31, 2018	December 31, 2017	Unfunded commitments

			at December 31, 2018
Extraction	$ 114,152	$ 86,040	$ 70,155
Downstream distribution and refining	17,300	25,329	19,358
Mid-stream shipping and storage	3,483	9,310	57,047
Support activities	8,892	13,811	14,898
Total energy lending portfolio	$ 143,827	$ 134,490	$ 161,458

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Investment Securities Analysis

Investment securities are comprised of securities which are classified as available for sale, equity, trading or other. The largest component, available for sale debt securities, decreased 1.3% during 2018 to $8.6 billion (excluding unrealized gains/losses in fair value) at year end 2018. During 2018, debt securities of $2.1 billion were purchased, which included $526.1 million in U.S. government securities, $707.5 million in agency mortgage-backed securities, $320.9 million in non-agency mortgage-based securities, and $418.2 million in asset-backed securities. Total sales, maturities and pay downs were $2.2 billion during 2018. During 2019, maturities and pay downs of approximately $1.0 billion are expected to occur. The average tax equivalent yield earned on total investment securities was 2.84% in 2018 and 2.51% in 2017.

At December 31, 2018, the fair value of available for sale securities was $8.5 billion, which included a net unrealized loss in fair value of $64.6 million, compared to a net unrealized gain of $10.0 million at December 31, 2017. The overall unrealized loss in fair value at December 31, 2018 included net gains of $5.3 million in state and municipal securities, offset by net losses of $51.9 million in mortgage and asset-backed securities. The portfolio also included unrealized net losses of $6.8 million, $3.7 million, and $7.3 million on U.S. government and federal agency obligations, government-sponsored enterprise obligations, and other debt securities, respectively.

Available for sale investment securities at year end for the past two years are shown below:

	December 31	
(In thousands)	2018	2017
Amortized Cost		
U.S. government and federal agency obligations	$914,486	$917,494
Government-sponsored enterprise obligations	199,470	408,266
State and municipal obligations	1,322,785	1,592,707
Agency mortgage-backed securities	3,253,433	3,046,701
Non-agency mortgage-backed securities	1,053,854	903,920
Asset-backed securities	1,518,976	1,495,380
Other debt securities	339,595	350,988
Total available for sale debt securities	$8,602,599	$8,715,456
Fair Value		
U.S. government and federal agency obligations	$907,652	$917,147
Government-sponsored enterprise obligations	195,778	406,363
State and municipal obligations	1,328,039	1,611,366
Agency mortgage-backed securities	3,214,985	3,040,913
Non-agency mortgage-backed securities	1,047,716	905,793
Asset-backed securities	1,511,614	1,492,800
Other debt securities	332,257	351,060
Total available for sale debt securities	$8,538,041	$8,725,442

At December 31, 2018, the available for sale portfolio included $3.2 billion of agency mortgage-backed securities, which are collateralized bonds issued by agencies including FNMA, GNMA, FHLMC, FHLB, Federal Farm Credit Banks and FDIC. Non-agency mortgage-backed securities totaled $1.0 billion and included $714.4 million collateralized by commercial mortgages and $333.3 million collateralized by residential mortgages at December 31, 2018. Certain non-agency mortgage-backed securities are other-than-temporarily impaired, and the processes for determining impairment and the related losses are discussed in Note 3 to the consolidated financial statements.

At December 31, 2018, U.S. government obligations included TIPS of $434.4 million, at fair value. Other debt securities include corporate bonds, notes and commercial paper.

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The types of securities held in the available for sale security portfolio at year end 2018 are presented in the table below. Additional detail by maturity category is provided in Note 3 to the consolidated financial statements.

	December 31, 2018		
	Percent of Total Debt Securities	Weighted Average Yield	Estimated Average Maturity*
Available for sale debt securities:			
U.S. government and federal agency obligations	10.6 %	1.63 %	5.0 years
Government-sponsored enterprise obligations	2.3	2.32	4.9
State and municipal obligations	15.5	2.50	5.2
Agency mortgage-backed securities	37.7	2.85	4.6
Non-agency mortgage-backed securities	12.3	2.85	3.1
Asset-backed securities	17.7	2.62	2.8
Other debt securities	3.9	2.65	3.8

*Based on call provisions and estimated prepayment speeds.

Equity securities include common and preferred stock with readily determinable fair values that totaled $2.6 million at December 31, 2018, compared to $48.8 million at December 31, 2017. The decrease is due to a third party merger transaction in June 2018, in which the majority of these securities were redeemed for cash of $39.9 million.

Other securities totaled $129.2 million at December 31, 2018 and $99.0 million at December 31, 2017. These include Federal Reserve Bank stock and Federal Home Loan Bank (Des Moines) stock held by the bank subsidiary in accordance with debt and regulatory requirements. These are restricted securities and are carried at cost. Also included are private equity investments which are held by a subsidiary qualified as a Small Business Investment Company. These investments are carried at estimated fair value, but are not readily marketable. While the nature of these investments carries a higher degree of risk than the normal lending portfolio, this risk is mitigated by the overall size of the investments and oversight provided by management, and management believes the potential for long-term gains in these investments outweighs the potential risks.

Other securities at year end for the past two years are shown below:

	December 31	
(In thousands)	2018	2017
Federal Reserve Bank stock	$33,498	$33,253
Federal Home Loan Bank stock	10,000	10,000
Private equity investments in debt securities	39,831	31,734
Private equity investments in equity securities	45,828	24,018
Total other securities	$129,157	$99,005

In addition to its holdings in the investment securities portfolio, the Company invests in long-term securities purchased under agreements to resell, which totaled $700.0 million at both December 31, 2018 and December 31, 2017. These investments mature in 2020 through 2022 and have fixed rates or variable rates that fluctuate with published indices. The counterparties to these agreements are other financial institutions from whom the Company has accepted collateral of $712.3 million in marketable investment securities at December 31, 2018. The average rate earned on these agreements during 2018 was 1.83%.

The Company also holds offsetting repurchase and resale agreements totaling $450.0 million at December 31, 2018 and $650.0 million at December 31, 2017, which are further discussed in Note 19 to the consolidated financial statements. These agreements involve the exchange of collateral under simultaneous repurchase and resale agreements with the same financial institution counterparty. These repurchase and resale agreements have been offset against each other in the balance sheet, as permitted under current accounting guidance. The agreements mature in 2019 and earned an average of 53 basis points during 2018.

Deposits and Borrowings

Deposits are the primary funding source for the Bank and are acquired from a broad base of local markets, including both individual and corporate customers. Total period-end deposits were $20.3 billion at December 31, 2018, compared to $20.4 billion last year, reflecting a decrease of $101.8 million, or 0.5%.

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Average deposits declined $463.5 million, or 2.3%, in 2018 compared to 2017, resulting from declines in average demand deposits, which decreased $447.3 million, driven by lower balances in business, personal, and government demand deposits. Additionally, average certificates of deposit balances decreased $363.3 million in 2018. These decreases were partially offset by growth in average interest checking and money market deposit accounts, which increased $299.4 million in 2018 over 2017 average balances.

The following table shows year end deposit balances by type, as a percentage of total deposits.

	December 31	
	2018	2017
Non-interest bearing	34.3 %	35.1 %
Savings, interest checking and money market	57.5	56.3
Certificates of deposit of less than $100,000	2.9	3.1
Certificates of deposit of $100,000 and over	5.3	5.5
Total deposits	100.0 %	100.0 %

Core deposits, which include non-interest bearing, interest checking, savings, and money market deposits, supported 77% of average earning assets in both 2018 and 2017. Average balances by major deposit category for the last six years appear on page 54. A maturity schedule of certificates of deposits outstanding at December 31, 2018 is included in Note 6 on Deposits in the consolidated financial statements.

The Company's primary sources of overnight borrowings are federal funds purchased and securities sold under agreements to repurchase (repurchase agreements). Balances in these accounts can fluctuate significantly on a day-to-day basis and generally have one day maturities. Total balances of federal funds purchased and repurchase agreements outstanding at December 31, 2018 were $2.0 billion, a $449.3 million decrease from the $1.5 billion balance outstanding at year end 2017. On an average basis, these borrowings increased $51.8 million, or 3.5%, during 2018, mainly due to an increase of $133.7 million in repurchase agreements, partly offset by a decrease of $82.0 million in federal funds purchased. The average rate paid on total federal funds purchased and repurchase agreements was 1.30% during 2018 and .67% during 2017.

The majority of the Company's long-term debt has been comprised of fixed rate advances from the FHLB. The Company repaid the advances in November 2017 and no new advances were taken in 2018. The average rate paid on the FHLB advances during 2017 was 3.55%.

Liquidity and Capital Resources

Liquidity Management

Liquidity is managed within the Company in order to satisfy cash flow requirements of deposit and borrowing customers while at the same time meeting its own cash flow needs. The Company has taken numerous steps to address liquidity risk and has developed a variety of liquidity sources which it believes will provide the necessary funds for future growth. The Company manages its liquidity position through a variety of sources including:

- A portfolio of liquid assets including marketable investment securities and overnight investments,
- A large customer deposit base and limited exposure to large, volatile certificates of deposit,
- Lower long-term borrowings that might place demands on Company cash flow,
- Relatively low loan to deposit ratio promoting strong liquidity,
- Excellent debt ratings from both Standard & Poor's and Moody's national rating services, and
- Available borrowing capacity from outside sources.

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The Company’s most liquid assets include available for sale debt securities, federal funds sold, balances at the Federal Reserve Bank, and securities purchased under agreements to resell. At December 31, 2018 and 2017, such assets were as follows:

(In thousands)	2018	2017
Available for sale debt securities	$8,538,041	$8,725,442
Federal funds sold	3,320	42,775
Long-term securities purchased under agreements to resell	700,000	700,000
Balances at the Federal Reserve Bank	689,876	30,631
Total	$9,931,237	$9,498,848

Federal funds sold are funds lent to the Company’s correspondent bank customers with overnight maturities, and totaled $3.3 million at December 31, 2018. At December 31, 2018, the Company had lent funds totaling $700.0 million under long-term resale agreements to other large financial institutions. The agreements mature in years 2020 through 2022. Under these agreements, the Company holds marketable securities, safekept by a third-party custodian, as collateral. This collateral totaled $712.3 million in fair value at December 31, 2018. Interest earning balances at the Federal Reserve Bank, which have overnight maturities and are used for general liquidity purposes, totaled $689.9 million at December 31, 2018. The Company’s available for sale investment portfolio includes scheduled maturities and expected pay downs of approximately $1.0 billion during 2019, and these funds offer substantial resources to meet either new loan demand or help offset reductions in the Company’s deposit funding base. The Company pledges portions of its investment securities portfolio to secure public fund deposits, repurchase agreements, trust funds, letters of credit issued by the FHLB, and borrowing capacity at the Federal Reserve Bank. At December 31, 2018 and 2017, total investment securities pledged for these purposes were as follows:

(In thousands)	2018	2017
Investment securities pledged for the purpose of securing:		
Federal Reserve Bank borrowings	$67,675	$84,946
FHLB borrowings and letters of credit	9,974	13,332
Repurchase agreements *	2,469,432	2,001,401
Other deposits	1,784,020	1,679,024
Total pledged securities	4,331,101	3,778,703
Unpledged and available for pledging	2,872,562	3,346,826
Ineligible for pledging	1,334,378	1,599,913
Total available for sale debt securities, at fair value	$8,538,041	$8,725,442

* Includes securities pledged for collateral swaps, as discussed in Note 19 to the consolidated financial statements

Liquidity is also available from the Company’s large base of core customer deposits, defined as non-interest bearing, interest checking, savings, and money market deposit accounts. At December 31, 2018, such deposits totaled $18.7 billion and represented 91.8% of the Company’s total deposits. These core deposits are normally less volatile, often with customer relationships tied to other products offered by the Company promoting long lasting relationships and stable funding sources. Total core deposits increased $7.0 million at year end 2018 compared to year end 2017, with growth of $105.5 million in corporate core deposits, offset by declines of $94.5 million in consumer deposits and $83.3 million in private banking deposits. While the Company considers core consumer and private banking deposits less volatile, corporate deposits could decline if interest rates increase significantly or if corporate customers increase investing activities and reduce deposit balances. If these corporate deposits decline, the Company's funding needs can be met by liquidity supplied by investment security maturities and pay downs expected to total $1.0 billion over the next year, as noted above. In addition, as shown on page 43, the Company has borrowing capacity of $3.6 billion through advances from the FHLB and the Federal Reserve.

(In thousands)	2018	2017
Core deposit base:		

Non-interest bearing	$6,980,298	$7,158,962
Interest checking	2,090,936	1,533,904
Savings and money market	9,594,303	9,965,716
Total	$18,665,537	$18,658,582

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Certificates of deposit of $100,000 or greater totaled $1.1 billion at December 31, 2018. These deposits are normally considered more volatile and higher costing, and comprised 5.3% of total deposits at December 31, 2018.

Other important components of liquidity are the level of borrowings from third party sources and the availability of future credit. The Company's outside borrowings are mainly comprised of federal funds purchased, and repurchase agreements, as follows:

(In thousands)	2018	2017
Borrowings:		
Federal funds purchased	$13,170	$202,370
Securities sold under agreements to repurchase	1,943,219	1,304,768
Other debt	8,702	1,758
Total	$1,965,091	$1,508,896

Federal funds purchased, which totaled $13.2 million at December 31, 2018, are unsecured overnight borrowings obtained mainly from upstream correspondent banks with which the Company maintains approved lines of credit. Retail repurchase agreements are offered to customers wishing to earn interest in highly liquid balances and are used by the Company as a funding source considered to be stable, but short-term in nature. Repurchase agreements are collateralized by securities in the Company's investment portfolio. Total repurchase agreements at December 31, 2018 were comprised of non-insured customer funds totaling $2.0 billion, and securities pledged for these retail agreements totaled $1.9 billion.

The Company pledges certain assets, including loans and investment securities, to both the Federal Reserve Bank and the FHLB as security to establish lines of credit and borrow from these entities. Based on the amount and type of collateral pledged, the FHLB establishes a collateral value from which the Company may draw advances against the collateral. Additionally, this collateral is used to enable the FHLB to issue letters of credit in favor of public fund depositors of the Company. The Federal Reserve Bank also establishes a collateral value of assets pledged and permits borrowings from the discount window. The following table reflects the collateral value of assets pledged, borrowings, and letters of credit outstanding, in addition to the estimated future funding capacity available to the Company at December 31, 2018.

	December 31, 2018		
(In thousands)	FHLB	Federal Reserve	Total
Total collateral value pledged	$2,461,457	$1,318,138	$3,779,595
Advances outstanding	—	—	—
Letters of credit issued	(217,406)	—	(217,406)
Available for future advances	$2,244,051	$1,318,138	$3,562,189

The Company's average loans to deposits ratio was 69.3% at December 31, 2018, which is considered in the banking industry to be a measure of strong liquidity. Also, the Company receives outside ratings from both Standard & Poor's and Moody's on both the consolidated company and its subsidiary bank, Commerce Bank. These ratings are as follows:

	Standard & Poor's	Moody's
Commerce Bancshares, Inc.		
Issuer rating	A-	
Preferred stock	BBB-	Baa1
Rating outlook	Stable	Stable
Commerce Bank		
Issuer rating	A	A2

Baseline credit assessment		a1
Short-term rating	A-1	P-1
Rating outlook	Stable	Stable

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The Company considers these ratings to be indications of a sound capital base and strong liquidity and believes that these ratings would help ensure the ready marketability of its commercial paper, should the need arise. No commercial paper has been outstanding during the past ten years. The Company has no subordinated or hybrid debt instruments which would affect future borrowing capacity. Because of its lack of significant long-term debt, the Company believes that, through its Capital Markets Group or in other public debt markets, it could generate additional liquidity from sources such as jumbo certificates of deposit, privately-placed corporate notes or other forms of debt.

The cash flows from the operating, investing and financing activities of the Company resulted in a net increase in cash, cash equivalents and restricted cash of $684.9 million in 2018, as reported in the consolidated statements of cash flows on page 63 of this report. Operating activities, consisting mainly of net income adjusted for certain non-cash items, provided cash flow of $552.7 million and has historically been a stable source of funds. Investing activities used total cash of $91.0 million, mainly from an increase in the loan portfolio, offset by sales and maturities (net of purchases) of investment securities. Growth in the loan portfolio used cash of $200.7 million and net purchases of land, buildings and equipment used $19.9 million, while activity in the investment securities portfolio provided cash of $129.5 million. Investing activities are somewhat unique to financial institutions in that, while large sums of cash flow are normally used to fund growth in investment securities, loans, or other bank assets, they are normally dependent on the financing activities described below.

During 2018, financing activities provided total cash of $223.3 million, primarily resulting from a $449.3 million increase in federal funds purchases and short-term securities sold under agreements to repurchase, offset by a $48.5 million decrease in deposits. Cash dividend payments of $109.2 million were paid on common and preferred stock, while treasury stock purchases totaled $75.2 million. Future short-term liquidity needs for daily operations are not expected to vary significantly, and the Company believes it maintains adequate liquidity to meet these cash flows. The Company’s sound equity base, along with its low debt level, common and preferred stock availability, and excellent debt ratings, provide several alternatives for future financing. Future acquisitions may utilize partial funding through one or more of these options.

Cash outflows resulting from the Company’s transactions in its common and preferred stock were as follows:

(In millions)	2018	2017	2016
Purchases of treasury stock	$75.2	$17.8	$39.4
Common cash dividends paid	100.2	91.6	87.1
Preferred cash dividends paid	9.0	9.0	9.0
Cash used	$184.4	$118.4	$135.5

The Parent faces unique liquidity constraints due to legal limitations on its ability to borrow funds from its bank subsidiary. The Parent obtains funding to meet its obligations from two main sources: dividends received from bank and non-bank subsidiaries (within regulatory limitations) and management fees charged to subsidiaries as reimbursement for services provided by the Parent, as presented below:

(In millions)	2018	2017	2016
Dividends received from subsidiaries	$200.0	$160.0	$160.0
Management fees	37.7	30.4	31.0
Total	$237.7	$190.4	$191.0

These sources of funds are used mainly to pay cash dividends on outstanding stock, pay general operating expenses, and purchase treasury stock. At December 31, 2018, the Parent’s investment securities totaled $5.8 million at fair value, consisting mainly of preferred stock and non-agency mortgage-backed securities. To support its various funding commitments, the Parent maintains a $20.0 million line of credit with its subsidiary bank. There were no borrowings outstanding under the line during 2018 or 2017.

Company senior management is responsible for measuring and monitoring the liquidity profile of the organization with oversight by the Company's Asset/Liability Committee. This is done through a series of controls, including a written Contingency Funding Policy and risk monitoring procedures, which include daily, weekly and monthly reporting. In addition, the Company prepares forecasts to project changes in the balance sheet affecting liquidity and to allow the Company to better plan for forecasted changes.

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Capital Management

Under Basel III capital guidelines, at December 31, 2018 and 2017, the Company met all capital adequacy requirements and had regulatory capital ratios in excess of the levels established for well-capitalized institutions, as shown in the following table.

(Dollars in thousands)	2018	2017	Minimum Ratios under Capital Adequacy Guidelines*	Minimum Ratios for Well-Capitalized Banks**
Risk-adjusted assets	$19,103,966	$19,149,949		
Tier I common risk-based capital	2,716,232	2,422,480		
Tier I risk-based capital	2,861,016	2,567,264		
Total risk-based capital	3,022,023	2,747,863		
Tier I common risk-based capital ratio	14.22 %	12.65 %	7.00 %	6.50 %
Tier I risk-based capital ratio	14.98	13.41	8.50	8.00
Total risk-based capital ratio	15.82	14.35	10.50	10.00
Tier I leverage ratio	11.52	10.39	4.00	5.00
Tangible common equity to tangible assets	10.45	9.84		
Dividend payout ratio	23.61	29.52		

* as of the fully phased-in date of Jan. 1, 2019, including capital conservation buffer

**under Prompt Corrective Action requirements

The Company maintains a treasury stock buyback program under authorizations by its Board of Directors and periodically purchases stock in the open market. During 2017 and 2018, respectively, the Company purchased 315 thousand and 1.2 million shares through market purchases. At December 31, 2018, 2.2 million shares remained available for purchase under the current Board authorization.

The Company’s common stock dividend policy reflects its earnings outlook, desired payout ratios, the need to maintain adequate capital levels and alternative investment options. Per share cash dividends paid by the Company increased 9.7% in 2018 compared with 2017, and the Company increased its first quarter 2019 cash dividend 16%, making 2019 the Company's 51st consecutive year of regular cash dividend increases. The Company also distributed its 25th consecutive annual 5% stock dividend in December 2018.

Commitments, Contractual Obligations, and Off-Balance Sheet Arrangements

In the normal course of business, various commitments and contingent liabilities arise which are not required to be recorded on the balance sheet. The most significant of these are loan commitments totaling $11.2 billion (including approximately $5.3 billion in unused approved credit card lines) and the contractual amount of standby letters of credit totaling $353.9 million at December 31, 2018. As many commitments expire unused or only partially used, these totals do not necessarily reflect future cash requirements. Management does not anticipate any material losses arising from commitments or contingent liabilities and believes there are no material commitments to extend credit that represent risks of an unusual nature.

A table summarizing contractual cash obligations of the Company at December 31, 2018 and the expected timing of these payments follows:

	Payments Due by Period				
(In thousands)	In One Year or Less	After One Year Through Three	After Three Years Through	After Five Years	Total

		Years	Five Years		
Long-term debt obligations*	$218	$458	$275	$—	$951
Operating lease obligations	5,763	8,872	6,871	15,161	36,667
Purchase obligations	255,861	270,790	51,209	2,370	580,230
Certificates of Deposit*	1,286,425	336,656	34,234	807	1,658,122
Total	$1,548,267	$616,776	$92,589	$18,338	$2,275,970

* Includes principal payments only.

The Company funds a defined benefit pension plan for a portion of its employees. Under the funding policy for the plan, contributions are made as necessary to provide for current service and for any unfunded accrued actuarial liabilities over a reasonable period. No contributions to the defined benefit plan were made in 2018, and the Company is not required nor does it expect to make a contribution in 2019.

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The Company has investments in several low-income housing partnerships within the areas it serves. These partnerships supply funds for the construction and operation of apartment complexes that provide affordable housing to that segment of the population with lower family income. If these developments successfully attract a specified percentage of residents falling in that lower income range, federal (and sometimes state) income tax credits are made available to the partners. The tax credits are normally recognized over ten years, and they play an important part in the anticipated yield from these investments. In order to continue receiving the tax credits each year over the life of the partnership, the low-income residency targets must be maintained. Under the terms of the partnership agreements, the Company has a commitment to fund a specified amount that will be due in installments over the life of the agreements, which ranges from 10 to 15 years. At December 31, 2018, the investments totaled $36.8 million and are recorded as other assets in the Company's consolidated balance sheet. Unfunded commitments, which are recorded as liabilities, amounted to $24.7 million at December 31, 2018.

The Company regularly purchases various state tax credits arising from third-party property redevelopment. These credits are either resold to third parties or retained for use by the Company. During 2018, purchases and sales of tax credits amounted to $80.9 million and $71.6 million, respectively. Fees from the sales of tax credits were $4.9 million, $3.3 million and $3.1 million in 2018, 2017 and 2016, respectively. At December 31, 2018, the Company had outstanding purchase commitments totaling $180.5 million that it expects to fund in 2019. These commitments, along with the commitments for the next five years, are included in the table above.

Interest Rate Sensitivity

The Company's Asset/Liability Management Committee (ALCO) measures and manages the Company's interest rate risk on a monthly basis to identify trends and establish strategies to maintain stability in net interest income throughout various rate environments. Analytical modeling techniques provide management insight into the Company's exposure to changing rates. These techniques include net interest income simulations and market value analysis. Management has set guidelines specifying acceptable limits within which net interest income and market value may change under various rate change scenarios. These measurement tools indicate that the Company is currently within acceptable risk guidelines as set by management.

The Company's main interest rate measurement tool, income simulations, projects net interest income under various rate change scenarios in order to quantify the magnitude and timing of potential rate-related changes. Income simulations are able to capture option risks within the balance sheet where expected cash flows may be altered under various rate environments. Modeled rate movements include "shocks, ramps and twists." Shocks are intended to capture interest rate risk under extreme conditions by immediately shifting rates up and down, while ramps measure the impact of gradual changes and twists measure yield curve risk. The size of the balance sheet is assumed to remain constant so that results are not influenced by growth predictions.

The Company also employs a sophisticated simulation technique known as a stochastic income simulation. This technique allows management to see a range of results from hundreds of income simulations. The stochastic simulation creates a vector of potential rate paths around the market's best guess (forward rates) concerning the future path of interest rates and allows rates to randomly follow paths throughout the vector. This allows for the modeling of non-biased rate forecasts around the market consensus. Results give management insight into a likely range of rate-related risk as well as worst and best-case rate scenarios.

Additionally, the Company uses market value analyses to help identify longer-term risks that may reside on the balance sheet. This is considered a secondary risk measurement tool by management. The Company measures the market value of equity as the net present value of all asset and liability cash flows discounted along the current swap curve plus appropriate market risk spreads. It is the change in the market value of equity under different rate environments, or effective duration, that gives insight into the magnitude of risk to future earnings due to rate changes. Market value analyses also help management understand the price sensitivity of non-marketable bank products under

different rate environments.

The tables below compute the effects of gradual shifts in interest rates over a twelve month period on the Company's net interest income, assuming a static balance sheet with the exception of deposit attrition. The difference between the two simulations is the amount of deposit attrition incorporated, which is shown in the tables below. In the simulations below, three rising rate scenarios and one falling rate scenario were selected and net interest income was calculated and compared to a base scenario in which assets, liabilities and rates remained constant over a twelve month period. For each of the simulations, interest rates applicable to each interest earning asset or interest bearing liability were ratably increased or decreased during the year (by either 100, 200 or 300 basis points). The balances contained in the balance sheet were assumed not to change over the twelve month period, except that as presented in the tables below, it was assumed certain non-maturity type deposit attrition would occur, as a result of higher interest rates, and would be replaced with borrowed funds.

The simulations shown below reflect different assumptions related to deposit attrition. The Company utilizes these simulations both for monitoring interest rate risk and for liquidity planning purposes. While the future effects of rising rates on deposit balances

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cannot be known, the Company maintains a practice of running multiple rate scenarios to better understand interest rate risk and its effect on the Company's performance. The Company believes that its approach to interest rate risk has appropriately considered its susceptibility to both rising rates and falling rates and has adopted strategies which minimize impacts to overall interest rate risk.

Simulation A	December 31, 2018			September 30, 2018		
(Dollars in millions)	$ Change in Net Interest Income	% Change in Net Interest Income	Assumed Deposit Attrition	$ Change in Net Interest Income	% Change in Net Interest Income	Assumed Deposit Attrition
300 basis points rising	$5.0	.59 %	$(348.3)	$7.0	.85 %	$(360.6)
200 basis points rising	5.2	.62	(237.9)	7.3	.88	(248.6)
100 basis points rising	3.8	.45	(120.3)	5.7	.69	(128.9)
100 basis points falling	(17.2)	(2.03)	142.8	(13.0)	1.56	139.3

Simulation B	December 31, 2018			September 30, 2018		
(Dollars in millions)	$ Change in Net Interest Income	% Change in Net Interest Income	Assumed Deposit Attrition	$ Change in Net Interest Income	% Change in Net Interest Income	Assumed Deposit Attrition
300 basis points rising	$(18.1)	(2.13)%	$(936.4)	$(15.4)	(1.85)%	$(947.2)
200 basis points rising	(15.3)	(1.81)	(829.2)	(12.7)	(1.53)	(838.8)
100 basis points rising	(14.2)	(1.68)	(715.4)	(11.8)	(1.42)	(723.3)

The difference in Simulation A and B is the degree to which deposits are modeled to decline or increase as noted in the tables above. Both simulations assume that a decline in deposits would be offset by an increase in borrowed funds, which are more rate sensitive and can result in higher interest costs in a rising rate environment.

Under Simulation A, in the three rising rate scenarios, interest income grows faster than funding costs as loan and investment balances remain constant but rates increase. The increase in interest income from higher rates is assisted by lower deposit balances, reducing interest expense but offset by higher short-term borrowed funds with higher market sensitive rates. In Simulation B, the assumed higher levels of deposit attrition were modeled to be replaced by wholesale borrowed funds with higher costs than in Simulation A and resulted in a reduction in net interest income under all rising rate scenarios. In the 100 basis point falling scenario shown in Simulation A, it is assumed that deposits would increase $142.8 million along with an increase in earning assets, but rates on loans would fall faster than deposit rates. In this scenario, additional borrowed funds would not be necessary. Additionally, this scenario results in lower net interest income than in the base calculation. The 100 basis point falling scenario is presented only in Simulation A as the results would be the same under Simulation B.

In both Simulations A and B, the change in net interest income from the base calculation at December 31, 2018 was lower than what was modeled at September 30, 2018 largely due to higher rates and balances of federal funds purchased and repurchase agreements, as well as higher deposit rates at year end. The deposit attrition assumption used in both Simulations A and B was not materially different than what was modeled in the prior quarter.

Projecting deposit activity in a historically low interest rate environment is difficult, and the Company cannot predict how deposits will react to shifting rates. The comparison provided above provides insight into potential effects

of changes in rates and deposit levels on net interest income.

Derivative Financial Instruments
The Company maintains an overall interest rate risk management strategy that permits the use of derivative instruments to modify exposure to interest rate risk. Such instruments include interest rate swaps, interest rate floors, interest rate caps, credit risk participation agreements, foreign exchange contracts, mortgage loan commitments, forward sale contracts, and forward to be announced (TBA) contracts. The Company’s interest rate risk management strategy includes the ability to modify the re-pricing characteristics of certain assets and liabilities so that changes in interest rates do not adversely affect the net interest margin and

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cash flows. Interest rate floors with a total notional amount of $1.0 billion were entered into during the year ended December 31, 2018 as part of this strategy to manage interest rate risk. All of these derivative instruments utilized by the Company are further discussed in Note 18 on Derivative Instruments.

In all of these contracts, the Company is exposed to credit risk in the event of nonperformance by counterparties, who may be bank customers or other financial institutions. The Company controls the credit risk of its financial contracts through credit approvals, limits and monitoring procedures. Because the Company generally enters into transactions only with high quality counterparties, there have been no losses associated with counterparty nonperformance on derivative financial instruments.

The following table summarizes the notional amounts and estimated fair values of the Company's derivative instruments at December 31, 2018 and 2017. Notional amount, along with the other terms of the derivative, is used to determine the amounts to be exchanged between the counterparties. Because the notional amount does not represent amounts exchanged by the parties, it is not a measure of loss exposure related to the use of derivatives nor of exposure to liquidity risk.

(In thousands)	2018			2017		
	Notional Amount	Positive Fair Value	Negative Fair Value	Notional Amount	Positive Fair Value	Negative Fair Value
Interest rate swaps	$2,006,280	$11,537	$(13,110)	$1,741,412	$7,674	$(7,857)
Interest rate floors	1,000,000	29,031	—	—	—	—
Interest rate caps	62,163	24	(24)	31,776	16	(16)
Credit risk participation agreements	143,460	47	(93)	133,488	46	(123)
Foreign exchange contracts	6,206	20	(8)	11,826	21	(40)
Mortgage loan commitments	14,544	536	—	17,110	580	—
Mortgage loan forward sale contracts	5,768	15	(8)	2,566	8	(7)
Forward TBA contracts	16,500	—	(178)	25,000	4	(31)
Total at December 31	$3,254,921	$41,210	$(13,421)	$1,963,178	$8,349	$(8,074)

Operating Segments

The Company segregates financial information for use in assessing its performance and allocating resources among three operating segments. The results are determined based on the Company's management accounting process, which assigns balance sheet and income statement items to each responsible segment. These segments are defined by customer base and product type. The management process measures the performance of the operating segments based on the management structure of the Company and is not necessarily comparable with similar information for any other financial institution. Each segment is managed by executives who, in conjunction with the Chief Executive Officer, make strategic business decisions regarding that segment. The three reportable operating segments are Consumer, Commercial, and Wealth. Additional information is presented in Note 12 on Segments in the consolidated financial statements.

The Company uses a funds transfer pricing method to value funds used (e.g., loans, fixed assets, cash, etc.) and funds provided (deposits, borrowings, and equity) by the business segments and their components. This process assigns a specific value to each new source or use of funds with a maturity, based on current swap rates, thus determining an interest spread at the time of the transaction. Non-maturity assets and liabilities are valued using weighted average pools. The funds transfer pricing process attempts to remove interest rate risk from valuation, allowing management to compare profitability under various rate environments. The Company also assigns loan charge-offs and recoveries (labeled in the table below as "provision for loan losses") directly to each operating segment instead of allocating an estimated loan loss provision. The operating segments also include a number of allocations of income and expense from various support and overhead centers within the Company.

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The table below is a summary of segment pre-tax income results for the past three years.

(Dollars in thousands)	Consumer	Commercial	Wealth	Segment Totals	Other/Elimination	Consolidated Totals
Year ended December 31, 2018:						
Net interest income	$296,228	$345,221	$46,946	$688,395	$ 135,430	$823,825
Provision for loan losses	(41,280)	(1,134)	32	(42,382)	(312)	(42,694)
Non-interest income	126,253	202,527	173,026	501,806	(465)	501,341
Investment securities losses, net	—	—	—	—	(488)	(488)
Non-interest expense	(287,473)	(297,847)	(123,576)	(708,896)	(28,925)	(737,821)
Income before income taxes	$93,728	$248,767	$96,428	$438,923	$ 105,240	$544,163
Year ended December 31, 2017:						
Net interest income	$279,031	$329,087	$47,264	$655,382	$ 78,297	$733,679
Provision for loan losses	(41,829)	205	(41)	(41,665)	(3,579)	(45,244)
Non-interest income	121,362	184,577	158,175	464,114	(2,851)	461,263
Investment securities gains, net	—	—	—	—	25,051	25,051
Non-interest expense	(275,734)	(281,845)	(120,461)	(678,040)	(66,303)	(744,343)
Income before income taxes	$82,830	$232,024	$84,937	$399,791	$ 30,615	$430,406
2018 vs 2017						
Increase in income before income taxes:						
Amount	$10,898	$16,743	$11,491	$39,132	$ 74,625	$113,757
Percent	13.2 %	7.2 %	13.5 %	9.8 %	N.M.	26.4 %
Year ended December 31, 2016:						
Net interest income	$268,654	$311,704	$44,113	$624,471	$ 55,578	$680,049
Provision for loan losses	(36,042)	4,378	(122)	(31,786)	(4,532)	(36,318)
Non-interest income	116,185	187,350	144,661	448,196	(1,640)	446,556
Investment securities losses, net	—	—	—	—	(53)	(53)
Non-interest expense	(266,258)	(272,398)	(113,888)	(652,544)	(36,685)	(689,229)
Income before income taxes	$82,539	$231,034	$74,764	$388,337	$ 12,668	$401,005
2017 vs 2016						
Increase in income before income taxes:						
Amount	$291	$990	$10,173	$11,454	$ 17,947	$29,401
Percent	.4 %	.4 %	13.6 %	2.9 %	N.M.	7.3 %

Consumer

The Consumer segment includes consumer deposits, consumer finance, and consumer debit and credit cards. During 2018, income before income taxes for the Consumer segment increased $10.9 million, or 13.2%, compared to 2017. This increase was mainly due to growth of $17.2 million, or 6.2%, in net interest income and an increase in non-interest income of $4.9 million, or 4.0%. Net interest income increased due to a $15.2 million increase in net allocated funding credits assigned to the Consumer segment's loan and deposit portfolios and growth of $3.5 million in loan interest income, partly offset by an increase of $1.6 million in deposit interest expense. Non-interest income increased mainly due to growth in net debit card fees, (mainly lower network expense and higher interchange fees), deposit fees (mainly deposit account service fees and overdraft and return item fees) and mortgage banking revenue, partly offset by higher credit card rewards expense. These increases to income were partly offset by growth of $11.7 million, or 4.3%, in non-interest expense. Non-interest expense increased over the prior year due to an increase in full-time salaries expense and higher allocated servicing and support costs, mainly marketing, information technology and management fees. The provision for loan losses totaled $41.3 million, a $549 thousand decrease from the prior year, which was mainly due to lower net charge-offs on marine & RV loans, partly offset by higher consumer credit

card loan net charge-offs. Total average loans in this segment decreased $69.9 million, or 2.8%, in 2018 compared to the prior year mainly due to a decline in auto loans and the continued run off of marine and RV loans. Average deposits increased $19.9 million over the prior year, resulting from growth in interest checking and money market deposit accounts, partly offset by declines in demand and certificate of deposit balances.

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During 2017, income before income taxes for the Consumer segment increased $291 thousand, or .4%, compared to 2016. This increase was mainly due to growth of $10.4 million, or 3.9%, in net interest income and an increase in non-interest income of $5.2 million, or 4.5%. Net interest income increased due to a $9.7 million increase in net allocated funding credits assigned to the Consumer segment's loan and deposit portfolios and a $670 thousand increase in loan interest income. Non-interest income increased mainly due to growth in deposit fees (mainly deposit account service fees and overdraft and return item fees) and bank card fees. These increases to income were partly offset by growth of $9.5 million, or 3.6%, in non-interest expense and $5.8 million in the provision for loan losses. Non-interest expense increased over the prior year due to an increase in full-time salaries expense and higher allocated support costs, mainly administrative, online banking and information technology, while supplies expense decreased due to higher chip card reissue costs in 2016. The provision for loan losses totaled $41.8 million, a $5.8 million increase over the prior year, which was mainly due to higher net charge-offs on consumer credit card loans. Total average loans in this segment decreased $62.0 million, or 2.4%, in 2017 compared to the prior year mainly due to a decline in marine and RV loans. Average deposits increased $234.3 million, or 2.4%, over the prior year, resulting from growth in money market deposit accounts, partly offset by a decline in certificate of deposit balances.

Commercial
The Commercial segment provides corporate lending (including the Small Business Banking product line within the branch network), leasing, international services, and business, government deposit, and related commercial cash management services, as well as merchant and commercial bank card products. The segment includes the Capital Markets Group, which sells fixed-income securities to individuals, corporations, correspondent banks, public institutions, and municipalities, and also provides investment safekeeping and bond accounting services. Pre-tax income for 2018 increased $16.7 million, or 7.2%, compared to 2017, mainly due to increases in net interest income and non-interest income, partly offset by higher non-interest expense and an increase in the provision for loan losses. Net interest income increased $16.1 million, or 4.9%, due to growth of $70.6 million in loan interest income, partly offset by a decrease of $32.1 million in net allocated funding credits and higher interest expense of $22.5 million on deposits and customer repurchase agreements. The provision for loan losses increased $1.3 million over last year, due to lower business and construction loan net recoveries, partly offset by lower commercial card loan net charge-offs. Non-interest income increased $18.0 million, or 9.7%, over the previous year due to higher net corporate card fees (driven by higher fees), swap fees, tax credit sales fees and deposit account fees (mainly corporate cash management). These increases were partly offset by lower gains on sales of leased assets to customers upon lease termination. Non-interest expense increased $16.0 million, or 5.7%, during 2018, mainly due to increases in salaries expense and allocated support and service costs (mainly information technology and commercial sales and product support fees). Average segment loans increased $304.7 million, or 3.5%, compared to 2017, with growth occurring in commercial and industrial, construction, and healthcare loans. Average deposits decreased $271.8 million, or 3.3%, due to declines in business demand deposits and certificates of deposit, partly offset by growth in interest checking deposits.
Pre-tax income for 2017 increased $990 thousand, or .4%, compared to 2016, mainly due to an increase in net interest income, partly offset by lower non-interest income, higher non-interest expense and an increase in the provision for loan losses. Net interest income increased $17.4 million, or 5.6%, due to growth of $45.9 million in loan interest income, partly offset by a decrease of $17.7 million in net allocated funding credits. In addition, customer repurchase agreement interest expense increased $5.5 million and deposit interest expense increased $5.2 million. The provision for loan losses increased $4.2 million over last year, as construction loan and business real estate loan net recoveries were lower by $2.5 million and $1.1 million, respectively. Non-interest income decreased $2.8 million, or 1.5%, from the previous year due to lower interest rate swap fees and capital market fees. Non-interest expense increased $9.4 million, or 3.5%, during 2017, mainly due to increases in full-time salaries expense and allocated support costs, partly offset by lower bank card processing costs and business line allocations. Average segment loans increased $562.5 million, or 7.0%, compared to 2016, with growth occurring in commercial and industrial, construction, and business real estate loans. Average deposits increased $57.6 million, or .7%, due to growth in governmental demand deposit accounts, partly offset by declines in certificates of deposit, money market deposit accounts, and business demand deposits.

Wealth

The Wealth segment provides traditional trust and estate planning, advisory and discretionary investment management services, brokerage services, and includes Private Banking accounts. At December 31, 2018, the Trust group managed investments with a market value of $30.3 billion and administered an additional $19.7 billion in non-managed assets. It also provides investment management services to The Commerce Funds, a series of mutual funds with $2.5 billion in total assets at December 31, 2018. In 2018, pre-tax income for the Wealth segment was $96.4 million, compared to $84.9 million in 2017, an increase of $11.5 million, or 13.5%. Net interest income decreased $318 thousand, or .7%, due to a $5.3 million decrease in net allocated funding credits, partly offset by a $5.5 million increase in loan interest income. Non-interest income increased $14.9 million, or 9.4%, over the prior year largely due to higher personal and institutional trust fees, brokerage fees and cash sweep commissions. These increases were partly offset by write downs on software costs. Non-interest expense increased $3.1 million, or 2.6%, resulting from higher salary and benefit costs, data processing expense and allocated support and corporate management fee costs, partly offset by lower

trust losses. The provision for loan losses decreased $73 thousand, mainly due to personal real estate loan net recoveries. Average assets increased $25.2 million, or 2.1%, during 2018 mainly due to higher personal real estate and consumer loans. Average deposits decreased $219.0 million, or 10.5%, due to declines in money market deposit accounts and long-term certificates of deposit over $100,000.

In 2017, pre-tax income for the Wealth segment was $84.9 million, compared to $74.8 million in 2016, an increase of $10.2 million, or 13.6%. Net interest income increased $3.2 million, or 7.1%, due to a $5.1 million increase in loan interest income, partly offset by a $2.1 million decline in net allocated funding credits. Non-interest income increased $13.5 million, or 9.3%, over the prior year largely due to higher personal and institutional trust fees, brokerage revenue and cash sweep fees, partly offset by a trust related settlement recorded in 2016. Non-interest expense increased $6.6 million, or 5.8%, resulting from higher incentive compensation and allocated support costs. The provision for loan losses decreased $81 thousand, mainly due to lower charge-offs on revolving home equity loans. Average assets increased $101.6 million, or 9.1%, during 2017 mainly due to higher personal real estate and consumer loans. Average deposits increased $5.6 million, or .3%, due to growth in money market deposit accounts and business demand deposits, partly offset by a decline in long-term certificates of deposit over $100,000.

The segment activity, as shown above, includes both direct and allocated items. Amounts in the “Other/Elimination” column include activity not related to the segments, such as certain administrative functions, the investment securities portfolio, and the effect of certain expense allocations to the segments. Also included in this category is the difference between the Company’s provision for loan losses and net loan charge-offs, which are generally assigned directly to the segments. In 2018, the pre-tax income in this category was $105.2 million, compared to $30.6 million in 2017. This increase was due to higher unallocated net interest income of $57.1 million and lower unallocated non-interest expense of $37.4 million. Non-interest expense for 2017 included contributions of $32.0 million to a related charitable foundation, which were not allocated to the segments. Unallocated securities losses were $488 thousand in 2018, compared to securities gains of $25.1 million in 2017. Also, the unallocated loan loss provision decreased $3.3 million, as the provision was $3.6 million in excess of charge-offs in 2017 compared to $312 thousand less than charge offs in 2018.

Impact of Recently Issued Accounting Standards

Derivatives The FASB issued ASU 2017-12, "Targeted Improvements to Accounting for Hedging Activities", in August 2017. The ASU improves the financial reporting of hedging relationships to better portray the economic results of an entity's risk management activities in its financial statements. These improvements allow the hedging of risk components, ease restrictions on the measurement of the change in fair value of the hedged item, aligns the recognition and presentation of the effects of the hedging instrument and the hedged item, and otherwise simplify hedge accounting guidance. The amendments are effective January 1, 2019 but may be adopted early in any interim period. The Company adopted the ASU on January 1, 2018, but as the Company did not utilize hedge accounting on that date, the Company's consolidated financial statements were not affected by the adoption. The hedging improvements in the new guidance will be considered in the development of risk management strategies in the future.

Revenue from Contracts with Customers The FASB issued ASU 2014-09, "Revenue from Contracts with Customers", in May 2014, which has been followed by additional clarifying guidance on specified implementation issues. The ASU supersedes revenue recognition requirements in Topic 605, Revenue Recognition, including most industry specific revenue recognition guidance in the FASB Accounting Standards Codification. The core principle of the new guidance is that an entity should recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. The guidance was adopted on January 1, 2018 under the full retrospective method with a restatement of prior periods. The impact of the adoption and required disclosures are discussed in Note 15 to the consolidated financial statements.

Liabilities The FASB issued ASU 2016-04, "Recognition of Breakage for Certain Prepaid Stored-Value Products", in March 2016, in order to address current and potential future diversity in practice related to the derecognition of a prepaid stored-value product liability. Such products include prepaid gift cards issued on a specific payment network and redeemable at network-accepting merchant locations, prepaid telecommunication cards, and traveler's checks. The amendments require that the portion of the dollar value of prepaid stored-value products that is ultimately unredeemed (that is, the breakage) be accounted for consistent with the breakage guidance for stored-value product transactions provided in ASC Topic 606 - Revenue from Contracts with Customers. These amendments are effective for interim and annual periods beginning January 1, 2018 and did not have a significant effect on the Company's consolidated financial statements.

Income Taxes The FASB issued ASU 2016-16, "Intra-Entity Transfers of Assets Other Than Inventory", in October 2016. Current GAAP prohibits the recognition of current and deferred income taxes for an intra-entity asset transfer until the asset has been sold to an outside party. The amendments require the recognition of income tax consequences of an intra-entity transfer of

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an asset (other than inventory) when the transfer occurs. This change removes the current exception to the principal of comprehensive recognition of current and deferred income taxes in GAAP (except for inventory). These amendments were effective for reporting periods beginning January 1, 2018 and did not have a significant effect on the Company's consolidated financial statements.

Financial Instruments The FASB issued ASU 2016-01, "Recognition and Measurement of Financial Assets and Financial Liabilities", in January 2016. The amendments require all equity investments to be measured at fair value with changes in the fair value recognized through net income, other than those accounted for under the equity method of accounting or those that result in the consolidation of the investee. The amendments also require use of the exit price notion when measuring the fair value of financial instruments for disclosure purposes. These amendments were adopted on January 1, 2018 and are further discussed in Notes 3 and 17 to the consolidated financial statements.

Statement of Cash Flows The FASB issued ASU 2016-15, "Classification of Certain Cash Receipts and Cash Payments", in August 2016. The ASU addresses the presentation and classification in the Statement of Cash Flows of several specific cash flow issues. These include cash payments for debt prepayment or extinguishment costs, settlement of zero-coupon debt instruments, distributions received from equity method investees, and separately identifiable cash flows and application of the predominance principle. The amendments were effective January 1, 2018 and did not have a significant effect on the Company's consolidated financial statements.

Restricted Cash The FASB issued ASU 2016-18, "Restricted Cash", in November 2016. The ASU requires that amounts described as restricted cash and restricted cash equivalents be included with cash and cash equivalents when reconciling the beginning and end of period amounts shown on the statement of cash flows. Disclosures are to be provided on the amounts reported as restricted and the nature of the restrictions on cash and cash equivalents. The amendments, which were applied on a retrospective basis, were effective January 1, 2018 and did not have a significant effect on the Company's consolidated financial statements.

Retirement Benefits The FASB issued ASU 2017-07, "Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost", in March 2017. Under previous guidance, the different components comprising net benefit cost are aggregated for reporting in the financial statements. Because these components are heterogeneous, the current presentation reduces the transparency and usefulness of the financial statements. The ASU requires that an employer report the service cost component of net benefit cost in the same line item as other compensation costs arising from services rendered during the period. The other components of net benefit cost are required to be presented separately from the servicing cost component. Only service cost is eligible for capitalization when applicable. The amendments were effective January 1, 2018 and as noted in Note 9 to the consolidated financial statements, did not have a significant effect on the Company's consolidated financial statements.

Leases In February 2016, the FASB issued ASU 2016-02, "Leases", in order to increase transparency and comparability by recognizing lease assets and lease liabilities on the balance sheet and disclosing key information about leasing arrangements. The ASU primarily affects lessee accounting, which requires the lessee to recognize a right-of-use (ROU) asset and a liability to make lease payments for those leases classified as operating leases under previous GAAP. The ASU provides guidance as to the definition of a lease, identification of lease components, and sale and leaseback transactions. The FASB has issued elections and expedients within the original ASU and additional amendments, clarifying the lease guidance for certain implementation issues. The Company has adopted the package of expedients, the lease component expedient as well as the disclosure expedient. Additionally, for leases with a term of 12 months or less, an election was made not to recognize lease assets and lease liabilities. The ASU and the related amendments are effective for interim and annual periods beginning January 1, 2019. The Company is the lessee in less than 200 lease agreements, which will be recognized on the balance sheet. As of January 1, 2019, the Company adopted the new accounting standard, and a lease liability of $28.1 million and a ROU asset of $27.5 million were recognized, but should not materially impact the Company's consolidated financial statements or various balance sheet

related ratios.

Premium Amortization The FASB issued ASU 2017-08, "Premium Amortization on Purchased Callable Debt Securities", in March 2017. Under current guidance, many entities amortize the premium on purchased callable debt securities over the contractual life of the instrument. As a result, upon the exercise of a call on a callable debt security held at a premium, the unamortized premium is recorded as a loss in earnings. The amendments in this ASU shorten the amortization period for certain callable debt securities held at a premium to the earliest call date, and more closely align the amortization period to expectations incorporated in market pricing of the instrument. The amendments are effective January 1, 2019 and are not expected to have a significant effect on the Company's consolidated financial statements.

Financial Instruments ASU 2016-13, "Measurement of Credit Losses on Financial Instruments", was issued in June 2016. Its implementation will result in a new loan loss accounting framework, also known as the current expected credit loss (CECL) model. CECL requires credit losses expected throughout the life of the asset portfolio on loans and held-to-maturity securities to be recorded at the time of origination. Under the current incurred loss model, losses are recorded when it is probable that a loss

event has occurred. The new standard will require significant operational changes, especially in data collection and analysis. The ASU is effective for interim and annual periods beginning January 1, 2020, and is expected to increase the allowance upon adoption.

The Company established an internal CECL implementation team in 2017 and partnered with an outside vendor to implement the new standard. Software development and data collection has continued since that time and it's expected the preliminary CECL model will be ready for detailed testing during the second quarter of 2019. The Company continues to evaluate the impact the adoption of ASU 2016-13 will have on the Company's consolidated financial statements.

Intangible Assets The FASB issued ASU 2017-04, "Simplifying the Test for Goodwill Impairment", in January 2017. Under current guidance, a goodwill impairment loss is measured by comparing the implied fair value of a reporting unit's goodwill with the carrying amount of that goodwill by following procedures that would be required in determining the fair value of assets acquired and liabilities assumed in a business combination. Under the new amendments, the goodwill impairment test compares the fair value of a reporting unit with its carrying amount and an impairment charge is measured as the amount by which the carrying amount exceeds the reporting unit's fair value. The amendments are effective for impairment tests beginning January 1, 2020 and are not expected to have a significant effect on the Company's consolidated financial statements.

Comprehensive Income The FASB issued ASU 2018-02, "Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income", in February 2018. The guidance allows a reclassification from accumulated other comprehensive income to retained earnings for stranded tax effects resulting from the Tax Cuts and Jobs Act. The amendments are effective for all entities effective January 1, 2019, but early adoption is permitted in certain circumstances. The Company adopted the ASU effective January 1, 2018 and recorded a reclassification which increased accumulated other comprehensive income and reduced retained earnings by $2.9 million. As these are both categories within equity, total equity was unchanged. The adoption did not have a significant effect on the Company's consolidated financial statements.

Financial Instruments The FASB issued ASU 2018-13, "Changes to the Disclosure Requirements of Fair Value Measurement", in August 2018. The amendments in the ASU eliminate or modify certain disclosure requirements for fair value measurements in Topic 820, Fair Value Measurement. In addition, the amendments in the ASU also require the addition of new disclosure requirements on fair value measurement, including the disclosure of changes in unrealized gains and losses for the period included in accumulated other comprehensive income (AOCI) for recurring Level 3 fair value measurements and the range and weighted average of significant unobservable inputs used to develop Level 3 fair value measurements. The amendments are effective January 1, 2020 and are not expected to have a significant effect on the Company's consolidated financial statements.

Retirement Benefits The FASB issued ASU 2018-14, "Compensation - Retirement Benefits-Defined Benefit Plans-General (Subtopic 715-20)", in August 2018. The amendments in the ASU eliminate disclosures that are no longer considered cost beneficial and clarify specific requirements of disclosures. In addition, the amendments in the ASU also add new disclosures, including the explanation of the reasons for significant gains and losses related to changes in the benefit obligation for the period. The amendments are effective January 1, 2021 and are not expected to have a significant effect on the Company's consolidated financial statements.

Intangible Assets The FASB issued ASU 2018-15, "Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract", in August 2018. This new standard modifies existing guidance and clarifies the accounting for implementation costs of a hosting arrangement. Under the new amendments, the requirements for capitalizing implementation costs incurred in a hosting arrangement that is a service contract are aligned with the requirements for capitalizing implementation costs incurred to develop or obtain internal-use

software or hosting arrangements that include an internal-use software license. The amendments are effective January 1, 2020, but early adoption is permitted. The Company is still assessing the impact on the Company's consolidated financial statements.

Corporate Governance

The Company has adopted a number of corporate governance measures. These include corporate governance guidelines, a code of ethics that applies to its senior financial officers and the charters for its audit committee, its committee on compensation and human resources, and its committee on governance/directors. This information is available on the Company's Web site www.commercebank.com under Investor Relations.

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AVERAGE BALANCE SHEETS — AVERAGE RATES AND YIELDS

	Years Ended December 31								
	2018			2017			2016		
(Dollars in thousands)	Average Balance	Interest Income/Expense	Average Rates Earned/Paid	Average Balance	Interest Income/Expense	Average Rates Earned/Paid	Average Balance	Interest Income/Expense	Average Rates Earned/Paid
ASSETS									
Loans:[(A)]									
Business[(B)]	$4,963,029	$184,837	3.72 %	$4,832,045	$154,681	3.20 %	$4,652,526	$134,438	2.89 %
Real estate – construction and land	967,320	49,440	5.11	881,879	37,315	4.23	778,822	27,452	3.52
Real estate – business	2,737,820	117,516	4.29	2,694,620	102,009	3.79	2,440,955	89,305	3.66
Real estate – personal	2,093,802	80,365	3.84	2,019,674	75,267	3.73	1,936,420	72,417	3.74
Consumer	2,010,826	89,074	4.43	2,036,393	81,065	3.98	1,947,240	75,076	3.86
Revolving home equity	379,715	17,513	4.61	398,611	15,516	3.89	417,514	14,797	3.54
Consumer credit card	768,789	92,269	12.00	743,885	88,329	11.87	749,589	86,008	11.47
Overdrafts	4,778	—	—	4,592	—	—	4,712	—	—
Total loans	13,926,079	631,014	4.53	13,611,699	554,182	4.07	12,927,778	499,493	3.86
Loans held for sale	19,493	1,298	6.66	17,452	1,000	5.73	25,710	1,317	5.12
Investment securities:									
U.S. government & federal agency obligations	921,759	21,720	2.36	914,961	19,697	2.15	735,081	15,628	2.13
Government-sponsored enterprise obligations	308,520	6,098	1.98	452,422	7,321	1.62	591,785	13,173	2.23
State & municipal obligations[(B)]	1,410,700	42,867	3.04	1,720,723	62,073	3.61	1,753,727	63,261	3.61
Mortgage-backed securities	4,203,625	111,686	2.66	3,784,602	89,623	2.37	3,460,821	82,888	2.40
Asset-backed securities	1,455,690	34,223	2.35	2,083,611	36,757	1.76	2,418,118	35,346	1.46
Other debt securities	340,458	8,912	2.62	330,365	8,410	2.55	331,289	8,382	2.53
Trading debt securities[(B)]	24,731	759	3.07	21,929	583	2.66	19,722	489	2.48
Equity securities[(B)]	26,459	11,816	44.66	60,772	2,283	3.76	47,763	2,208	4.62
Other securities[(B)]	114,438	12,412	10.85	98,564	10,507	10.66	112,888	7,656	6.78
Total investment securities	8,806,380	250,493	2.84	9,467,949	237,254	2.51	9,471,194	229,031	2.42
Federal funds sold and short-term securities purchased under agreements to resell	27,026	519	1.92	18,518	230	1.24	12,660	78	.62
Long-term securities purchased under agreements to resell	696,438	15,881	2.28	688,147	15,440	2.24	791,392	13,544	1.71
Interest earning deposits with banks	319,948	6,233	1.95	207,269	2,223	1.07	188,581	973	.52
	23,795,364	905,438	3.81	24,011,034	810,329	3.37	23,417,315	744,436	3.18

Total interest earning assets									
Allowance for loan losses	(158,791	)		(156,572	)		(152,628	)	
Unrealized gain (loss) on debt securities	(113,068	)		45,760			143,842		
Cash and due from banks	360,732			361,414			381,822		
Land, buildings and equipment - net	343,636			345,639			350,443		
Other assets	438,362			424,333			415,677		
Total assets	$24,666,235			$25,031,608			$24,556,471		
LIABILITIES AND EQUITY									
Interest bearing deposits:									
Savings	$867,150	973	.11	$819,558	981	.12	$775,121	923	.12
Interest checking and money market	10,817,169	26,830	.25	10,517,741	16,328	.16	10,285,288	13,443	.13
Certificates of deposit of less than $100,000	603,137	3,215	.53	676,272	2,645	.39	749,261	2,809	.37
Certificates of deposit of $100,000 and over	1,114,825	14,658	1.31	1,404,960	10,859	.77	1,471,610	8,545	.58
Total interest bearing deposits	13,402,281	45,676	.34	13,418,531	30,813	.23	13,281,280	25,720	.19
Borrowings:									
Federal funds purchased and securities sold under agreements to repurchase	1,514,144	19,655	1.30	1,462,387	9,829	.67	1,266,093	3,315	.26
Other borrowings	1,747	45	2.58	87,696	3,086				