

**2019 | ANNUAL REPORT**

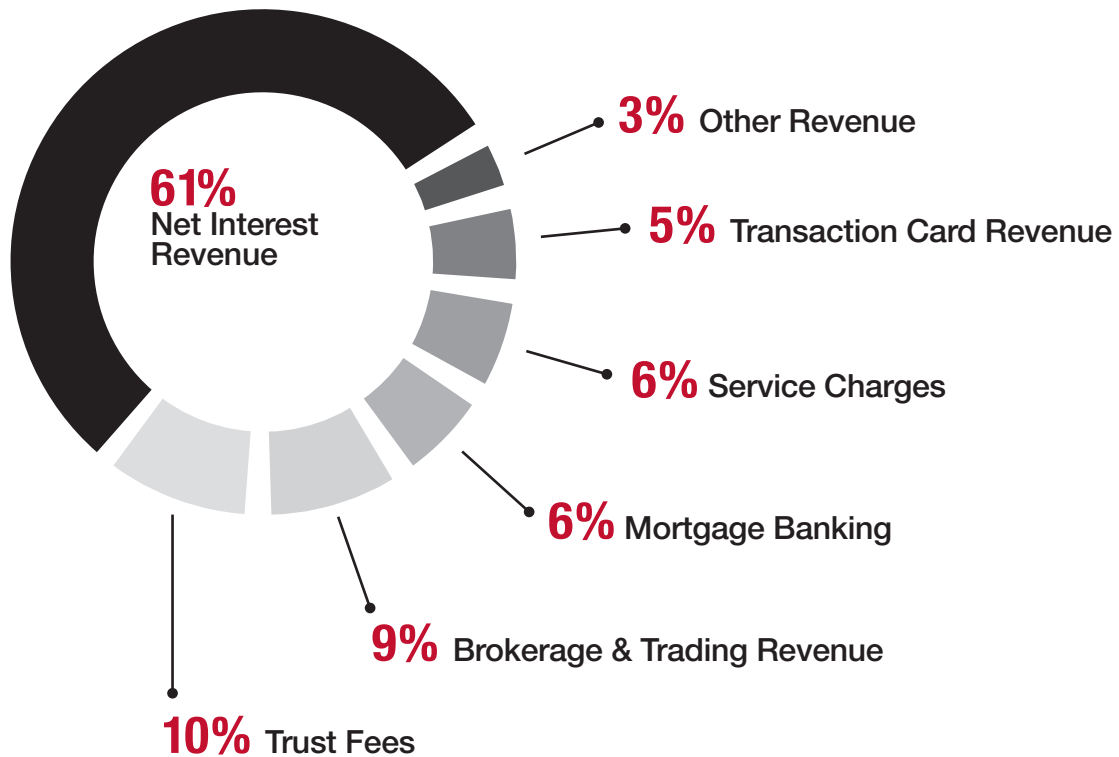


# KEY STATISTICS

At December 31, 2019



# DIVERSIFIED REVENUE



## CREDIT RATINGS

	S&P	Moody's	Fitch Ratings
<b>BOK Financial Corporation</b> Long-term Issuer	<b>BBB+ (OS)</b>	<b>A3 (OS)</b>	<b>A (OS)</b>
<b>BOKF, NA</b> Long-term Issuer	<b>A- (OS)</b>	<b>A3 (OS)</b>	<b>A (OS)</b>

## 2019 HIGHLIGHTS FOR A RECORD REVENUE YEAR



**29th consecutive year of profitability**



**12% year-over-year increase in net income to \$501 million**



**9% year-over-year fee and commission revenue increase**



**Robust deposit growth with year-end deposits up over 9% year over year**



**Total loan portfolio finished the year at \$22 billion for the first time in company history**



**Completion of the largest acquisition in company history—CoBiz Financial**

# Dear Shareholders,

If I were to summarize 2019 in a single phrase, it would be “*strength through diversity*.” While the record earnings BOK Financial delivered in 2018 were a feat worth celebrating, admittedly, the industry was experiencing strong tailwinds. Tax reform, along with rising interest rates, provided a lift for most if not all of us in the financial sector.

This backdrop makes our second-consecutive year of record earnings all the more satisfying. 2019 proved more challenging for the industry as a whole as we faced some pretty significant revenue headwinds when interest rates moved lower starting in mid-year. While this pressure typically contracts the earnings potential of regional financial institutions, we saw a strong surge in revenue from business units that perform exceedingly well when rates decline. For the year, pre-tax earnings were a record \$630.9 million; net income attributable to BOK Financial shareholders was \$500.8 million, up over 12 percent compared to 2018; and we reported diluted earnings per share of \$7.03.

This success was clearly the result of the diversity of our revenue model. This business model allows our company to remain outwardly focused on customer needs rather than looking inward to reduce investments in future company growth as many similar size banks must do when rates decline. It’s a testament to how the bank has been carefully constructed over many years in order to maintain our long-term approach to creating and sustaining earnings and shareholder value.

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## **LOANS AND DEPOSITS GROWING IN TANDEM**

Economic and employment strength in 2019 kept loan growth solid. Our expertise in energy and healthcare was responsible for the bulk of growth in 2019. As you know, both of the businesses are core competencies for the organization, and we expect them to continue to be key sources of growth in 2020.

Deposit gathering activities also showed real strength in 2019, particularly in the back half of the year as interest rates began to decline. While deposit growth got off to a slow start, we ended the year up over 9%, and were ultimately able to fund loan growth with deposit growth in 2019, achieving a key objective for the organization. Looking ahead, we want to continue this goal into 2020 and will do so by strategically focusing on what we call “commercial banking.”

We define commercial banking as business clients with sales between \$5 million and \$75 million. This segment was a core competency of our two most recent acquisitions, and we believe that the combined organization has tremendous growth

potential in this space throughout our footprint. With more than \$2 billion in loans and nearly \$4 billion in deposits, commercial banking is already one of BOK Financial’s largest lines of business. This line of business is also unique in that it drives the right mix of loans and deposits that we believe will help us achieve our tandem loan and deposit growth objectives in 2020.

All told, we remain optimistic about core loan and deposit growth as we head into 2020 as long as the broader economy continues to show strength.

## **REVENUE RESILIENCY THROUGH THREE RATE CUTS**

A sharp change in rate direction in the second half of the year compressed margin and net interest income with little time to shift business strategy. While this made incremental quarterly earnings growth difficult for most, we saw a strong surge in revenue from business units that perform exceedingly well when rates decline, most notably mortgage banking and brokerage and trading. As we often discuss, this balanced and flexible business model that we have worked hard over many years to build serves us well during times of uncertainty and economic change.

Ultimately, it allows us to keep our focus on customers while many banks have no alternative other than to look inward to reduce operating expenses.

Following a 20 percent reduction in the expense base and a shift away from the lower-margin online lead-buying business, the mortgage company was operating at peak efficiency. Going forward, we will continue this strategy and manage volume through pricing, rather than staffing.

Equally as beneficial, the expansion of trading activities in our mortgage-backed security business in late 2018 proved to be exceptionally timed, as the interest rate environment shifted to fuel this business in 2019. Related trading revenues were up 48 percent year over year, and were a key offset to spread business pressures.

Looking ahead, we've built our 2020 forecasts on a less volatile year from an interest rate perspective. Whether or not that proves to be the case, I have full confidence in our ability to take advantage of the right opportunities in 2020.

### **EXPENSE MANAGEMENT**

One of the primary drivers of our robust 2019 financial performance was expense management. This discipline ultimately led to the achievement of our 60 percent efficiency ratio goal a full year ahead of schedule. While we were able to hold this level in the second and third quarters, sharp interest rate declines weighed on net interest revenue in the fourth quarter driving the ratio higher.

While we could check the box as a goal achieved, we still aim to drive the efficiency ratio lower. Operating a growth company that is lean and efficient is often an elusive goal. But we remain committed to making the right investments to fuel growth while identifying areas of expense reduction and redundancy across the company. With the projected flat rate environment in 2020, the net interest revenue pressure felt in late 2019 should subside and allow us to capture future expense discipline.

### **COBIZ: AN ACQUISITION COMPLETE**

We closed the CoBiz merger in late 2018, but the heavy lifting of onboarding new employees and converting customer data occurred during 2019. We now have doubled our market share in Colorado and Arizona, two critical growth engines for the company, and we are poised to see accelerated

momentum from each in 2020. Mergers are always difficult and contain elements of risk, but we achieved the expense synergies we sought and have the leadership team in place to meet our expectations for higher growth in the coming years.

In 2020, we'll remain intensely focused on realizing the synergies of bringing our two companies together. It's obvious that the expense efficiencies have been achieved, but ultimately we'll realize our return by growing and serving our customer base in Colorado and Arizona.

### **WHAT'S IN A NAME?**

While BOK Financial is how our shareholders have always known us, that's not true for our clients. Bank of Arkansas, Mobank, Bank of Arizona, and Colorado State Bank and Trust have been our identities in Arkansas, Kansas, Missouri, Arizona and Colorado for quite some time. While a differentiated brand strategy in these five markets has been a long-standing tradition for us, the CoBiz acquisition gave us a unique opportunity to streamline our branding strategy to match our larger corporate and wealth management businesses in these states. By embracing our larger identity in these diverse markets, we expect to better deliver the full suite of products and services the broader organization has to offer.

### **OPERATIONS AND TECHNOLOGY—A KEY DIFFERENTIATOR AT BOK FINANCIAL**

Our operations and technology group continues to be a bright spot for the organization. This year saw one of the largest IT projects ever undertaken by our organization with the systems integration following the CoBiz acquisition. Thousands of hours of hard work from our technology team finalized the largest acquisition in company history. This monumental accomplishment not only brought the two organizations together, but also provided valuable insights that we'll use to improve our existing technology framework.

Looking ahead, we continue to invest heavily in technology that will improve our competitive position across a number of business units. To that end, we introduced new capabilities within our digital platform during the year, such as upgrading our Mortgage Banking platform, improving the ApplePay experience along with the introduction of Samsung, and launching a new digital advice platform in the Wealth Management space. We also began work on transformative projects to benefit customers in our Treasury Services, Wealth Management, and

Commercial Banking business units. As client expectations continue to increase, we feel that we are well-positioned to match the changing competitive landscape.

And while customer-facing technology will be a clear focus in 2020, we continue to prioritize investment in data protection and system integrity as we will stand up a third redundant data site in early 2020.

All told, I'm convinced that our technology investment plans will keep us relevant and growing in the years ahead.

### **COMMUNITY, DIVERSITY, AND INCLUSION**

In 2019, the bank and the BOKF Foundation invested more than \$5.8 million across our footprint. With strategic investments in each of our key operating markets, these contributions made a significant impact in support of 691 nonprofit organizations. Our commitment to actively advancing the communities we serve doesn't stop there. Employees across the company collectively invested 33,792 volunteer hours, including 341 employees serving in leadership roles with 486 nonprofit organizations. We all feel a strong sense of responsibility for improving our communities by taking care of those most in need, guiding programs to reduce those needs over time, and improving job and economic growth prospects in each of our markets. We expect to be leaders in all of these endeavors.

2019 was also a year featuring a deeper and more formal commitment to building an even stronger and more diverse workforce. Building on the foundational work produced in 2018 by a group of leaders across the company, we established our Diversity and Inclusion Council. The role of the Council, led by Chief Human Resource Officer Kelley Weil and me, is to build a set of strategies and impact tactics to increase diversity of thought and experience across the company. The initial strategies identified by the Council are focused on recruiting more diverse candidates and driving a more diverse slate of candidates for internal promotion. We intend to roll out a training program in 2020 for leaders across the company to reduce the unconscious bias that can

negatively impact hiring and recruiting. At the same time, we will sponsor groups across the company, called Communities of Practice, that will provide feedback on tactics and actions our company can take to improve the inclusiveness of our culture. We absolutely intend for our company to be inclusive and supportive of all employees and their unique experiences and perspectives as we work to constantly improve how well we work together across the company and on behalf of our customers.

### **FOCUSED ON THE LONG-TERM**

As noted throughout my letter, our results in 2019 stemmed from our diversity—diversity of our businesses, diversity of our markets, and diversity of our teams. A second-consecutive record earnings year doesn't happen by accident; it is a result of a multi-decade approach to understanding that diversity drives shareholder value.

Looking ahead to 2020, we expect this to be a year that our company separates further from peers in terms of performance and customer experience. The past decade of slow but steady growth has benefitted most banks but the headwinds of lower rates, coupled with unsustainably low credit costs and the economic uncertainty that is always exaggerated in a national election year will be a challenge that will force many banks to pull back on growth and investment plans. At BOK Financial, we are built to rise to the top in times of economic uncertainty as our diversified business model shows its merit while our time-proven approach to managing credit risk will prevail should we experience an economic slowdown. We are highly confident that we will grow earnings and continue our strong investment in people and technology while others may be forced to pullback on both.

And finally, I want to thank you, our shareholders, for your support. BOK Financial has always been an organization built for shareholders who are as long-term focused as we are. While 2020 will bring with it plenty of uncertainty from a political and economic perspective, I remain confident in our ability to deliver long-term shareholder value going forward.



Sincerely,

A handwritten signature in black ink that reads "Steven G. Bradshaw". The signature is fluid and cursive.

**Steven G. Bradshaw**

President and Chief Executive Officer

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

**FORM 10-K**

(Mark One)

**ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**  
For the fiscal year ended December 31, 2019

**OR**

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

**Commission File No. 0-19341**

**BOK FINANCIAL CORP ET AL**  
(Exact name of registrant as specified in its charter)

OK

(State or other jurisdiction  
of Incorporation or Organization)

Bank of Oklahoma Tower  
Boston Avenue at Second Street

Tulsa, OK  
(Address of Principal Executive Offices)

73-1373454

(IRS Employer  
Identification No.)

74172

(Zip Code)

(918) 588-6000

(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12 (b) of the Act: None

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

Common stock, \$0.00006 par value

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

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

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

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Website, if any, 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  No

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

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer or a smaller reporting company. See definitions of "larger accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

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

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

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

The aggregate market value of the registrant's common stock ("Common Stock") held by non-affiliates is approximately \$2.4 billion (based on the June 28, 2019 closing price of Common Stock of \$75.48 per share). As of January 31, 2020, there were 70,692,686 shares of Common Stock outstanding.

**DOCUMENTS INCORPORATED BY REFERENCE**

Part III incorporates certain information by reference from the Registrant's Proxy Statement for the 2020 Annual Meeting of Shareholders.

**BOK Financial Corporation**  
**Form 10-K**  
**Year Ended December 31, 2019**

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## PART I

### ITEM 1. BUSINESS

#### General

Developments relating to individual aspects of the business of BOK Financial Corporation ("BOK Financial" or "the Company") are described below. Additional discussion of the Company's activities during the current year appears within Item 7 "Management's Discussion and Analysis of Financial Condition and Results of Operations."

#### Description of Business

BOK Financial is a financial holding company incorporated in the state of Oklahoma in 1990 whose activities are governed by the Bank Holding Company Act of 1956 ("BHCA"), as amended by the Financial Services Modernization Act or Gramm-Leach-Bliley Act and the Dodd-Frank Wall Street Reform and Consumer Protection Act (the "Dodd-Frank Act"). BOK Financial offers full service banking in Oklahoma, Texas, New Mexico, Northwest Arkansas, Colorado, Arizona, and Kansas/Missouri. At December 31, 2019, the Company reported total consolidated assets of \$42 billion.

BOKF, NA is a wholly owned subsidiary bank of BOK Financial. BOKF, NA operates TransFund, Cavanal Hill Investment Management and BOK Financial Asset Management, Inc. BOKF, NA operates banking divisions across eight states: Bank of Albuquerque, Bank of Oklahoma, Bank of Texas and BOK Financial in Arizona, Arkansas, Colorado, Kansas and Missouri; as well as having limited purpose offices in Nebraska, Milwaukee and Connecticut. Other wholly owned subsidiaries of BOK Financial include BOK Financial Securities, Inc., a broker/dealer that primarily engages in retail and institutional securities sales and municipal bond underwriting; BOK Financial Private Wealth, Inc., an investment adviser to high net worth clients; and BOK Financial Insurance, Inc., a broker providing insurance services. Other non-bank subsidiary operations do not have a significant effect on the Company's financial statements.

Our overall strategic objective is to emphasize growth in long-term value by building on our leadership position in Oklahoma through expansion into other high-growth markets in contiguous states. We operate primarily in the metropolitan areas of Tulsa and Oklahoma City, Oklahoma; Dallas, Fort Worth and Houston, Texas; Albuquerque, New Mexico; Denver, Colorado; Phoenix, Arizona, and Kansas City, Kansas/Missouri. Our acquisition strategy targets fairly priced quality organizations with demonstrated solid growth that would supplement our principal lines of business. We provide additional growth opportunities by hiring talent to enhance competitiveness, adding locations and broadening product offerings. Our operating philosophy embraces local decision-making in each of our geographic markets while adhering to common Company standards.

Our primary focus is to provide a comprehensive range of nationally competitive financial products and services in a personalized and responsive manner. Products and services include loans and deposits, cash management services, fiduciary and insurance services, mortgage banking and brokerage and trading services to middle-market businesses, financial institutions and consumers. Commercial banking represents a significant part of our business. Our credit culture emphasizes building relationships by making high quality loans and providing a full range of financial products and services to our customers. We offer derivative products that enable mortgage banking customers to manage their production risks and our energy financing expertise enables us to offer commodity derivatives for customers to use in their risk management. Our diversified base of revenue sources is designed to generate returns in a range of economic situations. Historically, fees and commissions provide 39% to 48% of our total revenue. Approximately 39% of our revenue came from fees and commissions in 2019.

BOK Financial's corporate headquarters is located at Bank of Oklahoma Tower, Boston Avenue at Second Street, Tulsa, Oklahoma 74172.

The Company's Annual Reports on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and amendments to those reports are available on the Company's website at [www.bokf.com](http://www.bokf.com) as soon as reasonably practicable after the Company electronically files such material with or furnishes it to the Securities and Exchange Commission.

## **Operating Segments**

BOK Financial operates three principal lines of business: Commercial Banking, Consumer Banking and Wealth Management. Commercial Banking includes lending, treasury and cash management services and customer commodity risk management products for small businesses, middle market and larger commercial customers. Commercial Banking also includes the TransFund electronic funds network. Consumer Banking includes retail lending and deposit services, lending and deposit services to small business customers served through the retail branch network and all mortgage banking activities. Wealth Management engages in brokerage and trading activities and provides fiduciary services, private bank services, investment advisory services and insurance services in all markets. Wealth Management also underwrites state and municipal securities. Discussion of these principal lines of business appears within the Lines of Business section of "Management's Discussion and Analysis of Financial Condition and Results of Operations".

## **Competition**

BOK Financial and its operating segments face competition from other banks, thrifts, credit unions and other non-bank financial institutions, such as investment banking firms, investment advisory firms, brokerage firms, investment companies, financial technology firms, government agencies, mortgage brokers and insurance companies. The Company competes largely on the basis of customer services, interest rates on loans and deposits, lending limits and customer convenience. Some operating segments face competition from institutions that are not as closely regulated as banks, and therefore are not limited by the same capital requirements and other restrictions. All market share information presented below is based upon share of deposits in specified areas according to the Federal Deposit Insurance Corporation ("FDIC") as of June 30, 2019.

We are the largest financial institution in the state of Oklahoma with 13% of the state's total deposits. We have 32% and 9% of the market share in the Tulsa and Oklahoma City areas, respectively. We compete with two banks that have operations nationwide and have greater access to funds at lower costs, higher lending limits, and greater access to technology resources. We also compete with regional and locally-owned banks in both the Tulsa and Oklahoma City areas, as well as in every other community in which we do business throughout the state.

We compete against numerous financial institutions in the state of Texas, including some of the largest in the United States, and have a market share of approximately 1% in the Dallas, Fort Worth area and less than 1% in the Houston area. We have a 10% market share in the Albuquerque area and compete with four large national banks, some regional banks and several locally-owned smaller community banks. Our market share is approximately 4% in the Denver area. We serve Benton and Washington counties in Arkansas with a market share of approximately 2%. Our market share is approximately 1% in the Kansas City, Missouri/Kansas area. We operate as a community bank with locations in Phoenix, Mesa and Scottsdale with approximately 1% market share. The Company's ability to expand into additional states remains subject to various federal and state laws.

## **Employees**

As of December 31, 2019, BOK Financial and its subsidiaries employed 5,107 full-time equivalent employees. None of the Company's employees are represented by collective bargaining agreements. Management considers its employee relations to be good.

## **Supervision and Regulation**

BOK Financial and its subsidiaries are subject to extensive regulations under federal and state laws. Both the scope of the laws and regulations and the intensity of the supervision to which our business is subject have increased in recent years. Regulatory enforcement and fines have also increased across the banking and financial services sector. Many of these changes have occurred as a result of the Dodd-Frank Act and its implementing regulations, most of which are now in place. These regulations and others are designed to promote safety and soundness, protect consumers and ensure the stability of the banking system as a whole. The purpose of these regulations is not necessarily to protect shareholders and creditors. As detailed below, these regulations require the Company and its subsidiaries to maintain certain capital balances and require the Company to provide financial support to its subsidiaries. These regulations may restrict the Company's ability to diversify, to acquire other institutions and to pay dividends on its capital stock. These regulations also include requirements on certain programs and services offered to our customers, including restrictions on fees charged for certain services. The Company expects that its business will remain subject to extensive regulation and supervision.

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

## *General*

As a financial holding company, BOK Financial is regulated under the BHCA and is subject to regular inspection, examination and supervision by the Board of Governors of the Federal Reserve System (the "Federal Reserve Board"). Under the BHCA, BOK Financial files quarterly reports and other information with the Federal Reserve Board.

BOKF, NA is organized as a national banking association under the National Banking Act, and is subject to regulation, supervision and examination by the Office of the Comptroller of the Currency (the "OCC"), the FDIC, the Federal Reserve Board, the Consumer Financial Protection Bureau ("CFPB") and other federal and state regulatory agencies. The OCC has primary supervisory responsibility for national banks and must approve certain corporate or structural changes, including changes in capitalization, payment of dividends, change of place of business, and establishment of a branch or operating subsidiary. The OCC performs examinations concerning safety and soundness, the quality of management and directors, information technology and compliance with applicable regulations. The National Banking Act authorizes the OCC to examine every national bank as often as necessary.

A financial holding company, and the companies under its control, are permitted to engage in activities considered "financial in nature" as defined by the BHCA, Gramm-Leach-Bliley Act and Federal Reserve Board interpretations. Activities that are "financial in nature" include securities underwriting and dealing, insurance underwriting, merchant banking, operating a mortgage company, performing certain data processing operations, servicing loans and other extensions of credit, providing investment and financial advice, owning and operating savings and loan associations, and leasing personal property on a full pay-out, non-operating basis. A financial holding company is required to notify the Federal Reserve Board within thirty days of engaging in new activities determined to be "financial in nature." BOK Financial is engaged in some of these activities and has notified the Federal Reserve Board.

In order for a financial holding company to commence any new activity permitted by the BHCA, each insured depository institution subsidiary of the financial holding company must be "well capitalized" and "well managed" and have received a rating of at least "satisfactory" in its most recent examination under the Community Reinvestment Act. A financial holding company and its depository institution subsidiaries are considered to be "well capitalized" if they meet the requirements discussed in the section captioned "Capital Adequacy and Prompt Corrective Action" which follows. A financial holding company and its depository institution subsidiaries are considered to be "well managed" if they receive a composite rating and management rating of at least "satisfactory" in their most recent examinations. If a financial holding company fails to meet these requirements, the Federal Reserve Board may impose limitations or conditions on the conduct of its activities and the company may not commence any new financial activities without prior approval.

The BHCA requires the Federal Reserve Board's prior approval for the direct or indirect acquisition of more than five percent of any class of voting stock of any non-affiliated bank. Under the Federal Bank Merger Act, the prior approval of the OCC is required for a national bank to merge with another bank or purchase the assets or assume the deposits of another bank. In reviewing applications seeking approval of merger and acquisition transactions, the bank regulatory authorities consider, among other things, the competitive effect and public benefits of the transactions, the capital position of the combined organization, the applicant's performance record under the Community Reinvestment Act and fair housing laws and the effectiveness of the subject organizations in combating money laundering activities.

A financial holding company and its subsidiaries are prohibited under the BHCA from engaging in certain tie-in arrangements in connection with the provision of any credit, property or services. Thus, a subsidiary of a financial holding company may not extend credit, lease or sell property, furnish any services or fix or vary the consideration for these activities on the condition that (1) the customer obtain or provide additional credit, property or services from or to the financial holding company or any subsidiary thereof, or (2) the customer may not obtain some other credit, property or services from a competitor, except to the extent reasonable conditions are imposed to insure the soundness of credit extended.

The Company and other non-bank subsidiaries are also subject to other federal and state laws and regulations. For example, BOK Financial Securities, Inc. is regulated by the Securities and Exchange Commission ("SEC"), the Financial Industry Regulatory Authority ("FINRA"), the Federal Reserve Board, and state securities regulators. Such regulations generally include licensing of certain personnel, customer interactions, and trading operations.

### *Volcker and Swap Rules*

Title VI of the Dodd-Frank Act, commonly known as the Volcker Rule, prohibits the Company from (1) engaging in short-term proprietary trading for our own account, and (2) having certain ownership interests in or relationships with private equity or hedge funds. The fundamental prohibitions of the Volcker Rule apply to banking entities of any size, including the Company and its bank subsidiary. Trading activity remains largely unaffected by the Volcker Rule as most of our trading activity is exempted or excluded from the proprietary trading prohibitions.

Title VII of the Dodd-Frank Act, commonly known as the Swap Rule, subjects nearly all derivative transactions to the regulations of the Commodity Futures Trading Commission ("CFTC") or SEC. This includes registration, recordkeeping, reporting, capital, margin and business conduct requirements on swap dealers and major swap participants. Under CFTC and SEC rules, entities transacting in less than \$8 billion in notional value of swaps over any 12 month period are exempt from the definition of and registration as a "swap dealer." The Company currently estimates that the nature and volume of its swaps activity will not require it to register as a swap dealer.

### *Enhanced Prudential Standards*

The Dodd-Frank Act directed the Federal Reserve Board to monitor emerging risks to financial institutions and enacted enhanced supervision and prudential standards applicable to bank holding companies with consolidated assets of \$50 billion or more and non-bank covered companies designated as systemically important to the Financial Stability Oversight Council (often referred to as systemically important financial institutions). The Dodd-Frank Act mandated that certain regulatory requirements applicable to systemically important financial institutions be more stringent than those applicable to other financial institutions.

In February 2014, the Federal Reserve Board adopted rules to implement certain of these enhanced prudential standards. Beginning in 2015, the rules required publicly traded bank holding companies with \$10 billion or more in total consolidated assets to establish risk committees and required bank holding companies with \$50 billion or more in total consolidated assets to comply with enhanced capital, liquidity and overall risk management standards. In May 2018, the Economic Growth, Regulatory Relief and Consumer Protection Act ("Regulatory Relief Act") raised the threshold for systemically important financial institutions from \$50 billion to \$250 billion while providing the Federal Reserve with authority to establish incremental prudential standards for banks between \$100 billion and \$250 billion.

### *Consumer Financial Protection*

We are subject to a number of federal and state consumer protection laws that extensively govern our relationship with our customers. These laws include the Equal Credit Opportunity Act, the Fair Credit Reporting Act, the Truth in Lending Act, the Truth in Savings Act, the Electronic Fund Transfer Act, the Expedited Funds Availability Act, the Home Mortgage Disclosure Act, the Fair Housing Act, the Real Estate Settlement Procedures Act, the Fair Debt Collection Practices Act, the Service Members Civil Relief Act and these laws' respective state-law counterparts, as well as state usury laws and laws regarding unfair and deceptive acts and practices. These and other federal laws, among other things, require disclosures of the cost of credit and terms of deposit accounts, provide substantive consumer rights, prohibit discrimination in credit transactions, regulate the use of credit report information, provide financial privacy protections, prohibit unfair, deceptive and abusive practices, restrict our ability to raise interest rates and subject us to substantial regulatory oversight. Violations of applicable consumer protection laws can result in significant potential liability from litigation brought by customers, including actual damages, restitution and attorneys' fees. Federal bank regulators, state attorneys general and state and local consumer protection agencies may also seek to enforce consumer protection requirements and obtain these and other remedies, including regulatory sanctions, customer rescission rights, action by the state and local attorneys general in each jurisdiction in which we operate and civil money penalties. Failure to comply with consumer protection requirements may also damage our reputation and result in our failure to obtain any required bank regulatory approval for merger or acquisition transactions we may wish to pursue or our prohibition from engaging in such transactions even if approval is not required.

The CFPB has broad rulemaking authority for a wide range of consumer financial laws that apply to all banks, including, among other things, the authority to prohibit "unfair, deceptive or abusive" acts and practices. Abusive acts or practices are defined as those that materially interfere with a consumer's ability to understand a term or condition of a consumer financial product or service or take unreasonable advantage of a consumer's (i) lack of financial savvy, (ii) inability to protect himself in the selection or use of consumer financial products or services, or (iii) reasonable reliance on a covered entity to act in the consumer's interests. The CFPB can issue cease-and-desist orders against banks and other entities that violate consumer financial laws. The CFPB may also institute a civil action against an entity in violation of federal consumer financial law in order to impose a civil penalty or injunction.

### *Community Reinvestment Act*

The Community Reinvestment Act of 1977 ("CRA") requires depository institutions to assist in meeting the credit needs of their market areas consistent with safe and sound banking practice. Under the CRA, each depository institution is required to help meet the credit needs of its market areas by, among other things, providing credit to low- and moderate-income individuals and communities. Depository institutions are periodically examined for compliance with the CRA and are assigned ratings. In order for a financial holding company to commence any new activity permitted by the BHCA, or to acquire any company engaged in any new activity permitted by the BHCA, each insured depository institution subsidiary of the financial holding company must have received a rating of at least "satisfactory" in its most recent examination under the CRA. Furthermore, banking regulators take into account CRA ratings when considering a request for an approval of a proposed transaction. BOKF, NA received a rating of "outstanding" in its most recent CRA examination, which is above "satisfactory."

### *Financial Privacy*

The federal banking regulators adopted rules that limit the ability of banks and other financial institutions to disclose non-public information about consumers to non-affiliated third parties. These limitations require disclosure of privacy policies to consumers and, in some circumstances, allow consumers to prevent disclosure of certain personal information to a non-affiliated third party. These regulations affect how consumer information is transmitted through diversified financial companies and is conveyed to outside parties.

### *Capital Adequacy and Prompt Corrective Action*

The Federal Reserve Board, the OCC and the FDIC have issued substantially similar risk-based and leverage capital guidelines applicable to United States banking organizations to ensure capital adequacy based upon the risk levels of assets and off-balance sheet financial instruments. In addition, these regulatory agencies may from time to time require that a banking organization maintain capital above the minimum levels, whether because of its financial condition or actual or anticipated growth. 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 qualitative judgments by regulators regarding components, risk weighting and other factors.

Federal Reserve Board risk-based guidelines define four capital metrics based on three categories of regulatory capital. Common equity Tier 1 capital ("CET1") includes common shareholders' equity, less goodwill, most intangible assets and other adjustments. Tier 1 capital consists of CET1 capital plus certain additional capital instruments and related surplus. Supplementary capital ("Tier 2") consists of preferred stock not qualifying as Tier 1 capital, qualifying mandatory convertible debt securities, limited amounts of subordinated debt, other qualifying term debt and allowances for credit losses, subject to limitations. Assets and off-balance sheet exposures are assigned to categories of risk-weights, based primarily upon relative credit risk. Risk-based capital ratios are calculated by dividing CET1, Tier 1 and total capital by risk-weighted assets. In addition to the risk-based capital ratios, the Company is also subject to the leverage ratio. The leverage ratio is determined by dividing Tier 1 capital by adjusted average total assets.

Additional capital rules were effective for banks and bank holding companies, including BOK Financial, on January 1, 2015 as part of a package of regulatory reforms developed by the Basel Committee on Banking Supervision ("BCBS") to strengthen the regulation, supervision and risk management of the banking sector, commonly referred to as the Basel III framework. Several components, which had previously been deferred, were finalized in 2019. These have either already been implemented or will be effective April 1, 2020. We do not expect capital to be materially impacted as a result.

Failure to meet minimum capital requirements would be subject to regulatory restrictions on capital distributions (including but not limited to dividends and share repurchases) and executive bonus payments.

The Federal Deposit Insurance Corporation Improvement Act of 1991 (the "FDICIA"), among other things, identifies five capital categories for insured depository institutions from well capitalized to critically under-capitalized and requires the respective federal regulatory agencies to implement systems for prompt corrective action for institutions failing to meet minimum capital requirements within such categories. FDICIA imposes progressively more restrictive covenants on operations, management and capital distributions, depending upon the category in which an institution is classified. The various regulatory agencies have adopted substantially similar regulations that define the five capital categories identified by FDICIA, using the total risk-based capital, Tier 1 risk-based capital and leverage capital ratios as the relevant capital measures. Such regulations establish various degrees of corrective action to be taken when an institution is considered under-capitalized.

### *Stress Testing*

The Regulatory Relief Act eliminated the requirement for periodic company run capital stress tests known as the Dodd-Frank Act Stress Test for banks with assets less than \$250 billion. Although the mandate has been lifted, the Company still continues to perform capital stress testing on a regular basis.

### *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.

### *Deposit Insurance*

Substantially all of the deposits held by the subsidiary banks are insured up to applicable limits 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 (DRR) 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 implementation of the increase in the designated reserve ratio, but it ultimately resulted 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 September 30, 2018 the DRR rose above 1.35%. Accordingly, the surcharge for depository institutions with assets of greater than \$10 billion ceased. Base assessment rates will remain unchanged, but are scheduled to decrease when the DRR exceeds 2%. As of the third quarter of 2019, the DRR was 1.41%.

### *Dividends*

A key source of liquidity for BOK Financial is dividends from BOKF, NA, which is limited by various banking regulations to net profits, as defined, for the year plus retained profits for the preceding two years. Dividends are further restricted by minimum capital requirements and the Company's internal capital policy. BOKF, NA's dividend limitations are discussed under the heading "Liquidity and Capital" within "Management's Discussion and Analysis of Financial Condition and Results of Operations."

### *Source of Strength Doctrine*

According to Federal Reserve Board policy, a bank holding company is expected to act as a source of financial strength to each subsidiary bank and to commit resources to support each such subsidiary. This support may be required at times when a bank holding company may not be able to provide such support.

### *Transactions with Affiliates*

The Federal Reserve Board regulates transactions between the Company 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 collateral 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.

#### *Bank Secrecy Act and USA PATRIOT Act*

The Bank Secrecy Act ("BSA") and The USA PATRIOT Act of 2001 ("PATRIOT Act") impose many requirements on financial institutions in the interest of national security and law enforcement. BSA requires banks to maintain records and file suspicious activity reports that are of use to law enforcement and regulators in combating money laundering and other financial crimes. The PATRIOT Act is intended to deny terrorists and criminals the ability to access the U.S. financial services system and places significantly greater requirements on financial institutions. Financial institutions, such as the Company and its subsidiaries, must have a designated BSA Officer, internal controls, independent testing and training programs commensurate with their size and risk profile. As part of its internal control program, a financial institution is expected to have effective customer due diligence and enhanced due diligence requirements for high-risk customers, as well as processes to prohibit transactions with entities subject to Office of Foreign Asset Control sanctions. Documentation and recordkeeping requirements, as well as system requirements, aimed at identifying and reporting suspicious activity reporting, must increase with the institution's size and complexity. Failure to implement or maintain adequate programs and controls to combat terrorist financing and money laundering may have serious legal, financial, and reputational consequences.

### **Governmental Policies and Economic Factors**

The operations of BOK Financial and its subsidiaries are affected by legislative changes and by the policies of various regulatory authorities and, in particular, the policies of the Federal Reserve Board. The Federal Reserve Board has statutory objectives to maximize employment and maintain price stability. Among the instruments of monetary policy used by the Federal Reserve Board to implement these objectives are: open-market operations in U.S. Government securities, changes in the discount rate and federal funds rate on bank borrowings, and changes in reserve requirements on bank deposits. The effect of future changes in such policies on the business and earnings of BOK Financial and its subsidiaries is uncertain.

In response to the significant recession in business activity which began in 2007, the Federal Reserve took aggressive actions to reduce interest rates and provide liquidity. While many of the crisis-related programs have expired or been closed, government legislation and policies continue to be accommodative, including increases in government spending, reduction of certain taxes, the continued use by the Federal Reserve of a materially expanded balance sheet and promotion of affordable home programs.

In an effort to boost the economy as a result of risks caused by the trade war between the U.S. and China and a global slowdown, the Federal Reserve decreased its target rate by 25 basis points three times during 2019. Real gross domestic product is forecasted to remain around 2 percent in 2020. The unemployment rate dropped to historic lows of 3.5 percent in 2019 and is anticipated to stay below 4 percent in 2020. The inflation rate is expected to remain close to 2 percent. We expect energy prices to continue to be volatile due to economic, political and environmental factors. The current political environment, trade tensions, and the upcoming election could result in a volatile environment in 2020.

### **Foreign Operations**

BOK Financial does not engage in operations in foreign countries, nor does it lend to foreign governments.

## ITEM 1A. RISK FACTORS

BOK Financial Corporation and its subsidiaries could be adversely affected by risks and uncertainties that could have a material impact on its financial condition and results of operations, as well as on its common stock and other financial instruments. Risk factors which are significant to the Company include, but are not limited to:

### **General and Regulatory Risk Factors**

#### ***Adverse factors could impact BOK Financial's ability to implement its operating strategy.***

Although BOK Financial has developed an operating strategy, which it expects to result in continuing improved financial performance, BOK Financial cannot ensure that it will be successful in fulfilling this strategy or that this operating strategy will be successful. Achieving success is dependent upon a number of factors, many of which are beyond BOK Financial's direct control. Factors that may adversely affect BOK Financial's ability to implement its operating strategy include:

- deterioration of BOK Financial's asset quality;
- deterioration in general economic conditions, especially in BOK Financial's core markets;
- inability to control BOK Financial's non-interest expenses;
- inability to increase non-interest income;
- inability to access capital;
- decreases in net interest margins;
- increases in competition;
- a breach in the security of BOK Financial's systems and
- adverse regulatory developments.

#### ***Substantial competition could adversely affect BOK Financial.***

Banking is a competitive business. BOK Financial competes actively for loan, deposit and other financial services business in the southwest region of the United States. BOK Financial's competitors include a large number of small and large local and national banks, savings and loan associations, credit unions, trust companies, broker-dealers and underwriters, as well as many financial and non-financial firms that offer services similar to those of BOK Financial. Large national financial institutions have substantial capital, technology and marketing resources. Such large financial institutions may have greater access to capital at a lower cost than BOK Financial does, which may adversely affect BOK Financial's ability to compete effectively.

BOK Financial has expanded into markets outside of Oklahoma, where it competes with a large number of financial institutions that have an established customer base and greater market share than BOK Financial. With respect to some of its services, BOK Financial competes with non-bank companies that are not subject to regulation. The absence of regulatory requirements may give non-banks a competitive advantage.

The increasingly competitive environment is in part a result of changes in regulation, changes in technology and product delivery systems and the accelerating pace of consolidation among financial service providers. Our success depends on our ability to respond to the threats and opportunities of financial technology innovations. Developments in "fintech" and cryptocurrencies have the potential to disrupt the financial industry and change the way banks do business. Investment in new technology to stay competitive could result in significant costs and increased cybersecurity risk. Our success depends on our ability to adapt to the pace of the rapidly changing technological environment which is important to retention and acquisitions of customers.

#### ***Government regulations could adversely affect BOK Financial.***

BOK Financial and BOKF, NA are subject to banking laws and regulations that limit the type of acquisitions and investments that we may make. In addition, certain permitted acquisitions and investments are subject to prior review and approval by banking regulators, including the Federal Reserve, OCC and FDIC. Banking regulators have broad discretion on whether to approve proposed acquisitions and investments. In deciding whether to approve a proposed acquisition, federal banking regulators will consider, among other things, the effect of the acquisition on competition; the convenience and needs of the communities to be served, including our record of compliance under the Community Reinvestment Act; and our effectiveness in combating money laundering. They will also consider our financial condition and our future prospects, including projected capital ratios and levels; the competence, experience, and integrity of our management; and our record of compliance with laws and regulations.



The last several years have seen an increase in regulatory costs borne by the banking industry. Laws, regulations or policies currently affecting BOK Financial and its subsidiaries may change. The implementation of the Dodd-Frank Act has and will continue to affect BOK Financial's businesses, including interchange revenue, mortgage banking, derivative and trading activities on behalf of customers, consumer products and funds management.

Regulatory authorities may change their interpretation of these statutes and regulations, including the OCC, our primary regulator, and the CFPB, our regulator for certain designated consumer laws and regulations. Violations of laws and regulations could limit the growth potential of BOK Financial's businesses. We have made extensive investments in human and technological resources to address enhanced regulatory expectations, including investments in the areas of risk management, compliance, and capital planning. Political developments, including the upcoming election, add additional uncertainty to the implementation, scope and timing of changes in the regulatory environment for the banking industry and for the broader economy.

BOK Financial has a long-standing relationship with the energy industry and the local economies within BOKF's geographical footprint have a concentration in energy-related industries. The energy industry is facing increased pressure from investors and the government to mitigate greenhouse emissions, which could significantly increase costs, hinder financial results and shrink the industry.

***Political environment could negatively impact BOK Financial's business.***

As a result of the financial crisis and related government intervention to stabilize the banking system, there have been a series of laws and related regulations proposed or enacted in an attempt to ensure the crisis is not repeated. Many of the new regulations have been far-reaching. The intervention by the government also impacted populist sentiment with a negative view of financial institutions. High profile mistakes by the very largest banks in the country have continued to fuel negative sentiment towards the banking industry. This sentiment may increase litigation risk to the Company or have an adverse impact on BOK Financial's future operations. The passage of recent legislative proposals have eased some of the regulatory burden for BOK Financial; however, legislative outcomes and their durability are inherently uncertain.

**Credit Risk Factors**

***Adverse regional economic developments could negatively affect BOK Financial's business.***

At December 31, 2019, loans to businesses and individuals with collateral primarily located in Texas represented approximately 31% of the total loan portfolio, loans to businesses and individuals with collateral primarily located in Oklahoma represented approximately 16% of our total loan portfolio and loans to businesses and individuals with collateral primarily located in Colorado represented approximately 13% of our total loan portfolio. These geographic concentrations subject the loan portfolio to the general economic conditions within these areas. Poor economic conditions in Texas, Oklahoma, Colorado or other markets in the southwest region may cause BOK Financial to incur losses associated with higher default rates and decreased collateral values in BOK Financial's loan portfolio. A regional economic downturn could also adversely affect revenue from brokerage and trading activities, mortgage loan originations and other sources of fee-based revenue.

***Extended oil and gas commodity price downturns could negatively affect BOK Financial customers.***

At December 31, 2019, 18% of BOK Financial's total loan portfolio is comprised of loans to borrowers in the energy industry. The energy industry is historically cyclical and prolonged periods of low oil and gas commodity prices could negatively impact borrowers' ability to pay. In addition, the Company does business in several major oil and natural gas producing states including Oklahoma, Texas and Colorado. The economies of these states could be negatively impacted by prolonged periods of low oil and gas commodity prices resulting in increased credit migration to classified and nonaccruing categories, higher loan loss provisions and risk of credit losses from both energy borrowers and businesses and individuals in those regional economies.

***Other adverse economic factors affecting particular industries could have a negative effect on BOK Financial customers and their ability to make payments to BOK Financial.***

Certain industry-specific economic factors also affect BOK Financial. For example, BOK Financial's loan portfolio includes commercial real estate loans. A downturn in the real estate industry in general or in certain segments of the commercial real estate industry in the southwest region could also have an adverse effect on BOK Financial's operations. Regulatory changes in healthcare may negatively affect our customers. Legislation affecting reimbursement rates along with the continued transition to managed care in place of fee for service payments could affect their ability to pay.

***Adverse global economic factors could have a negative effect on BOK Financial customers and counterparties.***

Economic conditions globally could impact BOK Financial's customers and counterparties with which we do business. The United Kingdom continues to work through issues regarding BREXIT, trade related issues remain between the United States and China, an increasing tension exists between the United States and Iran, and the turmoil in Venezuela, who holds the world's largest oil reserve, continues without an obvious agreement. We have no direct exposure to European sovereign debt and limited exposure to European and Chinese financial institutions. We have not identified any significant customer exposures to European sovereign debt, European financial institutions or Chinese financial institutions.

BOK Financial, its customers and counterparties may also be negatively affected by global events, such as natural disasters, and other external events beyond our control, including public health issues, terrorist attacks and acts of war. These global events may significantly affect long-term and short-term interest rates, energy prices, the value of financial assets and ultimately economic activity in our primary markets. The adverse effect of these events on the Company may include narrowing of the spread between interest income and interest expense, a reduction in fee income, an increase in credit losses and a decrease in demand for loans and other products and services.

**Liquidity and Interest Rate Risk Factors**

***Fluctuations in interest rates could adversely affect BOK Financial's business.***

BOK Financial's business is highly sensitive to:

- the monetary policies implemented by the Federal Reserve Board, including the discount rate on bank borrowings and changes in reserve requirements, which affect BOK Financial's ability to make loans and the interest rates we may charge;
- changes in prevailing interest rates, due to the dependency of the subsidiary banks on interest income;
- changes in depositor behavior;
- open market operations in U.S. Government securities.

A significant increase in market interest rates, or the perception that an increase may occur, could adversely affect both BOK Financial's ability to originate new loans and BOK Financial's ability to grow. Conversely, a decrease in interest rates could result in acceleration in the payment of loans, including loans underlying BOK Financial's holdings of residential mortgage-backed securities and termination of BOK Financial's mortgage servicing rights. In addition, changes in market interest rates, changes in the relationships between short-term and long-term market interest rates or changes in the relationships between different interest rate indices, could affect the interest rates charged on interest-earning assets differently than the interest rates paid on interest-bearing liabilities. This difference could result in an increase in interest expense relative to interest income, which would reduce the Company's net interest revenue. In a rising interest rate environment, the composition of the deposit portfolio could shift resulting in a mix that is more sensitive to changes in interest rates than is the current mix. An increase in market interest rates also could adversely affect the ability of BOK Financial's floating-rate borrowers to meet their higher payment obligations. If this occurred, it could cause an increase in nonperforming assets and net charge-offs, which could adversely affect BOK Financial's business.

Although much progress is being made in the industry, there remains a great deal of uncertainty regarding the ultimate disposition of LIBOR, including the actual timing of LIBOR's discontinuance and the alternative reference rates and spreads that will be used in its stead. In 2017, the U.K. Financial Conduct Authority announced its lack of confidence in LIBOR as a market benchmark rate, and that it would no longer persuade or compel banks to submit to LIBOR after 2021. However, that does not mean that LIBOR's panel banks will necessarily cease their submissions at that time, potentially resulting in continued availability of LIBOR past 2021.

U.S. regulatory authorities have voiced similar support for phasing out LIBOR. The Federal Reserve Bank of New York's Alternative Reference Rate Committee has recommended the Secured Overnight Financing Rate ("SOFR") as an alternative to LIBOR. However, SOFR is not currently the economic equivalent of LIBOR for two key reasons. The first is that SOFR is a secured rate while LIBOR is an unsecured rate. The second is that SOFR is an overnight rate while LIBOR is published for different maturities.

We have a significant number of loans, securities, derivative contracts, borrowings and other financial instruments with attributes that are either directly or indirectly dependent on LIBOR. Given these uncertainties, it is not possible at this time to determine the impact of the transition away from LIBOR on the valuations, pricing and operation of our financial instruments.

In order to be well prepared for the transition, the Company has established formal governance for the LIBOR transition, including a LIBOR Transition Working Group ("the Group") whose purpose is to guide the overall transition process for the Company. The Group is an internal, cross-functional team with representatives from all business lines, support and control functions, and legal counsel. Its responsibilities include, but are not limited to, monitoring industry developments; tracking direct and indirect exposures; developing and implementing remediation plans; and communication with internal and external stakeholders.

Key loan provisions have been modified so that new and renewed loans include LIBOR fallback language designed to ensure the smoothest possible transition from LIBOR to the new benchmark when such transition occurs. All existing financial contracts with direct exposure to LIBOR have been inventoried and are being tracked. Indirect exposures in the form of LIBOR-related systems, models, and processes are being inventoried, evaluated, and prioritized and remediation plans either underway or are being developed.

***Changes in mortgage interest rates could adversely affect mortgage banking operations along with mortgage servicing rights as well as BOK Financial's substantial holdings of residential mortgage-backed securities, and brokerage and trading revenue.***

BOK Financial derives a substantial amount of revenue from mortgage banking activities, the production and sale of mortgage loans and the servicing of mortgage loans. In addition, as part of BOK Financial's mortgage banking business, BOK Financial has substantial holdings of mortgage servicing rights. Revenue generated from the production and sale of mortgage loans is affected by mortgage interest rates and government policies related to economic stimulus and home ownership. Falling interest rates tend to increase mortgage lending activities and related revenue while rising interest rates have an opposite effect.

Mortgage servicing revenue is a fee earned over the life of the related loan. However, mortgage servicing rights are assets that are carried at fair value which are very sensitive to numerous factors with the primary factor being changes in market interest rates. Falling interest rates tend to increase loan prepayments, which may lead to a decrease in the value of related servicing rights. We attempt to manage this risk by maintaining an active hedging program. The primary objective of the Company's hedging program is to provide an offset to changes in the fair value of these rights due to hedgeable risks, primarily changes in market interest rates. Due to numerous unhedgeable factors, hedging strategies may not offset all changes in the fair value of the asset. Such unhedgeable factors include, but are not limited to, changes in customer prepayment or delinquency behavior that is inconsistent with historical actual performance in a similar market environment; changes in the long-term or short-term primary/secondary mortgage spreads; and changes in survey-driven assumptions such as the cost of servicing and discount rates.

We also hold a substantial portfolio of residential mortgage-backed securities issued by U.S. government agencies. The fair value of residential mortgage-backed securities is highly sensitive to changes in interest rates. A significant decrease in interest rates may lead mortgage holders to refinance the mortgages constituting the pool backing the securities, subjecting BOK Financial to a risk of prepayment and decreased return on investment due to subsequent reinvestment at lower interest rates. A significant decrease in interest rates may also accelerate premium amortization. Conversely, a significant increase in interest rates may cause mortgage holders to extend the term over which they repay their loans, which delays the Company's opportunity to reinvest funds at higher rates. We mitigate this risk somewhat by investing principally in shorter duration mortgage products, which are less sensitive to changes in interest rates.

In addition, the Company actively engages in trading activities that provide U.S. government agency residential mortgage-backed securities and related derivative instruments to our customers. Trading activities generate net interest revenue, trading revenue and customer hedging revenue. Trading revenue and customer hedging revenue varies in response to customer demand. The value of trading securities will increase in response to decreases in interest rates or decrease in response to increases in interest rates. We mitigate the market risk of holding trading securities through appropriate economic hedging techniques.

***Market disruptions could impact BOK Financial's funding sources.***

BOK Financial's subsidiary bank may rely on other financial institutions and the Federal Home Loan Bank of Topeka as a significant source of funds. Our ability to fund loans, manage our interest rate risk and meet other obligations depends on funds borrowed from these sources. The inability to borrow funds at market interest rates could have a material adverse effect on our operations.

## **Operating Risk Factors**

### ***Dependence on technology increases cybersecurity, data privacy and technology failure risk.***

The Company is dependent on its technological ability to process, record and monitor a large number of customer transactions and store and protect a significant amount of sensitive customer information. Our customers' use of our internet-based services, and our customer and regulatory expectations regarding operational and information security and reliability, have increased over time. Congress and the legislatures of states in which we operate regularly consider legislation that would impose more stringent data privacy requirements, resulting in increased compliance costs.

Cybersecurity risks for financial institutions have increased significantly in recent years in part because of the proliferation of new technologies, the increased use of the internet and mobile technologies to conduct financial transactions, and the increased sophistication and ever changing cyberattack techniques used by organized crime, hackers, terrorists, hostile foreign governments and other external parties to obtain confidential customer information and misappropriate customer funds. Such parties may seek to gain access to our systems directly or use equipment or security passwords belonging to employees, customers, third party services providers or other users of our systems. Accordingly, our operational systems and infrastructure must continue to be safeguarded and monitored for potential failures, disruptions, breakdowns and cyber attacks.

Our business, financial, accounting, data processing systems and other operating systems and facilities may stop operating properly or become disabled as a result of a number of factors that may be wholly or partially beyond our control. In addition to cyber attacks, there could be sudden increases in customer transaction volume, electrical or telecommunications outages, natural disasters, pandemics, events arising from political or social matters, including terrorist attacks. Third parties with whom we do business or that facilitate our business activities including exchanges, clearing houses, financial intermediaries or vendors that provide services or security solutions for our operations, could also be sources of operational or information security risk to the Company, including breakdowns or failures of their own systems, capacity constraints or cyber attacks.

Cybersecurity risk management programs are expensive to maintain and will not protect the Company from all risks associated with maintaining the security of customer data from external and internal intrusions, disaster recovery and failures in controls used by our vendors. A material breach of customer data security or operational or system failure may negatively impact our business reputation and cause a loss of customers, result in increased expense to contain the event and/or require that we provide credit monitoring services for or reimburse affected customers, result in regulatory fines, penalties or intervention, or result in litigation, all of which could have a materially adverse effect on our results of operations and financial condition.

Although to date we have not experienced any material losses relating to cyber attacks or other information security breaches or operational failures, there can be no assurance that we will not suffer such losses in the future. Our risk and exposure to these matters remains heightened and as a result the continued development and enhancement of our controls, processes and practices designed to protect and facilitate the recovery of our systems, computers, software, data and networks from attack, damage or unauthorized access remains a high priority for us. As an additional layer of protection, we have purchased network and privacy liability risk insurance coverage. Our cybersecurity insurance may not provide sufficient coverage in the event of a breach, or may not be available in the future on acceptable terms.

### ***We depend on third parties for critical components of our infrastructure.***

We outsource a significant portion of our information systems, communications, data management and transaction processing to third parties. These third parties are sources of risk associated with operational errors, system interruptions or breaches, unauthorized disclosure of confidential information and misuse of intellectual property. If the service providers encounter any of these issues, we could be exposed to disruption of service, reputation damages, and litigation risk that could be material to our business.

## **Risks Related to an Investment in Our Stock**

### ***Although publicly traded, BOK Financial's common stock has substantially less liquidity than the average trading market for a stock quoted on the NASDAQ National Market System.***

A relatively small fraction of BOK Financial's outstanding common stock is actively traded. The risks of low liquidity include increased volatility of the price of BOK Financial's common stock. Low liquidity may also limit holders of BOK Financial's common stock in their ability to sell or transfer BOK Financial's shares at the price, time and quantity desired.

***BOK Financial's principal shareholder controls a majority of BOK Financial's common stock.***

Mr. George B. Kaiser owns approximately 54% of the outstanding shares of BOK Financial's common stock at December 31, 2019. Mr. Kaiser is able to elect all of BOK Financial's directors and effectively control the vote on all matters submitted to a vote of BOK Financial's common shareholders. Mr. Kaiser's ability to prevent an unsolicited bid for BOK Financial or any other change in control could have an adverse effect on the market price for BOK Financial's common stock. A substantial majority of BOK Financial's directors are not officers or employees of BOK Financial or any of its affiliates. However, because of Mr. Kaiser's control over the election of BOK Financial's directors, he could change the composition of BOK Financial's Board of Directors so that it would not have a majority of outside directors.

***Possible future sales of shares by BOK Financial's principal shareholder could adversely affect the market price of BOK Financial's common stock.***

Mr. Kaiser has the right to sell shares of BOK Financial's common stock in compliance with the federal securities laws at any time, or from time to time. The federal securities laws will be the only restrictions on Mr. Kaiser's ability to sell. Because of his current control of BOK Financial, Mr. Kaiser could sell large amounts of his shares of BOK Financial's common stock by causing BOK Financial to file a registration statement that would allow him to sell shares more easily. In addition, Mr. Kaiser could sell his shares of BOK Financial's common stock without registration under Rule 144 of the Securities Act. Although BOK Financial can make no predictions as to the effect, if any, that such sales would have on the market price of BOK Financial's common stock, sales of substantial amounts of BOK Financial's common stock, or the perception that such sales could occur, could adversely affect market prices. If Mr. Kaiser sells or transfers his shares of BOK Financial's common stock as a block, another person or entity could become BOK Financial's controlling shareholder.

***Statutory restrictions on subsidiary dividends and other distributions and debts of BOK Financial's subsidiaries could limit amounts BOK Financial's subsidiaries may pay to BOK Financial.***

A substantial portion of BOK Financial's cash flow typically comes from dividends paid by BOKF, NA. Statutory provisions and regulations restrict the amount of dividends BOKF, NA may pay to BOK Financial without regulatory approval. Management also developed, and the BOK Financial board of directors approved, an internal capital policy that is more restrictive than the regulatory capital standards. In the event of liquidation, creditors of the subsidiary banks and other non-bank subsidiaries of BOK Financial are entitled to receive distributions from the assets of that subsidiary before BOK Financial, as holder of an equity interest in the subsidiaries, is entitled to receive any distributions.

**ITEM 1B. UNRESOLVED STAFF COMMENTS**

None.

**ITEM 2. PROPERTIES**

BOK Financial and its subsidiaries own and lease improved real estate that is carried at \$369 million, net of depreciation and amortization. The Company's principal offices are located in leased premises in the Bank of Oklahoma Tower in Tulsa, Oklahoma. Banking offices are primarily located in Tulsa and Oklahoma City, Oklahoma; Dallas, Fort Worth and Houston, Texas; Albuquerque, New Mexico; Denver, Colorado; Phoenix, Arizona; and Kansas City, Kansas/Missouri. Primary operations facilities are located in Tulsa and Oklahoma City, Oklahoma; Dallas, Texas and Albuquerque, New Mexico. The Company's facilities are suitable for their respective uses and present needs.

The information set forth in Notes 5 and 14 of the Company's Notes to Consolidated Financial Statements, which appear elsewhere herein, provides further discussion related to properties.

**ITEM 3. LEGAL PROCEEDINGS**

The information set forth in Note 14 of the Company's Notes to Consolidated Financial Statements, which appear elsewhere herein, provides discussion related to legal proceedings.

**ITEM 4. MINE SAFETY DISCLOSURES**

Not applicable.

## PART II

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

BOK Financial's \$0.00006 par value common stock is traded on the NASDAQ Stock Market under the symbol BOKF. As of January 31, 2020, common shareholders of record numbered 732 with 70,692,686 shares outstanding.

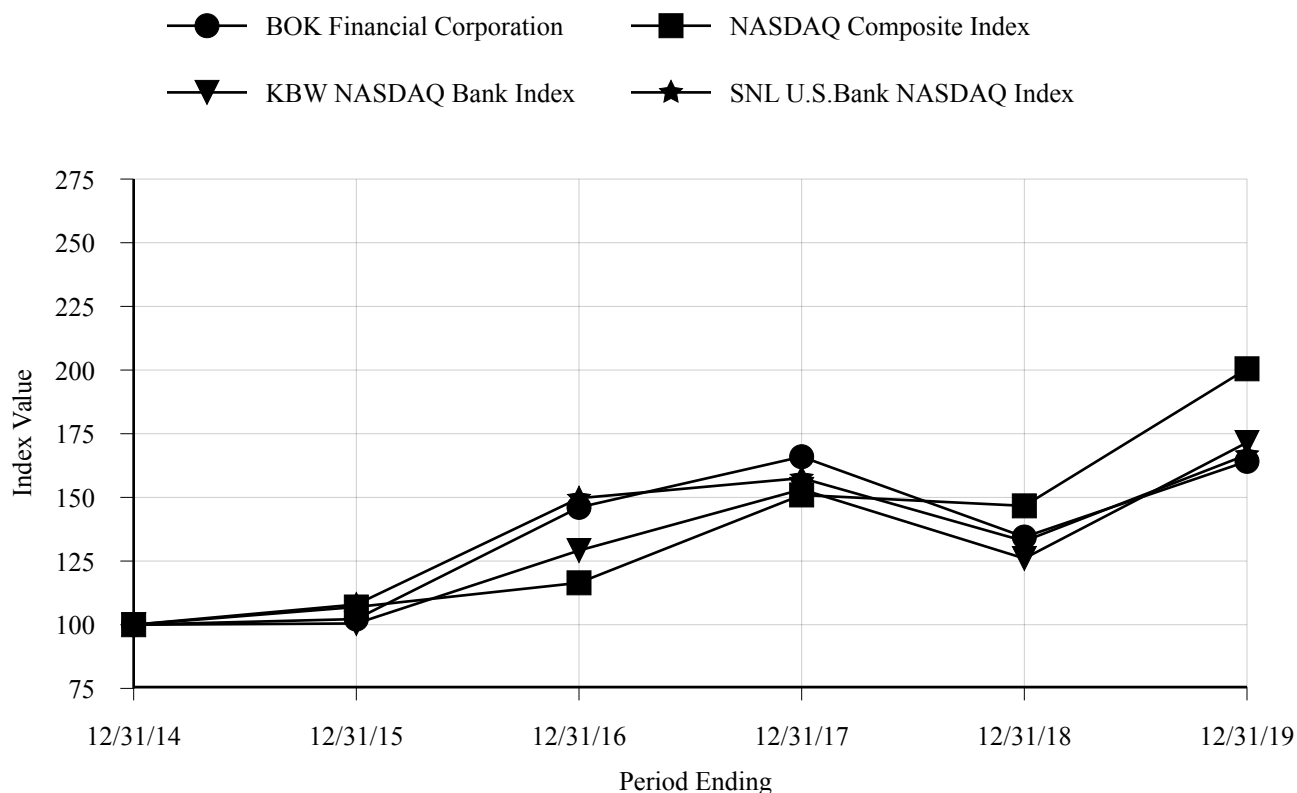
The highest and lowest quarterly closing bid price for shares and cash dividends declared per share of BOK Financial common stock follows:

	<b>First</b>	<b>Second</b>	<b>Third</b>	<b>Fourth</b>
<b>2019:</b>				
Low	\$ 73.43	\$ 73.81	\$ 73.45	\$ 72.23
High	92.31	87.68	83.41	88.01
Cash dividends declared	0.50	0.50	0.50	0.51
<b>2018:</b>				
Low	\$ 90.62	\$ 93.00	\$ 93.33	\$ 70.61
High	100.98	105.24	104.74	96.91
Cash dividends declared	0.45	0.45	0.50	0.50

### Shareholder Return Performance Graph

Set forth below is a line graph comparing the change in cumulative shareholder return of the NASDAQ Composite Index, the KBW NASDAQ Bank Index and the SNL U.S. Bank NASDAQ Index for the period commencing December 31, 2014 and ending December 31, 2019.\*

#### Total Return Performance



Index	Period Ending December 31,					
	2014	2015	2016	2017	2018	2019
BOK Financial Corporation	100.00	102.22	146.08	165.97	134.44	164.15
NASDAQ Composite	100.00	106.96	116.45	150.96	146.67	200.49
SNL U.S. Bank NASDAQ	100.00	107.95	149.68	157.58	132.82	166.75
KBW NASDAQ Bank Index	100.00	100.49	129.14	153.15	126.02	171.55

\* Graph assumes value of an investment in the Company's Common Stock for each index was \$100 on December 31, 2014. Cash dividends on Common Stock are assumed to have been reinvested in BOK Financial Common Stock.



The following table provides information with respect to purchases made by or on behalf of the Company or any “affiliated purchaser” (as defined in Rule 10b-18(a)(3) under the Securities Exchange Act of 1934), of the Company’s common stock during the three months ended December 31, 2019.

<b>Period</b>	<b>Total Number of Shares Purchased <sup>2</sup></b>	<b>Average Price Paid per Share</b>	<b>Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs <sup>1</sup></b>	<b>Maximum Number of Shares that May Yet Be Purchased Under the Plans</b>
October 1, 2019 to October 31, 2019	25,000	\$ 76.94	25,000	4,388,287
November 1, 2019 to November 30, 2019	205,000	\$ 81.96	205,000	4,183,287
December 1, 2019 to December 31, 2019	50,000	\$ 82.38	50,000	4,133,287
<b>Total</b>	<b>280,000</b>		<b>280,000</b>	

<sup>1</sup> On April 30, 2019, the Company's board of directors authorized the Company to repurchase up to five million shares of the Company's common stock. As of December 31, 2019, the Company had repurchased 866,713 shares under this plan. Future repurchases of the Company's common stock will vary based on market conditions, regulatory limitations and other factors.

<sup>2</sup> The Company may repurchase shares from employees to cover the exercise price and taxes in connection with employee shared-based compensation.

## ITEM 6. SELECTED FINANCIAL DATA

The selected financial data is set forth within Table 1 of Item 7, “Management’s Discussion and Analysis of Financial Condition and Results of Operations.”

## ITEM 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations

**Table 1 – Consolidated Selected Financial Data**

(Dollars in thousands, except per share data)

	December 31,				
	2019	2018	2017	2016	2015
<b>Selected Financial Data</b>					
For the year:					
Interest revenue	\$ 1,531,958	\$ 1,228,426	\$ 972,751	\$ 829,117	\$ 766,828
Interest expense	419,079	243,559	131,050	81,889	63,474
Net interest revenue	1,112,879	984,867	841,701	747,228	703,354
Provision for credit losses	44,000	8,000	(7,000)	65,000	34,000
Fees and commissions revenue <sup>1</sup>	702,201	643,176	642,169	647,986	615,029
Net income attributable to BOK Financial Corporation shareholders	500,758	445,646	334,644	232,668	288,565
Period-end:					
Loans	21,750,987	21,656,730	17,153,424	16,989,660	15,941,154
Assets	42,172,021	38,020,504	32,272,160	32,772,281	31,476,128
Deposits	27,621,168	25,263,763	22,061,305	22,748,095	21,088,158
Shareholders’ equity	4,855,795	4,432,109	3,495,367	3,274,854	3,230,556
Nonperforming assets <sup>2</sup>	293,762	267,162	290,305	356,641	251,908
<b>Profitability Statistics</b>					
Earnings per share (based on average equivalent shares):					
Basic	\$ 7.03	\$ 6.63	\$ 5.11	\$ 3.53	\$ 4.22
Diluted	7.03	6.63	5.11	3.53	4.21
Percentages (based on daily averages):					
Return on average assets	1.19%	1.28%	1.02%	0.72%	0.94%
Return on average shareholders’ equity	10.73%	11.98%	9.82%	7.02%	8.65%
Average total equity to average assets	11.11%	10.70%	10.43%	10.38%	11.03%
<b>Common Stock Performance</b>					
Per Share:					
Book value per common share	\$ 68.80	\$ 61.45	\$ 53.45	\$ 50.12	\$ 49.03
Market price: December 31 close	87.40	73.33	92.32	83.04	59.79
Market range – High close bid price	92.31	105.24	93.50	84.13	72.44
Market range – Low close bid price	72.23	70.61	74.34	44.72	53.37
Cash dividends declared	2.01	1.90	1.77	1.73	1.69
Dividend payout ratio	28.56%	28.55%	34.45%	48.81%	40.03%

**Table 1 – Consolidated Selected Financial Data**

(Dollars in thousands, except per share data)

	December 31,				
	2019	2018	2017	2016	2015
<b>Selected Financial Data</b>					
<b>Selected Balance Sheet Statistics</b>					
Period-end:					
Common equity Tier 1 ratio	<b>11.39%</b>	10.92%	12.05%	11.21%	12.13%
Tier 1 capital ratio	<b>11.39%</b>	10.92%	12.05%	11.21%	12.13%
Total capital ratio	<b>12.94%</b>	12.50%	13.54%	12.81%	13.30%
Leverage ratio	<b>8.40%</b>	8.96%	9.31%	8.72%	9.25%
Allowance for loan losses to nonaccruing loans <sup>3</sup>	<b>120.54%</b>	132.89%	129.09%	112.33%	180.09%
Allowance for loan losses to loans	<b>0.97%</b>	0.96%	1.34%	1.45%	1.41%
Combined allowances for credit losses to loans <sup>4</sup>	<b>0.98%</b>	0.97%	1.37%	1.52%	1.43%
<b>Miscellaneous (at December 31)</b>					
Number of employees (full-time equivalent)	<b>5,107</b>	5,313	4,930	4,884	4,789
Number of TransFund locations	<b>2,463</b>	2,426	2,223	2,021	1,972
Fiduciary assets	<b>\$52,352,135</b>	\$ 44,841,339	\$ 48,761,477	\$ 42,378,053	\$ 38,333,638
Mortgage loans serviced for others	<b>20,727,106</b>	21,658,335	22,046,632	21,997,568	19,678,226

<sup>1</sup> Non-GAAP measure to net interchange charges for 2015-2017 between transaction card revenue and data processing and communications expense as a result of the revenue recognition standard implemented January 1, 2018. This measure has no effect on net income or earnings per share.

<sup>2</sup> Includes nonaccruing loans, renegotiated loans and assets acquired in satisfaction of loans. Excludes loans past due 90 days or more and still accruing.

<sup>3</sup> Excludes residential mortgage loans guaranteed by agencies of the U.S. government.

<sup>4</sup> Includes allowance for loan losses and accrual for off-balance sheet credit risk.

## Management's Assessment of Operations and Financial Condition

### Overview

The following discussion is management's analysis to assist in the understanding and evaluation of the financial condition and results of operations of BOK Financial Corporation ("BOK Financial" or "the Company"). This discussion should be read in conjunction with the Consolidated Financial Statements and footnotes and selected financial data presented elsewhere in this report.

The U.S. economy completed its 11th year of expansion in 2019. The unemployment rate dropped to historic lows of 3.5% during the year. GDP grew 2.2% and is expected to remain close to 2% in 2020. Inflation also remained low, below 2% for 2019 and is expected to remain close to 2% in 2020. The Federal Reserve decreased the target range for the federal funds rate by 25 basis points three times during the second half of 2019. The 10-year U.S. Treasury note finished the year yielding 1.92% versus 2.69% at December 31, 2018.

## ***Performance Summary***

Net income for the year ended December 31, 2019 totaled \$500.8 million or \$7.03 per diluted share compared with net income of \$445.6 million or \$6.63 per diluted share for the year ended December 31, 2018.

We incurred \$17.2 million of closing and integration costs in 2019 related to the acquisition of CoBiz Financial, Inc. ("CoBiz") on October 1, 2018, which resulted in an \$0.18 per share reduction in 2019. We incurred \$16.6 million of closing and integrations costs in 2018, resulting in an \$0.18 per share reduction. A fee earned through the sale of client assets of \$15.4 million was recognized in Fiduciary and asset management fees in 2018 for a \$0.17 per share addition. The fluctuation discussion in the highlights below exclude the impact of these items.

Highlights of 2019 included:

- Net interest revenue totaled \$1.1 billion for 2019, up from \$984.9 million for 2018. CoBiz added \$158.5 million to net interest revenue in 2019 and \$43.1 million to net interest revenue in 2018. Net interest margin was 3.11% for 2019 compared to 3.20% for 2018. Average earning assets were \$36.4 billion for 2019, up \$5.4 billion over 2018. The increase was largely due to acquired loans and the expansion of the available for sale securities portfolio as we repositioned the balance sheet for a lower rate environment.
- Fees and commissions revenue was \$702.2 million for 2019, an increase of \$74.4 million compared to 2018. Brokerage and trading revenue increased \$51.5 million due to increased trading in residential mortgage-backed securities. Mortgage banking revenue increased \$9.8 million. Lower mortgage interest rates have increased both mortgage loan production and trading activities. Fiduciary and asset management revenue increased \$7.7 million.
- Other operating expense totaled \$1.1 billion, a \$103.6 million increase compared to 2018, including \$84.0 million of costs related to CoBiz operations in 2019 and \$29.7 million in 2018. Excluding CoBiz operating costs, personnel expense increased \$49.3 million, primarily due to an increase in incentive compensation expense combined with annual merit increases. Non-personnel expense remained consistent with 2018.
- Based on an evaluation of all credit factors, including specific impairment of two shared national credit energy loans where the Company is not the lead agent, changes in nonaccruing and potential problem loans and net charge-offs, the Company recorded a \$44.0 million provision for credit losses in 2019. An \$8.0 million provision for credit losses was recorded in 2018. Nonaccruing loans not guaranteed by U.S. government agencies increased \$19 million compared to December 31, 2018. Potential problem loans decreased \$55 million while other loans especially mentioned increased \$28 million. Net charge-offs were \$41 million or 0.19% of average loans for 2019, compared to net charge-offs of \$33 million or 0.18% of average loans for 2018. At December 31, 2019, the combined allowance for credit losses totaled \$212 million or 0.98% of outstanding loans and 1.06%, excluding loans from CoBiz measured at acquisition date fair value.
- Period-end outstanding loan balances were \$21.8 billion at December 31, 2019, a \$94 million increase over the prior year. An increase in commercial loan balances of \$396 million was largely offset by a decrease in commercial real estate loans of \$331 million.
- Period-end deposits totaled \$27.6 billion at December 31, 2019, a \$2.4 billion increase compared to December 31, 2018. Interest-bearing transaction deposits increased \$3.2 billion, while demand deposit balances decreased \$953 million.
- Common equity Tier 1 capital ratio was 11.39% at December 31, 2019. In addition, the Tier 1 capital ratio was 11.39%, total capital ratio was 12.94% and leverage ratio was 8.40% at December 31, 2019. At December 31, 2018, the Tier 1 capital ratio was 10.92%, the total capital ratio was 12.50% and the leverage ratio was 8.96%.
- The Company repurchased 1,572,322 shares at an average price of \$82.35 per share during 2019 and 615,840 shares at an average price of \$86.82 during 2018.
- The Company paid cash dividends of \$2.01 per common share during 2019 and \$1.90 per common share in 2018.

Net income for the fourth quarter of 2019 totaled \$110.4 million or \$1.56 per diluted share, compared to \$108.5 million or \$1.50 per diluted share for the fourth quarter of 2018. The fourth quarter of 2018 earnings per share included a \$0.15 per share reduction as a result of CoBiz closing and integration costs of \$14.5 million. The highlights below exclude this amount.

Highlights of the fourth quarter of 2019 included:

- Net interest revenue totaled \$270.2 million for the fourth quarter of 2019, a decrease of \$15.4 million compared to the fourth quarter of 2018. Net interest margin was 2.88% for the fourth quarter of 2019 and 3.40% for the fourth quarter of 2018. Net interest revenue decreased largely due to three 25 basis point decreases in the federal funds rate by the Federal Reserve during the second half of 2019.
- Fees and commissions revenue totaled \$179.4 million, up \$19.3 million over the fourth quarter of 2018. Brokerage and trading revenue increased \$15.7 million and mortgage banking revenue increased \$3.5 million, both largely affected by lower mortgage interest rates.
- Operating expenses in the fourth quarter totaled \$288.8 million, an \$18.7 million increase compared to the prior year. Personnel expense increased \$13.4 million primarily due to higher incentive compensation expense. Non-personnel expenses increased \$5.3 million, largely due to increased data processing and communications expense and mortgage banking costs.
- Based on an evaluation of all credit factors, the Company recorded a \$19 million provision for credit losses in the fourth quarter of 2019 and a \$9 million provision for credit losses in the fourth quarter of 2018.

## Critical Accounting Policies & Estimates

The Consolidated Financial Statements and accompanying notes are prepared in accordance with generally accepted accounting principles in the United States of America (“GAAP”). The Company’s accounting policies are more fully described in Note 1 of the Consolidated Financial Statements. Management makes significant assumptions and estimates in the preparation of the Consolidated Financial Statements and accompanying notes in conformity with GAAP that may be highly subjective, complex and subject to variability. Actual results could differ significantly from these assumptions and estimates. The following discussion addresses the most critical areas where these assumptions and estimates could affect the financial condition, results of operations and cash flows of the Company. These critical accounting policies and estimates have been discussed with the appropriate committees of the Board of Directors.

### *Allowance for Loan Losses and Accrual for Off-Balance Sheet Credit Risk*

The appropriateness of the allowance for loan losses and accrual for off-balance sheet credit risk is assessed quarterly by management based on an ongoing evaluation of the probable estimated losses inherent in the loan portfolio and probable estimated losses on unused commitments to provide financing. A consistent, well-documented methodology has been developed and is applied by an independent Credit Administration department to ensure consistency across the Company. The allowance for loan losses consists of specific allowances attributed to certain impaired loans that have not yet been charged down to amounts we expect to recover, general allowances for unimpaired loans that are based on estimated loss rates by loan class and nonspecific allowances for risks beyond factors specific to a particular portfolio segment or loan class. There were no material changes in the approach or techniques utilized in developing the allowance for loan losses and accrual for off-balance sheet credit risk during 2019.

Loans are considered impaired when it is probable that we will not collect all amounts due according to the contractual terms of the loan agreements, including loans modified in a troubled debt restructuring. Internally risk graded loans are evaluated individually for impairment. Substantially all commercial and commercial real estate loans and certain residential mortgage and personal loans are risk graded through a quarterly evaluation of the borrower’s ability to repay.

Specific allowances for impaired loans that have not yet been charged down to amounts we expect to recover are measured by an evaluation of estimated future cash flows discounted at the loan’s initial effective interest rate or the fair value of collateral for certain collateral dependent loans. Collateral value of real property is generally based on third party appraisals that conform to Uniform Standards of Professional Appraisal Practice, less estimated selling costs. Appraised values are on an “as-is” basis and generally are not adjusted by the Company. Updated appraisals are obtained at least annually or more frequently if market conditions indicate collateral values may have declined. Collateral value of mineral rights is determined by our internal staff of engineers based on projected cash flows under current market conditions. The value of other collateral is generally determined by our special assets staff based on liquidation cash flows under current market conditions. Collateral values and available cash resources that support impaired loans are evaluated quarterly. Historical statistics may be used as a practical way to estimate impairment in limited situations, such as when a collateral dependent loan is identified as impaired near the end of a reporting period until an updated appraisal of collateral value is received or a full assessment of future cash flows is completed. Estimates of future cash flows and collateral values require significant judgments and may be volatile.

General allowances for unimpaired loans are based on estimated loss rates by loan class. The appropriate historical gross loss rate for each loan class is determined by the greater of the current loss rate based on the most recent twelve months or average gross loss rate over the long-term credit cycle. Recoveries are not directly considered in the estimation of historical loss rates. Recoveries generally do not follow predictable patterns and are not received until well-after the charge-off date as a result of protracted legal proceedings. For risk graded loans, historical loss rates are adjusted for changes in risk rating. For each loan class, the weighted average current risk grade is compared to the weighted average long-term risk grade. This comparison determines whether the risk in each loan class is increasing or decreasing. Historical loss rates are adjusted upward or downward in proportion to changes in weighted average risk grading. General allowances for unimpaired loans also consider inherent risks identified for a given loan class. Inherent risks include consideration of the loss rates that most appropriately represent the current credit cycle and other factors attributable to a specific loan class which have not yet been represented in the historical gross loss rates or risk grading. Examples of these factors include changes in commodity prices or engineering imprecision, which may affect the value of reserves that secure our energy loan portfolio, construction risk that may affect commercial real estate loans, changes in regulations and public policy that may disproportionately impact health care loans and changes in loan product types.

Nonspecific allowances are maintained for risks beyond factors specific to a particular portfolio segment or loan class. These factors include trends in the economy in our primary lending areas, concentrations in loans with large balances and other relevant factors.

## *Fair Value Measurement*

Certain assets and liabilities are recorded at fair value in the Consolidated Financial Statements. Fair value is defined by applicable accounting guidance as the price to sell an asset or transfer a liability in an orderly transaction between market participants in the principal markets for the given asset or liability at the measurement date based on market conditions at that date. An orderly transaction assumes exposure to the market for a customary period for marketing activities prior to the measurement date and not a forced liquidation or distressed sale.

A hierarchy for fair value has been established that prioritizes the inputs of valuation techniques used to measure fair value into three broad categories: unadjusted quoted prices in active markets for identical assets or liabilities (Level 1), other observable inputs that can be observed either directly or indirectly (Level 2) and unobservable inputs for assets or liabilities (Level 3). Fair value may be recorded for certain assets and liabilities every reporting period on a recurring basis or under certain circumstances on a non-recurring basis. Fair value measurements of significant assets or liabilities that are based on unobservable inputs (Level 3) are considered Critical Accounting Policies and Estimates. Additional discussion of fair value measurement and disclosure is included in Notes 7 and 19 of the Consolidated Financial Statements.

### *Mortgage Servicing Rights*

We have a significant investment in mortgage servicing rights. Our mortgage servicing rights are primarily retained from sales in the secondary market of residential mortgage loans we have originated or purchased from correspondent lenders. Occasionally, mortgage servicing rights may be purchased from other lenders. Both originated and purchased mortgage servicing rights are initially recognized at fair value. We carry all mortgage servicing rights at fair value. Changes in fair value are recognized in earnings as they occur.

Mortgage servicing rights are not traded in active markets. The fair value of mortgage servicing rights is determined by discounting the projected cash flows. Certain significant assumptions and estimates used in valuing mortgage servicing rights are based on current market sources including projected prepayment speeds, assumed servicing costs, earnings on escrow deposits, ancillary income and discount rates. Assumptions used to value our mortgage servicing rights are considered significant unobservable inputs and represent our best estimate of assumptions that market participants would use to value this asset. A separate third party model is used to estimate prepayment speeds based on interest rates, housing turnover rates, estimated loan curtailment, anticipated defaults and other relevant factors. The prepayment model is updated periodically for changes in market conditions and adjusted to better correlate with actual performance of our servicing portfolio. The discount rate is based on benchmark rates for mortgage loans plus a market spread expected by investors in servicing rights. Significant assumptions used to determine the fair value of our mortgage servicing rights are presented in Note 7 to the Consolidated Financial Statements. At least annually, we request estimates of fair value from outside sources to corroborate the results of the valuation model.

The assumptions used in this model are primarily based on mortgage interest rates. Evaluation of the effect of a change in one assumption without considering the effect of that change on other assumptions is not meaningful. Considering all related assumptions, we expect a 50 basis point increase in primary mortgage interest rates to increase the fair value of our servicing rights by \$30 million. We expect a \$42 million decrease in the fair value of our mortgage servicing rights from a 50 basis point decrease in primary mortgage interest rates.

### *Valuation of Impaired Loans and Real Estate and Other Repossessed Assets*

The fair value of collateral for certain impaired loans and real estate and other repossessed assets is measured on a non-recurring basis. The fair value of real estate is generally based on unadjusted third-party appraisals derived principally from or corroborated by observable market data. Fair value measurements based on these appraisals are considered to be based on Level 2 inputs. Fair value measurements based on appraisals that are not based on observable inputs or that require significant adjustments by us or fair value measurements that are not based on third-party appraisals are considered to be based on Level 3 inputs. Significant unobservable inputs include listing prices for comparable assets, uncorroborated expert opinions or management's knowledge of the collateral or industry.

The fair value of mineral rights is generally determined by our internal staff of engineers based on projected cash flows from proven oil and gas reserves under existing economic and operating conditions. Proven oil and gas reserves are estimated quantities that geological and engineering data demonstrate, with reasonable certainty, to be recoverable in future years from known reservoirs using existing prices and costs. Projected cash flows incorporate assumptions related to a number of factors including production, sales prices, operating expenses, severance, ad valorem taxes, capital costs and appropriate discount rate. Fair values determined through this process are considered to be based on Level 3 inputs.

### ***Income Taxes***

Determination of income tax expense and related assets and liabilities is complex and requires estimates and judgments when applying tax laws, rules, regulations and interpretations. It also requires judgments as to future earnings and the timing of future events. Accrued income taxes represent an estimate of net amounts due to or from taxing jurisdictions based upon these estimates, interpretations and judgments.

Management evaluates the Company's current tax expense or benefit based upon estimates of taxable income, tax credits and statutory tax rates. Annually, we file tax returns with each jurisdiction where we conduct business and adjust recognized income tax expense or benefit to filed tax returns.

We recognize deferred tax assets and liabilities based upon the differences between the values of assets and liabilities as recognized in the financial statements and their related tax basis using enacted tax rates in effect for the year in which the differences are expected to be recovered or settled. A valuation allowance is provided when it is more likely than not that some portion of the entire deferred tax asset may not be realized.

We also recognize the benefit of uncertain tax positions when based upon all relevant evidence, it is more-likely-than-not that our position would prevail upon examination, including resolution of related appeals or litigation, based upon the technical merits of the position. Unrecognized tax benefits, including estimated interest and penalties, are part of our current accrued income tax liability. Estimated penalties and interest are recognized in income tax expense. Income tax expense in future periods may decrease if an uncertain tax position is favorably resolved, generally upon completion of an examination by the taxing authorities, expiration of a statute of limitations, or changes in facts and circumstances.



## ***Results of Operations***

### **Net Interest Revenue and Net Interest Margin**

Net interest revenue is the interest earned on debt securities, loans and other interest-earning assets less interest paid for interest-bearing deposits and other borrowings. The net interest margin is calculated by dividing tax-equivalent net interest revenue by average interest-earning assets. Net interest spread is the difference between the average rate earned on interest-earning assets and the average rate paid on interest-bearing liabilities. Net interest margin is typically greater than net interest spread due to interest income earned on assets funded by non-interest bearing liabilities such as demand deposits and equity.

Tax-equivalent net interest revenue totaled \$1.1 billion for 2019, up from \$993.8 million for 2018. Tax-equivalent net interest revenue increased \$130.7 million over the prior year. The acquisition of CoBiz in the fourth quarter of 2018 added \$158.5 million to net interest revenue in 2019 and \$43.1 million to net interest revenue in 2018. This includes \$37.8 million of net purchase discount accretion for 2019 and \$6.4 million for 2018. Net interest revenue decreased \$13.7 million due to rates and increased \$144.4 million from growth in earning assets. Table 2 shows the effects on net interest revenue due to changes in average balances and interest rates for the various types of earning assets and interest-bearing liabilities. In addition, see the Annual and Quarterly Financial Summary of consolidated daily average balances, yields and rates following the Consolidated Financial Statements.

Net interest margin was 3.11% for 2019 and 3.20% for 2018. The tax-equivalent yield on earning assets was 4.27% for 2019, up from 3.98% in 2018. Short-term interest rate increases during the first half of the year resulting from four 25 basis point increases in the federal funds rate by the Federal Reserve during 2018 were partially offset by three 25 basis point decreases in the federal funds rate in the second half of 2019. Loan yields increased 33 basis points to 5.13%. The available for sale securities portfolio yield increased 23 basis points to 2.58%. The yield on interest-bearing cash and cash equivalents increased 48 basis points to 2.28%. The yield on trading securities fell 29 basis points to 3.55%.

Funding costs increased 42 basis points over 2018. The cost of interest-bearing deposits increased 39 basis points. The cost of other short-term borrowings increased 35 basis points. The benefit to net interest margin from earning assets funded by non-interest bearing liabilities was 45 basis points for 2019, up from 41 basis points for 2018.

Average earning assets for 2019 increased \$5.4 billion or 18% over 2018, largely due to acquired loans combined with the expansion of the available for sale securities portfolio. Average loans, net of allowance for loan losses, increased \$3.4 billion. The average balance of available for sale securities, which consists largely of residential and commercial mortgage-backed securities guaranteed by U.S. government agencies, increased \$1.8 billion. We purchase securities to supplement earnings and to manage interest rate risk. We have increased the size of our bond portfolio during the second half of 2019 in order to reduce our exposure to falling short-term interest rates. Fair value option securities, which we hold as an economic hedge against changes in the fair value of mortgage servicing rights, increased \$682 million. Trading securities balances increased \$242 million. Average interest-bearing cash and cash equivalents decreased \$704 million.

Total average deposits grew by \$2.8 billion over the prior year, largely related to acquired deposits. Average interest-bearing transaction account balances increased \$2.5 billion. Average demand deposit balances increased \$219 million. Average short-term borrowings increased \$2.9 billion over the prior year, primarily from increased borrowings from federal funds purchased and the Federal Home Loan Banks.

Our overall objective is to manage the Company's balance sheet to be relatively neutral to changes in interest rates as is further described in the Market Risk section of this report. As shown in Table 21, approximately 77% of our commercial and commercial real estate loan portfolios are either variable rate loans or fixed rate loans that will re-price within one year. These loans are funded primarily by deposit accounts that are either non-interest bearing, or that re-price more slowly than the loans. The result is a balance sheet that would be asset sensitive, which means that assets generally re-price more quickly than liabilities. Among the strategies that we use to manage toward a relatively rate-neutral position, we purchase fixed rate residential mortgage-backed securities issued primarily by U.S. government agencies and fund them with market rate sensitive liabilities. The liability-sensitive nature of this strategy provides an offset to the asset-sensitive characteristics of our loan portfolio. We also may use derivative instruments to manage our interest rate risk.

The effectiveness of these strategies is reflected in the overall change in net interest revenue due to changes in interest rates as shown in Table 2 and in the interest rate sensitivity projections as shown in the Market Risk section of this report.

#### *Fourth Quarter 2019 Net Interest Revenue*

Tax-equivalent net interest revenue totaled \$273.0 million for the fourth quarter of 2019, a decrease of \$15.8 million compared to the fourth quarter of 2018. CoBiz added \$30.4 million to net interest revenue in the fourth quarter of 2019 and \$43.1 million to net interest revenue in the fourth quarter of 2018. The fourth quarter of 2019 included \$5.8 million of net purchase accounting discount accretion and the fourth quarter of 2018 included \$6.4 million. Net interest revenue decreased \$28.9 million primarily due to three 25 basis point decreases in the federal funds rate by the Federal Reserve during 2019. This was partially offset by an increase of \$13.1 million primarily due to the growth in average available for sale securities, fair value option securities, and loan balances.

Net interest margin was 2.88% for the fourth quarter of 2019 compared to 3.40% for the fourth quarter of 2018. The tax-equivalent yield on earning assets was 3.93% for the fourth quarter of 2019, a decrease of 40 basis points compared to the fourth quarter of 2018. Loan yields decreased 34 basis points to 4.75%, primarily due to federal funds rate cuts in 2019. Yield on trading securities decreased 91 basis points to 3.19% and the yield on fair value option securities decreased 94 basis points to 2.62%.

Funding costs decreased 2 basis points compared to the fourth quarter of 2018. The cost of interest-bearing deposits increased 22 basis points over the fourth quarter of 2018. The cost of other short-term borrowings decreased 50 basis points. The benefit to net interest margin from earning assets funded by non-interest bearing liabilities was 35 basis points in the fourth quarter of 2019, down from 49 basis points in the fourth quarter of 2018, primarily due to a decrease in demand deposits and an increase in receivables from our trading activity.

Average earning assets for the fourth quarter of 2019 increased \$4.4 billion over the fourth quarter of 2018. Available for sale securities increased \$2.6 billion as the balance sheet is repositioned for the current rate environment. Fair value option securities held as an economic hedge of our mortgage servicing rights increased \$1.2 billion. Average loans, net of allowance for loan losses, increased \$661 million.

Average deposits increased \$2.0 billion over the fourth quarter of 2018. Average interest-bearing transaction accounts increased \$2.9 billion, partially offset by a decrease in average demand deposit balances of \$1.0 billion. Average short-term borrowings increased \$2.8 billion.

#### *2018 Net Interest Revenue*

Tax-equivalent net interest revenue for 2018 was \$993.8 million, up from \$858.9 million for 2017. The acquisition of CoBiz in the fourth quarter of 2018 added \$43.1 million to net interest revenue, including \$6.4 million of net purchase accounting discount accretion. Net interest revenue increased \$55.5 million due to rates and \$79.4 million from growth in earning assets. The benefit of an increase in short-term interest rates during 2018 on the loan portfolio and interest-bearing cash and cash equivalents yields was partially offset by higher borrowing costs.

Net interest margin was 3.20% for 2018 compared to 2.92% for 2017. The tax-equivalent yield on average earning assets increased 62 basis points over 2017, primarily due to increases in short-term interest rates resulting from four 25 basis point increases in federal funds rate during the year. Loan yields increased 67 basis points. The yield on interest-bearing cash and cash equivalents increased 70 basis points. The available for sale securities portfolio yield increased 22 basis points. The cost of interest-bearing liabilities increased 52 basis points. The cost of interest-bearing deposits increased 30 basis points and the cost of other short-term borrowings increased 86 basis points. The benefit to net interest margin from earning assets funded by non-interest bearing liabilities was 41 basis points for 2018, compared to 23 basis points for 2017, primarily due to interest rate increases during 2018.

Average earning assets increased \$1.4 billion or 5% over 2017 with \$950 million due to CoBiz. Average loans, net of allowance for loan losses, increased \$1.6 billion led by growth in commercial and commercial real estate loans. Trading securities balances increased \$1.0 billion, primarily related to expanded U.S. mortgage-backed securities trading activity. The average balance of available for sale securities decreased \$144 million. Total average deposits grew by \$624 million over 2017, including \$859 million from the CoBiz acquisition. Excluding acquired deposits, average demand deposit account balances decreased \$131 million, average interest-bearing transaction deposits decreased \$62 million and average time deposit balances decreased \$81 million. Borrowings from the Federal Home Loan Banks increased \$325 million and funds purchased and repurchase agreements increased \$392 million compared to 2017.

**Table 2 – Volume/Rate Analysis**

(In thousands)

	Year Ended December 31, 2019 / 2018			Year Ended December 31, 2018 / 2017		
	Change Due To <sup>1</sup>			Change Due To <sup>1</sup>		
	Change	Volume	Yield / Rate	Change	Volume	Yield / Rate
Tax-equivalent interest revenue:						
Interest-bearing cash and cash equivalents	\$ (10,119)	\$ (14,371)	\$ 4,252	\$ 205	\$ (11,155)	\$ 11,360
Trading securities	4,012	8,666	(4,654)	40,311	37,008	3,303
Investment securities	(1,431)	(2,597)	1,166	(2,944)	(2,504)	(440)
Available for sale securities	56,629	35,720	20,909	19,404	581	18,823
Fair value option securities	17,731	19,592	(1,861)	(1,550)	(3,541)	1,991
Restricted equity securities	5,305	5,696	(391)	3,065	1,880	1,185
Residential mortgage loans held for sale	(1,018)	(535)	(483)	(583)	(1,645)	1,062
Loans	235,141	168,241	66,900	189,518	68,882	120,636
Total tax-equivalent interest revenue	306,250	220,412	85,838	247,426	89,506	157,920
Interest expense:						
Transaction deposits	66,995	20,057	46,938	37,232	1,748	35,484
Savings deposits	238	66	172	80	35	45
Time deposits	12,788	1,302	11,486	4,402	(769)	5,171
Funds purchased and repurchase agreements	43,796	28,392	15,404	8,351	2,369	5,982
Other borrowings	46,417	20,787	25,630	60,856	5,023	55,833
Subordinated debentures	5,286	5,398	(112)	1,588	1,665	(77)
Total interest expense	175,520	76,002	99,518	112,509	10,071	102,438
Tax-equivalent net interest revenue	130,730	144,410	(13,680)	134,917	79,435	55,482
Change in tax-equivalent adjustment	2,718			(8,249)		
<b>Net interest revenue</b>	<b>\$ 128,012</b>			<b>\$ 143,166</b>		

<sup>1</sup> Changes attributable to both volume and yield/rate are allocated to both volume and yield/rate on an equal basis.

**Table 2 – Volume/Rate Analysis (continued)**  
(In thousands)

	Three Months Ended		
	December 31, 2019 / 2018		
	Change	Change Due To <sup>1</sup>	
Volume		Yield / Rate	
Tax-equivalent interest revenue:			
Interest-bearing cash and cash equivalents	\$ (835)	\$ 44	\$ (879)
Trading securities	(6,621)	(2,589)	(4,032)
Investment securities	(387)	(626)	239
Available for sale securities	14,607	14,433	174
Fair value option securities	6,910	8,988	(2,078)
Restricted equity securities	643	1,494	(851)
Residential mortgage loans held for sale	2	219	(217)
Loans	(10,396)	8,261	(18,657)
Total tax-equivalent interest revenue	3,923	30,224	(26,301)
Interest expense:			
Transaction deposits	13,554	6,560	6,994
Savings deposits	6	7	(1)
Time deposits	2,661	444	2,217
Funds purchased and repurchase agreements	12,077	10,731	1,346
Other borrowings	(8,599)	(652)	(7,947)
Subordinated debentures	2	(9)	11
Total interest expense	19,701	17,081	2,620
Tax-equivalent net interest revenue	(15,778)	13,143	(28,921)
Change in tax-equivalent adjustment	(341)		
Net interest revenue	\$ (15,437)		

<sup>1</sup> Changes attributable to both volume and yield/rate are allocated to both volume and yield/rate on an equal basis.

## Other Operating Revenue

Other operating revenue was \$694.4 million for 2019, an increase of \$77.6 million or 13% over 2018 driven by growth in brokerage and trading revenue and mortgage banking revenue.

A \$15.4 million fee earned through the sale of client assets was recognized as fiduciary and asset management revenue in 2018. This fee is excluded from the fluctuation discussion below.

**Table 3 – Other Operating Revenue**

(In thousands)

	Year Ended December 31,				
	2019	2018	2017	2016	2015
Brokerage and trading revenue	\$ 159,826	\$ 108,323	\$ 131,601	\$ 138,377	\$ 129,556
Transaction card revenue <sup>1</sup>	87,216	84,025	81,143	78,347	73,650
Fiduciary and asset management revenue	177,025	184,703	162,889	135,387	126,034
Deposit service charges and fees	112,485	112,153	112,079	111,589	109,592
Mortgage banking revenue	107,541	97,787	104,719	133,914	126,002
Other revenue	58,108	56,185	49,738	50,372	50,195
Total fees and commissions revenue	702,201	643,176	642,169	647,986	615,029
Other gains (losses), net	9,351	(2,265)	11,434	4,687	5,390
Gain (loss) on derivatives, net	14,951	(422)	779	(15,685)	430
Gain (loss) on fair value option securities, net	15,787	(25,572)	(2,733)	(10,555)	(3,684)
Change in fair value of mortgage servicing rights	(53,517)	4,668	172	(2,193)	(4,853)
Gain (loss) on available for sale securities, net	5,597	(2,801)	4,428	11,675	12,058
Total other-than-temporary impairment	—	—	—	—	(2,443)
Portion of loss recognized in (reclassified from) other comprehensive income	—	—	—	—	624
Net impairment losses recognized in earnings	—	—	—	—	(1,819)
Total other operating revenue	\$ 694,370	\$ 616,784	\$ 656,249	\$ 635,915	\$ 622,551
<b>Non-GAAP Reconciliation:<sup>1</sup></b>					
Transaction card revenue on income statement	87,216	84,025	119,988	116,452	109,579
Netting adjustment	—	—	(38,845)	(38,105)	(35,929)
Transaction card revenue after netting adjustment	87,216	84,025	81,143	78,347	73,650

<sup>1</sup> Non-GAAP measure to net interchange charges for 2015-2017 between transaction card revenue and data processing and communications expense as a result of the revenue recognition standard implemented January 1, 2018. This measure has no effect on net income or earnings per share.

### *Fees and commissions revenue*

Diversified sources of fees and commissions revenue are a significant part of our business strategy and represented 39% of total revenue for 2019, excluding provision for credit losses and gains and losses on asset sales, securities and derivatives and the change in the fair value of mortgage servicing rights. We believe that a variety of fee revenue sources provides an offset to changes in interest rates, values in the equity markets, commodity prices and consumer spending, all of which can be volatile. As an example of this strength, many of the economic factors such as rising interest rates resulting in growth in net interest revenue or fiduciary and asset management revenue, may also decrease mortgage banking production volumes. We expect growth in other operating revenue to come through offering new products and services and by further development of our presence in other markets. However, current and future economic conditions, regulatory constraints, increased competition and saturation in our existing markets could affect the rate of future increases.

Brokerage and trading revenue, which includes revenues from trading, customer hedging, retail broker and investment banking, increased \$51.5 million or 48% over the prior year.

Trading revenue includes net realized and unrealized gains and losses primarily related to sales of residential mortgage-backed securities guaranteed by U.S. government agencies and related derivative instruments that enable our mortgage-banking customers to manage their production risk. Trading revenue also includes net realized and unrealized gains and losses on municipal securities, asset-backed securities and other financial instruments that we sell to institutional customers, along with changes in the fair value of financial instruments we hold as economic hedges against market risk of our trading securities. Trading revenue was \$88.6 million for 2019, an increase of \$60.5 million over 2018. Lower mortgage interest rates during 2019 increased customer mortgage-backed trading activities. In addition, trading revenue growth reflected a shift in the mix of our to-be-announced residential mortgage backed securities contracts from our customer hedging program to our trading program.

Customer hedging revenue is based primarily on realized and unrealized changes in the fair value of derivative contracts held for customer risk management programs. As more fully discussed under Customer Derivative Programs in Note 3 of the Consolidated Financial Statements, we offer commodity, interest rate, foreign exchange and equity derivatives to our customers. Derivative contracts executed with customers are offset with contracts between selected counterparties and exchanges to minimize market risk from changes in commodity prices, interest rates or foreign exchange rates. Customer hedging revenue totaled \$18.9 million for 2019, a decrease of \$19.9 million or 51% compared to 2018.

Revenue earned from retail brokerage transactions totaled \$16.1 million for 2019, a decrease of \$1.8 million or 10% compared to the prior year. Retail brokerage revenue is primarily based on fees and commissions earned on sales of fixed income securities, annuities, mutual funds and other financial instruments to retail customers. Revenue is primarily based on the volume of customer transactions and applicable commission rate for each type of product.

Insurance brokerage fees were \$13.9 million for 2019, an increase of \$9.7 million compared to the prior year due to a full year of operations with the addition of CoBiz in October, 2018.

Investment banking, which includes fees earned upon completion of underwriting, financial advisory services and loan syndication fees, totaled \$22.3 million for 2019, an increase of \$3.1 million or 16% compared to 2018, related to the timing and volume of completed transactions.

Transaction card revenue depends largely on the volume and amount of transactions processed, the number of TransFund automated teller machine ("ATM") locations and the number of merchants served. Transaction card revenue totaled \$87.2 million for 2019, a \$3.2 million or 4% increase over 2018. Revenues from the processing of transactions on behalf of the members of our TransFund electronic funds transfer ("EFT") network totaled \$77.3 million, up \$1.1 million or 1% over 2018. The number of TransFund ATM locations totaled 2,463 at December 31, 2019 compared to 2,426 at December 31, 2018. Merchant services fees paid by customers for account management and electronic processing of card transactions totaled \$8.8 million, an increase of \$982 thousand over the prior year.

Fiduciary and asset management revenue is earned through managing or holding of assets for customers and executing transactions or providing related services. Approximately 90% of fiduciary and asset management revenue is primarily based on the fair value of assets. Rates applied to those asset values vary based on the nature of the relationship. Fiduciary and managed asset relationships generally have a higher fee rate than non-fiduciary and/or managed relationships.

Fiduciary and asset management revenue grew \$7.7 million or 5% over 2018 primarily due to growth in managed fiduciary assets.

A distribution of assets under management or administration and related fiduciary and asset management revenue follows:

**Table 4 -- Assets Under Management or Administration**

	Year Ended December 31,					
	2019			2018		
	Balance	Revenue <sup>1</sup>	Margin <sup>2</sup>	Balance	Revenue <sup>1</sup>	Margin <sup>2</sup>
Managed fiduciary assets:						
Personal	\$ 10,441,048	\$ 97,527	0.93%	\$ 8,115,503	\$ 92,633	1.14%
Institutional	13,512,904	25,603	0.19%	13,119,497	22,488	0.17%
Total managed fiduciary assets	23,953,952	123,130	0.51%	21,235,000	115,121	0.54%
Non-managed assets:						
Fiduciary	28,398,183	52,480	0.18%	23,606,339	67,460	0.22% <sup>3</sup>
Non-fiduciary	14,250,586	1,415	0.01%	15,964,854	2,122	0.01%
Safekeeping and brokerage assets under administration	16,138,240	—	—%	15,473,584	—	—%
Total non-managed assets	58,787,009	53,895	0.09%	55,044,777	69,582	0.10%
Total assets under management or administration	\$ 82,740,961	\$ 177,025	0.21%	\$ 76,279,777	\$ 184,703	0.22% <sup>3</sup>

<sup>1</sup> Fiduciary and asset management revenue includes asset-based and other fees associated with the assets.

<sup>2</sup> Revenue divided by period-end balance.

<sup>3</sup> Margin excludes \$15.4 million fee earned through client asset management.

A summary of changes in assets under management or administration for the year ended December 31, 2019 and 2018 follows:

**Table 5 -- Changes in Assets Under Management or Administration**

	Year Ended December 31,	
	2019	2018
Beginning balance	\$ 76,279,777	\$ 81,827,797
Net inflows (outflows)	(257,531)	(6,812,199)
Change in assets from acquisitions	—	998,705
Net change in fair value	6,718,715	265,474
Ending balance	\$ 82,740,961	\$ 76,279,777

Mortgage banking revenue totaled \$107.5 million for 2019, a \$9.8 million or 10% increase compared to 2018. Mortgage production revenue increased \$11.0 million. Production volume is up \$446 million as average primary interest rates decreased 60 basis points compared to 2018. Gain on sale margin also increased 19 basis points to 1.44%. In 2019, we exited our lower margin online lead purchasing business to focus on our core competency of developing complete, long-term relationships with our clients. In addition, the lower mortgage interest rates in 2019 led to an increase in supply of mortgage applications, which further expanded margins. Mortgage servicing revenue was \$64.8 million, relatively consistent with the prior year. The outstanding principal balance of mortgage loans serviced for others totaled \$20.7 billion at December 31, 2019, a \$931 million decrease compared to December 31, 2018.

**Table 6 – Mortgage Banking Revenue**

(In thousands)

	Year Ended December 31,				
	2019	2018	2017	2016	2015
Mortgage production revenue	\$ 42,720	\$ 31,690	\$ 38,498	\$ 69,628	\$ 69,587
Mortgage loans funded for sale	\$ 2,973,291	\$ 2,587,297	\$ 3,286,873	\$ 6,117,417	\$ 6,372,956
Add: Current year end outstanding commitments	158,460	160,848	222,919	318,359	601,147
Less: Prior year end outstanding commitments	160,848	222,919	318,359	601,147	627,505
Total mortgage production volume	2,970,903	2,525,226	3,191,433	5,834,629	6,346,598
Gain on sale margin	1.44%	1.25%	1.21%	1.19%	1.10%
Mortgage loan refinances to mortgage loans funded for sale	44%	28%	40%	51%	42%
Primary mortgage interest rates:					
Average	3.94%	4.54%	3.99%	3.65%	3.85%
Period end	3.74%	4.55%	3.99%	4.32%	3.96%
Mortgage servicing revenue	\$ 64,821	\$ 66,097	\$ 66,221	\$ 64,286	\$ 56,415
Average outstanding principal balance of mortgage loans serviced for others	21,257,462	21,891,749	22,055,002	20,837,897	17,920,557
Average mortgage servicing fee rates	0.30%	0.30%	0.30%	0.31%	0.31%

Primary rates disclosed in Table 6 above represent rates generally available to borrowers on 30 year conforming mortgage loans.

*Net gains on securities, derivatives and other assets*

As discussed in the Market Risk section following, the fair value of our mortgage servicing rights ("MSRs") changes in response to changes in primary mortgage loan rates and other assumptions. We attempt to mitigate the earnings volatility caused by changes in the fair value of MSRs by designating certain financial instruments as an economic hedge. Changes in the fair value of these instruments are generally expected to partially offset changes in the fair value of MSRs.

The net economic cost of the changes in fair value of mortgage servicing rights and related economic hedges was \$17.9 million in 2019, including a \$53.5 million decrease in the fair value of mortgage servicing rights, offset by a \$30.4 million increase in the fair value of securities and derivative contracts held as an economic hedge and \$5.2 million of related net interest revenue.

The net economic cost of changes in the fair value of mortgage servicing rights and related economic hedges was \$15.6 million in 2018. The fair value of mortgage servicing rights increased \$4.7 million. The fair value of securities and interest rate derivative contracts held as an economic hedge decreased \$25.0 million. Net interest earned on securities held as an economic hedge was \$4.8 million.



**Table 7 – Gain (Loss) on Mortgage Servicing Rights, Net of Economic Hedge**  
(In thousands)

	Year Ended December 31,				
	2019	2018	2017	2016	2015
Gain (loss) on mortgage hedge derivative contracts, net	\$ 14,589	\$ 551	\$ 681	\$ (15,696)	\$ 634
Gain (loss) on fair value option securities, net	15,787	(25,572)	(2,733)	(10,555)	(3,684)
Gain (loss) on economic hedge of mortgage servicing rights	30,376	(25,021)	(2,052)	(26,251)	(3,050)
Gain (loss) on change in fair value of mortgage servicing rights	(53,517)	4,668	172	(2,193)	(4,853)
Gain (loss) on changes in fair value of mortgage servicing rights, net of economic hedges included in other operating revenue	(23,141)	(20,353)	(1,880)	(28,444)	(7,903)
Net interest revenue on fair value option securities <sup>1</sup>	5,214	4,798	8,435	4,356	8,001
Total economic benefit (cost) of changes in the fair value of mortgage servicing rights, net of economic hedges	\$ (17,927)	\$ (15,555)	\$ 6,555	\$ (24,088)	\$ 98

<sup>1</sup> Actual interest earned on fair value option securities less internal transfer-priced cost of funds.

#### *Fourth Quarter 2019 Other Operating Revenue*

Other operating revenue was \$178.6 million for the fourth quarter of 2019, an increase of \$42.1 million compared to the fourth quarter of 2018.

A decrease in mortgage interest rates in 2019 increased mortgage banking revenue and related trading activity. Brokerage and trading revenue was \$43.8 million for the fourth quarter of 2019, an increase of \$15.7 million. Mortgage banking revenue was \$25.4 million for the fourth quarter of 2019, an increase of \$3.5 million. Mortgage loan production volumes were \$635 million for the fourth quarter of 2019, compared to \$460 million in the fourth quarter of 2018.

The fourth quarter of 2019 included a \$3.7 million decrease in the fair value of mortgage servicing rights, net of economic hedges, while the fourth quarter of 2018 included a \$12.4 million decrease.

Other gains and losses, net, increased \$6.7 million primarily due to changes in the fair value of assets related to the deferred compensation plan and equity securities not held for trading purposes.

#### *2018 Other Operating Revenue*

Other operating revenue totaled \$616.8 million for 2018, a decrease of \$39.5 million or 6% compared to 2017. The change in the fair value of mortgage servicing rights, net of economic hedges, decreased operating revenue in 2018 by \$20.4 million compared to a decrease in operating revenue of \$1.9 million in 2017 as a result of mortgage rate volatility in 2018.

Brokerage and trading revenue for 2018 decreased \$23.3 million compared to 2017. During 2018, we significantly expanded our U.S. government residential mortgage-backed securities trading activities. Net interest revenue on our trading portfolio grew \$37.0 million. However, trading revenue decreased \$15.5 million in 2018, primarily due to an \$18.3 million increase in hedging costs. Customer hedging revenue decreased \$5.3 million compared to 2017. The volume of derivative contracts sold to our mortgage banking customers used to hedge their pipelines of mortgage loan originations decreased as average mortgage rates rose during 2018.

Transaction card revenue grew by \$2.9 million over 2017 primarily due to growth in transaction volumes. Fiduciary and asset management fees increased \$6.4 million primarily due to growth in managed fiduciary assets.

Mortgage banking revenue decreased by \$6.9 million compared 2017 mainly due to a decrease in production volume as average primary interest rates climbed 56 basis points.

## Other Operating Expense

Other operating expense for 2019 totaled \$1.1 billion, a \$104.2 million or 10% increase over the prior year. CoBiz added \$17.2 million in closing and integration costs during 2019 and \$16.6 million in 2018. Operations related to CoBiz added \$84.0 million to other operating expense in 2019 and \$29.7 million in 2018. Excluding those costs, operating expense increased \$49.3 million, mostly related to incentive compensation. The fluctuation discussion below excludes closing and integration costs.

**Table 8 – Other Operating Expense**  
(In thousands)

	Year Ended December 31,				
	2019	2018	2017	2016	2015
Regular compensation	\$ 395,902	\$ 358,280	\$ 333,226	\$ 332,740	\$ 313,403
Incentive compensation:					
Cash-based compensation	144,526	132,593	127,964	128,077	114,305
Share-based compensation	15,544	4,229	23,602	10,464	12,358
Deferred compensation	8,711	(1,076)	4,091	1,687	361
Total incentive compensation	168,781	135,746	155,657	140,228	127,024
Employee benefits	95,882	89,105	84,525	80,151	74,871
Total personnel expense	660,565	583,131	573,408	553,119	515,298
Business promotion	35,662	30,523	28,877	26,582	27,851
Charitable contributions to BOKF Foundation	3,000	2,846	2,000	2,000	796
Professional fees and services	54,861	59,099	51,067	56,783	40,123
Net occupancy and equipment	110,275	97,981	86,477	80,024	76,016
Insurance	20,906	23,318	19,653	32,489	20,375
Data processing & communications <sup>1</sup>	124,983	114,796	108,125	93,736	86,454
Printing, postage and supplies	16,517	17,169	15,689	15,584	13,498
Net losses & operating expenses of repossessed assets	6,707	17,052	9,687	3,359	1,446
Amortization of intangible assets	20,618	9,620	6,779	6,862	4,359
Mortgage banking costs	50,685	46,298	52,856	61,387	38,813
Other expense	27,602	26,333	32,054	47,560	35,233
Total other operating expense	\$ 1,132,381	\$ 1,028,166	\$ 986,672	\$ 979,485	\$ 860,262
Average number of employees (full-time equivalent)	5,155	4,993	4,900	4,872	4,797
<b>Non-GAAP Reconciliation:<sup>1</sup></b>					
Data processing and communications expense on income statement	124,983	114,796	146,970	131,841	122,383
Netting adjustment	—	—	(38,845)	(38,105)	(35,929)
Data processing and communications expense after netting adjustment	124,983	114,796	108,125	93,736	86,454

<sup>1</sup> Non-GAAP measure to net interchange charges for 2015-2017 between transaction card revenue and data processing and communications expense as a result of the revenue recognition standard implemented January 1, 2018. This measure has no effect on net income or earnings per share.

### Personnel expense

Personnel expense increased \$80.3 million in 2019. Regular compensation expense, which consists of salaries and wages, overtime pay and temporary personnel costs, increased \$36.0 million or 10% over 2018. CoBiz employees added \$33.9 million in 2019 and \$13.5 million in 2018. The remaining increase is primarily due to standard annual merit increases, which were effective for the majority of our staff on March 1. The average number of employees increased with the addition of CoBiz employees.

Incentive compensation increased \$37.6 million or 29% compared to 2018. The addition of CoBiz employees added \$8.4 million to incentive compensation in 2019 and \$2.9 million in 2018. Cash-based incentive compensation plans, which are either intended to provide current rewards to employees who generate long-term business opportunities for the Company based on growth in loans, deposits, customer relationships and other measurable metrics or intended to compensate employees with commissions on completed transactions, grew \$16.5 million over 2018.

Share-based compensation expense represents expense for equity awards based on the grant-date fair value. Non-vested shares generally cliff vest in 3 years and are subject to a two year holding period after vesting. The number of shares that will ultimately vest is determined by BOKF's change in earnings per share relative to a defined group of peer banks. Share-based compensation expense for equity awards increased \$11.3 million compared to 2018, primarily due to an increase in the vesting probability of certain performance-based share awards.

The Company currently offers a deferred compensation plan for certain executive and senior officers. Deferred compensation expense increased \$9.8 million compared to the prior year. Deferred compensation expense is largely offset by changes in the fair value of assets held in rabbi trusts for the benefit of participants, which is included in other gains (losses), net in the Consolidated Statements of Earnings.

#### *Non-personnel operating expense*

Non-personnel expense increased \$23.3 million or 5% over the prior year.

Intangible asset amortization increased \$11.0 million due to the addition of CoBiz. Occupancy and equipment expense increased \$8.4 million or 9%, primarily related to CoBiz operations. Data processing and communications expense increased \$8.5 million or 7% primarily due to technology project costs. Mortgage banking expense increased \$4.4 million or 9%, primarily due to an increase in prepayments.

Net losses and operating expenses of repossessed assets decreased \$10.3 million over the prior year mainly due to write-downs on a set of oil and gas properties and a healthcare property in 2018. Insurance expense decreased \$2.6 million or 11%, largely due to the elimination of a large bank deposit insurance surcharge assessed by the FDIC in the fourth quarter of 2018.

#### *Fourth Quarter 2019 Operating Expenses*

Other operating expense for the fourth quarter of 2019 totaled \$288.8 million, an increase of \$4.2 million compared to the fourth quarter of 2018. The fourth quarter of 2018 included \$14.5 million of CoBiz closing and acquisition costs. The discussion following excludes these costs.

Personnel expense increased \$13.4 million over the fourth quarter of 2018, primarily due to an increase in incentive compensation of \$17.6 million. Share-based compensation expense increased \$5.6 million mainly due to changes in vesting assumptions related to the Company's earnings per share growth relative to a defined peer group. Deferred compensation expense increased \$6.1 million, which is largely offset by changes in the fair value of assets held in rabbi trusts for the benefit of participants. Cash based incentive compensation increased \$5.9 million due to increased sales activity. These increases were partially offset by a decrease in employee benefit costs of \$3.6 million, primarily related to a reduction in employee insurance costs.

Non-personnel expense increased \$5.3 million compared to the fourth quarter of 2018, largely due to increases in data processing and communications expense and mortgage banking costs.

#### *2018 Operating Expenses*

Other operating expense totaled \$1.0 billion for 2018, a \$41.5 million or 4% increase over 2017. Closing and integration costs were \$16.6 million and operating expenses related to CoBiz were \$29.7 million in 2018.

Personnel expense increased \$4.0 million in 2018. A \$24.9 million increase in regular compensation expense largely as a result of the addition of Cobiz employees in the fourth quarter was partially offset by a \$24.6 million decrease in incentive compensation due to changes in vesting assumptions.

Non-personnel expense increased \$20.9 million or 5% over 2017. Occupancy and equipment expense increased \$11.4 million, primarily related to the addition of CoBiz operating expenses and the new Oklahoma City office. Data processing and communications expense increased \$6.3 million due to technology project costs. Insurance expense increased \$3.7 million. The Company received \$5.1 million in credits during 2017 related to the revision of certain inputs to the assessment calculation filed for years 2013 through 2016. Net losses and operating expenses of repossessed assets increased \$7.4 million mainly due to write-downs on a set of oil and gas properties and a healthcare property.

Mortgage banking expense decreased \$6.6 million, largely due to a reduction in accruals related to default servicing and loss mitigation costs on loans serviced for others. Other expense decreased \$5.7 million primarily due to reductions in litigation expenses and expenses related to merchant banking investments that were sold in 2017.

## **Income Taxes**

Income tax expense was \$130.2 million or 20.6% of net income before taxes for 2019, \$119.1 million or 21.1% of net income before taxes for 2018 and \$182.6 million or 35.2% of net income before taxes for 2017.

In 2018, we completed our accounting for uncertainties that resulted from the Tax Reform Act. Resolution of these uncertainties decreased 2018 tax expense by \$1.7 million. Excluding these adjustments, the 2018 effective tax rate would have been 21.4%.

Net deferred tax liabilities totaled \$26 million at December 31, 2019 compared to net deferred tax assets of \$35 million at December 31, 2018. We have evaluated the recoverability of our deferred tax assets based on the generation of future taxable income during the periods in which those temporary differences become deductible and determined that no valuation allowance was required in 2019 and 2018.

Income tax expense was \$30.3 million or 21.5% of net income before taxes for the fourth quarter of 2019 compared to \$20.1 million or 15.7% of net income before taxes for the fourth quarter of 2018.

**Table 9 – Selected Quarterly Financial Data (Unaudited)**  
(In thousands, except per share data)

	2019			
	First	Second	Third	Fourth
Interest revenue	\$ 376,074	\$ 390,820	\$ 395,207	\$ 369,857
Interest expense	97,972	105,388	116,111	99,608
Net interest revenue	278,102	285,432	279,096	270,249
Provision for credit losses	8,000	5,000	12,000	19,000
Net interest revenue after provision for credit losses	270,102	280,432	267,096	251,249
Fees and commissions revenue	160,552	176,108	186,119	179,422
Gain on financial instruments and other assets, net	17,384	25,512	12,924	(10,134)
Change in fair value of mortgage servicing rights	(20,666)	(29,555)	(12,593)	9,297
Other operating revenue	157,270	172,065	186,450	178,585
Personnel expense	169,228	160,342	162,573	168,422
Other non-personnel expense	117,929	116,795	116,719	120,373
Total other operating expense	287,157	277,137	279,292	288,795
Net income before taxes	140,215	175,360	174,254	141,039
Federal and state income taxes	29,950	37,580	32,396	30,257
Net income	110,265	137,780	141,858	110,782
Net income (loss) attributable to non-controlling interests	(347)	217	(373)	430
Net income attributable to shareholders of BOK Financial Corp. shareholders	\$ 110,612	\$ 137,563	\$ 142,231	\$ 110,352
Earnings per share:				
Basic	\$ 1.54	\$ 1.93	\$ 2.00	\$ 1.56
Diluted	\$ 1.54	\$ 1.93	\$ 2.00	\$ 1.56
Average shares:				
Basic	71,387,070	70,887,063	70,596,307	70,295,899
Diluted	71,404,388	70,902,033	70,609,924	70,309,644

**Table 9 – Selected Quarterly Financial Data (Unaudited) (continued)**

(In thousands, except per share data)

	2018			
	First	Second	Third	Fourth
Interest revenue	\$ 265,407	\$ 294,180	\$ 303,247	\$ 365,592
Interest expense	45,671	55,618	62,364	79,906
Net interest revenue	219,736	238,562	240,883	285,686
Provision for credit losses	(5,000)	—	4,000	9,000
Net interest revenue after provision for credit losses	224,736	238,562	236,883	276,686
Fees and commissions revenue	159,614	157,258	166,197	160,107
Gain (loss) on financial instruments and other assets, net	(24,831)	(2,582)	(4,228)	581
Change in fair value of mortgage servicing rights	21,206	1,723	5,972	(24,233)
Other operating revenue	155,989	156,399	167,941	136,455
Personnel expense	139,947	138,947	143,531	160,706
Other non-personnel expense	104,483	107,529	109,086	123,937
Total other operating expense	244,430	246,476	252,617	284,643
Net income before taxes	136,295	148,485	152,207	128,498
Federal and state income taxes	30,948	33,330	34,662	20,121
Net income	\$ 105,347	\$ 115,155	\$ 117,545	\$ 108,377
Net income (loss) attributable to non-controlling interests	(215)	783	289	(79)
Net income attributable to shareholders of BOK Financial Corp. shareholders	\$ 105,562	\$ 114,372	117,256	108,456
Earnings per share:				
Basic	\$ 1.61	\$ 1.75	\$ 1.79	\$ 1.50
Diluted	\$ 1.61	\$ 1.75	\$ 1.79	\$ 1.50
Average shares:				
Basic	64,847,334	64,901,975	64,901,095	71,808,029
Diluted	64,888,033	64,937,226	64,934,351	71,833,334

## Lines of Business

We operate three principal lines of business: Commercial Banking, Consumer Banking and Wealth Management. Commercial Banking includes lending, treasury and cash management services and customer risk management products for small businesses, middle market and larger commercial customers. Commercial Banking also includes the TransFund EFT network. Consumer Banking includes retail lending and deposit services, lending and deposit services to small business customers served through our consumer branch network and all mortgage banking activities. Wealth Management provides fiduciary services, private bank services, insurance and investment advisory services in all markets. Wealth Management also underwrites state and municipal securities and engages in brokerage and trading activities.

In addition to our lines of business, we have a Funds Management unit. The primary purpose of this unit is to manage our overall liquidity needs and interest rate risk. Each line of business borrows funds from and provides funds to the Funds Management unit as needed to support their operations. Operating results for Funds Management and other include the effect of interest rate risk positions and risk management activities, securities gains and losses including impairment charges, the provision for credit losses in excess of net loans charged off, tax planning strategies and certain executive compensation costs that are not attributed to the lines of business. The Funds Management unit also initially recognizes accruals for loss contingencies when losses become probable. Actual losses are recognized by the lines of business if the accruals are settled.

The operations of CoBiz, acquired on October 1, 2018, were allocated to the operating segments in the second quarter of 2019. Prior to April 1, 2019, CoBiz operations were included in Funds Management and other.

We allocate resources and evaluate the performance of our lines of business using the net direct contribution, which includes the allocation of funds, actual net credit losses and capital costs. In addition, we measure the performance of our business lines after allocations of certain indirect expenses and taxes based on statutory rates.

The cost of funds borrowed from the Funds Management unit by the operating lines of business is transfer priced at rates that approximate market rates for funds with similar repricing and cash flow characteristics. Market rates are generally based on the applicable LIBOR or interest rate swap rates, adjusted for prepayment risk and liquidity risk. This method of transfer-pricing funds that support assets of the operating lines of business tends to insulate them from interest rate risk.

The value of funds provided by the operating lines of business to the Funds Management unit is also based on rates that approximate wholesale market rates for funds with similar repricing and cash flow characteristics. Market rates are generally based on LIBOR or interest rate swap rates. The funds credit formula applied to deposit products with indeterminate maturities is established based on their repricing characteristics reflected in a combination of the short-term LIBOR rate and a moving average of an intermediate term swap rate, with an appropriate spread applied to both. Shorter duration products are weighted towards the short term LIBOR rate and longer duration products are weighted towards the intermediate swap rates. The expected duration ranges from 30 days for certain rate-sensitive deposits to five years. During 2018, the funds transfer pricing rates for non-maturity deposits became inverted due to the flattening of the yield curve. Short term rates continued to increase while long term rates remained relatively flat. In order to appropriately reflect the organizational value of these deposits to the lines of business, effective January 1, 2019, we made adjustments that attribute more deposit credit value to the business lines, with the offset to Funds Management and other.

Economic capital is assigned to the business units by a capital allocation model that reflects management's assessment of risk. This model assigns capital based upon credit, operating, interest rate and other market risk inherent in our business lines and recognizes the diversification benefits among the units. The level of assigned economic capital is a combination of the risk taken by each business line, based on its actual exposures and calibrated to its own loss history where possible. Average invested capital includes economic capital and amounts we have invested in the lines of business.

As shown in Table 10 following, net income attributable to our lines of business increased \$81.8 million or 18% over the prior year. Net interest revenue grew by \$135.2 million over the prior year, primarily due to the CoBiz acquisition combined with growth in average loan balances. Net charge-offs were up \$9.8 million over the prior year. Other operating revenue increased \$62.1 million and other operating expense increased \$69.8 million.

**Table 10 – Net Income by Line of Business**  
(In thousands)

	Year Ended December 31,		
	2019	2018	2017
Commercial Banking	\$ 374,806	\$ 333,515	\$ 267,797
Consumer Banking	56,606	25,399	15,573
Wealth Management	95,331	86,027	59,849
Subtotal	526,743	444,941	343,219
Funds Management and other	(25,985)	705	(8,575)
Total	\$ 500,758	\$ 445,646	\$ 334,644

*Commercial Banking*

Commercial Banking contributed \$374.8 million to consolidated net income in 2019, up \$41.3 million or 12% over the prior year. Growth in net interest revenue and fees and commissions revenue was partially offset by increased operating expense.

**Table 11 – Commercial Banking**  
(Dollars in thousands)

	Year Ended December 31,		
	2019	2018	2017
Net interest revenue from external sources	\$ 919,148	\$ 726,855	\$ 618,325
Net interest expense from internal sources	(242,907)	(159,954)	(92,055)
Total net interest revenue	676,241	566,901	526,270
Net loans charged off	39,011	30,358	13,877
Net interest revenue after net loans charged off	637,230	536,543	512,393
Fees and commissions revenue <sup>1</sup>	168,667	161,949	163,107
Other gains, net	1,745	752	7,192
Other operating revenue	170,412	162,701	170,299
Personnel expense	163,106	122,863	117,824
Non-personnel expense <sup>1</sup>	89,353	79,232	79,864
Other operating expense	252,459	202,095	197,688
Net direct contribution	555,183	497,149	485,004
Gain on financial instruments, net	106	26	52
Gain (loss) on repossessed assets, net	331	(6,532)	(2,681)
Corporate expense allocations	43,055	36,670	28,060
Income before taxes	512,565	453,973	454,315
Federal and state income taxes	137,759	120,458	186,518
Net income	\$ 374,806	\$ 333,515	\$ 267,797
Average assets	\$ 22,807,589	\$ 18,432,035	\$ 17,766,027
Average loans	18,090,224	15,073,484	14,373,830
Average deposits	10,319,677	8,517,137	8,725,920
Average invested capital	2,218,013	1,561,623	1,338,468

<sup>1</sup> Fees and commission revenue for 2017 has been adjusted on a comparable basis with 2019 and 2018 (Non-GAAP measure) to net interchange fees paid to issuing banks on card transactions processed by our TransFund merchant processing services for the twelve months ended December 31, 2017 as a result of the revenue recognition standard.



Net interest revenue increased \$109.3 million or 19% over the prior year, primarily due to the allocation of CoBiz to the business lines and an increase in average originated loan balances, along with increased yields. Yields on deposits sold to the Funds Management unit also went up due to the increase in short-term interest rates. Net loans charged-off increased \$8.7 million.

Fees and commissions revenue increased \$6.7 million or 4% due to an increase in loan syndication fees based on the timing of completed transactions and an increase in revenues from the processing of transactions on behalf of the members of our TransFund EFT network, split almost equally.

Operating expense increased \$50.4 million or 25% compared to 2018. Personnel expense increased \$40.2 million or 33% primarily due to the incorporation of CoBiz employees combined with standard annual merit increases. Non-personnel expense increased \$10.1 million or 13%, primarily due to increased intangible asset amortization related to CoBiz. Corporate expense allocations increased \$6.4 million or 17% over the prior year.

The average outstanding balance of loans attributed to Commercial Banking was up \$3.0 billion or 20% over 2018 to \$18.1 billion. See the Loans section of Management's Discussion and Analysis of Financial condition following for additional discussion of changes in commercial and commercial real estate loans, which are primarily attributed to the Commercial Banking segment.

Average deposits attributed to Commercial Banking were \$10.3 billion for 2018, a 21% increase compared to the prior year. See Management's Discussion and Analysis of Financial Condition and Results of Operations - Liquidity and Capital for further discussion of change.

### *Consumer Banking*

Consumer Banking services are provided through four primary distribution channels: traditional branches, the 24-hour ExpressBank call center, Internet banking and mobile banking. Consumer Banking also conducts mortgage banking activities through offices located outside of our Consumer Banking markets. In the first quarter of 2019, the strategic decision was made to exit our online lead buying business, HomeDirect, to focus more on our core competency of developing complete, long-term relationships with our clients through our traditional mortgage origination channel.

Net income attributed to Consumer Banking totaled \$56.6 million for 2019, compared to \$25.4 million in the prior year. Improved performance by Consumer Banking was largely due to the effect of changes in pricing of funds sold to the Funds Management unit combined with lower mortgage interest rates, which has increased mortgage banking activity and related revenue.

**Table 12 – Consumer Banking**  
(Dollars in thousands)

	Year Ended December 31,		
	2019	2018	2017
Net interest revenue from external sources	\$ 99,679	\$ 83,231	\$ 84,286
Net interest revenue from internal sources	95,775	73,448	53,916
Total net interest revenue	195,454	156,679	138,202
Net loans charged off	6,271	5,143	4,786
Net interest revenue after net loans charged off	189,183	151,536	133,416
Fees and commissions revenue	187,996	178,174	185,030
Other losses, net	(496)	(51)	(152)
Other operating revenue	187,500	178,123	184,878
Personnel expense	96,518	96,234	100,695
Other non-personnel expense	134,398	134,841	141,110
Total other operating expense	230,916	231,075	241,805
Net direct contribution	145,767	98,584	76,489
Gain (loss) on financial instruments, net	30,375	(25,021)	(2,052)
Change in fair value of mortgage servicing rights	(53,517)	4,668	172
Gain on repossessed assets, net	496	247	223
Corporate expense allocations	47,169	44,398	49,344
Net income before taxes	75,952	34,080	25,488
Federal and state income taxes	19,346	8,681	9,915
Net income	\$ 56,606	\$ 25,399	\$ 15,573
Average assets	\$ 9,301,341	\$ 8,303,263	\$ 8,544,117
Average loans	1,762,915	1,731,894	1,734,836
Average deposits	6,876,676	6,560,145	6,610,134
Average invested capital	294,923	292,791	295,026

Net interest revenue from Consumer Banking activities grew by \$38.8 million or 25% over 2018, primarily related to increased yields on deposit balances sold to the Funds Management unit. Average consumer deposits grew \$317 million with demand deposit balances up by \$287 million or 15%, largely due to the allocation of acquired deposits.

Fees and commissions revenue increased \$9.8 million or 6% compared to the prior year. Lower mortgage interest rates increased mortgage loan origination volumes. Mortgage production volume increased \$446 million or 18% and gain on sale margin increased 18 basis points. Operating expense remained relatively flat compared to 2018 and corporate expense allocations were \$2.8 million or 6% higher than in the prior year.

Changes in the fair value of our mortgage servicing rights, net of economic hedges, as more fully presented in Table 7, resulted in a \$23.1 million decrease to pre-tax net income for 2019 compared to a \$20.4 million decrease to pre-tax net income in 2018.

## Wealth Management

Wealth Management contributed \$95.3 million to consolidated net income in 2019, up \$9.3 million or 11% over the prior year. Prior year included an after tax benefit of \$11.5 million as a result of a fee earned on the sale of client assets. Excluding this fee, net income for Wealth Management increased \$20.8 million or 24% over 2018. This fee is excluded from the discussion below.

**Table 13 – Wealth Management**  
(Dollars in thousands)

	Year Ended December 31,		
	2019	2018	2017
Net interest revenue from external sources	\$ 61,277	\$ 81,528	\$ 45,024
Net interest revenue from internal sources	38,815	31,480	38,344
Total net interest revenue	100,092	113,008	83,368
Net loans recovered	(308)	(288)	(696)
Net interest revenue after net loans recovered	100,400	113,296	84,064
Fees and commissions revenue	341,333	296,465	301,485
Other gains (losses), net	56	(96)	(51)
Other operating revenue	341,389	296,369	301,434
Personnel expense	201,368	184,144	183,727
Other non-personnel expense	75,899	73,506	70,768
Other operating expense	277,267	257,650	254,495
Net direct contribution	164,522	152,015	131,003
Gain on financial instruments, net	2	7	—
Gain (loss) on repossessed assets, net	—	—	387
Corporate expense allocations	36,239	35,920	32,693
Net income before taxes	128,285	116,102	98,697
Federal and state income tax	32,954	30,075	38,848
Net income	\$ 95,331	\$ 86,027	\$ 59,849
Average assets	\$ 10,204,426	\$ 8,447,784	\$ 7,072,622
Average loans	1,609,464	1,423,126	1,314,441
Average deposits	6,447,987	5,617,325	5,516,214
Average invested capital	274,599	251,401	232,729

Net interest revenue decreased \$12.9 million or 11% over the prior year, largely due to decreased spreads on trading securities. Further, Wealth Management incurred additional funding costs related to an increase in non-interest bearing receivables on unsettled securities sales. Average loan balances were up \$186 million or 13% over the prior year and average deposit balances increased \$831 million or 15% largely due to the allocation of acquired loans and deposits.

Fees and commissions revenue increased \$60.3 million or 21% compared to the prior year. Brokerage and trading revenue increased \$50.5 million compared to the prior year due to increased trading activity as a result of lower mortgage interest rates. Fiduciary and asset management revenue increased \$7.6 million compared to 2018.

Operating expense increased \$19.6 million or 8% compared to the prior year. Personnel expense increased \$17.2 million primarily due to the combination of standard annual merit increases and the increase of incentive compensation as a result of higher trading activity. Non-personnel expense increased \$2.4 million or 3% over 2018 largely related to occupancy and equipment expense related to the new Oklahoma City office.

## Financial Condition

### Securities

We maintain a securities portfolio to enhance profitability, manage interest rate risk, provide liquidity and comply with regulatory requirements. Securities are classified as trading, held for investment, or available for sale.

**Table 14 – Securities**  
(In thousands)

	December 31,					
	2019		2018		2017	
	Amortized Cost	Fair Value	Amortized Cost	Fair Value	Amortized Cost	Fair Value
<b>Trading:</b>						
U.S. government agency debentures	\$ 44,258	\$ 44,264	\$ 63,511	\$ 63,765	\$ 21,188	\$ 21,196
Residential agency mortgage-backed securities	1,502,358	1,504,651	1,781,618	1,791,584	393,190	392,673
Municipal and other tax-exempt securities	26,136	26,196	34,508	34,507	13,476	13,559
Asset-backed securities	14,105	14,084	41,971	42,656	23,911	23,885
Other debt securities	34,705	34,726	24,346	24,411	11,359	11,363
<b>Total trading securities</b>	<b>\$ 1,621,562</b>	<b>\$ 1,623,921</b>	<b>\$ 1,945,954</b>	<b>\$ 1,956,923</b>	<b>\$ 463,124</b>	<b>\$ 462,676</b>
<b>Investment:</b>						
Municipal and other tax-exempt	\$ 93,653	\$ 96,897	\$ 137,296	138,562	\$ 228,186	\$ 230,349
Residential agency mortgage-backed securities	10,676	11,164	12,612	12,770	15,891	16,242
Other debt securities	189,089	206,341	205,279	215,966	217,716	233,444
<b>Total investment securities</b>	<b>\$ 293,418</b>	<b>\$ 314,402</b>	<b>\$ 355,187</b>	<b>\$ 367,298</b>	<b>\$ 461,793</b>	<b>\$ 480,035</b>
<b>Available for sale:</b>						
U.S. Treasury	\$ 1,598	\$ 1,600	\$ 496	\$ 493	\$ 1,000	\$ 1,000
Municipal and other tax-exempt	1,789	1,861	2,782	2,864	27,182	27,080
<b>Mortgage-backed securities:</b>						
Residential agency	7,956,297	8,046,096	5,886,323	5,804,708	5,355,148	5,309,152
Residential non-agency	25,968	41,609	40,948	59,736	74,311	93,221
Commercial agency	3,145,342	3,178,005	2,986,297	2,953,889	2,858,885	2,834,961
Other debt securities	500	472	35,545	35,430	25,500	25,481
Perpetual preferred stock <sup>1</sup>	—	—	—	—	12,562	15,767
Equity securities and mutual funds <sup>1</sup>	—	—	—	—	14,487	14,916
<b>Total available for sale securities</b>	<b>\$ 11,131,494</b>	<b>\$ 11,269,643</b>	<b>\$ 8,952,391</b>	<b>\$ 8,857,120</b>	<b>\$ 8,369,075</b>	<b>\$ 8,321,578</b>
<b>Fair value option securities:</b>						
U.S. Treasury	\$ 9,965	\$ 9,917	\$ —	\$ —	\$ —	\$ —
Residential agency mortgage-backed securities	1,074,551	1,088,660	280,469	283,235	756,931	755,054
<b>Total fair value option securities</b>	<b>\$ 1,084,516</b>	<b>\$ 1,098,577</b>	<b>\$ 280,469</b>	<b>\$ 283,235</b>	<b>\$ 756,931</b>	<b>\$ 755,054</b>

<sup>1</sup> As a result of the recent measurement accounting standard effective January 1, 2018, equity securities are no longer considered part of the available for sale portfolio and have been moved to other assets.

We maintain an inventory of trading securities in support of sales to a variety of customers, including banks, corporations, insurance companies, money managers and others. As discussed in the Market Risk section of this report, trading activities involve risk of loss from adverse price movement. We mitigate this risk within board-approved limits through the use of derivative contracts, short-sales and other techniques. These limits remain unchanged from levels set before our expanded trading activities.

Investment securities consist primarily of intermediate and long-term, fixed rate Oklahoma and Texas municipal bonds and taxable Texas school construction bonds. The investment security portfolio is diversified among issuers.

Available for sale securities, which may be sold prior to maturity, are carried at fair value. Unrealized gains or losses, net of deferred taxes, are recorded as accumulated other comprehensive income in shareholders' equity. The amortized cost of available for sale securities totaled \$11.1 billion at December 31, 2019, an increase of \$2.2 billion compared to December 31, 2018. Available for sale securities consist primarily of U.S. government agency residential mortgage-backed securities and U.S. government agency commercial mortgage-backed securities. Both residential and commercial mortgage-backed securities have credit risk from delinquency or default of the underlying loans. We mitigate this risk by primarily investing in securities issued by U.S. government agencies. Principal and interest payments on the underlying loans are fully guaranteed. Commercial mortgage-backed securities have prepayment penalties similar to commercial loans. At December 31, 2019, residential mortgage-backed securities represented 72% of total available for sale securities.

A primary risk of holding residential mortgage-backed securities comes from extension during periods of rising interest rates or prepayment during periods of falling interest rates. We evaluate this risk through extensive modeling of risk both before making an investment and throughout the life of the security. Our best estimate of the effective duration of the combined residential mortgage-backed securities portfolio held in investment and available for sale securities portfolios at December 31, 2019 is 3.2 years. Management estimates the combined portfolios' duration extends to 4.0 years assuming an immediate 200 basis point upward shock. The estimated duration contracts to 2.5 years assuming a 100 basis point decline in the current low rate environment.

The aggregate gross amount of unrealized losses on available for sale securities totaled \$20 million at December 31, 2019, a \$118 million decrease compared to December 31, 2018. On a quarterly basis, we perform an evaluation on debt securities to determine if the unrealized losses are temporary as more fully described in Note 2 of the Consolidated Financial Statements. No other-than-temporary impairment charges were recognized in earnings in 2019.

Certain residential mortgage-backed securities issued by U.S. government agencies and included in Fair value option securities on the Consolidated Balance Sheets have been segregated and designated as economic hedges of changes in the fair value of our mortgage servicing rights. We have elected to carry these securities at fair value with changes in fair value recognized in current period income. These securities are held with the intent that gains or losses will offset changes in the fair value of mortgage servicing rights and related derivative contracts. Fair value option securities totaled \$1.1 billion, an increase of \$815 million due to an increase in the sensitivity of the fair value of mortgage servicing rights as mortgage interest rates declined significantly throughout 2019. See Market Risk section for further details.

### **Bank-Owned Life Insurance**

We have approximately \$390 million of bank-owned life insurance at December 31, 2019. This investment is expected to provide a long-term source of earnings to support existing employee benefit programs. Approximately \$301 million is held in separate accounts. Our separate account holdings are invested in diversified portfolios of investment-grade fixed income securities and cash equivalents, including U.S. Treasury and Agency securities, residential mortgage-backed securities, corporate debt, asset-backed and commercial mortgage-backed securities. The portfolios are managed by unaffiliated professional managers within parameters established in the portfolio's investment guidelines. The cash surrender value of certain life insurance policies is further supported by a stable value wrap, which protects against changes in the fair value of the investments. As of December 31, 2019, the fair value of investments held in separate accounts was approximately \$313 million. As the underlying fair value of the investments held in a separate account at December 31, 2019 exceeded the net book value of the investments, no cash surrender value was supported by the stable value wrap. The stable value wrap is provided by a domestic financial institution. The remaining cash surrender value of \$89 million primarily represents the cash surrender value of policies held in general accounts and other amounts due from various insurance companies.

## Loans

The aggregate loan portfolio before allowance for loan losses totaled \$21.8 billion at December 31, 2019, an increase of \$94 million over December 31, 2018. Growth in commercial and personal loan balances was partially offset by a decrease in commercial real estate and residential mortgage loans.

**Table 15 – Loans**  
(In thousands)

	December 31,				
	2019	2018	2017	2016	2015
Commercial:					
Energy	\$ 3,973,377	\$ 3,590,333	\$ 2,930,156	\$ 2,497,868	\$ 3,097,328
Services	3,122,163	3,258,192	2,528,389	2,632,036	2,480,361
Healthcare	3,033,916	2,799,277	2,314,753	2,201,916	1,883,380
Wholesale/retail	1,760,866	1,621,158	1,471,256	1,576,818	1,418,024
Public finance	709,868	804,550	464,145	487,020	308,714
Manufacturing	665,449	730,521	496,774	514,975	556,729
Other commercial and industrial	766,011	832,047	528,502	480,191	507,995
<b>Total commercial</b>	<b>14,031,650</b>	<b>13,636,078</b>	<b>10,733,975</b>	<b>10,390,824</b>	<b>10,252,531</b>
Commercial real estate:					
Multifamily	1,265,562	1,288,065	980,017	903,272	751,085
Office	928,379	1,072,920	831,770	798,888	637,707
Industrial	856,117	778,106	573,014	871,749	563,169
Retail	775,521	919,082	691,532	761,888	796,499
Residential construction and land development	150,879	148,584	117,245	135,533	160,426
Other commercial real estate	457,325	558,056	286,409	337,716	350,147
<b>Total commercial real estate</b>	<b>4,433,783</b>	<b>4,764,813</b>	<b>3,479,987</b>	<b>3,809,046</b>	<b>3,259,033</b>
Residential mortgage:					
Permanent mortgage	1,057,321	1,122,610	1,043,435	1,006,820	945,336
Permanent mortgages guaranteed by U.S. government agencies	197,794	190,866	197,506	199,387	196,937
Home equity	829,057	916,557	732,745	743,625	734,620
<b>Total residential mortgage</b>	<b>2,084,172</b>	<b>2,230,033</b>	<b>1,973,686</b>	<b>1,949,832</b>	<b>1,876,893</b>
Personal	1,201,382	1,025,806	965,776	839,958	552,697
<b>Total</b>	<b>\$ 21,750,987</b>	<b>\$ 21,656,730</b>	<b>\$ 17,153,424</b>	<b>\$ 16,989,660</b>	<b>\$ 15,941,154</b>

### Commercial

Commercial loans represent loans for working capital, facilities acquisition or expansion, purchases of equipment and other needs of commercial customers primarily located within our geographical footprint. Commercial loans are underwritten individually and represent ongoing relationships based on a thorough knowledge of the customer, the customer's industry and market. While commercial loans are generally secured by the customer's assets including real property, inventory, accounts receivable, operating equipment, interests in mineral rights and other property and may also include personal guarantees of the owners and related parties, the primary source of repayment of the loans is the on-going cash flow from operations of the customer's business. Inherent lending risks are centrally monitored on a continuous basis from underwriting throughout the life of the loan for compliance with commercial lending policies.

Commercial loans totaled \$14.0 billion or 65% of the loan portfolio at December 31, 2019, growing \$396 million or 3% over December 31, 2018. This growth was led by a \$383 million or 11% increase in energy sector loans. Healthcare sector loans were up \$235 million or 8%. Wholesale/retail sector loans increased \$140 million or 9%. Service sector loans decreased \$136 million or 4%. Public finance loans decreased \$95 million or 12%.

Table 16 presents our commercial loan portfolio distributed primarily by collateral location. Loans for which the collateral location is less relevant, such as unsecured loans and reserve-based energy loans, are distributed by the borrower's primary operating location.

**Table 16 – Commercial Loans by Collateral Location**  
(In thousands)

	Oklahoma	Texas	New Mexico	Arkansas	Colorado	Arizona	Kansas/Missouri	Other	Total
Energy	\$ 633,942	\$2,314,404	\$ 59,471	\$ 579	\$ 497,751	\$ 12	\$ 106,933	\$ 360,285	\$ 3,973,377
Services	606,021	700,916	172,878	13,173	578,835	448,573	253,823	347,944	3,122,163
Healthcare	246,485	424,041	121,940	78,488	310,580	274,064	271,802	1,306,516	3,033,916
Wholesale/retail	230,710	749,336	32,996	35,943	156,865	122,329	31,845	400,842	1,760,866
Public finance	62,743	161,792	37,247	—	167,790	82,667	—	197,629	709,868
Manufacturing	97,048	188,834	1,004	5,491	139,246	125,625	44,655	63,546	665,449
Other commercial and industrial	134,429	116,002	5,283	57,573	116,012	34,657	50,969	251,086	766,011
Total commercial loans	\$2,011,378	\$4,655,325	\$430,819	\$ 191,247	\$1,967,079	\$1,087,927	\$ 760,027	\$2,927,848	\$14,031,650

The majority of our commercial portfolio is located within our geographic footprint. At December 31, 2019, the Other category is composed primarily of California totaling \$583 million or 4% of the commercial portfolio, Florida totaling \$248 million or 2% of the commercial portfolio, Louisiana totaling \$169 million or 1% of the commercial portfolio, North Carolina totaling \$163 million or 1% of the commercial portfolio, Pennsylvania totaling \$157 million or 1% and Ohio totaling \$140 million or 1%. All other states individually represent less than one percent of the total commercial loan portfolio.

Supporting the energy industry with loans to producers and other energy-related entities has been a hallmark of the Company since its founding and represents a large portion of our commercial loan portfolio. In addition, energy production and related industries have a significant impact on the economy in our primary markets. Loans collateralized by oil and gas properties are subject to a semi-annual engineering review by our internal staff of petroleum engineers. This review is utilized as the basis for developing the expected cash flows supporting the loan amount. The projected cash flows are discounted according to risk characteristics of the underlying oil and gas properties. Loans are evaluated to demonstrate with reasonable certainty that crude oil, natural gas and natural gas liquids can be recovered from known oil and gas reservoirs under existing economic and operating conditions at current pricing levels and with existing conventional equipment and operating methods and costs. As part of our evaluation of credit quality, we analyze rigorous stress tests over a range of commodity prices and take proactive steps to mitigate risk when appropriate.

Outstanding energy loans totaled \$4.0 billion or 18% of total loans at December 31, 2019. Unfunded energy loan commitments decreased by \$246 million during the year to \$3.0 billion at December 31, 2019. Approximately \$3.1 billion or 79% of energy loans were to oil and gas producers, a \$188 million increase over December 31, 2018. The majority of this portfolio is first lien, senior secured, reserve-based lending, which we believe is the lowest risk form of energy lending. Approximately 58% of the committed production loans are secured by properties primarily producing oil and 42% of the committed production loans are secured by properties primarily producing natural gas. Loans to borrowers in the midstream sector of the industry totaled \$609 million or 15% of energy loans, an increase of \$189 million over the prior year. Loans to borrowers that provide services to the energy industry totaled \$177 million or 4% of energy loans, an increase of \$1.4 million during 2019. Loans to other energy borrowers, including those engaged in wholesale or retail energy sales totaled \$67 million or 2% of energy loans, an increase of \$4.6 million over the prior year.

The services sector of the loan portfolio totaled \$3.1 billion or 14% of total loans and consists of a large number of loans to a variety of businesses, including commercial services, Native American tribal governments, financial services, technology and media and education. Approximately \$1.5 billion of the services category is made up of loans with individual balances of less than \$10 million. Service sector loans are generally secured by the assets of the borrower with repayment coming from the cash flows of ongoing operations of the customer's business.

The healthcare sector of the loan portfolio totaled \$3.0 billion or 14% of total loans and consists primarily of loans for the development and operation of senior housing and care facilities, including independent living, assisted living and skilled nursing. Healthcare also includes loans to hospitals and other medical service providers.

We participate in shared national credits when appropriate to obtain or maintain business relationships with local customers. Shared national credits are defined by banking regulators as credits of more than \$100 million and with three or more non-affiliated banks as participants. At December 31, 2019, the outstanding principal balance of these loans totaled \$4.5 billion, including \$2.2 billion in the energy sector. Approximately 85% of shared national credits are to borrowers with local market relationships. We serve as the agent lender in approximately 17% of our shared national credits, based on dollars committed. We hold shared national credits to the same standard of analysis and perform the same level of review as internally originated credits. Our lending policies generally avoid loans in which we do not have the opportunity to maintain or achieve other business relationships with the customer. In addition to management's quarterly assessment of credit risk, banking regulators annually review a sample of shared national credits for proper risk grading.

### *Commercial Real Estate*

Commercial real estate represents loans for the construction of buildings or other improvements to real estate and property held by borrowers for investment purposes. The majority of commercial real estate loans are secured by properties within our geographic footprint, with the larger concentrations in Texas with 24% of total commercial real estate loans, Oklahoma with 12% of total commercial real estate loans and Colorado with 11% of the total commercial real estate portfolio at December 31, 2019. We require collateral values in excess of the loan amounts, demonstrated cash flows in excess of expected debt service requirements, equity investment in the project and a portion of the project already sold, leased or permanent financing already secured. The expected cash flows from all significant new or renewed income producing property commitments are stress tested to reflect the risks in varying interest rates, vacancy rates and rental rates. As with commercial loans, inherent lending risks are centrally monitored on a continuous basis from underwriting throughout the life of the loan for compliance with applicable lending policies.

Commercial real estate loans totaled \$4.4 billion or 20% of the loan portfolio at December 31, 2019. The outstanding balance of commercial real estate loans decreased \$331 million compared to 2018. Loans secured by office buildings decreased \$145 million or 13%. Loans secured by retail facilities decreased \$144 million or 16%. Other real estate loans decreased \$101 million or 18%. These decreases were partially offset by an increase of \$78 million or 10% in loans secured by industrial facilities. The commercial real estate loan balance as a percentage of our total loan portfolio has ranged from 20% to 22% over the past five years. The commercial real estate segment of our loan portfolio distributed by collateral location follows in Table 17.

**Table 17 – Commercial Real Estate Loans by Collateral Location**

(In thousands)

	Oklahoma	Texas	New Mexico	Arkansas	Colorado	Arizona	Kansas/ Missouri	Other	Total
Multifamily	\$ 162,329	\$ 391,904	\$ 32,618	\$ 55,808	\$ 48,022	\$169,681	\$ 145,852	\$ 259,348	\$ 1,265,562
Office	125,552	151,130	114,706	19,872	84,917	74,947	58,143	299,112	928,379
Industrial	118,153	192,751	19,613	76	80,749	45,752	36,122	362,901	856,117
Retail	60,538	248,985	147,921	5,252	88,703	45,403	13,507	165,212	775,521
Residential construction and land development	6,433	37,035	14,332	91	54,643	5,854	5,267	27,224	150,879
Other commercial real estate	44,104	36,462	9,219	2,198	111,792	68,031	34,075	151,444	457,325
<b>Total commercial real estate loans</b>	<b>\$ 517,109</b>	<b>\$1,058,267</b>	<b>\$338,409</b>	<b>\$ 83,297</b>	<b>\$ 468,826</b>	<b>\$409,668</b>	<b>\$ 292,966</b>	<b>\$1,265,241</b>	<b>\$ 4,433,783</b>

The Other category includes Utah with \$275 million or 6% of total commercial real estate loans, California with \$261 million or 6% of total commercial real estate loans, Georgia with \$92 million or 2% of total commercial real estate loans and Nevada with \$78 million or 2% of total commercial real estate loans. All other states individually represent less than 2% of the total commercial real estate loan population.



While recent changes nationally in consumer purchasing trends from brick-and-mortar stores to online has created concern with regards to retail lending, our credit quality remains very good. The portfolio is highly diversified with no material exposure to a single borrower or tenant.

### *Residential Mortgage and Personal*

Residential mortgage loans provide funds for our customers to purchase or refinance their primary residence or to borrow against the equity in their home. Residential mortgage loans are secured by a first or second-mortgage on the customer's primary residence. Personal loans consist primarily of loans to Wealth Management clients secured by the cash surrender value of insurance policies and marketable securities. It also includes direct loans secured by and for the purchase of automobiles, recreational and marine equipment as well as unsecured loans. Residential mortgage and personal loans are made in accordance with underwriting policies we believe to be conservative and are fully documented. Credit scoring is assessed based on significant credit characteristics including credit history, residential and employment stability.

Residential mortgage loans totaled \$2.1 billion, a \$146 million or 7% decrease compared to December 31, 2018. In general, we sell the majority of our fixed rate loan originations that conform to U.S. government agency standards in the secondary market and retain the majority of our non-conforming and adjustable-rate mortgage loans. We have no concentration in sub-prime residential mortgage loans. Our mortgage loan portfolio does not include payment option adjustable rate mortgage loans or adjustable rate mortgage loans with initial rates that are below market. Collateral for 93% of our residential mortgage portfolio is located within our geographic footprint.

The majority of our permanent mortgage loan portfolio is primarily composed of various non-conforming mortgage programs to support customer relationships including jumbo mortgage loans, non-builder construction loans and special loan programs for high net worth individuals or certain professionals. Jumbo loans may be fixed or variable rate and are fully amortizing. The size of jumbo loans exceed maximums set under government sponsored entity standards, but otherwise generally conform to those standards. These loans generally require a minimum FICO score of 720 and a maximum debt-to-income ratio ("DTI") of 38%. Loan-to-value ratios ("LTV") are tiered from 60% to 100%, depending on the market. Special mortgage programs include fixed and variable rate fully amortizing loans tailored to the needs of certain healthcare professionals. Variable rate loans are fully indexed at origination and may have fixed rates for three to ten years, then adjust annually thereafter.

At December 31, 2019, \$198 million of permanent residential mortgage loans are guaranteed by U.S. government agencies. We have minimal credit exposure on loans guaranteed by the agencies. This amount includes residential mortgage loans previously sold into GNMA mortgage pools that are eligible to be repurchased. We may repurchase these loans when certain defined delinquency criteria are met. Because of this repurchase right, the Company is deemed to have regained effective control over these loans and must include them in the Consolidated Balance Sheets. Permanent residential mortgage loans guaranteed by U.S. government agencies increased \$6.9 million or 4% over December 31, 2018.

Home equity loans totaled \$829 million at December 31, 2019, an \$88 million or 10% decrease compared to December 31, 2018. Our home equity portfolio is primarily composed of first-lien, fully amortizing home equity loans. Home equity loans generally require a minimum FICO score of 700 and a maximum DTI of 50%. The maximum loan amount available for our home equity loan products is generally \$400 thousand. Revolving loans have a 10 year revolving period followed by 15 year term of amortizing repayments. Interest-only home equity loans have a 5 year revolving period followed by a 15 year term of amortizing repayments and may not be extended for any additional revolving time. All other home equity loans may be extended at management's discretion for an additional 5 year revolving term subject to an update of certain credit information.

A summary of our home equity loan portfolio at December 31, 2019 by lien position and amortizing status follows in Table 18.

**Table 18 – Home Equity Loans**  
(In thousands)

	<b>Revolving</b>	<b>Amortizing</b>	<b>Total</b>
First lien	\$ 94,801	\$ 428,622	\$ 523,423
Junior lien	197,572	108,062	305,634
<b>Total home equity</b>	<b>\$ 292,373</b>	<b>\$ 536,684</b>	<b>\$ 829,057</b>

Personal loans totaled \$1.2 billion, growing by \$176 million or 17% over the prior year. This growth is primarily due to loans to Wealth Management customers for investment in businesses that will be repaid from personal income.

The distribution of residential mortgage and personal loans at December 31, 2019 is presented in Table 19. Residential mortgage loans are distributed by collateral location. Personal loans are generally distributed by borrower location.

**Table 19 – Residential Mortgage and Personal Loans by Collateral Location**

(In thousands)

	<u>Oklahoma</u>	<u>Texas</u>	<u>New Mexico</u>	<u>Arkansas</u>	<u>Colorado</u>	<u>Arizona</u>	<u>Kansas/ Missouri</u>	<u>Other</u>	<u>Total</u>
Residential mortgage:									
Permanent mortgage	\$ 165,598	\$416,470	\$ 61,622	\$ 12,687	\$ 194,921	\$107,737	\$ 52,472	\$ 45,814	\$ 1,057,321
Permanent mortgages guaranteed by U.S. government agencies	53,119	31,445	30,318	9,939	6,211	801	18,238	47,723	197,794
Home equity	355,092	135,192	74,896	7,935	116,326	36,277	53,166	50,173	829,057
Total residential mortgage	\$ 573,809	\$583,107	\$ 166,836	\$ 30,561	\$ 317,458	\$144,815	\$ 123,876	\$143,710	\$ 2,084,172
Personal	\$ 420,809	\$461,382	\$ 11,061	\$ 10,862	\$ 84,388	\$ 86,055	\$ 54,975	\$ 71,850	\$ 1,201,382

The Company secondarily evaluates loan portfolio performance based on the primary geographical market managing the loan. Loans attributed to a geographical market may not represent the location of the borrower or the collateral. All permanent mortgage loans serviced by our mortgage banking unit and held for investment by BOKF, NA are centrally managed by the Bank of Oklahoma division.

**Table 20 – Loans Managed by Primary Geographical Market**

(In thousands)

	December 31,				
	2019	2018	2017	2016	2015
<b>Texas:</b>					
Commercial	\$ 6,174,894	\$ 5,438,133	\$ 4,520,401	\$ 4,022,455	\$ 3,908,425
Commercial real estate	1,259,117	1,341,783	1,261,864	1,415,011	1,204,202
Residential mortgage	268,282	266,805	233,675	233,981	219,126
Personal	458,893	394,743	375,084	306,748	203,496
<b>Total Texas</b>	<b>8,161,186</b>	<b>7,441,464</b>	<b>6,391,024</b>	<b>5,978,195</b>	<b>5,535,249</b>
<b>Oklahoma:</b>					
Commercial	3,454,825	3,491,117	3,238,720	3,370,259	3,782,687
Commercial real estate	631,026	700,756	682,037	684,381	739,829
Residential mortgage	1,375,080	1,440,566	1,435,432	1,407,197	1,409,114
Personal	479,784	375,543	342,212	303,823	255,387
<b>Total Oklahoma</b>	<b>5,940,715</b>	<b>6,007,982</b>	<b>5,698,401</b>	<b>5,765,660</b>	<b>6,187,017</b>
<b>Colorado:</b>					
Commercial	2,169,598	2,275,069	1,130,714	1,018,208	987,076
Commercial real estate	927,826	963,575	174,201	265,264	223,946
Residential mortgage	196,326	251,849	63,350	59,631	53,782
Personal	80,613	72,916	63,115	50,372	23,384
<b>Total Colorado</b>	<b>3,374,363</b>	<b>3,563,409</b>	<b>1,431,380</b>	<b>1,393,475</b>	<b>1,288,188</b>
<b>Arizona:</b>					
Commercial	1,307,073	1,320,139	687,792	686,253	606,733
Commercial real estate	728,832	889,903	660,094	747,409	507,523
Residential mortgage	89,396	97,959	41,771	36,265	44,047
Personal	97,143	68,546	57,140	52,553	31,060
<b>Total Arizona</b>	<b>2,222,444</b>	<b>2,376,547</b>	<b>1,446,797</b>	<b>1,522,480</b>	<b>1,189,363</b>
<b>Kansas/Missouri:</b>					
Commercial	527,872	659,793	717,408	807,816	499,412
Commercial real estate	322,541	343,228	273,116	338,762	200,791
Residential mortgage	66,771	77,971	94,844	97,685	22,148
Personal	64,298	91,441	106,512	108,455	26,994
<b>Total Kansas/Missouri</b>	<b>981,482</b>	<b>1,172,433</b>	<b>1,191,880</b>	<b>1,352,718</b>	<b>749,345</b>
<b>New Mexico:</b>					
Commercial	305,320	340,489	343,296	399,256	375,839
Commercial real estate	402,148	383,670	341,282	284,603	313,422
Residential mortgage	80,325	87,346	98,018	108,058	120,507
Personal	9,932	10,662	11,721	11,483	11,557
<b>Total New Mexico</b>	<b>797,725</b>	<b>822,167</b>	<b>794,317</b>	<b>803,400</b>	<b>821,325</b>
<b>Arkansas:</b>					
Commercial	92,068	111,338	95,644	86,577	92,359
Commercial real estate	162,293	141,898	87,393	73,616	69,320
Residential mortgage	7,992	7,537	6,596	7,015	8,169
Personal	10,719	11,955	9,992	6,524	819
<b>Total Arkansas</b>	<b>273,072</b>	<b>272,728</b>	<b>199,625</b>	<b>173,732</b>	<b>170,667</b>
<b>Total BOK Financial loans</b>	<b>\$ 21,750,987</b>	<b>\$ 21,656,730</b>	<b>\$ 17,153,424</b>	<b>\$ 16,989,660</b>	<b>\$ 15,941,154</b>

**Table 21 – Loan Maturity and Interest Rate Sensitivity at December 31, 2019**

(In thousands)

	Remaining Maturities of Selected Loans			
	Total	Within 1 Year	1-5 Years	After 5 Years
Loan maturity:				
Commercial	\$ 14,031,650	\$ 824,474	\$ 7,789,765	\$ 5,417,411
Commercial real estate	4,433,783	536,146	2,556,793	1,340,844
Total	\$ 18,465,433	\$ 1,360,620	\$ 10,346,558	\$ 6,758,255
Interest rate sensitivity for selected loans with:				
Predetermined interest rates	\$ 4,291,763	\$ 87,543	\$ 880,031	\$ 3,324,189
Floating or adjustable interest rates	14,173,670	1,273,077	9,466,527	3,434,066
Total	\$ 18,465,433	\$ 1,360,620	\$ 10,346,558	\$ 6,758,255

**Loan Commitments**

We enter into certain off-balance sheet arrangements in the normal course of business as shown in Table 22. Loan commitments may be unconditional obligations to provide financing or conditional obligations that depend on the borrower's financial condition, collateral value or other factors. Standby letters of credit are unconditional commitments to guarantee the performance of our customer to a third party. Since some of these commitments are expected to expire before being drawn upon, the total commitment amounts do not necessarily represent future cash requirements. None of the outstanding standby letters of credit were issued on behalf of customers whose loans are nonperforming at December 31, 2019.

**Table 22 – Off-Balance Sheet Credit Commitments**

(In thousands)

	December 31,				
	2019	2018	2017	2016	2015
Loan commitments	\$ 11,065,649	\$ 11,944,525	\$ 9,958,080	\$ 9,404,665	\$ 8,455,037
Standby letters of credit	645,505	582,196	647,653	585,472	507,988
Mortgage loans sold with recourse	88,808	98,623	125,127	139,486	155,489

**Customer Derivative Programs**

We offer programs that permit our customers to hedge various risks, including fluctuations in energy, cattle and other agricultural product prices, interest rates and foreign exchange rates. Each of these programs work essentially the same way. Derivative contracts are executed between the customers and the Company. Offsetting contracts are executed between the Company and selected counterparties or exchanges to minimize market risk to us from changes in commodity prices, interest rates or foreign exchange rates. The counterparty contracts are identical to the customer contracts, except for a fixed pricing spread or a fee paid to us as compensation for administrative costs, credit risk and profit.

The customer derivative programs create credit risk for potential amounts due to the Company from our customers and from the counterparties. Customer credit risk is monitored through existing credit policies and procedures. The effects of changes in commodity prices, interest rates or foreign exchange rates are evaluated across a range of possible options to determine the maximum exposure we are willing to have individually to any customer. Customers may also be required to provide cash margin or other collateral in conjunction with our credit agreements to further limit our credit risk.

Counterparty credit risk is evaluated through existing policies and procedures. This evaluation considers the total relationship between BOK Financial and each of the counterparties. Individual limits are established by management, approved by Credit Administration and reviewed by the Asset/Liability Committee. Margin collateral is required if the exposure between the Company and any counterparty exceeds established limits. Based on declines in the counterparties' credit ratings, these limits may be reduced and additional margin collateral may be required.

A deterioration of the credit standing of one or more of the customers or counter-parties to these contracts may result in BOK Financial recognizing a loss as the fair value of the affected contracts may no longer move in tandem with the offsetting contracts. This occurs if the credit standing of the customer or counterparty deteriorated such that either the fair value of underlying collateral no longer supports the contract or the customer or counterparty's ability to provide margin collateral was impaired. Credit losses on customer derivatives reduce brokerage and trading revenue in the Consolidated Statements of Earnings.

Derivative contracts are carried at fair value. At December 31, 2019, the net fair values of derivative contracts, before consideration of cash margin, reported as assets under these programs totaled \$302 million compared to \$427 million at December 31, 2018. Derivative contracts carried as assets include foreign exchange contracts with fair values of \$213 million, interest rate swaps primarily sold to loan customers with fair values of \$47 million and energy contracts with fair values of \$37 million. Before consideration of cash margin paid to counterparties, the aggregate net fair values of derivative contracts held under these programs reported as liabilities totaled \$291 million.

At December 31, 2019, total derivative assets were reduced by \$698 thousand of cash collateral received from counterparties and total derivative liabilities were reduced by \$51 million of cash collateral paid to counterparties related to instruments executed with the same counterparty under a master netting agreement.

A table showing the notional and fair value of derivative assets and liabilities on both a gross and net basis is presented in Note 3 to the Consolidated Financial Statements.

The fair value of derivative contracts reported as assets under these programs, net of cash margin held by the Company, by category of debtor at December 31, 2019 follows in Table 23.

**Table 23 – Fair Value of Derivative Contracts**  
(In thousands)

Customers	\$ 159,974
Banks and other financial institutions	138,717
Exchanges and clearing organizations	2,927
Fair value of customer hedge asset derivative contracts, net	\$ 301,618

The largest exposure to a single counterparty was to a customer for an interest rate swap which totaled \$4.7 million at December 31, 2019.

Our customer derivative program also introduces liquidity and capital risk. We are required to provide cash margin to certain counterparties when the net negative fair value of the contracts exceeds established limits. Also, changes in commodity prices affect the amount of regulatory capital we are required to hold as support for the fair value of our derivative assets. These risks are modeled as part of the management of these programs. Based on current prices, a decrease in market prices equal to the equivalent of \$35.12 per barrel of oil would decrease the fair value of derivative assets by \$22 million, with dealer counterparties comprising the bulk of the assets. An increase in prices equal to the equivalent of \$73.05 per barrel of oil would increase the fair value of derivative assets by \$225 million. Further increases in prices to the equivalent of \$87.35 per barrel of oil would increase the fair value of our derivative assets by \$478 million with lending customers comprising the bulk of the assets. Liquidity requirements of this program are also affected by our credit rating. A decrease in credit rating to below investment grade would increase our obligation to post cash margin on existing contracts by approximately \$10 million. The fair value of our to-be-announced residential mortgage-backed securities and interest rate swap derivative contracts is affected by changes in interest rates. Based on our assessment as of December 31, 2019, changes in interest rates would not materially impact regulatory capital or liquidity needed to support this portion of our customer derivative program.

## Summary of Loan Loss Experience

We maintain an allowance for loan losses and an accrual for off-balance sheet credit risk. At December 31, 2019, the combined allowance for loan losses and accrual for off-balance sheet credit risk totaled \$212 million or 0.98% of outstanding loans and 121% of nonaccruing loans, excluding loans guaranteed by U.S. government agencies. Excluding acquired loans measured at acquisition date fair value, the combined allowance for loan losses was 1.06% of outstanding loans and 127% of nonaccruing loans. The allowance for loan losses was \$211 million and the accrual for off-balance sheet credit risk was \$1.6 million. At December 31, 2018, the combined allowance for credit losses was \$209 million or 0.97% of outstanding loans and 134% of nonaccruing loans, excluding loans guaranteed by U.S. government agencies. The allowance for loan losses was \$207 million and the accrual for off-balance sheet credit risk was \$1.8 million.

The provision for credit losses is the amount necessary to maintain the allowance for loan losses and an accrual for off-balance sheet credit risk at an amount determined by management to be appropriate based on its evaluation. The provision includes the combined charge or credit to expense for both the allowance for loan losses and the accrual for off-balance sheet credit risk. All losses incurred from lending activities will ultimately be reflected in charge-offs against the allowance for loan losses following funds advanced against outstanding commitments. Based on an evaluation of all credit factors, including changes in nonaccruing and potential problem loans during the year, net charge-offs, specific impairment of two shared national credit energy loans where the company is not the lead agent and growth in the loan portfolio during the year, the Company determined that a \$44 million provision for credit losses was appropriate for 2019. The Company recorded an \$8.0 million provision for loan losses for 2018.

**Table 24 – Summary of Loan Loss Experience**  
(In thousands)

	Year Ended December 31,				
	2019	2018	2017	2016	2015
<b>Allowance for loan losses:</b>					
Beginning balance	\$ 207,457	\$ 230,682	\$ 246,159	\$ 225,524	\$ 189,056
Loans charged off:					
Commercial	(43,185)	(37,880)	(19,810)	(35,828)	(6,734)
Commercial real estate	(1,161)	—	(76)	—	(944)
Residential mortgage	(288)	(378)	(649)	(1,312)	(2,205)
Personal	(6,343)	(5,325)	(5,064)	(5,448)	(5,288)
Total	(50,977)	(43,583)	(25,599)	(42,588)	(15,171)
Recoveries of loans previously charged off:					
Commercial	2,021	3,316	4,461	1,727	2,729
Commercial real estate	4,986	3,552	1,940	1,283	11,079
Residential mortgage	562	1,047	760	1,999	1,260
Personal	2,505	2,499	2,451	2,747	3,052
Total	10,074	10,414	9,612	7,756	18,120
Net loans recovered (charged off)	(40,903)	(33,169)	(15,987)	(34,832)	2,949
Provision for loan losses	44,205	9,944	510	55,467	33,519
Ending balance	\$ 210,759	\$ 207,457	\$ 230,682	\$ 246,159	\$ 225,524
<b>Accrual for off-balance sheet credit risk:</b>					
Beginning balance	\$ 1,790	\$ 3,734	\$ 11,244	\$ 1,711	\$ 1,230
Provision for off-balance sheet credit risk	(205)	(1,944)	(7,510)	9,533	481
Ending balance	\$ 1,585	\$ 1,790	\$ 3,734	\$ 11,244	\$ 1,711
<b>Total combined provision for credit losses</b>	<b>\$ 44,000</b>	<b>\$ 8,000</b>	<b>\$ (7,000)</b>	<b>\$ 65,000</b>	<b>\$ 34,000</b>
Allowance for loan losses to loans outstanding at period end	0.97%	0.96%	1.34 %	1.45%	1.41 %
Net charge-offs (recoveries) to average loans	0.19%	0.18%	0.09 %	0.21%	(0.02)%
Total provision for credit losses to average loans	0.20%	0.04%	(0.04)%	0.40%	0.23 %
Recoveries to gross charge-offs	19.76%	23.89%	37.55 %	18.21%	119.44 %
Allowance for loan losses as a multiple of net charge-offs	5.15x	6.25x	14.43x	7.07x	(76.47)x
Accrual for off-balance sheet credit risk to off-balance sheet credit commitments	0.01%	0.01%	0.04 %	0.11%	0.02 %
Combined allowance for credit losses to loans outstanding at period-end	0.98%	0.97%	1.37 %	1.52%	1.43 %

#### *Allowance for Loan Losses*

The appropriateness of the allowance for loan losses is assessed by management based on an ongoing quarterly evaluation of the probable estimated losses inherent in the portfolio. The allowance consists of specific allowances attributed to certain impaired loans, general allowances based on estimated loss rates by loan class and non-specific allowances based on general economic conditions, concentration in loans with large balances and other relevant factors.

Loans are considered to be impaired when it is probable that we will not collect all amounts due according to the original contractual terms of the loan agreements. This includes all nonaccruing loans, all loans modified in trouble debt restructurings and all government guaranteed loans repurchased from GNMA pools. A specific allowance is required when the outstanding principal balance of the loan is not supported by either the discounted cash flows expected to be received from the borrower or the fair value of collateral for collateral dependent loans. At December 31, 2019, impaired loans totaled \$373 million, including \$49 million with specific allowances of \$17 million and \$324 million with no specific allowances because the loan balances represent the amounts we expect to recover. At December 31, 2018, impaired loans totaled \$347 million, including \$35 million of impaired loans with specific allowances of \$8.7 million and \$312 million with no specific allowances.

General allowances for unimpaired loans are based on an estimated loss rate by loan class. Estimated loss rates for risk-graded loans are either increased or decreased based on changes in risk grading for each loan class. Estimated loss rates for both risk-graded and non-risk graded loans may be further adjusted for inherent risks identified for the given loan class which have not yet been captured in the loss rate.

The aggregate amount of general allowances for all unimpaired loans totaled \$176 million at December 31, 2019, compared to \$181 million at December 31, 2018. Decreases in the general allowance for the commercial real estate loan portfolio of \$8.2 million and residential mortgage portfolio of \$3.6 million were partially offset by an increase in the commercial loan portfolio of \$7.3 million.

Nonspecific allowances are maintained for risks beyond factors specific to a particular portfolio segment or loan class. These factors include trends in the economy in our primary lending areas, concentrations in loans with large balances and other relevant factors. Nonspecific allowances totaled \$17 million at December 31, 2019, down from \$18 million at December 31, 2018.

An allocation of the allowance for loan losses by loan category follows in Table 25.

**Table 25 – Allowance for Loan Losses Allocation**  
(Dollars in thousands)

Loan category:	December 31,									
	2019		2018		2017		2016		2015	
	Allowance	% of Loans <sup>1</sup>	Allowance	% of Loans <sup>1</sup>	Allowance	% of Loans <sup>1</sup>	Allowance	% of Loans <sup>1</sup>	Allowance	% of Loans <sup>1</sup>
Commercial	\$ 118,187	64.51%	\$ 102,226	62.96%	\$ 124,269	62.58%	\$ 140,213	61.16%	\$ 130,334	64.32%
Commercial real estate	51,805	20.38%	60,026	22.00%	56,621	20.29%	50,749	22.42%	41,391	20.44%
Residential mortgage	14,400	9.58%	17,964	10.30%	18,451	11.50%	18,224	11.48%	19,509	11.77%
Personal	9,172	5.53%	9,473	4.74%	9,124	5.63%	8,773	4.94%	4,164	3.47%
Nonspecific allowance	17,195		17,768		22,217		28,200		30,126	
<b>Total</b>	<b>\$ 210,759</b>	<b>100.00%</b>	<b>\$ 207,457</b>	<b>100.00%</b>	<b>\$ 230,682</b>	<b>100.00%</b>	<b>\$ 246,159</b>	<b>100.00%</b>	<b>\$ 225,524</b>	<b>100.00%</b>

<sup>1</sup> Represents ratio of loan category balance to total loans.

Our loan monitoring process also identified certain accruing substandard loans, based on regulatory guidelines, that possess more than the normal amount of risk due to deterioration in the financial condition of the borrower or the value of the collateral. Because the borrowers are still performing in accordance with the original terms of the loan agreements, and no loss of principal or interest is anticipated, these loans were not included in nonperforming assets. Known information does, however, cause management concern as to the borrowers' continued ability to comply with current repayment terms. These potential problem loans totaled \$160 million at December 31, 2019, composed primarily of \$64 million or 2% of energy loans, \$34 million or 1% of services loans, \$21 million or 1% of healthcare loans and \$14 million or 2% of manufacturing loans. Potential problem loans totaled \$215 million at December 31, 2018.

Based on regulatory guidelines, other loans especially mentioned are in compliance with the original terms of the agreement, but may have a weakness that deserves management's close attention. Other loans especially mentioned totaled \$210 million at December 31, 2019 and were composed primarily of \$117 million or 3% of energy loans, \$30 million or 1% of service sector loans, \$18 million or 3% of manufacturing sector loans, \$13 million or less than 1% of healthcare sector loans and \$12 million or 2% of commercial real estate loans secured by retail facilities. Other loans especially mentioned totaled \$182 million at December 31, 2018.



### *Net Loans Charged Off*

Loans are charged off against the allowance for loan losses when the loan balance or a portion of the loan balance is no longer covered by the paying capacity of the borrower based on an evaluation of available cash resources and collateral value. Internally risk graded loans are evaluated quarterly and charge-offs are taken in the quarter in which the loss is identified. Non-risk graded loans are generally charged off when payments are between 60 days and 180 days past due, depending on loan class. In addition, non-risk graded loans are generally charged-down to collateral value within 60 days of being notified of a borrower's bankruptcy filing, regardless of payment status.

BOK Financial had net loans charged off of \$41 million or 0.19% of average loans for 2019, compared to net loans charged off of \$33 million or 0.18% of average loans in 2018.

Net commercial loans charged off totaled \$41 million, primarily from \$28 million of net charge-offs from energy loans and \$9.8 million of net charge-offs from healthcare loans. Net commercial real estate loan recoveries totaled \$3.8 million. Net recoveries of residential mortgage loans totaled \$274 thousand for the year and net charge-offs of personal loans were \$3.8 million. Net charge-offs of personal loans include deposit account overdraft losses.

**Table 26 - Nonperforming Assets**  
(Dollars in Thousands)

	December 31,				
	2019	2018	2017	2016	2015
Nonaccruing loans:					
Commercial	\$ 115,416	\$ 99,841	\$ 137,303	\$ 178,953	\$ 76,424
Commercial real estate	27,626	21,621	2,855	5,521	9,001
Residential mortgage	37,622	41,555	47,447	46,220	61,240
Personal	287	230	269	290	463
Total nonaccruing loans	180,951	163,247	187,874	230,984	147,128
Accruing renegotiated loans guaranteed by U.S. government agencies					
	92,452	86,428	73,994	81,370	74,049
Real estate and other repossessed assets	20,359	17,487	28,437	44,287	30,731
Total nonperforming assets	\$ 293,762	\$ 267,162	\$ 290,305	\$ 356,641	\$ 251,908
Total nonperforming assets excluding those guaranteed by U.S. government agencies					
	\$ 195,210	\$ 173,602	\$ 207,132	\$ 263,425	\$ 155,959
Nonaccruing loans by loan class:					
Commercial:					
Energy	\$ 91,722	\$ 47,494	\$ 92,284	\$ 132,499	\$ 61,189
Manufacturing	10,133	8,919	5,962	4,931	331
Services	7,483	8,567	2,620	8,173	10,290
Healthcare	4,480	16,538	14,765	825	1,072
Wholesale/retail	1,163	1,316	2,574	11,407	2,919
Public finance	—	—	—	—	—
Other commercial and industrial	435	17,007	19,098	21,118	623
Total commercial	115,416	99,841	137,303	178,953	76,424
Commercial real estate:					
Retail	18,868	20,279	276	326	1,319
Multifamily	6,858	301	—	38	274
Office	—	—	275	426	651
Industrial	909	—	—	76	76
Residential construction and land development	350	350	1,832	3,433	4,409
Other commercial real estate	641	691	472	1,222	2,272
Total commercial real estate	27,626	21,621	2,855	5,521	9,001
Residential mortgage:					
Permanent mortgage	20,441	23,951	25,193	22,855	28,984
Permanent mortgages guaranteed by U.S. government agencies	6,100	7,132	9,179	11,846	21,900
Home equity	11,081	10,472	13,075	11,519	10,356
Total residential mortgage	37,622	41,555	47,447	46,220	61,240
Personal	287	230	269	290	463
Total nonaccruing loans	\$ 180,951	\$ 163,247	\$ 187,874	\$ 230,984	\$ 147,128
Allowance for loan losses to nonaccruing loans <sup>1</sup>					
	120.54%	132.89%	129.09%	112.33%	180.09%
Accruing loans 90 days or more past due <sup>1</sup>					
	\$ 7,680	\$ 1,338	\$ 633	\$ 5	\$ 1,207
Foregone interest on nonaccruing loans <sup>2</sup>					
	17,409	15,502	16,496	15,990	7,432

<sup>1</sup> Excludes residential mortgages guaranteed by agencies of the U.S. government.

<sup>2</sup> Interest collected and recognized on nonaccruing loans was not significant in 2019 and previous years.

Nonperforming assets totaled \$294 million or 1.35% of outstanding loans and repossessed assets at December 31, 2019, a \$27 million increase over the prior year. Nonaccruing loans totaled \$181 million, accruing renegotiated residential mortgage loans totaled \$92 million and real estate and other repossessed assets totaled \$20 million. All accruing renegotiated residential mortgage loans and \$6.1 million of nonaccruing loans are guaranteed by U.S. government agencies. Excluding assets guaranteed by U.S. government agencies, nonperforming assets increased \$22 million to \$195 million or 0.90% of outstanding non-guaranteed loans and repossessed assets. The increase was primarily due to nonaccruing energy and multifamily commercial real estate, partially offset by a decrease in nonaccruing other commercial & industrial loans and healthcare loans. The Company generally retains nonperforming assets to maximize potential recovery, which may cause future nonperforming assets to decrease more slowly.

Loans are generally classified as nonaccruing when it becomes probable that we will not collect the full contractual principal and interest. As more fully discussed in Note 4 to the Consolidated Financial Statements, we may modify loans in a troubled debt restructuring. Modifications may include extension of payment terms and rate concessions. We generally do not forgive principal or accrued but unpaid interest. All loans modified in troubled debt restructurings, except residential mortgage loans guaranteed by U.S. government agencies, are classified as nonaccruing. We may renew matured nonaccruing loans. All nonaccruing loans, including those renewed or modified in troubled debt restructurings, are charged off when the loan balance is no longer covered by the paying capacity of the borrower based on a quarterly evaluation of available cash resources and collateral value. Nonaccruing loans generally remain on nonaccruing status until full collection of principal and interest in accordance with the original terms, including principal previously charged off, is probable. We generally do not voluntarily modify personal loans to troubled borrowers. Personal loans modified at the direction of bankruptcy court orders are identified as troubled debt restructurings and classified as nonaccruing.

Accruing renegotiated loans guaranteed by U.S. government agencies represent residential mortgage loans that have been modified in troubled debt restructurings. See Note 4 to the Consolidated Financial Statements for additional discussion of troubled debt restructurings. Generally, we modify residential mortgage loans primarily by reducing interest rates and extending the number of payments in accordance with U.S. government agency guidelines. Generally, no unpaid principal or interest is forgiven. Interest continues to accrue based on the modified terms of the loan. Modified loans guaranteed by U.S. government agencies under residential mortgage loan programs may be sold once they become eligible according to U.S. government agency guidelines.

A rollforward of nonperforming assets for the year ended December 31, 2019 follows in Table 27.

**Table 27 – Rollforward of Nonperforming Assets**  
(In thousands)

	Year Ended December 31, 2019			
	Nonaccruing Loans	Renegotiated Loans	Real Estate and Other Repossessed Assets	Total Nonperforming Assets
Balance, December 31, 2018	\$ 163,247	\$ 86,428	\$ 17,487	\$ 267,162
Additions	165,020	44,171	—	209,191
Payments	(81,279)	(2,590)	—	(83,869)
Charge-offs	(50,977)	—	—	(50,977)
Net gains (losses) and write-downs	—	—	863	863
Foreclosure of nonaccruing loans	(10,665)	—	10,665	—
Foreclosure of loans guaranteed by U.S. government agencies	(2,755)	(10,289)	—	(13,044)
Proceeds from sales	—	(26,175)	(8,656)	(34,831)
Net transfers to nonaccruing loans	235	(235)	—	—
Return to accrual status	(1,875)	—	—	(1,875)
Other, net	—	1,142	—	1,142
Balance, December 31, 2019	\$ 180,951	\$ 92,452	\$ 20,359	\$ 293,762

We foreclose on loans guaranteed by U.S. government agencies in accordance with agency guidelines. Generally these loans are not eligible for modification programs or have failed to comply with modified loan terms. Principal is guaranteed by agencies of the U.S. government, subject to limitations and credit risk is limited. These properties will be conveyed to the agencies and receivables collected once applicable criteria have been met.

Nonaccruing loans totaled \$181 million or 0.83% of outstanding loans at December 31, 2019, compared to \$163 million or 0.75% of outstanding loans at December 31, 2018. Nonaccruing loans increased \$18 million compared to December 31, 2018. Newly identified nonaccruing loans totaled \$165 million. This was offset by \$81 million of payments, \$51 million of charge-offs and \$11 million of foreclosures during the year.

#### *Commercial*

Nonaccruing commercial loans totaled \$115 million or 0.82% of total commercial loans at December 31, 2019, compared to \$100 million or 0.73% of total commercial loans at December 31, 2018. Newly identified nonaccruing commercial loans totaled \$133 million, offset by \$68 million in payments, \$43 million of charge-offs and \$6.6 million of repossessions.

Nonaccruing commercial loans at December 31, 2019 were primarily composed of \$92 million or 2.31% of total energy loans, \$10 million or 1.52% of total manufacturing loans and \$7.5 million or 0.24% of service sector loans.

#### *Commercial Real Estate*

Nonaccruing commercial real estate loans were \$28 million or 0.62% of outstanding commercial real estate loans at December 31, 2019, compared to \$22 million or 0.45% of outstanding commercial real estate loans at December 31, 2018. The \$6.0 million increase was primarily due to \$10 million of newly identified commercial real estate loans during the year, partially offset by \$1.6 million of cash payments received and \$1.2 million of charge-offs.

Nonaccruing commercial real estate loans were primarily composed of \$19 million or 2.43% of commercial real estate loans secured by retail facilities and \$6.9 million or 0.54% of outstanding commercial real estate loans secured by multifamily residential properties.

#### *Residential Mortgage and Personal*

Nonaccruing residential mortgage loans totaled \$38 million or 1.81% of outstanding residential mortgage loans at December 31, 2019, compared to \$42 million or 1.86% of outstanding residential mortgage loans at December 31, 2018. Newly identified nonaccruing residential mortgage loans of \$16 million were offset by \$12 million of cash payments and \$4.0 million of foreclosures. Nonaccruing residential mortgage loans primarily consisted of \$20 million or 1.93% of non-guaranteed permanent residential mortgage loans and \$11 million or 1.34% of total home equity loans.

Payments on accruing residential mortgage loans and personal loans may be delinquent. The composition of residential mortgage loans and personal loans past due but still accruing is included in the following Table 28. Substantially all non-guaranteed residential loans past due 90 days or more are nonaccruing. At December 31, 2019, residential mortgage loans 30 to 59 days past due were \$5.4 million, up \$1.1 million over the prior year. Residential mortgage loans 60 to 89 days past due decreased \$257 thousand from December 31, 2018. Personal loans 30 to 59 days past due increased \$4.2 million and personal loans 60 to 89 days past due decreased \$742 thousand compared to December 31, 2018.

**Table 28 – Residential Mortgage and Personal Loans Past Due**

(In thousands)

	December 31, 2019			December 31, 2018		
	90 Days or More	60 to 89 Days	30 to 59 Days	90 Days or More	60 to 89 Days	30 to 59 Days
Residential mortgage:						
Permanent mortgage <sup>1</sup>	\$ —	\$ 153	\$ 2,011	\$ —	\$ 366	\$ 3,196
Home equity	—	308	3,343	59	352	1,102
<b>Total residential mortgage</b>	<b>\$ —</b>	<b>\$ 461</b>	<b>\$ 5,354</b>	<b>\$ 59</b>	<b>\$ 718</b>	<b>\$ 4,298</b>
Personal	\$ 15	\$ 54	\$ 4,664	\$ 3	\$ 796	\$ 479

<sup>1</sup> Excludes past due residential mortgage loans guaranteed by agencies of the U.S. government.

## Real Estate and Other Repossessed Assets

Real estate and other repossessed assets are assets acquired in partial or total forgiveness of loans. The assets are carried at the lower of cost as determined by fair value at date of foreclosure or current fair value, less estimated selling costs.

Real estate and other repossessed assets totaled \$20 million at December 31, 2019, composed primarily of \$8.9 million of developed commercial real estate, \$5.3 million of oil and gas properties, \$3.9 million of 1-4 family residential properties, and \$2.1 million of undeveloped land primarily zoned for commercial development. The residential properties and undeveloped land are widely disbursed across our geographical footprint. Real estate and other repossessed assets increased \$2.9 million compared to December 31, 2018.

## Liquidity and Capital

Based on the average balances for 2019, approximately 61% of our funding was provided by deposit accounts, 24% from borrowed funds, less than 1% from long-term subordinated debt and 11% from equity. Our funding sources, which primarily include deposits and borrowings from the Federal Home Loan Banks, provide adequate liquidity to meet our operating needs.

### Subsidiary Banks

Deposits and borrowed funds are the primary sources of liquidity for the subsidiary banks. Deposit accounts represent our largest funding source. We compete for retail and commercial deposits by offering a broad range of products and services and focusing on customer convenience. Retail deposit growth is supported through personal and small business checking, online bill paying services, mobile banking services, an extensive network of branch locations and ATMs and our ExpressBank call center. Commercial deposit growth is supported by offering treasury management and lockbox services. We also acquire brokered deposits when the cost of funds is advantageous to other funding sources.

**Table 29 - Average Deposits by Line of Business**

(In thousands)

	Year Ended December 31,	
	2019	2018
Commercial Banking	\$ 10,319,677	\$ 8,517,137
Consumer Banking	6,876,676	6,560,145
Wealth Management	6,447,987	5,617,325
Subtotal	23,644,340	20,694,607
Funds Management and other	2,006,941	2,114,604
Total	\$ 25,651,281	\$ 22,809,211

Average deposits for 2019 totaled \$25.7 billion and represented approximately 61% of total liabilities and capital compared with \$22.8 billion and 65% of total liabilities and capital for 2018. Average deposits increased \$2.8 billion over the prior year, largely related to the full year impact of the CoBiz acquisition in the fourth quarter of 2018. Acquired deposits were allocated to the lines of business from Funds Management and other in the second quarter of 2019. Demand deposits grew by \$219 million. Interest-bearing transaction deposit account balances increased by \$2.5 billion and time deposits grew by \$82 million.

Average deposits attributed to Commercial Banking were \$10.3 billion for 2019, a \$1.8 billion or 21% increase over 2018. Interest-bearing transaction account balances increased \$1.7 billion or 65% and demand deposit balances increased \$78 million or 1%. Commercial customers continue to retain large cash reserves primarily due to a combination of factors including uncertainty about the economic environment and potential for growth, lack of preferable liquid alternatives and a desire to minimize deposit charges through the earnings credit. The earnings credit is a non-cash method that enables commercial customers to offset deposit service charges based on account balances. Commercial deposit balances may decrease as the economic outlook improves and if short-term rates move higher, enhancing their investment alternatives.

Average Consumer Banking deposit balances increased \$317 million or 5% over the prior year. Average demand deposit balances grew by \$287 million or 15% while average interest-bearing transaction accounts increased \$30 million or 1%. Time deposit balances increased \$51 million or 6%.

Average Wealth Management deposit balances grew by \$831 million or 15% over the prior year. Interest-bearing transaction balances increased \$908 million or 26%. Non-interest-bearing demand deposits decreased \$74 million or 6%, and time deposit balances decreased \$11 million or 1%.

**Table 30 - Maturity of Domestic CDs and Public Funds in Amounts of \$100,000 or More**

(In thousands)

	December 31,	
	2019	2018
Months to maturity:		
3 or less	\$ 364,642	\$ 380,315
Over 3 through 6	275,227	298,692
Over 6 through 12	466,751	299,346
Over 12	572,539	618,413
Total	\$ 1,679,159	\$ 1,596,766

Brokered deposits included in time deposits averaged \$247 million for 2019, compared to \$251 million for 2018. Brokered deposits included in time deposits totaled \$237 million at December 31, 2019 and \$247 million at December 31, 2018.

Average interest-bearing transaction accounts for 2019 included \$1.1 billion of brokered deposits compared to \$821 million for 2018. Brokered deposits included in interest-bearing transaction accounts totaled \$1.2 billion at December 31, 2019 and \$832 million at December 31, 2018.

The distribution of our period end deposit account balances among principal markets follows in Table 31.

**Table 31 - Period End Deposits by Principal Market Area**  
(In thousands)

	December 31,				
	2019	2018	2017	2016	2015
Oklahoma:					
Demand	\$ 3,257,337	\$ 3,610,593	\$ 3,885,008	\$ 3,993,170	\$ 4,133,520
Interest-bearing:					
Transaction	8,574,912	6,445,831	5,901,293	6,345,536	5,971,819
Savings	306,194	288,210	265,870	241,696	226,733
Time	1,125,446	1,118,643	1,092,133	1,118,355	1,202,274
Total interest-bearing	10,006,552	7,852,684	7,259,296	7,705,587	7,400,826
Total Oklahoma	13,263,889	11,463,277	11,144,304	11,698,757	11,534,346
Texas:					
Demand	2,757,376	3,289,659	3,239,098	3,137,009	2,627,764
Interest-bearing:					
Transaction	2,911,731	2,294,740	2,397,071	2,388,812	2,132,099
Savings	102,456	99,624	93,620	83,101	77,902
Time	495,343	423,880	502,879	535,642	549,740
Total interest-bearing	3,509,530	2,818,244	2,993,570	3,007,555	2,759,741
Total Texas	6,266,906	6,107,903	6,232,668	6,144,564	5,387,505
Colorado:					
Demand	1,729,674	1,658,473	633,714	576,000	497,318
Interest-bearing:					
Transaction	1,769,037	1,899,203	657,629	616,679	616,697
Savings	53,307	57,289	35,223	32,866	31,927
Time	283,517	274,877	224,962	242,782	296,224
Total interest-bearing	2,105,861	2,231,369	917,814	892,327	944,848
Total Colorado	3,835,535	3,889,842	1,551,528	1,468,327	1,442,166
New Mexico:					
Demand	623,722	691,692	663,353	627,979	487,286
Interest-bearing:					
Transaction	558,493	571,347	552,393	590,571	563,723
Savings	63,999	58,194	55,647	49,963	43,672
Time	238,140	224,515	216,743	238,408	267,821
Total interest-bearing	860,632	854,056	824,783	878,942	875,216
Total New Mexico	1,484,354	1,545,748	1,488,136	1,506,921	1,362,502

	December 31,				
	2019	2018	2017	2016	2015
Arizona:					
Demand	681,268	709,176	334,701	366,755	326,324
Interest-bearing:					
Transaction	684,929	575,996	274,846	305,099	358,556
Savings	10,314	10,545	3,343	2,973	2,893
Time	49,676	43,051	20,394	27,765	29,498
Total interest-bearing	744,919	629,592	298,583	335,837	390,947
Total Arizona	1,426,187	1,338,768	633,284	702,592	717,271
Kansas/Missouri:					
Demand	384,533	418,199	457,080	508,418	197,424
Interest-bearing:					
Transaction	784,574	327,866	382,066	513,176	153,203
Savings	12,169	13,721	13,574	12,679	1,378
Time	17,877	19,688	27,260	42,152	35,524
Total interest-bearing	814,620	361,275	422,900	568,007	190,105
Total Kansas/Missouri	1,199,153	779,474	879,980	1,076,425	387,529
Arkansas:					
Demand	27,381	36,800	30,384	26,389	27,252
Interest-bearing:					
Transaction	108,076	91,593	85,095	105,232	202,857
Savings	1,837	1,632	1,881	2,192	1,747
Time	7,850	8,726	14,045	16,696	24,983
Total interest-bearing	117,763	101,951	101,021	124,120	229,587
Total Arkansas	145,144	138,751	131,405	150,509	256,839
Total BOK Financial deposits	\$ 27,621,168	\$ 25,263,763	\$ 22,061,305	\$ 22,748,095	\$ 21,088,158

See Note 9 to the Consolidated Financial Statements for a summary of other borrowings.

In addition to deposits, liquidity for the subsidiary banks is provided primarily by federal funds purchased, securities repurchase agreements and Federal Home Loan Bank borrowings. Federal funds purchased consist primarily of unsecured, overnight funds acquired from other financial institutions. Funds are primarily purchased from bankers' banks and Federal Home Loan Banks from across the country. The largest source of wholesale federal funds purchased totaled \$600 million at December 31, 2019 and \$300 million at December 31, 2018. Securities repurchase agreements generally mature within 90 days and are secured by certain available for sale securities. Federal Home Loan Bank borrowings are generally short term and are secured by a blanket pledge of eligible collateral (generally unencumbered U.S. Treasury and mortgage-backed securities, 1-4 family residential mortgage loans, multifamily and other qualifying commercial real estate loans). Amounts borrowed from the Federal Home Loan Bank of Topeka averaged \$7.1 billion during 2019 and \$6.2 billion during 2018.

At December 31, 2019, the estimated unused credit available to BOKF, NA from collateralized sources was approximately \$10.6 billion.

BOKF, NA also has a liability related to the repurchase of certain delinquent residential mortgage loans previously sold in GNMA mortgage pools. Interest is payable monthly at rates contractually due to investors.



### *Parent Company and Other Non-Bank Subsidiaries*

The primary sources of liquidity for BOK Financial are cash on hand and dividends from the subsidiary banks. Cash and cash equivalents totaled \$215 million at December 31, 2019. Dividends from the subsidiary banks are limited by various banking regulations to net profits, as defined, for the year plus retained profits for the two preceding years. Dividends are further restricted by minimum capital requirements. At December 31, 2019, based on the most restrictive limitations as well as management's internal capital policy, BOKF, NA could declare up to \$246 million of dividends without regulatory approval. Dividend constraints may be alleviated through increases in retained earnings, capital issuances or changes in risk weighted assets. Future losses or increases in required regulatory capital could also affect its ability to pay dividends to the parent company.

On June 27, 2016, the parent company issued \$150 million of subordinated debt that will mature on June 30, 2056. This debt bears interest at the rate of 5.375%, payable quarterly. On June 30, 2021, we will have the option to redeem the debt at the principal amount plus accrued interest, subject to regulatory approval.

As a result of the acquisition of CoBiz Financial, we obtained \$60 million of subordinated debt issued in June 2015 that will mature on June 25, 2030. This debt bears interest at the rate of 5.625% through June 25, 2025 and thereafter, the notes will bear an annual floating rate equal to 3-month LIBOR plus 317 basis points. We also acquired \$72 million of junior subordinated debentures. Interest is based on spreads over 3 month LIBOR ranging from 145 basis points to 295 basis points and mature September 17, 2033 through September 30, 2035. The junior subordinated debentures are subject to early redemption prior to maturity.

Shareholders' equity at December 31, 2019 was \$4.9 billion, an increase of \$424 million over December 31, 2018. Net income less cash dividends paid increased equity \$357 million during 2019. Changes in interest rates resulted in accumulated other comprehensive income of \$105 million at December 31, 2019, compared to an accumulated other comprehensive loss of \$73 million at December 31, 2018. Capital is managed to maximize long-term value to the shareholders. Factors considered in managing capital include projections of future earnings, asset growth and acquisition strategies, and regulatory and debt covenant requirements. Capital management may include subordinated debt issuance, share repurchase and stock and cash dividends.

On April 30, 2019, the Board of Directors authorized the Company to purchase up to five million common shares, subject to market conditions, securities laws and other regulatory compliance limitations. As of December 31, 2019, a cumulative total of 866,713 shares have been repurchased under this authorization. The Company repurchased 1,572,322 shares during 2019 at an average price of \$82.35 per share, including shares purchased under a previous authorization.

BOK Financial and the subsidiary banks are subject to various capital requirements administered by federal agencies. Failure to meet minimum capital requirements, including capital conservation buffer, can result in certain mandatory and additional discretionary actions by regulators that could have a material impact on operations including restrictions on capital distributions from dividends and share repurchases and executive bonus payments. These capital requirements include quantitative measures of assets, liabilities and off-balance sheet items. The capital standards are also subject to qualitative judgments by the regulators.

A summary of minimum capital requirements follows for BOK Financial on a consolidated basis in Table 32.

**Table 32 – Capital Ratios**

	Minimum Capital Requirement	Capital Conservation Buffer	Minimum Capital Requirement Including Capital Conservation Buffer	December 31,	
				2019	2018
Risk-based capital:					
Common equity Tier 1	4.50%	2.50%	7.00%	11.39%	10.92%
Tier 1 capital	6.00%	2.50%	8.50%	11.39%	10.92%
Total capital	8.00%	2.50%	10.50%	12.94%	12.50%
Tier 1 Leverage	4.00%	N/A	4.00%	8.40%	8.96%
Average total equity to average assets				11.11%	10.70%
Tangible common equity ratio				8.98%	8.82%

As discussed further in Recently Issued Accounting Standard section following, the Company adopted FASB Accounting Standards Update No. 2016-13, *Financial Instruments - Credit Losses (Topic 326): Assets Measured at Amortized Cost* (“ASU 2016-13” or “CECL”) on January 1, 2020. The adoption of CECL is not expected to have a significant impact on capital. We plan to adopt the three year transition approach for regulatory capital purposes.

Capital resources of financial institutions are also regularly measured by the tangible common shareholders’ equity ratio. Tangible common shareholders’ equity is shareholders’ equity as defined by generally accepted accounting principles in the United States of America (“GAAP”), including unrealized gains and losses on available for sale securities, less intangible assets and equity which does not benefit common shareholders. Equity that does not benefit common shareholders includes preferred equity. This non-GAAP measure is a valuable indicator of a financial institution’s capital strength since it eliminates intangible assets from shareholders’ equity and retains the effect of unrealized losses on securities and other components of accumulated other comprehensive income in shareholders’ equity.

Table 33 following provides a reconciliation of the non-GAAP measures with financial measures defined by GAAP.

**Table 33 – Non-GAAP Measures**

(Dollars in thousands)

	December 31,	
	2019	2018
<b>Tangible common equity ratio:</b>		
Total shareholders' equity	\$ 4,855,795	\$ 4,432,109
Less: Goodwill and intangible assets, net	1,173,362	1,184,112
Tangible common equity	3,682,433	3,247,997
Total assets	42,172,021	38,020,504
Less: Goodwill and intangible assets, net	1,173,362	1,184,112
Tangible assets	\$ 40,998,659	\$ 36,836,392
Tangible common equity ratio	8.98%	8.82%

### Off-Balance Sheet Arrangements

See Note 14 to the Consolidated Financial Statements for a discussion of the Company’s significant off-balance sheet commitments.

### Aggregate Contractual Obligations

BOK Financial has numerous contractual obligations in the normal course of business. These obligations include time deposits and other borrowed funds, premises used under various operating leases, commitments to extend credit to borrowers and to purchase securities, derivative contracts and contracts for services such as data processing that are integral to our operations. Table 34 following summarizes payments due on contractual obligations with initial terms in excess of one year.

**Table 34 – Contractual Obligations as of December 31, 2019**

(In thousands)

	<b>Less Than 1 Year</b>	<b>1 to 3 Years</b>	<b>4 to 5 Years</b>	<b>More Than 5 Years</b>	<b>Total</b>
Time deposits	\$ 864,803	\$ 345,389	\$ 171,359	\$ 271,354	\$ 1,652,905
Other borrowings	2,458	2,671	5,937	5,638	16,704
Subordinated debentures	14,543	29,086	29,086	558,920	631,635
Lease obligations	27,496	45,735	37,107	127,027	237,365
Derivative contracts	38,436	25,507	11,606	8,244	83,793
Data processing services	13,161	22,346	18,718	13,265	67,490
<b>Total</b>	<b>\$ 960,897</b>	<b>\$ 470,734</b>	<b>\$ 273,813</b>	<b>\$ 984,448</b>	<b>\$ 2,689,892</b>
Loan commitments				\$	11,065,649
Standby letters of credit					645,505
Mortgage loans sold with recourse					88,808
Alternative investment commitments					82,207

Payments on time deposits, other borrowed funds and subordinated debentures include interest which has been calculated from rates at December 31, 2019. These obligations may have variable interest rates and actual payments will differ from the amounts shown on this table.

Payments on time deposits are based on contractual maturity dates. These funds may be withdrawn prior to maturity. We may charge the customer a penalty for early withdrawal.

Lease commitments generally represent real property we rent for branch offices, corporate offices and operations facilities. Payments presented represent the minimum lease payments and exclude related costs such as utilities and property taxes.

Obligations under derivative contracts are used in customer hedging programs. As previously discussed, we have entered into derivative contracts which are expected to substantially offset the cash payments due on these obligations.

Data processing and communications contracts represent the minimum obligations under the contracts. Additional payments that are based on the volume of transactions processed are excluded.

Loan commitments represent legally binding obligations to provide financing to our customers. Some of these commitments are expected to expire before being drawn upon and the total commitment amounts do not necessarily represent future cash requirements. Approximately \$1.7 billion of the loan commitments expire within one year.

The Company has commitments to fund an additional \$82 million for various alternative investments. Alternative investments primarily consist of limited partnership interests in entities that invest in low income housing projects. Legally binding commitments to fund alternative investments are recognized as liabilities in the Consolidated Financial Statements.

### Recently Issued Accounting Standards

See Note 1 of the Consolidated Financial Statements for disclosure of newly adopted and pending accounting standards.

On June 16, 2016 the FASB issued FASB Accounting Standards Update No. 2016-13, *Financial Instruments - Credit Losses (Topic 326): Assets Measured at Amortized Cost ("ASU 2016-13" or "CECL")* to provide more-timely recording of expected credit losses on loans and certain other financial assets. The Company adopted CECL on January 1, 2020, through a pre-tax, cumulative-effect adjustment to retained earnings of approximately \$61.4 million.

The distribution of the cumulative-effect adjustment is summarized in Table 35 following.

**Table 35 - CECL Transition Adjustment**

(In millions)

	<b>Pre-tax Cumulative-Effect Adjustment</b>
Adjustments to the allowance for loan losses:	
Measurement changes to the allowance attributed to outstanding loan balances	\$ 1.3
Recognition of expected credit losses on acquired loans	24.5
Total adjustments to the allowance for loan losses	25.8
Measurement changes to accruals for unfunded loan commitments	23.6
Total adjustments for lending activities	49.4
Measurement changes to accruals for credit risk associated with residential mortgage loans transferred to mortgage-backed securities that exceed amounts guaranteed by U.S. government agencies	10.9
Total adjustments to accruals for mortgage-banking activities	10.9
Allowance for held-to-maturity (investment) securities	1.1
Total pre-tax transition adjustment	<b>\$ 61.4</b>

CECL requires recognition of expected credit losses on assets carried at amortized cost over their expected lives, after appropriately considering prepayments and, in limited-circumstances, extensions and renewals. Expected losses are generally estimated through the use of models that measure probability of default and loss given default over a 12-month reasonable and estimable economic forecast period. Estimated losses after that period are generally measured by a reversion method that considers the direction and level of current risk in the portfolio applied over the remaining expected lives.

Models are based on relevant macro-economic factors, such as gross national product, unemployment rate, and oil and gas prices, that consider three scenarios, Base, Upside and Downside. The probability of each scenario is weighted to determine the appropriate economic forecast factors.

### Forward-Looking Statements

This 10-K contains forward-looking statements that are based on management's beliefs, assumptions, current expectations, estimates and projections about BOK Financial, the financial services industry and the economy generally. Words such as "anticipates," "believes," "estimates," "expects," "forecasts," "plans," "projects," "will," "intends," variations of such words and similar expressions are intended to identify such forward-looking statements. Management judgments relating to and discussion of the provision and allowance for credit losses, allowance for uncertain tax positions, accruals for loss contingencies and valuation of mortgage servicing rights involve judgments as to expected events and are inherently forward-looking statements. Assessments that BOK Financial's acquisitions, including its latest acquisition of CoBiz Financial, Inc., and other growth endeavors will be profitable are necessary statements of belief as to the outcome of future events based in part on information provided by others which BOK Financial has not independently verified. These statements are not guarantees of future performance and involve certain risks, uncertainties, and assumptions which are difficult to predict with regard to timing, extent, likelihood and degree of occurrence. Therefore, actual results and outcomes may materially differ from what is expected, implied or forecasted in such forward-looking statements. Internal and external factors that might cause such a difference include, but are not limited to changes in commodity prices, interest rates and interest rate relationships, inflation, demand for products and services, the degree of competition by traditional and nontraditional competitors, changes in banking regulations, tax laws, prices, levies and assessments, the impact of technological advances, and trends in customer behavior as well as their ability to repay loans. BOK Financial and its affiliates undertake no obligation to update, amend or clarify forward-looking statements, whether as a result of new information, future events, or otherwise.

### Legal Notice

As used in this report, the term "BOK Financial" and such terms as "the Company," "the Corporation," "our," "we" and "us" may refer to one or more of the consolidated subsidiaries or all of them taken as a whole. All these terms are used for convenience only and are not intended as a precise description of any of the separate companies, each of which manages its own affairs.

## ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

### Market Risk

Market risk is a broad term for the risk of economic loss due to adverse changes in the fair value of a financial instrument. These changes may be the result of various factors, including interest rates, foreign exchange rates, commodity prices or equity prices. Financial instruments that are subject to market risk can be classified either as held for trading or held for purposes other than trading. Market risk excludes changes in fair value due to credit of the individual issuers of financial instruments.

BOK Financial is subject to market risk primarily through the effect of changes in interest rates on both its assets held for purposes other than trading and trading assets. The effects of other changes, such as foreign exchange rates, commodity prices or equity prices do not pose significant market risk to BOK Financial. BOK Financial has no material investments in assets that are affected by changes in foreign exchange rates or equity prices. Energy and agricultural product derivative contracts, which are affected by changes in commodity prices, are matched against offsetting contracts as previously discussed.

The Asset/Liability Committee is responsible for managing market risk in accordance with policy limits established by the Board of Directors. The Committee monitors projected variation in net interest revenue, net income and economic value of equity due to specified changes in interest rates. These limits also set maximum levels for short-term borrowings, short-term assets, public funds and brokered deposits and establish minimum levels for un-pledged assets, among other things. Further, the Board approved market risk limits for fixed income trading, mortgage pipeline and mortgage servicing assets inclusive of economic hedge benefits. Exposure is measured daily and compliance is reviewed monthly. Deviations from the Board approved limits, which periodically occur throughout the reporting period, may require management to develop and execute plans to reduce exposure. These plans are subject to escalation to and approval by the Board.

The simulations used to manage market risk are based on numerous assumptions regarding the effects of changes in interest rates on the timing and extent of repricing characteristics, future cash flows and customer behavior. These assumptions are inherently uncertain and, as a result, models cannot precisely estimate or precisely predict the impact of higher or lower interest rates. Actual results will differ from simulated results due to timing, magnitude and frequency of interest rate changes, market conditions and management strategies, among other factors.

#### *Interest Rate Risk – Other than Trading*

As previously noted in the Net Interest Revenue section of this report, management has implemented strategies to manage the Company's balance sheet to have relatively limited exposure to changes in interest rates over a twelve-month period. The effectiveness of these strategies in managing the overall interest rate risk is evaluated through the use of an asset/liability model. BOK Financial performs a sensitivity analysis to identify more dynamic interest rate risk exposures, including embedded option positions, on net interest revenue. A simulation model is used to estimate the effect of changes in interest rates on our performance across multiple interest rate scenarios. Our current internal policy limit for net interest revenue variation due to a 200 basis point parallel change in market interest rates over twelve months is a maximum decline of 5%. The results of a 200 basis point decrease in interest rates in the current low-rate environment are not meaningful. Until such time as it becomes meaningful, we will instead report the effect of a 100 basis point decrease in interest rates.

The Company's primary interest rate exposures include the Federal Funds rate, which affects short-term borrowings, and the prime lending rate and LIBOR, which are the basis for much of the variable rate loan pricing. Additionally, residential mortgage rates directly affect the prepayment speeds for residential mortgage-backed securities and mortgage servicing rights. Derivative financial instruments and other financial instruments used for purposes other than trading are included in this simulation. In addition, the impact on the level and composition of demand deposit accounts and other core deposit balances resulting from a significant increase in short-term market interest rates and the overall interest rate environment is likely to be material. The simulation incorporates assumptions regarding the effects of such changes based on a combination of historical analysis and expected behavior. The impact of planned growth and new business activities is factored into the simulation model.

**Table 36 – Interest Rate Sensitivity**

(Dollars in thousands)

	200 bp Increase		100 bp Decrease <sup>1</sup>	
	2019	2018	2019	2018
Anticipated impact over the next twelve months on net interest revenue	\$ (16,328)	\$ (4,248)	\$ (31,629)	\$ (42,483)
	(1.50)%	(0.36)%	(2.91)%	(3.57)%

<sup>1</sup> The results of a 200 basis point decrease in interest rates in the low-rate environment are not meaningful, therefore we will instead report the effect of a 100 basis point decrease in interest rates.

BOK Financial is also subjected to market risk through changes in the fair value of mortgage servicing rights. Changes in the fair value of mortgage servicing rights are highly dependent on changes in primary mortgage rates offered to borrowers, intermediate-term interest rates that affect the value of custodial funds, and assumptions about servicing revenues, servicing costs and discount rates. As primary mortgage rates increase, prepayment speeds slow and the value of our mortgage servicing rights increases. As primary mortgage rates fall, prepayment speeds increase and the value of our mortgage servicing rights decreases.

We maintain a portfolio of financial instruments, which may include debt securities issued by the U.S. government or its agencies and interest rate derivative contracts held as an economic hedge of the changes in the fair value of our mortgage servicing rights. Composition of this portfolio will change based on our assessment of market risk. Changes in the fair value of residential mortgage-backed securities are highly dependent on changes in secondary mortgage rates required by investors, and interest rate derivative contracts are highly dependent on changes in other market interest rates. While primary and secondary mortgage rates generally move in the same direction, the spread between them may widen and narrow due to market conditions and government intervention. Changes in the forward-looking spread between the primary and secondary rates can cause significant earnings volatility.

Management performs a stress test to measure market risk due to changes in interest rates inherent in its MSR portfolio and hedges. The stress test shocks applicable interest rates up and down 50 basis points and calculates an estimated change in fair value, net of economic hedging activity, that may result. The Board has approved a \$20 million market risk limit for mortgage servicing rights, net of economic hedges.

**Table 37 - MSR Asset and Hedge Sensitivity Analysis**

(In thousands)

	December 31,			
	2019		2018	
	Up 50 bp	Down 50 bp	Up 50 bp	Down 50 bp
MSR Asset	\$ 30,369	\$ (41,779)	\$ 18,619	\$ (27,154)
MSR Hedge	(40,727)	33,454	(21,838)	21,922
Net Exposure	(10,358)	(8,325)	(3,219)	(5,232)

*Trading Activities*

The Company bears market risk by originating residential mortgages held for sale ("RMHFS"). RMHFS are generally outstanding for 60 to 90 days, which represents the typical period from commitment to originate a loan to sale of the closed loan to an investor. Primary mortgage interest rate changes during this period affect the value of RMHFS commitments and loans. We use forward sale contracts to mitigate market risk on all closed mortgage loans held for sale and on an estimate of mortgage loan commitments that are expected to result in closed loans.

A variety of methods are used to monitor market risk of mortgage origination activities. These methods include daily marking of all positions to market value, independent verification of inventory pricing, and revenue sensitivity limits.

Management performs a stress test to measure market risk due to changes in interest rates inherent in the mortgage production pipeline. The stress test shocks applicable interest rates up and down 50 basis points and calculates an estimated change in fair value, net of economic hedging activity that may result. The Board has approved a \$7 million market risk limit for the mortgage production pipeline, net of forward sale contracts.

**Table 38 - Mortgage Pipeline Sensitivity Analysis**

(In thousands)

	Year Ended December 31,			
	2019		2018	
	Up 50 bp	Down 50 bp	Up 50 bp	Down 50 bp
Average <sup>1</sup>	\$ (143)	\$ (191)	\$ 223	\$ (697)
Low <sup>2</sup>	528	293	2,077	699
High <sup>3</sup>	(498)	(538)	(1,015)	(2,447)
Period End	(112)	(98)	(16)	(420)

<sup>1</sup> Average represents the simple average of each daily value observed during the reporting period.

<sup>2</sup> Low represents least risk of loss in fair value measured as the smallest negative value or the largest positive value observed daily during the reporting period.

<sup>3</sup> High represents the greatest risk of loss in fair value measured as the largest negative value or the smallest positive value observed daily during the reporting period.

BOK Financial enters into trading activities both as an intermediary for customers and for its own account. As an intermediary, we take positions in securities, generally residential mortgage-backed securities, government agency securities and municipal bonds. These securities are purchased for resale to customers, which include individuals, corporations, foundations and financial institutions. On a limited basis, we may also take trading positions in U.S. Treasury securities, residential mortgage-backed securities, and municipal bonds to enhance returns on securities portfolios. Both of these activities involve interest rate, liquidity and price risk. BOK Financial has an insignificant exposure to foreign exchange risk and does not take positions in commodity derivatives.

A variety of methods are used to monitor the interest rate risk of trading activities. These methods include daily marking of all positions to market value, independent verification of inventory pricing, and position limits for each trading activity. Economic hedges in either the futures or cash markets may be used to reduce the risk associated with some trading programs.

Management performs a stress test to measure market risk from changes in interest rates on its trading portfolio. The stress test shocks applicable interest rates up and down 50 basis points and calculates an estimated change in fair value, net of economic hedging activity that may result. The Board has approved an \$8 million market risk limit for the trading portfolio, net of economic hedges.

**Table 39 –Trading Securities Sensitivity Analysis**

(In thousands)

	Year Ended December 31,			
	2019		2018	
	Up 50 bp	Down 50 bp	Up 50 bp	Down 50 bp
Average <sup>1</sup>	\$ (1,803)	\$ 2,602	\$ (1,133)	\$ 649
Low <sup>2</sup>	2,049	7,106	2,041	4,423
High <sup>3</sup>	(5,345)	(1,376)	(4,534)	(3,463)
Period End	(1,702)	2,710	1,470	(1,081)

<sup>1</sup> Average represents the simple average of each daily value observed during the reporting period.

<sup>2</sup> Low represents least risk of loss in fair value measured as the smallest negative value or the largest positive value observed daily during the reporting period.

<sup>3</sup> High represents the greatest risk of loss in fair value measured as the largest negative value or the smallest positive value observed daily during the reporting period.

## **ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA**

### **Report of Management on Internal Control over Financial Reporting**

Management of BOK Financial Corporation is responsible for establishing and maintaining adequate internal control over financial reporting and for assessing the effectiveness of internal control over financial reporting, as such term is defined in Exchange Act Rules 13a-15(f) and 15d-15(f), as amended. Management has assessed the effectiveness of the Company's internal control over financial reporting based on the criteria established in "Internal Control – Integrated Framework," issued by the Committee of Sponsoring Organizations ("COSO") of the Treadway Commission in 2013. Based on that assessment and criteria, management has determined that the Company maintained effective internal control over financial reporting as of December 31, 2019.

Ernst & Young LLP, the independent registered public accounting firm that audited the Consolidated Financial Statements of the Company included in this annual report has issued an audit report on the effectiveness of the Company's internal control over financial reporting as of December 31, 2019. Their report, which expresses an unqualified opinion on the effectiveness of the Company's internal control over financial reporting as of December 31, 2019, is included in this annual report.



## Report of Independent Registered Public Accounting Firm

To the Shareholders and the Board of Directors of BOK Financial Corporation

### Opinion on Internal Control over Financial Reporting

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

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of BOK Financial Corporation as of December 31, 2019 and 2018, and the related consolidated statements of earnings, comprehensive income, changes in equity, and cash flows for each of the three years in the period ended December 31, 2019, and the related notes and our report dated February 27, 2020 expressed an unqualified opinion thereon.

### Basis for Opinion

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

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

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

### Definition and Limitations of Internal Control over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

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

/s/ Ernst & Young LLP

Tulsa, Oklahoma

February 27, 2020

## **Report of Independent Registered Public Accounting Firm**

To the Shareholders and the Board of Directors of BOK Financial Corporation

### **Opinion on the Financial Statements**

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

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company’s internal control over financial reporting as of December 31, 2019, based on the criteria established in Internal Control-Integrated Framework issued by the Committee of Sponsoring Organizations of the Treadway Commission (2013 framework), and our report dated February 27, 2020 expressed an unqualified opinion thereon.

### **Basis for Opinion**

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

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

### **Critical Audit Matter**

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

### ***Allowance for loan losses***

#### *Description of the Matter*

The Company's loan portfolio totaled \$21.8 billion as of December 31, 2019 and the associated allowance for loan losses (ALL) was \$211 million. As discussed in Notes 1 and 4 to the consolidated financial statements, the ALL is established to absorb probable estimated losses inherent in the portfolio. Management's estimate for the inherent losses within the loan portfolio consists of specific allowances attributed to impaired loans that have not yet been charged down to amounts expected to be recovered, general allowances, including inherent risks, for unimpaired loans based on estimated loss rates by loan class and nonspecific allowances. General allowances for unimpaired loans are based on an estimated loss rate by loan class not considering recoveries. General allowances for unimpaired loans also consider inherent risks identified for each loan class. Inherent risks consider loss rates that most appropriately represent the current credit cycle and other factors attributable to a specific loan class which have not yet been represented in the historical gross loss rates or risk grading. Nonspecific allowances are maintained for risks beyond factors specific to a particular portfolio segment or loan class. These factors include trends in the economy in primary lending areas, concentration in large-balance loans and other relevant factors.

Auditing management's estimate of the ALL involves a high degree of subjectivity in evaluating the determination of inherent risk adjustments to loss rates by loan class and the non-specific allowances. Management's determination of the inherent risk adjustments and identification and measurement of the nonspecific allowances is highly judgmental and could have a significant effect on the ALL.

#### *How We Addressed the Matter in Our Audit*

We evaluated the design and tested the operating effectiveness of related controls over the calculation and recording of the ALL. Specifically, we tested the design and operating effectiveness of controls around inherent risk adjustments to loss rates by loan class identified by the Company, the identification of such inherent risk factors, the applicability of that risk factor to the Company's portfolio, and the measurement of the impact of that risk factor. We tested controls over management's process for identifying appropriate nonspecific allowances, the determination of whether any adjustment was warranted, and the measurement of the recorded adjustments.

To test the inherent risk adjustments to loss rates by loan class and non-specific allowances, we performed audit procedures that included, among others, assessing the methodology used by the Company to estimate the ALL and the underlying data used by the Company in its calculation of the ALL. To evaluate inherent risk adjustments to loss rates by loan class identified by the Company, as well as any nonspecific allowance recorded, we compared the significant assumptions used by management to the Company's historical loss data, industry data, or economic data and evaluated whether such data was indicative of losses inherent in the loan portfolio. We tested inputs and assumptions used in the buildup of inherent risk adjustments to loss rates by loan class and the nonspecific allowance, and we evaluated the basis for adjustments considered, the basis for concluding an adjustment was warranted, which considered the assessment associated with whether the historical data adequately captured the risk in the current portfolio, and the completeness of the inputs used by management in determining such adjustments.

We compared the overall ALL amount to those established by similar banking institutions as a consideration around potentially contradictory information. We also reviewed subsequent events and transactions and considered whether they corroborate or contradict the Company's conclusion.

/s/ Ernst & Young LLP

We have served as the Company's auditor since 1990.

Tulsa, Oklahoma

February 27, 2020

## Consolidated Statements of Earnings

(In thousands, except share and per share data)

	Year Ended December 31,		
	2019	2018	2017
<b>Interest and dividend revenue</b>			
Loans	\$ 1,123,791	\$ 891,587	\$ 696,479
Residential mortgage loans held for sale	7,105	8,123	8,706
Trading securities	61,595	57,531	17,002
Investment securities	13,426	14,775	16,121
Available for sale securities	254,031	197,317	177,070
Fair value option securities	32,936	15,205	16,755
Restricted equity securities	26,860	21,555	18,490
Interest-bearing cash and cash equivalents	12,214	22,333	22,128
<b>Total interest and dividend revenue</b>	<b>1,531,958</b>	<b>1,228,426</b>	<b>972,751</b>
<b>Interest expense</b>			
Deposits	175,538	95,517	53,803
Borrowed funds	228,428	138,215	69,008
Subordinated debentures	15,113	9,827	8,239
<b>Total interest expense</b>	<b>419,079</b>	<b>243,559</b>	<b>131,050</b>
<b>Net interest and dividend revenue</b>	<b>1,112,879</b>	<b>984,867</b>	<b>841,701</b>
<b>Provision for credit losses</b>	<b>44,000</b>	<b>8,000</b>	<b>(7,000)</b>
<b>Net interest and dividend revenue after provision for credit losses</b>	<b>1,068,879</b>	<b>976,867</b>	<b>848,701</b>
<b>Other operating revenue</b>			
Brokerage and trading revenue	159,826	108,323	131,601
Transaction card revenue	87,216	84,025	119,988
Fiduciary and asset management revenue	177,025	184,703	162,889
Deposit service charges and fees	112,485	112,153	112,079
Mortgage banking revenue	107,541	97,787	104,719
Other revenue	58,108	56,185	49,738
<b>Total fees and commissions</b>	<b>702,201</b>	<b>643,176</b>	<b>681,014</b>
Other gains (losses), net	9,351	(2,265)	11,434
Gain (loss) on derivatives, net	14,951	(422)	779
Gain (loss) on fair value option securities, net	15,787	(25,572)	(2,733)
Change in fair value of mortgage servicing rights	(53,517)	4,668	172
Gain (loss) on available for sale securities, net	5,597	(2,801)	4,428
<b>Total other operating revenue</b>	<b>694,370</b>	<b>616,784</b>	<b>695,094</b>
<b>Other operating expense</b>			
Personnel	660,565	583,131	573,408
Business promotion	35,662	30,523	28,877
Charitable contributions to BOKF Foundation	3,000	2,846	2,000
Professional fees and services	54,861	59,099	51,067
Net occupancy and equipment	110,275	97,981	86,477
Insurance	20,906	23,318	19,653
Data processing and communications	124,983	114,796	146,970
Printing, postage and supplies	16,517	17,169	15,689
Net losses and operating expenses of repossessed assets	6,707	17,052	9,687
Amortization of intangible assets	20,618	9,620	6,779
Mortgage banking costs	50,685	46,298	52,856
Other expense	27,602	26,333	32,054
<b>Total other operating expense</b>	<b>1,132,381</b>	<b>1,028,166</b>	<b>1,025,517</b>
<b>Net income before taxes</b>	<b>630,868</b>	<b>565,485</b>	<b>518,278</b>
Federal and state income taxes	130,183	119,061	182,593
<b>Net income</b>	<b>500,685</b>	<b>446,424</b>	<b>335,685</b>
Net income (loss) attributable to non-controlling interests	(73)	778	1,041
<b>Net income attributable to BOK Financial Corporation shareholders</b>	<b>\$ 500,758</b>	<b>\$ 445,646</b>	<b>\$ 334,644</b>
<b>Earnings per share:</b>			
Basic	\$ 7.03	\$ 6.63	\$ 5.11
Diluted	\$ 7.03	\$ 6.63	\$ 5.11
<b>Average shares used in computation:</b>			
Basic	70,787,700	66,628,640	64,745,364
Diluted	70,802,612	66,662,273	64,806,284
<b>Dividends declared per share</b>	<b>\$ 2.01</b>	<b>\$ 1.90</b>	<b>\$ 1.77</b>

See accompanying notes to Consolidated Financial Statements.

## Consolidated Statements of Comprehensive Income

(In thousands)

	Year Ended December 31,		
	2019	2018	2017
Net income	\$ 500,685	\$ 446,424	\$ 335,685
Other comprehensive income (loss) before income taxes:			
Net change in unrealized gain (loss)	241,047	(48,010)	(26,152)
Reclassification adjustments included in earnings:			
Loss (gain) on available for sale securities, net	(5,597)	2,801	(4,428)
Other comprehensive gain (loss), before income taxes	235,450	(45,209)	(30,580)
Federal and state income taxes	57,942	(11,507)	(11,923)
Other comprehensive gain (loss), net of income taxes	177,508	(33,702)	(18,657)
Comprehensive income	678,193	412,722	317,028
Comprehensive income (loss) attributable to non-controlling interests	(73)	778	1,041
Comprehensive income attributable to BOK Financial Corp. shareholders	\$ 678,266	\$ 411,944	\$ 315,987

See accompanying notes to Consolidated Financial Statements.

## Consolidated Balance Sheets

(In thousands, except share data)

	December 31,	
	2019	2018
<b>Assets</b>		
Cash and due from banks	\$ 735,836	\$ 741,749
Interest-bearing cash and cash equivalents	522,985	401,675
Trading securities	1,623,921	1,956,923
Investment securities (fair value: 2019 – \$314,402; 2018 – \$367,298)	293,418	355,187
Available for sale securities	11,269,643	8,857,120
Fair value option securities	1,098,577	283,235
Restricted equity securities	460,552	344,447
Residential mortgage loans held for sale	182,271	149,221
Loans	21,750,987	21,656,730
Allowance for loan losses	(210,759)	(207,457)
Loans, net of allowance	21,540,228	21,449,273
Premises and equipment, net	535,519	330,033
Receivables	231,811	204,960
Goodwill	1,048,091	1,049,263
Intangible assets, net	125,271	134,849
Mortgage servicing rights	201,886	259,254
Real estate and other repossessed assets, net of allowance (2019 – \$11,013; 2018 – \$13,665)	20,359	17,487
Derivative contracts	323,375	320,929
Cash surrender value of bank-owned life insurance	389,879	381,608
Receivable on unsettled securities sales	1,020,404	336,400
Other assets	547,995	446,891
Total assets	\$ 42,172,021	\$ 38,020,504
<b>Liabilities and Equity</b>		
Liabilities:		
Noninterest-bearing demand deposits	\$ 9,461,291	\$ 10,414,592
Interest-bearing deposits:		
Transaction	15,391,752	12,206,576
Savings	550,276	529,215
Time	2,217,849	2,113,380
Total deposits	27,621,168	25,263,763
Funds purchased and repurchase agreements	3,818,350	1,018,411
Other borrowings	4,527,055	6,124,390
Subordinated debentures	275,923	275,913
Accrued interest, taxes and expense	259,701	192,826
Derivative contracts	251,128	362,306
Due on unsettled securities purchases	182,547	156,370
Other liabilities	372,230	183,480
Total liabilities	37,308,102	33,577,459
Shareholders' equity:		
Common stock (\$.00006 par value; 2,500,000,000 shares authorized; shares issued and outstanding: 2019 – 75,758,597; 2018 – 75,711,492)	5	5
Capital surplus	1,350,995	1,334,030
Retained earnings	3,729,778	3,369,654
Treasury stock (shares at cost: 2019 – 5,178,999; 2018 – 3,588,560)	(329,906)	(198,995)
Accumulated other comprehensive income (loss)	104,923	(72,585)
Total shareholders' equity	4,855,795	4,432,109
Non-controlling interests	8,124	10,936
Total equity	4,863,919	4,443,045
Total liabilities and equity	\$ 42,172,021	\$ 38,020,504

See accompanying notes to Consolidated Financial Statements.

## Consolidated Statements of Changes in Equity

(In thousands)

	Common Stock		Capital Surplus	Retained Earnings	Treasury Stock		Accumulated Other Comprehensive Income (Loss)	Total Shareholders' Equity	Non-Controlling Interests	Total Equity
	Shares	Amount			Shares	Amount				
Balance, December 31, 2016	74,993	\$ 4	\$1,006,535	\$ 2,823,334	9,656	\$(544,052)	\$ (10,967)	\$ 3,274,854	\$ 31,503	\$ 3,306,357
Net income	—	—	—	334,644	—	—	—	334,644	1,041	335,685
Other comprehensive loss	—	—	—	—	—	—	(18,657)	(18,657)	—	(18,657)
Repurchase of common stock	—	—	—	—	80	(7,403)	—	(7,403)	—	(7,403)
Share-based compensation plans:										
Stock options exercised	100	—	5,758	—	—	—	—	5,758	—	5,758
Non-vested shares awarded, net	55	—	—	—	—	—	—	—	—	—
Vesting of non-vested shares	—	—	—	—	17	(1,390)	—	(1,390)	—	(1,390)
Share-based compensation	—	—	23,602	—	—	—	—	23,602	—	23,602
Cash dividends on common stock	—	—	—	(116,041)	—	—	—	(116,041)	—	(116,041)
Capital calls and distributions, net	—	—	—	—	—	—	—	—	(9,577)	(9,577)
Reclassification of stranded accumulated other comprehensive loss related to tax reform	—	—	—	6,550	—	—	(6,550)	—	—	—
Balance, December 31, 2017	75,148	4	1,035,895	3,048,487	9,753	(552,845)	(36,174)	3,495,367	22,967	3,518,334
Transition adjustment of net unrealized gains on equity securities	—	—	—	2,709	—	—	(2,709)	—	—	—
Balance, December 31, 2017, Adjusted	75,148	4	1,035,895	3,051,196	9,753	(552,845)	(38,883)	3,495,367	22,967	3,518,334
Net income	—	—	—	445,646	—	—	—	445,646	778	446,424
Other comprehensive loss	—	—	—	—	—	—	(33,702)	(33,702)	—	(33,702)
Repurchase of common stock	—	—	—	—	616	(53,465)	—	(53,465)	—	(53,465)
Share-based compensation plans:										
Stock options exercised	54	—	2,781	—	—	—	—	2,781	—	2,781
Non-vested shares awarded, net	109	—	—	—	—	—	—	—	—	—
Vesting of non-vested shares	—	—	—	—	31	(2,870)	—	(2,870)	—	(2,870)
Share-based compensation	—	—	4,229	—	—	—	—	4,229	—	4,229
Cash dividends on common stock	—	—	—	(127,188)	—	—	—	(127,188)	—	(127,188)
Capital calls and distributions, net	—	—	—	—	—	—	—	—	(12,809)	(12,809)
Issuance of shares for CoBiz acquisition	400	1	291,125	—	(6,811)	410,185	—	701,311	—	701,311
Balance, December 31, 2018	75,711	\$ 5	\$1,334,030	\$ 3,369,654	3,589	\$(198,995)	\$ (72,585)	\$ 4,432,109	\$ 10,936	\$ 4,443,045

## Consolidated Statements of Changes in Equity

(In thousands)

	Common Stock		Capital Surplus	Retained Earnings	Treasury Stock		Accumulated Other Comprehensive Income (Loss)	Total Shareholders' Equity	Non-Controlling Interests	Total Equity
	Shares	Amount			Shares	Amount				
Balance, December 31, 2018	75,711	\$ 5	\$1,334,030	\$ 3,369,654	3,589	\$(198,995)	\$ (72,585)	\$ 4,432,109	\$ 10,936	\$ 4,443,045
Transition adjustment - Lease obligations and right of use assets	—	—	—	2,862	—	—	—	2,862	—	2,862
Balance, January 1, 2019, Adjusted	75,711	5	1,334,030	3,372,516	3,589	(198,995)	(72,585)	4,434,971	10,936	4,445,907
Net income (loss)	—	—	—	500,758	—	—	—	500,758	(73)	500,685
Other comprehensive income	—	—	—	—	—	—	177,508	177,508	—	177,508
Repurchase of common stock	—	—	—	—	1,572	(129,483)	—	(129,483)	—	(129,483)
Share-based compensation plans:										
Stock options exercised	27	—	1,421	—	—	—	—	1,421	—	1,421
Non-vested shares awarded, net	21	—	—	—	—	—	—	—	—	—
Vesting of non-vested shares	—	—	—	—	18	(1,428)	—	(1,428)	—	(1,428)
Share-based compensation	—	—	15,544	—	—	—	—	15,544	—	15,544
Cash dividends on common stock	—	—	—	(143,496)	—	—	—	(143,496)	—	(143,496)
Capital calls and distributions, net	—	—	—	—	—	—	—	—	(2,739)	(2,739)
Balance, December 31, 2019	75,759	\$ 5	\$1,350,995	\$ 3,729,778	5,179	\$(329,906)	\$ 104,923	\$ 4,855,795	\$ 8,124	\$ 4,863,919

See accompanying notes to Consolidated Financial Statements.



## Consolidated Statements of Cash Flows

(In thousands)

	Year Ended		
	2019	2018	2017
<b>Cash Flows From Operating Activities:</b>			
Net income	\$ 500,685	\$ 446,424	\$ 335,685
Adjustments to reconcile net income to net cash provided by (used in) operating activities:			
Provision for credit losses	44,000	8,000	(7,000)
Change in fair value of mortgage servicing rights due to market changes	53,517	(4,668)	(172)
Change in fair value of mortgage servicing rights due to principal payments	38,979	33,528	33,527
Net unrealized losses (gains) from derivative contracts	(25,936)	4,686	3,704
Share-based compensation	15,544	4,229	23,602
Depreciation and amortization	95,416	60,843	54,466
Net amortization of discounts and premiums	(16,984)	30,945	28,693
Net losses (gains) on financial instruments and other losses (gains), net	(583)	9,585	(2,828)
Net gain on mortgage loans held for sale	(40,402)	(35,705)	(47,159)
Mortgage loans originated for sale	(3,025,930)	(2,587,297)	(3,286,873)
Proceeds from sale of mortgage loans held for sale	3,035,600	2,691,144	3,405,890
Capitalized mortgage servicing rights	(35,128)	(35,247)	(39,149)
Change in trading and fair value option securities	(483,007)	(1,023,097)	(804,204)
Change in receivables	(740,868)	(38,346)	321,880
Change in other assets	18,955	27,507	(5,506)
Change in accrued interest, taxes and expense	34,894	(5,191)	18,191
Change in other liabilities	57,569	(139,346)	182,184
<b>Net cash provided by (used in) operating activities</b>	<b>(473,679)</b>	<b>(552,006)</b>	<b>214,931</b>
<b>Cash Flows From Investing Activities:</b>			
Proceeds from maturities or redemptions of investment securities	60,128	124,864	112,022
Proceeds from maturities or redemptions of available for sale securities	1,841,069	1,122,680	1,841,217
Purchases of investment securities	—	(4,468)	(32,972)
Purchases of available for sale securities	(5,245,256)	(1,955,172)	(2,845,557)
Proceeds from sales of available for sale securities	1,211,718	745,643	1,309,215
Change in amount receivable on unsettled available for sale securities transactions	25,410	38,347	(68,792)
Loans originated, net of principal collected	(44,414)	(1,553,033)	(78,232)
Net payments on derivative asset contracts	33,566	(114,417)	479,409
Acquisitions, net of cash acquired	—	(175,755)	—
Proceeds from disposition of assets	178,681	308,762	274,029
Purchases of assets	(384,639)	(345,082)	(250,783)
<b>Net cash provided by (used in) investing activities</b>	<b>(2,323,737)</b>	<b>(1,807,631)</b>	<b>739,556</b>
<b>Cash Flows From Financing Activities:</b>			
Net change in demand deposits, transaction deposits and savings accounts	2,252,936	(13,870)	(563,406)
Net change in time deposits	104,288	(73,089)	(123,384)
Net change in other borrowed funds	1,110,970	1,295,484	(10,909)
Change in amount due on unsettled security purchases	(41,651)	(41,319)	144,690
Issuance of common and treasury stock, net	(7)	(88)	4,368
Net change in derivative margin accounts	(207,122)	85,466	(17,726)
Net payments or proceeds on derivative liability contracts	(33,622)	114,076	(485,119)
Repurchase of common stock	(129,483)	(53,465)	(7,403)
Dividends paid	(143,496)	(127,188)	(116,041)
<b>Net cash provided by (used in) financing activities</b>	<b>2,912,813</b>	<b>1,186,007</b>	<b>(1,174,930)</b>
Net increase (decrease) in cash and cash equivalents	115,397	(1,173,630)	(220,443)
<b>Cash and cash equivalents at beginning of period</b>	<b>1,143,424</b>	<b>2,317,054</b>	<b>2,537,497</b>
<b>Cash and cash equivalents at end of period</b>	<b>\$ 1,258,821</b>	<b>\$ 1,143,424</b>	<b>\$ 2,317,054</b>
<b>Supplemental Cash Flow Information:</b>			
Cash paid for interest	\$ 417,070	\$ 243,121	\$ 127,513
Cash paid for taxes	\$ 87,361	\$ 92,291	\$ 121,697
Net loans and bank premises transferred to repossessed real estate and other assets	\$ 10,665	\$ 9,880	\$ 7,367
Increase in U.S. government guaranteed loans eligible for repurchase	\$ 91,634	\$ 100,238	\$ 148,107
Increase in receivables from conveyance of GNMA OREO	\$ 28,669	\$ 38,216	\$ 40,528
Right-of-use assets obtained in exchange for operating lease liabilities	\$ 62,755	\$ —	\$ —

See accompanying notes to Consolidated Financial Statements.

## Notes to Consolidated Financial Statements

### (1) Significant Accounting Policies

#### *Basis of Presentation*

The Consolidated Financial Statements of BOK Financial Corporation (“BOK Financial” or “the Company”) have been prepared in conformity with accounting principles generally accepted in the United States (“U.S. GAAP”), including interpretations of U.S. GAAP issued by federal banking regulators and general practices of the banking industry. The Consolidated Financial Statements include the accounts of BOK Financial and its subsidiaries, principally BOKF, NA, BOK Financial Securities, Inc., BOK Financial Private Wealth, Inc., BOK Financial Insurance, Inc. and Cavanal Hill Distributors, Inc. All significant intercompany transactions are eliminated in consolidation.

The Consolidated Financial Statements include the assets, liabilities, non-controlling interests and results of operations of variable interest entities (“VIEs”) when BOK Financial is determined to be the primary beneficiary. Variable interest entities are generally defined as entities that either do not have sufficient equity to finance their activities without support from other parties or whose equity investors lack a controlling financial interest. Determination that the Company is the primary beneficiary considers the power to direct the activities that most significantly impact the variable interest's economic performance and the obligation to absorb losses of the variable interest or the right to receive benefits of the variable interest that could be significant to the variable interest.

Certain prior year amounts have been reclassified to conform to current year presentation.

#### *Nature of Operations*

BOK Financial, through its subsidiaries, provides a wide range of financial services to commercial and industrial customers, other financial institutions, municipalities, and consumers. These services include depository and cash management; lending and lease financing; mortgage banking; securities brokerage, trading and underwriting; and personal and corporate trust.

BOKF, NA operates as Bank of Oklahoma primarily in the Tulsa and Oklahoma City metropolitan areas of the state of Oklahoma and Bank of Texas primarily in the Dallas, Fort Worth and Houston metropolitan areas of the state of Texas. In addition, BOKF, NA does business as BOK Financial in the metropolitan areas of Phoenix, Arizona; Northwest Arkansas; Denver, Colorado; Kansas City, Missouri/Kansas; and as Bank of Albuquerque in Albuquerque, New Mexico. BOKF, NA also operates the TransFund electronic funds network, Cavanal Hill Investment Management, and BOK Financial Asset Management, Inc.

#### *Use of Estimates*

Preparation of BOK Financial's Consolidated Financial Statements requires management to make estimates of future economic activities, including loan collectability, loss contingencies, prepayments and cash flows from customer accounts. These estimates are based upon current conditions and information available to management. Actual results may differ significantly from these estimates.

#### *Acquisitions*

Assets and liabilities acquired, including identifiable intangible assets, are recorded at fair value on the acquisition date. The purchase price includes consideration paid at closing and the estimated fair value of contingent consideration that will be paid in the future, subject to achieving defined performance criteria. Premiums and discounts assigned to interest-earning assets and interest-bearing liabilities are amortized over the lives of the acquired assets and liabilities on either an individual instrument or pool basis. Provision for credit losses is recognized for changes in credit quality after the acquisition date. Goodwill is recognized as the excess of the purchase price over the net fair value of assets acquired and liabilities assumed. The Consolidated Statements of Earnings include the results of operations from the acquisition date.

## *Goodwill and Intangible Assets*

Goodwill and intangible assets generally result from business combinations and are evaluated for each of BOK Financial's reporting units for impairment annually or more frequently if conditions indicate impairment. The evaluation of possible impairment of goodwill and intangible assets involves significant judgment based upon short-term and long-term projections of future performance.

Reporting units are defined by the Company as significant lines of business within each operating segment. This definition is consistent with the manner in which the chief operating decision maker assesses the performance of the Company and makes decisions concerning the allocation of resources. The Company qualitatively assesses whether it is more likely than not that the fair value of the reporting units are less than their carrying value, including goodwill. Reporting unit carrying value includes sufficient capital to exceed regulatory requirements. This assessment includes consideration of relevant events and circumstances including but not limited to macroeconomic conditions, industry and market conditions, the financial and stock performance of the Company and other relevant factors.

If the Company concludes based on the qualitative assessment that goodwill may be impaired, a quantitative one-step impairment test will be applied to goodwill at all reporting units. The quantitative analysis compares the fair value of the reporting unit with its carrying value, including goodwill. The fair value of each reporting unit is estimated by the discounted future earnings method. Goodwill is considered impaired if the fair value of the reporting unit is less than the carrying value of the reporting unit, including goodwill.

Intangible assets are generally composed of customer relationships, naming rights, non-compete agreements and core deposit premiums. They are amortized using accelerated or straight-line methods, as appropriate, over the estimated benefit periods. These periods range from 3 years to 20 years. The net book values of identifiable intangible assets are evaluated for impairment when economic conditions indicate impairment may exist.

## *Cash Equivalents*

Due from banks, funds sold (generally federal funds sold for one day), resell agreements (which generally mature within one day to 30 days) and investments in money market funds are considered cash equivalents.

## *Securities*

Securities are identified as trading, investment (held to maturity) or available for sale at the time of purchase based upon the intent of management, liquidity and capital requirements, regulatory limitations and other relevant factors. Trading securities, which are acquired for profit through resale, are carried at fair value with unrealized gains and losses included in current period earnings. Investment securities are carried at amortized cost. Amortization is computed by methods that approximate level yield and is adjusted for changes in prepayment estimates. Securities identified as available for sale are carried at fair value. Unrealized gains and losses are recorded, net of deferred income taxes, as accumulated other comprehensive income in shareholders' equity. Available for sale securities are separately identified as pledged to creditors if the creditor has the right to sell or re-pledge the collateral.

The purchase or sale of securities is recognized on a trade date basis. Realized gains and losses on sales of securities are based upon specific identification of the security sold. A receivable or payable is recognized for subsequent transaction settlement.

On a quarterly basis, the Company performs separate evaluations of impaired debt investment and available for sale securities to determine if the decline in fair value below the amortized cost is other-than-temporary.

Management determines whether it intends to sell or if it is more likely than not that it will be required to sell impaired securities. This determination considers current and forecasted liquidity requirements and securities portfolio management. If the Company intends to sell or it is more likely than not that it will be required to sell the impaired debt security, a charge is recognized against earnings for the entire unrealized loss. For all impaired debt securities for which there is no intent or expected requirement to sell, the evaluation considers all available evidence to assess whether it is more likely than not that all amounts due would not be collected according to the security's contractual terms. Impairment of debt securities rated investment grade by nationally-recognized rating agencies is considered temporary unless specific contrary information is identified. Impairment of debt securities rated below investment grade by at least one of the nationally recognized rating agencies is evaluated based on projections of estimated cash flows. Any expected credit loss due to the inability to collect all amounts due according to the security's contractual terms is recognized as a charge against earnings. Any remaining unrealized loss related to other factors would be recognized in other comprehensive income, net of taxes.

BOK Financial may elect to carry certain securities that are not held for trading purposes at fair value with changes in fair value recognized in current period income. These securities are held with the intent that gains or losses will offset changes in the fair value of mortgage servicing rights or other financial instruments.

Restricted equity securities represent equity interests the Company is required to hold in the Federal Reserve Banks and Federal Home Loan Banks. Restricted equity securities are carried at cost as these securities do not have a readily determined fair value because ownership of these shares is restricted and they lack a market.

The fair value of our securities portfolio is generally based on a single price for each financial instrument provided to us by a third-party pricing service determined by one or more of the following:

- Quoted prices for similar, but not identical, assets or liabilities in active markets;
- Quoted prices for identical or similar assets or liabilities in inactive markets;
- Inputs other than quoted prices that are observable, such as interest rate and yield curves, volatilities, prepayment speeds, loss severities, credit risks and default rates; and
- Other inputs derived from or corroborated by observable market inputs.

The underlying methods used by the third-party pricing services are considered in determining the primary inputs used to determine fair values. We evaluate the methodologies employed by the third-party pricing services by comparing the price provided by the pricing service with other sources, including brokers' quotes, sales or purchases of similar instruments and discounted cash flows to establish a basis for reliance on the pricing service values. Significant differences between the pricing service provided value and other sources are discussed with the pricing service to understand the basis for their values. Based on all observable inputs, management may adjust prices obtained from third-party pricing services to more appropriately reflect the prices that would be received to sell assets or paid to transfer liabilities in orderly transactions in the current market.

#### *Derivative Instruments*

Derivative instruments may be used by the Company as part of its internal risk management programs or may be offered to customers. All derivative instruments are carried at fair value and changes in fair value are generally reported in income as they occur. The determination of fair value of derivative instruments considers changes in interest rates, commodity prices and foreign exchange rates. Fair values for exchange-traded contracts are based on quoted prices in an active market for identical instruments. Fair values for over-the-counter contracts are generated internally using third-party valuation models. Inputs used in third-party valuation models to determine fair values are considered significant other observable inputs. Credit risk is also considered in determining fair value. Deterioration in the credit rating of customers or other counterparties reduces the fair value of asset contracts. Deterioration of our credit rating could decrease the fair value of our derivative liabilities.

When bilateral netting agreements or similar agreements exist between the Company and its counterparties that create a single legal claim or obligation to pay or receive the net amount in settlement of the individual derivative contracts, the Company reports derivative assets and liabilities on a net by derivative contract by counterparty basis.

Derivative contracts may also require the Company to provide or receive cash margin as collateral for derivative assets and liabilities. Derivative assets and liabilities are reported net of cash margin when certain conditions are met. In addition, derivative contracts executed with customers under Customer Risk Management Programs may be secured by non-cash collateral in conjunction with a credit agreement with that customer. Access to collateral in the event of default is reasonably assured.

BOK Financial may use derivative instruments in managing its interest rate sensitivity, as part of its economic hedge of the changes in the fair value of mortgage servicing rights and to mitigate the market risk of holding trading securities. Changes in the fair value of derivative instruments used in managing interest rate sensitivity and as part of its economic hedge of changes in the fair value of mortgage servicing rights are included in Other Operating Revenue - Gain (loss) on derivatives, net in the Consolidated Statements of Earnings. Changes in the fair value of derivative instruments used to mitigate the market risk of holding trading securities are included in Operating Revenue - Brokerage and trading revenue.

BOK Financial also enters into mortgage loan commitments that are considered derivative contracts. Forward sales contracts that have not been designated as hedging instruments are used to economically hedge these mortgage loan commitments as well as mortgage loans held for sale. Mortgage loan commitments, forward sales contracts, and residential mortgage loans held for sale are carried at fair value. Changes in the fair value are reported in Other Operating Revenue - Mortgage banking revenue.

BOK Financial offers programs that permit its customers to manage various risks, including fluctuations in energy, cattle and other agricultural products, interest rates and foreign exchange rates with derivative contracts. Customers may also manage interest rate risk through interest rate swaps used by the borrower to modify interest rate terms of their loans or to-be-announced securities used by our mortgage banking customers to hedge their loan production. Derivative contracts are executed between the customers and BOK Financial. Offsetting contracts are executed between BOK Financial and other selected counterparties to minimize market risk from changes in commodity prices, interest rates or foreign exchange rates. The counterparty contracts are identical to customer contracts, except for a fixed pricing spread or fee paid to BOK Financial as profit and compensation for administrative costs and credit risk which is recognized over the life of the contracts and included in other Operating Revenue - Brokerage and trading revenue in the Consolidated Statements of Earnings.

### *Loans*

Loans are either secured or unsecured based on the type of loan and the financial condition of the borrower. Repayment is generally expected from cash flow or proceeds from the sale of selected assets of the borrower. BOK Financial is exposed to risk of loss on loans due to the borrower's financial difficulties, which may arise from any number of factors, including problems within the respective industry or local economic conditions. Access to collateral, in the event of borrower default, is reasonably assured through adherence to applicable lending laws and through sound lending standards and credit review procedures. Accounting policies for all loans, excluding residential mortgage loans guaranteed by U.S. government agencies, are as follows.

Interest is accrued at the applicable interest rate on the outstanding principal amount. Loans are placed on nonaccruing status when, in the opinion of management, full collection of principal or interest is uncertain. Internally risk graded loans are individually evaluated for nonaccruing status quarterly. Non-risk graded loans are generally placed on nonaccruing status when 90 days or more past due or within 60 days of being notified of the borrower's bankruptcy filing. Interest previously accrued but not collected is charged against interest income when the loan is placed on nonaccruing status. Payments received on nonaccruing loans are applied to principal or recognized as interest income, according to management's judgment as to the collectability of principal. Loans may be returned to accruing status when, in the opinion of management, full collection of principal and interest, including principal previously charged off, is probable based on improvements in the borrower's financial condition or a sustained period of performance.

For loans acquired with no evidence of credit deterioration, discounts are accreted on either an individual basis for loans with unique characteristics or on a pool basis for groups of homogeneous loans. Accretion is discontinued when a loan with an individually attributed discount is placed on nonaccruing status.

Loans to borrowers experiencing financial difficulties may be modified in troubled debt restructurings ("TDRs"). All TDRs are generally classified as nonaccruing, excluding loans guaranteed by U.S. government agencies. Modifications generally consist of extension of payment terms or interest rate concessions and may result either voluntarily through negotiations with the borrower or involuntarily through court order. Generally, principal and accrued but unpaid interest is not voluntarily forgiven.

Performing loans may be renewed under the then current collateral, debt service ratio and other underwriting standards. Nonaccruing loans may also be renewed and will remain classified as nonaccruing.

Occasionally, loans, other than residential mortgage loans, may be held for sale in order to manage credit concentration. These loans are carried at the lower of cost or fair value with gains or losses recognized in gain (loss) on assets.

All loans are charged-off when the loan balance or a portion of the loan balance is no longer supported by the paying capacity of the borrower or when the required cash flow is reduced in a TDR. The charge-off amount is determined through an evaluation of available cash resources and collateral value. Internally risk graded loans are evaluated quarterly and charge-offs are taken in the quarter in which the loss is identified. Non-risk graded loans that are past due between 60 days and 180 days, based on the loan product type, are charged off. Loans to borrowers whose personal obligation has been discharged through Chapter 7 bankruptcy proceedings are charged off within 60 days of notice of the bankruptcy filing, regardless of payment status.

Loan origination and commitment fees and direct loan acquisition and origination costs are deferred and amortized as an adjustment to yield over the life of the loan or over the commitment period, as applicable. Amortization does not anticipate loan prepayments. Net unamortized fees are recognized in full at time of payoff.

Qualifying residential mortgage loans guaranteed by U.S. government agencies have been sold into GNMA pools. Under certain performance conditions specified in government programs, the Company has the right, but not the obligation to repurchase loans from GNMA pools. These loans no longer qualify for sale accounting and are recognized in the Consolidated Balance Sheets. Guaranteed loans are considered to be impaired because we do not expect to receive all principal and interest based on the loan's contractual terms. A portion of the principal balance continues to be guaranteed; however, interest accrues at a curtailed rate as specified in the programs. The carrying value of these loans is reduced based on an estimate of expected cash flows discounted at the original note rate plus a liquidity spread. Guaranteed loans may be modified in TDRs in accordance with U.S. government agency guidelines. Interest continues to accrue at the modified rate. Guaranteed loans may either be resold into GNMA pools after a performance period specified by the programs or foreclosed and conveyed to the guarantors.

Loans are disaggregated into portfolio segments and further disaggregated into classes. The portfolio segment is the level at which the Company develops and documents a systematic method for determining its Allowance for Credit Losses. Classes are based on the risk characteristics of the loans and the Company's method for monitoring and assessing credit risk.

#### *Allowance for Loan Losses and Accrual for Off-Balance Sheet Credit Risk*

The appropriateness of the allowance for loan losses and accrual for off-balance sheet credit risk (collectively "Allowance for Credit Losses") is assessed by management based on an ongoing quarterly evaluation of the probable estimated losses inherent in the portfolio, including probable losses on both outstanding loans and unused commitments to provide financing. A consistent well-documented methodology has been developed and is applied by an independent Credit Administration department to assure consistency across the Company.

The allowance for loan losses consists of specific allowances attributed to impaired loans that have not yet been charged down to amounts we expect to recover, general allowances based on estimated loss rates by loan class and nonspecific allowances based on factors that affect more than one portfolio segment. There were no changes to the methodology for estimating general allowances during 2019 or 2018.

Loans are considered to be impaired when it becomes probable that BOK Financial will be unable to collect all amounts due according to the contractual terms of the loan agreements. Internally risk graded loans are evaluated individually for impairment. Substantially all commercial and commercial real estate loans and certain residential mortgage and personal loans are risk graded based on a quarterly evaluation of the borrowers' ability to repay. Certain commercial loans and most residential mortgage and personal loans are small balance, homogeneous pools of loans that are not risk graded. Non-risk graded loans are identified as impaired based on performance status. Generally, non-risk graded loans 90 days or more past due, modified in a troubled debt restructuring or in bankruptcy are considered to be impaired.

Specific allowances for impaired loans are measured by an evaluation of estimated future cash flows discounted at the loan's initial effective interest rate or the fair value of collateral for certain collateral dependent loans. The fair value of real property held as collateral is generally based on third party appraisals that conform to Uniform Standards of Professional Appraisal Practice, less estimated selling costs. Appraised values are on an "as-is" basis and generally are not adjusted by the Company. Updated appraisals are obtained at least annually or more frequently if market conditions indicate collateral values may have declined. Collateral value of mineral rights is generally determined by our internal staff of engineers based on projected cash flows from proven oil and gas reserves under existing economic and operating conditions. The value of other collateral is generally determined by our special assets staff based on projected liquidation cash flows under current market conditions. Collateral values and available cash resources that support impaired loans are evaluated quarterly. Historical statistics may be used as a practical way to estimate impairment in limited situations, such as when a collateral dependent loan is identified as impaired at the end of a reporting period until an appraisal of collateral value is received or a full assessment of future cash flows is completed. Estimates of future cash flows and collateral values require significant judgments and may be volatile.

General allowances for unimpaired loans are based on an estimated loss rate by loan class. The appropriate historical gross loss rate for each loan class is determined by the greater of the current loss rate based on the most recent twelve months or average loss rate over the long-term credit cycle. Recoveries are not directly considered in the estimation of historical loss rates. Recoveries generally do not follow predictable patterns and are not received until well-after the charge-off date as a result of protracted legal actions. For risk graded loans, historical gross loss rates are adjusted for changes in risk grading. For each loan class, the current weighted average risk grade is compared to the long-term weighted average risk grade. This comparison determines whether credit risk in each loan class is increasing or decreasing. Historical loss rates are adjusted upward or downward in proportion to changes in average risk grading. General allowances for unimpaired loans also consider inherent risks identified for each loan class. Inherent risks consider loss rates that most appropriately represent the current credit cycle and other factors attributable to a specific loan class which have not yet been represented in the historical gross loss rates or risk grading. These factors include changes in commodity prices or engineering imprecision which may affect the value of reserves that secure our energy loan portfolio, construction risk that may affect commercial real estate loans, changes in regulations and public policy that may disproportionately impact health care loans and changes in loan products.

Nonspecific allowances are maintained for risks beyond factors specific to a particular portfolio segment or loan class. These factors include trends in the economy in our primary lending areas, concentration in large-balance loans and other relevant factors.

An accrual for off-balance sheet credit risk is included in Other liabilities in the Consolidated Balance Sheets. The appropriateness of the accrual is determined in the same manner as the allowance for loan losses.

A provision for credit losses is charged against or credited to earnings in amounts necessary to maintain an appropriate Allowance for Credit Losses. Recoveries of loans previously charged off are added to the allowance when received.

#### *Real Estate and Other Repossessed Assets*

Real estate and other repossessed assets are acquired in partial or total forgiveness of loans. These assets are initially recognized at cost, which is determined by fair value at date of foreclosure less estimated disposal costs. They are subsequently carried at the lower of cost or current fair value less estimated disposal costs. Decreases in fair value below cost are recognized as asset-specific valuation allowances which may be reversed when supported by future increases in fair value. Subsequent increases in fair value may be used to reduce the allowance but not below zero.

Fair values of real estate are based on “as is” appraisals which are updated at least annually or more frequently for certain asset types or assets located in certain distressed markets. Fair values based on appraisals are generally considered to be based on significant other observable inputs. The Company also considers decreases in listing price and other relevant information in quarterly evaluations and reduces the carrying value of real estate and other repossessed assets when necessary. Fair values based on list prices and other relevant information are generally considered to be based on significant unobservable inputs. Additional costs incurred to complete real estate and other repossessed assets may increase the carrying value, up to current fair value based on “as completed” appraisals. The fair value of mineral rights included in repossessed assets are generally determined by our internal staff of engineers based on projected cash flows from proven oil and gas reserves under existing economic and operating conditions. The value of other repossessed assets is generally determined by our special assets staff based on projected liquidation cash flows under current market conditions.

Income generated by these assets is recognized as received. Operating expenses are recognized as incurred. Gains or losses on sales of real estate and other repossessed assets are based on the cash proceeds received less the cost basis of the asset, net of any valuation allowances. The estimated disposal costs of real estate and other repossessed assets are evaluated by the Company on an annual basis based on actual results.

#### *Transfers of Financial Assets*

BOK Financial regularly transfers financial assets as part of its mortgage banking activities and periodically may transfer other financial assets. Transfers are recorded as sales when the criteria for surrender of control are met.

The Company has elected to carry certain residential mortgage loans held for sale at fair value under the fair value option. Changes in fair value are recognized in net income as they occur. These loans are reported separately in the Consolidated Balance Sheets and changes in fair value are recorded in Other Operating Revenue - Mortgage banking revenue in the Consolidated Statements of Earnings.

Fair value of conforming residential mortgage loans that will be sold to U.S. government agencies is based on sales commitments or market quotes considered Level 2 inputs. Fair value of mortgage loans that are unable to be sold to U.S. government agencies is based on Level 3 inputs using quoted prices of loans that are sold in securitization transactions with a liquidity discount applied. The fair value is corroborated with an independent third party on at least an annual basis.

BOK Financial retains a repurchase obligation under underwriting representations and warranties related to residential mortgage loans transferred and generally retains the right to service the loans. These are not credit obligations. The Company may incur a recourse obligation in limited circumstances. Separate accruals are recognized in Other liabilities in the Consolidated Balance Sheets for repurchase and recourse obligations. These reserves reflect the estimated amount of probable loss the Company will incur as a result of repurchasing a loan, indemnifications, and other settlement resolutions.

Repurchases of loans with an origination defect that are also credit impaired are considered collateral dependent and are initially recognized at net realizable value (appraised value less the cost to sell). The difference between unpaid principal balance and net realizable value is not accreted. Repurchases of loans with an origination defect that are not credit impaired are carried at fair value as of the repurchase date. Interest income continues to accrue on these loans and the discount is accreted over the estimated life of the loan.

The Company may also choose to purchase GNMA loans once certain mandated delinquency criteria are met. The loans that are eligible and are chosen to be repurchased are initially recognized at fair value based on expected cash flow discounted using the average agency guaranteed debenture rates, average actual principal loss rates and liquidity premium.

#### *Mortgage Servicing Rights*

Mortgage servicing rights may be purchased or may be recognized when mortgage loans are originated and sold with servicing rights retained. All mortgage servicing rights are carried at fair value. Changes in the fair value are recognized in earnings as they occur.

Mortgage servicing rights are not traded in active markets. A cash flow model is used to determine fair value. Key assumptions and estimates, including projected prepayment speeds and assumed servicing costs, earnings on escrow deposits, ancillary income and discount rates, used by this model are based on current market sources. Assumptions used to value mortgage servicing rights are considered significant unobservable inputs. A separate third-party model is used to estimate prepayment speeds based on interest rates, housing turnover rates, estimated loan curtailment, anticipated defaults and other relevant factors. The prepayment model is updated daily for changes in market conditions and adjusted to better correlate with actual performance of BOK Financial's servicing portfolio. Fair value estimates from outside sources are received at least annually to corroborate the results of the valuation model.

#### *Premises and Equipment*

Premises and equipment are carried at cost, including capitalized interest when appropriate, less accumulated depreciation and amortization. Depreciation and amortization are computed on a straight-line basis over the estimated useful lives of the assets or, for leasehold improvements, over the shorter of the estimated useful lives or remaining lease terms. Useful lives range from 5 years to 40 years for buildings and improvements, 3 years to 10 years for software and related implementation costs, and 3 years to 10 years for furniture and equipment. Construction in progress represents facilities construction and data processing systems projects underway that have not yet been placed into service. Depreciation and amortization begin once the assets are placed into service.

Repair and maintenance costs, including software maintenance and enhancement costs, are charged to expense as incurred. Software licensing costs are generally charged to expense as incurred. Software licensing costs are capitalized if the contractual right to take possession of the software exists and it is feasible to take possession without significant penalty. Capitalized costs are amortized over the shorter of the estimated useful life of the software or remaining contractual life of the license.

Premises no longer used by the Company are transferred to real estate and other repossessed assets. The transferred amount is the lower of cost less accumulated depreciation or fair value less estimated disposal costs as of the transfer date.



Premises and equipment includes rights to use leased facilities and equipment. Right of use assets are initially measured by the present value of future rent payments over lease terms, adjusted for rent concessions. Rent payments exclude both payments made for non-lease components such as services and variable lease payments other than payments dependent on an index at lease commencement. Lease term includes options reasonably certain to be exercised. The right of use assets and lease liabilities are amortized to achieve straight-line expense over the lease term. Upon lease modification, the right of use asset and liability are reassessed and remeasured. Right of use assets are evaluated for impairment when facts and circumstances change that indicate an impairment may be necessary. Leases less than twelve months are excluded from capitalization.

Ongoing technology projects of significant size or length are reviewed at least annually for impairment. Accumulated costs are reviewed for projects or components of projects that do not support the value of the asset being developed. Findings of obsolescence, duplicate effort or other conditions that do not support the recorded value are impaired, with the cost of the impaired components being charged to current-year earnings.

#### *Federal and State Income Taxes*

BOK Financial and its subsidiaries file consolidated tax returns. The subsidiaries provide for income taxes on a separate return basis and remit to BOK Financial amounts determined to be currently payable. BOK Financial is an agent for its subsidiaries under the Company's tax sharing agreements and has no ownership rights to any refunds received for the benefit of its subsidiaries.

Current income tax expense or benefit is based on an evaluation that considers estimated taxable income, tax credits, and statutory federal and state income tax rates. The amount of current income tax expense or benefit recognized in any period may differ from amounts reported to taxing authorities. Annually, tax returns are filed with each jurisdiction where the Company conducts business and recognized current income tax expense or benefit is adjusted to the filed tax returns.

Deferred tax assets and liabilities are based upon the temporary differences between the values of assets and liabilities as recognized in the financial statements and their related tax basis using enacted tax rates in effect for the year in which the differences are expected to be recovered or settled. The effect of changes in statutory tax rates on the measurement of deferred tax assets and liabilities is recognized through income tax expense in the period the change is enacted. A valuation allowance is provided when it is more likely than not that some portion of the entire deferred tax asset may not be realized.

BOK Financial has unrecognized tax benefits, which are included in accrued current income taxes payable, for the uncertain portion of recorded tax benefits and related interest. These uncertainties result from the application of complex tax laws, rules, regulations and interpretations, primarily in state taxing jurisdictions. Unrecognized tax benefits are assessed quarterly and may be adjusted through current income tax expense in future periods based on changing facts and circumstances, completion of examinations by taxing authorities or expiration of a statute of limitations. Estimated penalties and interest on uncertain tax positions are recognized in income tax expense.

#### *Employee Benefit Plans*

BOK Financial sponsors a defined contribution plan ("Thrift Plan") and a defined benefit cash balance pension plan ("Pension Plan"). Employer contributions to the Thrift Plan, which matches employee contributions subject to percentage and years of service limits, are expensed when incurred. Pension Plan costs, which are based upon actuarial computations of current costs, are expensed annually. Pension Plan benefits were curtailed as of April 1, 2006. No participants may be added to the Pension Plan and no additional service benefits will be accrued. BOK Financial recognizes the funded status of its employee benefit plans. Adjustments required to recognize the Pension Plan's net funded status are made through accumulated other comprehensive income, net of deferred income taxes.

#### *Share-Based Compensation Plans*

BOK Financial awards stock options and non-vested common shares as compensation to certain officers. The grant date fair value of stock options is based on the Black-Scholes option pricing model. Stock options generally have graded vesting over 7 years. Each tranche is considered a separate award for valuation and compensation cost recognition. Grant date fair value of non-vested shares is based on the then-current market value of BOK Financial common stock. Non-vested shares generally cliff vest in 3 years and are subject to a holding period after vesting of 2 years.

Compensation cost is initially based on the grant date fair value of the award and recognized as expense over the service period, which is generally the vesting period. Expense is reduced for estimated forfeitures over the vesting period and adjusted for actual forfeitures as they occur. Share-based compensation awarded to certain officers has performance conditions that affect the number of awards granted. Compensation cost is adjusted based on the probable outcome of the performance conditions.

Restricted stock units ("RSUs") may also be awarded for certain executives who have elected to defer income recognition upon vesting of their awards. RSUs are subject to the same vesting criteria as non-vested shares. The value of the awards will vary in amounts equal to changes in the fair value of an equal number of BOKF Financial common shares.

Tax effects of share-based payments are recognized through tax expense. Dividends on non-vested shares are charged to retained earnings. Dividend equivalents on RSU's are charged to expense.

### *Other Operating Revenue*

Fees and commissions revenue is generated through the sales of products, consisting primarily of financial instruments, and the performance of services for customers under contractual obligations. Revenue from providing services for customers is recognized at the time services are provided in an amount that reflects the consideration we expect to be entitled to for those services. Revenue is recognized based on the application of five steps:

- Identify the contract with a customer
- Identify the performance obligations in the contract
- Determine the transaction price
- Allocate the transaction price to the performance obligations in the contract
- Recognize revenue when (or as) the Company satisfies a performance obligation

For contracts with multiple performance obligations, individual performance obligations are accounted for separately if the customer can benefit from the good or service on its own or with other resources readily available to the customer and the promise to transfer goods and services to the customer is separately identifiable in the contract. The transaction price is allocated to the performance obligations based on relative standalone selling prices.

Revenue is recognized on a gross basis whenever we have primary responsibility and risk in providing the services or products to our customers and have discretion in establishing the price for the services or products. Revenue is recognized on a net basis whenever we act as an agent for products or services of others.

Brokerage and trading revenue includes revenues from trading, customer hedging, retail brokerage, investment banking and insurance brokerage. Trading revenue includes net realized and unrealized gains primarily related to sales of securities to institutional customers and related derivative contracts. Customer hedging revenue includes realized and unrealized changes in the fair value of derivative contracts held for customer risk management programs including credit valuation adjustments, as necessary. We offer commodity, interest rate, foreign exchange and equity derivatives to our customers. These customer contracts are offset with contracts with selected counterparties and exchanges to minimize changes in market risk from changes in commodity prices, interest rates or foreign exchange rates. Retail brokerage revenue represents fees and commissions earned on sales of fixed income securities, annuities, mutual funds and other financial instruments to retail customers. Investment banking revenue includes fees earned upon completion of underwriting and financial advisory services. Investment banking revenue also includes fees earned in conjunction with loan syndications. Insurance brokerage revenues represent fees and commissions earned on placement of insurance products with carriers for property and casualty and health coverage.

Transaction card revenue includes merchant discount fees and electronic funds transfer network fees, net of interchange fees paid to card issuers and assessments paid to card networks. Merchant discount fees represent fees paid by customers for account management and electronic processing of card transactions. Merchant discount fees are recognized at the time the customer's transactions are processed or other services are performed. The Company also maintains the TransFund electronic funds transfer network for the benefit of its members, which includes BOKF, NA. Electronic funds transfer fees are recognized as electronic transactions are processed on behalf of its members.

Fiduciary and asset management revenue includes fees from asset management, custody, recordkeeping, investment advisory and administration services. Revenue is recognized on an accrual basis at the time the services are performed and may be based on either the fair value of the account or the service provided.

Deposit service charges and fees include commercial account service charges, overdraft fees, check card fee revenue and automated service charge and other deposit service fees. Fees are recognized at least quarterly in accordance with published deposit account agreements and disclosure statements for retail accounts or contractual agreements for commercial accounts. Item charges for overdraft or non-sufficient funds items are recognized as items are presented for payment. Account balance charges and activity fees are accrued monthly and collected in arrears. Commercial account activity fees may be offset by an earnings credit based on account balances. Check card fees represent interchange fees paid by a merchant bank for transactions processed from cards issued by the Company. Check card fees are recognized when transactions are processed.

Mortgage banking revenue includes revenues recognized in conjunction with the origination, marketing and servicing of conventional and government-sponsored residential mortgage loans. Mortgage production revenue includes net realized gains (losses) on sales of residential mortgage loans in the secondary market and the net change in unrealized gains (losses) on residential mortgage loans held for sale. Mortgage production revenue also includes changes in the fair value of derivative contracts not designated as hedging instruments related to residential mortgage loan commitments and forward sales contracts. Mortgage servicing revenue includes servicing fee income and late charges on loans serviced for others.

### **Newly Adopted and Pending Accounting Pronouncements**

The following is a summary of newly adopted and pending accounting pronouncements that may have a more than insignificant effect on the Company's financial statements.

#### **Financial Accounting Standards Board ("FASB")**

##### FASB Accounting Standards Update No. 2016-02, *Leases (Topic 842)* ("ASU 2016-02")

On February 25, 2016, the FASB issued ASU 2016-02 to increase transparency and comparability by recognizing lease assets and liabilities on the balance sheet and disclosing key information about leasing arrangements. Lessees are required to recognize an obligation for future lease payments measured on a discounted basis and a right-of-use asset. The Company adopted the new standard January 1, 2019 through a cumulative effect adjustment to retained earnings. Prior periods were not restated. BOKF elected to apply all practical expedients other than the lessee's practical expedient to combine lease and non-lease components which would further gross up lease liability and the related right-of-use asset. The implementation of ASU 2016-02 increased the reported right-of-use asset and lease liability by \$137 million. The effect on retained earnings was immaterial.

##### FASB Accounting Standards Update No. 2019-01, *Leases (Topic 842): Codification Improvements* ("ASU 2019-01")

On March 5, 2019, the FASB issued ASU 2019-01 which amends certain aspects of leasing standard ASU 2016-02. ASU 2019-01 provides guidance for determining fair value of the underlying asset by lessors that are not manufacturers or dealers. The ASU also requires depository and lending lessors within the scope of ASC 942 to classify principal payments received from sales-type and direct financing leases within "investing activities" on the statement of cash flows. For the two issues above, the ASU is effective for the Company for fiscal years beginning after December 15, 2019, and interim periods therein; however, early adoption is permitted. Additionally, ASU 2019-01 also clarifies interim disclosure requirements during transition and is effective with the original transition requirements in Topic 842. Adoption of ASU 2019-01 is not expected to have a material impact on the Company's financial statements.

##### FASB Accounting Standards Update No. 2016-13, *Financial Instruments - Credit Losses (Topic 326): Assets Measured at Amortized Cost* ("ASU 2016-13")

On June 16, 2016, the FASB issued ASU 2016-13 to provide more timely recording of credit losses on loans and other financial assets measured at amortized cost, effective for the Company's annual reporting periods beginning after December 15, 2019, including interim periods within those fiscal years.

The Company has established a CECL implementation team to evaluate the impact to the Company's financial statements. The CECL implementation team, overseen by the Chief Credit Officer, Chief Financial Officer and Chief Risk Officer, has developed a project plan that incorporates input from various departments within the bank including Credit, Financial Reporting, Risk and Information Technology among others. The Audit and Credit Committees of the Board of Directors are periodically updated on project progress. The implementation team has completed the design of internal controls over the expected credit losses estimate and is formalizing control procedures, governance, and approval processes. This includes finalizing model validation, refinement of model assumptions and qualitative framework, and drafting policies, reporting, and disclosures. The Company adopted the standard on January 1, 2020 through a cumulative-effect adjustment to retained earnings.

FASB Accounting Standards Update No. 2019-04, *Codification Improvements to Topic 326, Financial Instruments-Credit Losses, Topic 815, Derivatives and Hedging, and Topic 825, Financial Instruments* ("ASU 2019-04")

On April 25, 2019, the FASB issued ASU 2019-04 which clarifies certain aspects of the accounting for credit losses, hedging activities, and financial instruments addressed by ASUs 2016-13, 2017-12, and 2016-01, respectively. Significant amendments made to the provisions of ASU 2016-13 by ASU 2019-04 include providing certain alternatives for the measurement of the allowance for credit losses on accrued interest receivable and clarifying steps entities should take when recording the transfer of loans or debt securities between measurement classification or categories. ASU 2019-04 further clarifies the expectation that entities include recoveries of financial assets in the calculation of the current expected credit losses allowance for both pools of financial assets and individual financial assets. Significant amendments made to the provisions of ASU 2017-12 by ASU 2019-04 include clarification on partial-term fair value hedges of interest rate risk, amortization of fair value hedge basis adjustments and disclosure of fair value hedge basis adjustments. Significant amendments made to provisions of ASU 2016-01 include clarification of the measurement alternative practice for equity securities and remeasurement of equity securities at historical exchange rates. ASU 2019-04 includes other amendments which clarify various provisions within the codification. ASU 2019-04 is effective for the Company for fiscal years beginning after December 15, 2019 and interim periods therein. Adoption of ASU 2019-04 is not expected to have a material impact on the Company's financial statements.

FASB Accounting Standards Update No. 2019-05, *Financial Instruments-Credit Losses (Topic 326): Targeted Transition Relief* ("ASU 2019-05")

On May 15, 2019, the FASB issued ASU 2019-05 which provides transition relief for entities adopting the Board's credit losses standard, ASU 2016-13. ASU 2019-05 amends ASU 2016-13 to allow companies to irrevocably elect, upon adoption of ASU 2016-13, the fair value option for financial instruments that meet specific requirements and is effective for the Company for annual reporting periods beginning after December 15, 2019. Adoption of ASU 2019-05 is not expected to have a material impact on the Company's financial statements.

FASB Accounting Standards Update No. 2019-11, *Codification Improvements to Topic 326: Financial Instruments-Credit Losses* ("ASU 2019-11")

On November 27, 2019, the FASB issued ASU 2019-11 which revises certain aspects of new guidance on credit losses. Topics addressed include purchased credit-deteriorated assets, transition relief for troubled debt restructurings, disclosure relief for accrued interest receivable, and financial assets secured by collateral maintenance provisions. ASU 2019-11 is effective for the Company for annual reporting periods beginning after December 15, 2019. Adoption of ASU 2019-11 is not expected to have a material impact on the Company's financial statements.

FASB Accounting Standards Update No. 2019-12, *Income Taxes (Topic 740): Simplifying the Accounting for Income Taxes* ("ASU 2019-12")

On December 18, 2019, the FASB issued ASU 2019-12 which removes certain exceptions for recognizing deferred taxes for investments, performing intraperiod allocation and calculating income taxes in interim periods. The ASU also adds guidance to reduce complexity in certain areas, including recognizing deferred taxes for tax goodwill and allocating taxes to members of a consolidated group. ASU 2019-12 is effective for the Company for annual reporting periods beginning after December 15, 2020, and interim periods within. Adoption of ASU 2019-12 is not expected to have a material impact on the Company's financial statements.

## (2) Securities

### Trading Securities

The fair value and net unrealized gain (loss) included in trading securities is as follows (in thousands):

	December 31, 2019		December 31, 2018	
	Fair Value	Net Unrealized Gain (Loss)	Fair Value	Net Unrealized Gain (Loss)
U.S. government agency debentures	\$ 44,264	\$ 6	\$ 63,765	\$ 254
Residential agency mortgage-backed securities	1,504,651	2,293	1,791,584	9,966
Municipal and other tax-exempt securities	26,196	60	34,507	(1)
Asset-backed securities	14,084	(21)	42,656	685
Other debt securities	34,726	21	24,411	65
Total trading securities	\$ 1,623,921	\$ 2,359	\$ 1,956,923	\$ 10,969

### Investment Securities

The amortized cost and fair values of investment securities are as follows (in thousands):

	December 31, 2019			
	Amortized Cost	Fair Value	Gross Unrealized	
			Gain	Loss
Municipal and other tax-exempt securities	\$ 93,653	\$ 96,897	\$ 3,250	\$ (6)
Residential agency mortgage-backed securities	10,676	11,164	488	—
Other debt securities	189,089	206,341	17,547	(295)
Total investment securities	\$ 293,418	\$ 314,402	\$ 21,285	\$ (301)

	December 31, 2018			
	Amortized Cost	Fair Value	Gross Unrealized	
			Gain	Loss
Municipal and other tax-exempt securities	\$ 137,296	\$ 138,562	\$ 1,858	\$ (592)
Residential agency mortgage-backed securities	12,612	12,770	293	(135)
Other debt securities	205,279	215,966	12,257	(1,570)
Total investment securities	\$ 355,187	\$ 367,298	\$ 14,408	\$ (2,297)

The amortized cost and fair values of investment securities at December 31, 2019, by contractual maturity, are as shown in the following table (dollars in thousands):

	Less than One Year	One to Five Years	Six to Ten Years	Over Ten Years	Total	Weighted Average Maturity <sup>1</sup>
Fixed maturity debt securities:						
Amortized cost	\$ 41,670	\$ 84,027	\$ 144,705	\$ 12,340	\$ 282,742	5.10
Fair value	41,840	87,883	161,178	12,337	303,238	
Residential mortgage-backed securities:						
Amortized cost					\$ 10,676	<sup>2</sup>
Fair value					11,164	
Total investment securities:						
Amortized cost					\$ 293,418	
Fair value					314,402	

<sup>1</sup> Expected maturities may differ from contractual maturities because borrowers may have the right to call or prepay obligations with or without penalty.

<sup>2</sup> The average expected lives of residential mortgage-backed securities were 5.0 years based upon current prepayment assumptions.

### Temporarily Impaired Investment Securities

(in thousands):

	December 31, 2019						
	Number of Securities	Less Than 12 Months		12 Months or Longer		Total	
		Fair Value	Unrealized Loss	Fair Value	Unrealized Loss	Fair Value	Unrealized Loss
Investment:							
Municipal and other tax-exempt	4	\$ 1,001	\$ 1	\$ 1,706	\$ 5	\$ 2,707	\$ 6
Residential agency mortgage-backed securities	—	—	—	—	—	—	—
Other debt securities	13	275	1	8,041	294	8,316	295
Total investment securities	17	\$ 1,276	\$ 2	\$ 9,747	\$ 299	\$ 11,023	\$ 301

	December 31, 2018						
	Number of Securities	Less Than 12 Months		12 Months or Longer		Total	
		Fair Value	Unrealized Loss	Fair Value	Unrealized Loss	Fair Value	Unrealized Loss
Investment:							
Municipal and other tax- exempt	72	\$ 18,255	\$ 69	\$ 66,141	\$ 523	\$ 84,396	\$ 592
Residential agency mortgage-backed securities	2	—	—	5,633	135	5,633	135
Other debt securities	72	13,372	64	23,028	1,506	36,400	1,570
Total investment securities	146	\$ 31,627	\$ 133	\$ 94,802	\$ 2,164	\$ 126,429	\$ 2,297

## Available for Sale Securities

The amortized cost and fair value of available for sale securities are as follows (in thousands):

	December 31, 2019			
	Amortized Cost	Fair Value	Gross Unrealized	
			Gain	Loss
U.S. Treasury	\$ 1,598	\$ 1,600	\$ 2	\$ —
Municipal and other tax-exempt	1,789	1,861	72	—
Mortgage-backed securities:				
Residential agency	7,956,297	8,046,096	104,912	(15,113)
Residential non-agency	25,968	41,609	15,641	—
Commercial agency	3,145,342	3,178,005	37,808	(5,145)
Other debt securities	500	472	—	(28)
<b>Total available for sale securities</b>	<b>\$ 11,131,494</b>	<b>\$ 11,269,643</b>	<b>\$ 158,435</b>	<b>\$ (20,286)</b>

	December 31, 2018			
	Amortized Cost	Fair Value	Gross Unrealized	
			Gain	Loss
U.S. Treasury	\$ 496	\$ 493	\$ —	\$ (3)
Municipal and other tax-exempt	2,782	2,864	82	—
Mortgage-backed securities:				
Residential agency	5,886,323	5,804,708	16,149	(97,764)
Residential non-agency	40,948	59,736	18,788	—
Commercial agency	2,986,297	2,953,889	7,955	(40,363)
Other debt securities	35,545	35,430	12	(127)
<b>Total available for sale securities</b>	<b>\$ 8,952,391</b>	<b>\$ 8,857,120</b>	<b>\$ 42,986</b>	<b>\$ (138,257)</b>

The amortized cost and fair values of available for sale securities at December 31, 2019, by contractual maturity, are as shown in the following table (dollars in thousands):

	Less than One Year	One to Five Years	Six to Ten Years	Over Ten Years	Total	Weighted Average Maturity <sup>1</sup>
Fixed maturity debt securities:						
Amortized cost	\$ 5,105	\$ 1,113,463	\$ 1,455,340	\$ 575,321	\$ 3,149,229	8.15
Fair value	5,114	1,122,392	1,474,002	580,430	3,181,938	
Residential mortgage-backed securities:						
Amortized cost					\$ 7,982,265	<sup>2</sup>
Fair value					8,087,705	
Total available-for-sale securities:						
Amortized cost					\$ 11,131,494	
Fair value					11,269,643	

<sup>1</sup> Expected maturities may differ from contractual maturities, because borrowers may have the right to call or prepay obligations with or without penalty.

<sup>2</sup> The average expected lives of mortgage-backed securities were 4.0 years based upon current prepayment assumptions.

Sales of available for sale securities resulted in gains and losses as follows (in thousands):

	Year Ended December 31,		
	2019	2018	2017
Proceeds	\$ 1,211,718	\$ 745,643	\$ 1,309,215
Gross realized gains	14,996	7,117	10,223
Gross realized losses	(9,399)	(9,918)	(5,795)
Related federal and state income tax expense (benefit)	1,425	(713)	1,722

The fair value of debt securities pledged as collateral for repurchase agreements, public trust funds on deposit and for other purposes, as required by law was \$10.1 billion at December 31, 2019 and \$9.1 billion at December 31, 2018.

The secured parties do not have the right to sell or re-pledge these securities.

### Temporarily Impaired Available for Sale Securities

(In thousands)

	December 31, 2019						
	Number of Securities	Less Than 12 Months		12 Months or Longer		Total	
		Fair Value	Unrealized Loss	Fair Value	Unrealized Loss	Fair Value	Unrealized Loss
Available for sale:							
Mortgage-backed securities:							
Residential agency	133	\$ 1,352,597	\$ 6,690	\$ 686,002	\$ 8,423	\$ 2,038,599	\$ 15,113
Commercial agency	69	830,047	4,238	210,877	907	1,040,924	5,145
Other debt securities	1	—	—	472	28	472	28
Total available for sale securities	203	\$ 2,182,644	\$ 10,928	\$ 897,351	\$ 9,358	\$ 3,079,995	\$ 20,286

	December 31, 2018						
	Number of Securities	Less Than 12 Months		12 Months or Longer		Total	
		Fair Value	Unrealized Loss	Fair Value	Unrealized Loss	Fair Value	Unrealized Loss
Available for sale:							
U.S. Treasury	1	\$ —	\$ —	\$ 493	\$ 3	\$ 493	\$ 3
Mortgage-backed securities:							
Residential agency	289	510,824	1,158	3,641,370	96,606	4,152,194	97,764
Commercial agency	197	179,258	394	1,969,504	39,969	2,148,762	40,363
Other debt securities	3	9,982	63	20,436	64	30,418	127
Total available for sale securities	490	\$ 700,064	\$ 1,615	\$ 5,631,803	\$ 136,642	\$ 6,331,867	\$ 138,257

Based on evaluations of impaired securities as of December 31, 2019, the Company does not intend to sell any impaired available for sale securities before fair value recovers to the current amortized cost and it is more-likely-than-not that the Company will not be required to sell impaired securities before fair value recovers, which may be maturity.

No other-than-temporary impairment losses were recorded in earnings during 2019 and none were recorded in 2018. Cumulative other-than-temporary impairment on available for sale securities was \$36 million at December 31, 2019 and \$45 million at December 31, 2018. The decrease compared to the prior year was due to sales during 2019.



## Fair Value Option Securities

Fair value option securities represent securities which the Company has elected to carry at fair value and are separately identified on the Consolidated Balance Sheets with changes in the fair value recognized in earnings as they occur. Certain residential mortgage-backed securities issued by U.S. government agencies and derivative contracts are held as an economic hedge of the mortgage servicing rights.

The fair value and net unrealized gain (loss) included in fair value option securities is as follows (in thousands):

	December 31, 2019		December 31, 2018	
	Fair Value	Net Unrealized Gain (Loss)	Fair Value	Net Unrealized Gain (Loss)
U.S. Treasury	\$ 9,917	\$ (48)	\$ —	\$ —
Residential agency mortgage-backed securities	1,088,660	14,109	283,235	2,766
Total	\$ 1,098,577	\$ 14,061	\$ 283,235	\$ 2,766

### (3) Derivatives

The following table summarizes the fair values of derivative contracts recorded as “derivative contracts” assets and liabilities in the balance sheet at December 31, 2019 (in thousands):

	Assets					
	Notional <sup>1</sup>	Gross Fair Value	Netting Adjustments	Net Fair Value Before Cash Collateral	Cash Collateral	Fair Value Net of Cash Collateral
Customer risk management programs:						
Interest rate contracts						
To-be-announced residential mortgage-backed securities	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —
Interest rate swaps	2,464,478	49,100	(1,839)	47,261	—	47,261
Energy contracts	2,151,096	144,906	(107,591)	37,315	(38)	37,277
Agricultural contracts	16,118	1,522	(22)	1,500	—	1,500
Foreign exchange contracts	214,119	213,007	—	213,007	—	213,007
Equity option contracts	81,455	3,233	—	3,233	(660)	2,573
Total customer risk management programs	4,927,266	411,768	(109,452)	302,316	(698)	301,618
Trading	69,721,932	131,561	(115,949)	15,612	—	15,612
Interest rate risk management programs	1,268,180	6,226	(81)	6,145	—	6,145
Total derivative contracts	\$ 75,917,378	\$ 549,555	\$ (225,482)	\$ 324,073	\$ (698)	\$ 323,375

	Liabilities					
	Notional <sup>1</sup>	Gross Fair Value	Netting Adjustments	Net Fair Value Before Cash Collateral	Cash Collateral	Fair Value Net of Cash Collateral
Customer risk management programs:						
Interest rate contracts						
To-be-announced residential mortgage-backed securities	\$ —	\$ —	\$ —	\$ —	\$ —	\$ —
Interest rate swaps	2,464,478	49,194	(1,839)	47,355	(43,932)	3,423
Energy contracts	2,105,391	139,311	(107,591)	31,720	(6,031)	25,689
Agricultural contracts	16,139	1,507	(22)	1,485	(1,485)	—
Foreign exchange contracts	207,919	207,020	—	207,020	—	207,020
Equity option contracts	81,455	3,233	—	3,233	—	3,233
Total customer risk management programs	4,875,382	400,265	(109,452)	290,813	(51,448)	239,365
Trading	65,144,388	125,535	(115,949)	9,586	—	9,586
Interest rate risk management programs	380,401	3,121	(81)	3,040	(863)	2,177
Total derivative contracts	\$ 70,400,171	\$ 528,921	\$ (225,482)	\$ 303,439	\$ (52,311)	\$ 251,128

<sup>1</sup> Notional amounts for commodity contracts are converted into dollar-equivalent amounts based on dollar prices at the inception of the contract.

The following table summarizes the fair values of derivative contracts recorded as “derivative contracts” assets and liabilities in the balance sheet at December 31, 2018 (in thousands):

<b>Assets</b>						
	<b>Notional<sup>1</sup></b>	<b>Gross Fair Value</b>	<b>Netting Adjustments</b>	<b>Net Fair Value Before Cash Collateral</b>	<b>Cash Collateral</b>	<b>Fair Value Net of Cash Collateral</b>
Customer risk management programs:						
Interest rate contracts						
To-be-announced residential mortgage-backed securities	\$ 10,671,151	\$ 92,231	\$ (26,787)	\$ 65,444	\$ —	\$ 65,444
Interest rate swaps	1,924,131	36,112	(6,688)	29,424	(7,934)	21,490
Energy contracts	1,472,209	206,418	(60,983)	145,435	(106,752)	38,683
Agricultural contracts	21,210	842	(201)	641	—	641
Foreign exchange contracts	184,990	183,759	—	183,759	—	183,759
Equity option contracts	89,085	2,021	—	2,021	(648)	1,373
Total customer risk management programs	14,362,776	521,383	(94,659)	426,724	(115,334)	311,390
Trading	15,356,909	45,346	(39,521)	5,825	—	5,825
Internal risk management programs	553,079	5,064	(1,350)	3,714	—	3,714
Total derivative contracts	\$ 30,272,764	\$ 571,793	\$ (135,530)	\$ 436,263	\$ (115,334)	\$ 320,929
<b>Liabilities</b>						
	<b>Notional<sup>1</sup></b>	<b>Gross Fair Value</b>	<b>Netting Adjustments</b>	<b>Net Fair Value Before Cash Collateral</b>	<b>Cash Collateral</b>	<b>Fair Value Net of Cash Collateral</b>
Customer risk management programs:						
Interest rate contracts						
To-be-announced residential mortgage-backed securities	\$ 10,558,151	\$ 90,388	\$ (26,787)	\$ 63,601	\$ (63,596)	\$ 5
Interest rate swaps	1,924,131	36,288	(6,688)	29,600	(4,110)	25,490
Energy contracts	1,434,247	202,494	(60,983)	141,511	(1,490)	140,021
Agricultural contracts	21,214	812	(201)	611	—	611
Foreign exchange contracts	177,423	175,922	—	175,922	—	175,922
Equity option contracts	89,085	2,021	—	2,021	—	2,021
Total customer risk management programs	14,204,251	507,925	(94,659)	413,266	(69,196)	344,070
Trading	19,374,294	56,983	(39,521)	17,462	—	17,462
Internal risk management programs	260,348	9,439	(1,350)	8,089	(7,315)	774
Total derivative contracts	\$ 33,838,893	\$ 574,347	\$ (135,530)	\$ 438,817	\$ (76,511)	\$ 362,306

<sup>1</sup> Notional amounts for commodity contracts are converted into dollar-equivalent amounts based on dollar prices at the inception of the contract.

The following summarizes the pre-tax net gains (losses) on derivative instruments and where they are recorded in the Consolidated Statements of Earnings (in thousands):

	Year Ended December 31,					
	2019		2018		2017	
	Brokerage and Trading Revenue	Gain (Loss) on Derivatives, Net	Brokerage and Trading Revenue	Gain (Loss) on Derivatives, Net	Brokerage and Trading Revenue	Gain (Loss) on Derivatives, Net
Customer risk management programs:						
Interest rate contracts						
To-be-announced residential mortgage-backed securities	\$ 9,579	\$ —	\$ 27,190	\$ —	\$ 34,532	\$ —
Interest rate swaps	3,647	—	2,614	—	2,647	—
Energy contracts	5,064	—	8,443	—	5,536	—
Agricultural contracts	28	—	53	—	79	—
Foreign exchange contracts	623	—	535	—	1,352	—
Equity option contracts	—	—	—	—	—	—
Total customer risk management programs	18,941	—	38,835	—	44,146	—
Trading	13,999	—	(13,643)	—	4,615	—
Internal risk management programs	—	14,951	—	(422)	—	779
Total derivative contracts	\$ 32,940	\$ 14,951	\$ 25,192	\$ (422)	\$ 48,761	\$ 779

As discussed in Note 7, certain derivative contracts not designated as hedging instruments related to mortgage loan commitments and forward sales contracts are included in Residential mortgage loans held for sale on the Consolidated Balance Sheets. See Note 7 for additional discussion of notional, fair value and impact on earnings of these contracts.

No derivative contracts have been designated as hedging instruments for financial reporting purposes.

#### (4) Loans and Allowances for Credit Losses

The portfolio segments of the loan portfolio are as follows (in thousands):

	December 31, 2019				December 31, 2018			
	Fixed Rate	Variable Rate	Non-accrual	Total	Fixed Rate	Variable Rate	Non-accrual	Total
Commercial	\$ 3,231,485	\$ 10,684,749	\$ 115,416	\$ 14,031,650	\$ 2,251,188	\$ 11,285,049	\$ 99,841	\$ 13,636,078
Commercial real estate	1,056,321	3,349,836	27,626	4,433,783	1,477,274	3,265,918	21,621	4,764,813
Residential mortgage	1,652,653	393,897	37,622	2,084,172	1,830,224	358,254	41,555	2,230,033
Personal	193,903	1,007,192	287	1,201,382	190,687	834,889	230	1,025,806
Total	\$ 6,134,362	\$ 15,435,674	\$ 180,951	\$ 21,750,987	\$ 5,749,373	\$ 15,744,110	\$ 163,247	\$ 21,656,730
Accruing loans past due (90 days) <sup>1</sup>				\$ 7,680				\$ 1,338
Foregone interest on nonaccrual loans				\$ 17,409				\$ 15,502

<sup>1</sup> Excludes residential mortgage loans guaranteed by agencies of the U.S. government.

At December 31, 2019, loans to businesses and individuals with collateral primarily located in Texas totaled \$6.8 billion or 31% of the total loan portfolio. Loans to businesses and individuals with collateral primarily located in Oklahoma totaled \$3.5 billion or 16% of our total loan portfolio. Loans to businesses and individuals with collateral primarily located in Colorado totaled \$2.8 billion or 13% of our total loan portfolio. Loans for which the collateral location is not relevant, such as unsecured loans and reserve-based energy loans, are distributed by the borrower's primary operating location. These geographic concentrations subject the loan portfolio to the general economic conditions within these areas. At December 31, 2018, loans to businesses and individuals with collateral primarily located in Texas totaled \$6.4 billion or 30% of the loan portfolio and loans to businesses and individuals with collateral primarily located in Oklahoma totaled \$3.5 billion or 16% of the loan portfolio.

### *Commercial*

Commercial loans represent loans for working capital, facilities acquisition or expansion, purchases of equipment and other needs of commercial customers primarily located within our geographical footprint. Commercial loans are underwritten individually and represent on-going relationships based on a thorough knowledge of the customer, the customer's industry and market. While commercial loans are generally secured by the customer's assets including real property, inventory, accounts receivable, operating equipment, interest in mineral rights and other property and may also include personal guarantees of the owners and related parties, the primary source of repayment of the loans is the on-going cash flow from operations of the customer's business. Inherent lending risk is centrally monitored on a continuous basis from underwriting throughout the life of the loan for compliance with commercial lending policies.

At December 31, 2019, commercial loans with collateral primarily located in Texas totaled \$4.7 billion or 33% of the commercial loan portfolio segment. Commercial loans with collateral primarily located in Oklahoma totaled \$2.0 billion or 14% of the commercial loan portfolio segment. Commercial loans with collateral primarily located in Colorado totaled \$2.0 billion or 14% of the commercial loan portfolio segment. The commercial loan portfolio segment is further divided into loan classes. The services loan class totaled \$3.1 billion or 14% of total loans. Approximately \$1.5 billion of loans in the services class consisted of loans with individual balances of less than \$10 million. Businesses included in the services class include commercial services, Native American tribal governments, financial services, entertainment and recreation and education. The energy loan class totaled \$4.0 billion or 18% of total loans, including \$3.1 billion of outstanding loans to energy producers. Approximately 58% of committed production loans were secured by properties primarily producing oil and 42% are secured by properties producing natural gas. The healthcare loan class totaled \$3.0 billion or 14% of total loans. The healthcare loan class consists primarily of loans for the development and operation of senior housing and care facilities, including independent living, assisted living and skilled nursing. Healthcare also includes loans to hospitals and other medical service providers.

At December 31, 2018, commercial loans with collateral primarily located in Texas totaled \$4.1 billion or 30% of the commercial loan portfolio segment and commercial loans with collateral primarily located in Oklahoma totaled \$2.2 billion or 16% of the commercial loan portfolio segment. The energy loan class totaled \$3.6 billion or 17% of total loans, including \$2.9 billion of outstanding loans to energy producers. At December 31, 2018, approximately 57% of committed production loans were secured by properties primarily producing oil and 43% were secured by properties producing natural gas. The services loan class totaled \$3.3 billion or 15% of total loans. Approximately \$2.3 billion of loans in the services category consisted of loans with individual balances of less than \$10 million. The healthcare loan class totaled \$2.8 billion or 13% of total loans.

### *Commercial Real Estate*

Commercial real estate loans are for the construction of buildings or other improvements to real estate and property held by borrowers for investment purposes primarily within our geographical footprint. We require collateral values in excess of the loan amounts, demonstrated cash flows in excess of expected debt service requirements, equity investment in the project and a portion of the project already sold, leased or permanent financing already secured. The expected cash flows from all significant new or renewed income producing property commitments are stress tested to reflect the risks in varying interest rates, vacancy rates and rental rates. As with commercial loans, inherent lending risks are centrally monitored on a continuous basis from underwriting throughout the life of the loan for compliance with applicable lending policies.

At December 31, 2019, 24% of commercial real estate loans are secured by properties primarily located in the Dallas and Houston areas of Texas. An additional 11% of commercial real estate loans are secured by properties located primarily in the Denver, Colorado metropolitan area. At December 31, 2018, 26% of commercial real estate loans were secured by properties in Texas, 9% of commercial real estate loans were secured by properties in Oklahoma.

## *Residential Mortgage and Personal*

Residential mortgage loans provide funds for our customers to purchase or refinance their primary residence or to borrow against the equity in their home. Residential mortgage loans are secured by a first or second mortgage on the customer's primary residence. Personal loans consist primarily of loans secured by the cash surrender value of insurance policies and marketable securities. It also includes direct loans secured by and for the purchase of automobiles, recreational and marine equipment as well as other unsecured loans. Residential mortgage and personal loans are made in accordance with underwriting policies. Credit scoring is assessed based on significant credit characteristics including credit history, residential and employment stability. Residential mortgage loans retained in the Company's portfolio are primarily composed of various mortgage programs to support customer relationships including jumbo mortgage loans, non-builder construction loans and special loan programs for high net worth individuals and certain professionals. Jumbo loans may be fixed or variable rate and are fully amortizing. Jumbo loans generally conform to government sponsored entity standards, except that the loan size exceeds maximums required under these standards. These loans generally require a minimum FICO score of 720 and a maximum debt-to-income ratio ("DTI") of 38%. Loan-to-value ("LTV") ratios are tiered from 60% to 100%, depending on the market. Special mortgage programs include fixed and variable fully amortizing loans tailored to the needs of certain healthcare professionals. Variable rate loans are fully indexed at origination and may have fixed rates for 3 years to 10 years, then adjust annually thereafter.

At December 31, 2019 and 2018, residential mortgage loans included \$198 million and \$191 million, respectively, of loans guaranteed by U.S. government agencies previously sold into GNMA mortgage pools. These loans either have been repurchased or are eligible to be repurchased by the Company when certain defined delinquency criteria are met. Although payments on these loans generally are past due more than 90 days, interest continues to accrue based on the government guarantee.

Home equity loans totaled \$829 million at December 31, 2019 and \$917 million at December 31, 2018. At December 31, 2019, 63% of the home equity loan portfolio was comprised of first lien loans and 37% of the home equity portfolio was comprised of junior lien loans. Junior lien loans were distributed 35% to amortizing term loans and 65% to revolving lines of credit. At December 31, 2018, 65% of the home equity portfolio was comprised of first lien loans and 35% of the home equity loan portfolio was comprised of junior lien loans. Junior lien loans were distributed 36% to amortizing term loans and 64% to revolving lines of credit. Home equity loans generally require a minimum FICO score of 700 and a maximum DTI of 40%. The maximum loan amount available for our home equity loan products is generally \$400 thousand. Revolving loans have a 5 year revolving period followed by 15 year term of amortizing repayments. Interest-only home equity loans may not be extended for any additional revolving time. All other home equity loans may be extended at management's discretion for an additional 5 year revolving term subject to an update of certain credit information.

At December 31, 2019, 28% of residential mortgage loans are secured by properties located in Oklahoma, 28% of residential mortgage loans are secured by properties located in Texas and 15% of residential mortgage are secured by properties located in Colorado. At December 31, 2018, 28% of residential mortgage were secured by properties in Texas, 26% of residential mortgage loans were secured by properties in Oklahoma and 19% of residential mortgage loans are secured by properties in Colorado.

### *Credit Commitments*

Commitments to extend credit are agreements to lend to a customer as long as there is no violation of conditions established in the contract. Commitments generally have fixed expiration dates or other termination clauses and may require payment of a fee. At December 31, 2019, outstanding commitments totaled \$11.1 billion. Because some commitments are expected to expire before being drawn upon, the total commitment amounts do not necessarily represent future cash requirements. BOK Financial uses the same credit policies in making commitments as it does loans.

The amount of collateral obtained, if deemed necessary, is based upon management's credit evaluation of the borrower.

Standby letters of credit are conditional commitments issued to guarantee the performance of a customer to a third party. Because the credit risk involved in issuing standby letters of credit is essentially the same as that involved in extending loan commitments, BOK Financial uses the same credit policies in evaluating the creditworthiness of the customer. Additionally, BOK Financial uses the same evaluation process in obtaining collateral on standby letters of credit as it does for loan commitments. The term of these standby letters of credit is defined in each commitment and typically corresponds with the underlying loan commitment. At December 31, 2019, outstanding standby letters of credit totaled \$646 million. Commercial letters of credit are used to facilitate customer trade transactions with the drafts being drawn when the underlying transaction is consummated. At December 31, 2019, outstanding commercial letters of credit totaled \$1.2 million.

## Allowances for Credit Losses

BOK Financial maintains an allowance for loan losses and an accrual for off-balance sheet credit risk. The accrual for off-balance sheet credit risk is maintained at a level that is appropriate to cover estimated losses associated with credit instruments that are not currently recognized as assets such as loan commitments, standby letters of credit or guarantees. As discussed in greater detail in Note 7, the Company also has separate accruals related to off-balance sheet credit risk related to residential mortgage loans previously sold with full or partial recourse and for residential mortgage loans sold to government sponsored agencies under standard representations and warranties.

The allowance for loan losses consists of specific allowances attributed to impaired loans that have not yet been charged down to amounts we expect to recover, general allowances for unimpaired loans based on estimated loss rates by loan class and nonspecific allowances based on general economic conditions, concentration in loans with large balances and other relevant factors.

The activity in the allowance for loan losses and the accrual for off-balance sheet credit risk related to loan commitments and standby letters of credit for the year ended December 31, 2019 is summarized as follows (in thousands):

	<u>Commercial</u>	<u>Commercial Real Estate</u>	<u>Residential Mortgage</u>	<u>Personal</u>	<u>Nonspecific Allowance</u>	<u>Total</u>
<b>Allowance for loan losses:</b>						
Beginning balance	\$ 102,226	\$ 60,026	\$ 17,964	\$ 9,473	\$ 17,768	\$ 207,457
Provision for loan losses	57,125	(12,046)	(3,838)	3,537	(573)	44,205
Loans charged off	(43,185)	(1,161)	(288)	(6,343)	—	(50,977)
Recoveries	2,021	4,986	562	2,505	—	10,074
Ending balance	\$ 118,187	\$ 51,805	\$ 14,400	\$ 9,172	\$ 17,195	\$ 210,759
<b>Accrual for off-balance sheet credit risk:</b>						
Beginning balance	\$ 1,655	\$ 52	\$ 52	\$ 31	\$ —	\$ 1,790
Provision for off-balance sheet credit risk	(221)	55	(8)	(31)	—	(205)
Ending balance	\$ 1,434	\$ 107	\$ 44	\$ —	\$ —	\$ 1,585
Total provision for credit losses	\$ 56,904	\$ (11,991)	\$ (3,846)	\$ 3,506	\$ (573)	\$ 44,000

The activity in the allowance for loan losses and the accrual for off-balance sheet credit risk related to loan commitments and standby letters of credit for the year ended December 31, 2018 is summarized as follows (in thousands):

	<u>Commercial</u>	<u>Commercial Real Estate</u>	<u>Residential Mortgage</u>	<u>Personal</u>	<u>Nonspecific Allowance</u>	<u>Total</u>
<b>Allowance for loan losses:</b>						
Beginning balance	\$ 124,269	\$ 56,621	\$ 18,451	\$ 9,124	\$ 22,217	\$ 230,682
Provision for loan losses	12,521	(147)	(1,156)	3,175	(4,449)	9,944
Loans charged off	(37,880)	—	(378)	(5,325)	—	(43,583)
Recoveries	3,316	3,552	1,047	2,499	—	10,414
Ending balance	\$ 102,226	\$ 60,026	\$ 17,964	\$ 9,473	\$ 17,768	\$ 207,457
<b>Accrual for off-balance sheet credit risk:</b>						
Beginning balance	\$ 3,644	\$ 45	\$ 43	\$ 2	\$ —	\$ 3,734
Provision for off-balance sheet credit risk	(1,989)	7	9	29	—	(1,944)
Ending balance	\$ 1,655	\$ 52	\$ 52	\$ 31	\$ —	\$ 1,790
Total provision for credit losses	\$ 10,532	\$ (140)	\$ (1,147)	\$ 3,204	\$ (4,449)	\$ 8,000

The activity in the allowance for loan losses and the accrual for off-balance sheet credit risk related to loan commitments and standby letters of credit for the year ended December 31, 2017 is summarized as follows (in thousands):

	<u>Commercial</u>	<u>Commercial Real Estate</u>	<u>Residential Mortgage</u>	<u>Personal</u>	<u>Nonspecific Allowance</u>	<u>Total</u>
<b>Allowance for loan losses:</b>						
Beginning balance	\$ 140,213	\$ 50,749	\$ 18,224	\$ 8,773	\$ 28,200	\$ 246,159
Provision for loan losses	(595)	4,008	116	2,964	(5,983)	510
Loans charged off	(19,810)	(76)	(649)	(5,064)	—	(25,599)
Recoveries	4,461	1,940	760	2,451	—	9,612
Ending balance	\$ 124,269	\$ 56,621	\$ 18,451	\$ 9,124	\$ 22,217	\$ 230,682
<b>Accrual for off-balance sheet credit risk:</b>						
Beginning balance	\$ 11,063	\$ 123	\$ 50	\$ 8	\$ —	\$ 11,244
Provision for off-balance sheet credit risk	(7,419)	(78)	(7)	(6)	—	(7,510)
Ending balance	\$ 3,644	\$ 45	\$ 43	\$ 2	\$ —	\$ 3,734
Total provision for credit losses	\$ (8,014)	\$ 3,930	\$ 109	\$ 2,958	\$ (5,983)	\$ (7,000)



The allowance for loan losses and recorded investment of the related loans by portfolio segment for each impairment measurement method at December 31, 2019 is as follows (in thousands):

	Collectively Measured for Impairment		Individually Measured for Impairment		Total	
	Recorded Investment	Related Allowance	Recorded Investment	Related Allowance	Recorded Investment	Related Allowance
Commercial	\$ 13,916,234	\$ 100,773	\$ 115,416	\$ 17,414	\$ 14,031,650	\$ 118,187
Commercial real estate	4,406,157	51,805	27,626	—	4,433,783	51,805
Residential mortgage	2,046,550	14,400	37,622	—	2,084,172	14,400
Personal	1,201,095	9,172	287	—	1,201,382	9,172
<b>Total</b>	<b>21,570,036</b>	<b>176,150</b>	<b>180,951</b>	<b>17,414</b>	<b>21,750,987</b>	<b>193,564</b>
Nonspecific allowance	—	—	—	—	—	17,195
<b>Total</b>	<b>\$ 21,570,036</b>	<b>\$ 176,150</b>	<b>\$ 180,951</b>	<b>\$ 17,414</b>	<b>\$ 21,750,987</b>	<b>\$ 210,759</b>

The allowance for loan losses and recorded investment of the related loans by portfolio segment for each impairment measurement method at December 31, 2018 is as follows (in thousands):

	Collectively Measured for Impairment		Individually Measured for Impairment		Total	
	Recorded Investment	Related Allowance	Recorded Investment	Related Allowance	Recorded Investment	Related Allowance
Commercial	\$ 13,536,237	\$ 93,494	\$ 99,841	\$ 8,732	\$ 13,636,078	\$ 102,226
Commercial real estate	4,743,192	60,026	21,621	—	4,764,813	60,026
Residential mortgage	2,188,478	17,964	41,555	—	2,230,033	17,964
Personal	1,025,576	9,473	230	—	1,025,806	9,473
<b>Total</b>	<b>21,493,483</b>	<b>180,957</b>	<b>163,247</b>	<b>8,732</b>	<b>21,656,730</b>	<b>189,689</b>
Nonspecific allowance	—	—	—	—	—	17,768
<b>Total</b>	<b>\$ 21,493,483</b>	<b>\$ 180,957</b>	<b>\$ 163,247</b>	<b>\$ 8,732</b>	<b>\$ 21,656,730</b>	<b>\$ 207,457</b>

## Credit Quality Indicators

The Company utilizes loan class and risk grading as primary credit quality indicators. Substantially all commercial and commercial real estate loans and certain residential mortgage and personal loans are risk graded based on a quarterly evaluation of the borrowers' ability to repay the loans. Certain commercial loans and most residential mortgage and personal loans are small, homogeneous pools that are not risk graded.

The allowance for loan losses and recorded investment of the related loans by portfolio segment for risk graded and non-risk graded loans at December 31, 2019 is as follows (in thousands):

	Internally Risk Graded		Non-Graded		Total	
	Recorded Investment	Related Allowance	Recorded Investment	Related Allowance	Recorded Investment	Related Allowance
Commercial	\$ 13,997,538	\$ 117,236	\$ 34,112	\$ 951	\$ 14,031,650	\$ 118,187
Commercial real estate	4,433,783	51,805	—	—	4,433,783	51,805
Residential mortgage	279,113	3,085	1,805,059	11,315	2,084,172	14,400
Personal	1,116,297	7,003	85,085	2,169	1,201,382	9,172
<b>Total</b>	<b>19,826,731</b>	<b>179,129</b>	<b>1,924,256</b>	<b>14,435</b>	<b>21,750,987</b>	<b>193,564</b>
Nonspecific allowance	—	—	—	—	—	17,195
<b>Total</b>	<b>\$ 19,826,731</b>	<b>\$ 179,129</b>	<b>\$ 1,924,256</b>	<b>\$ 14,435</b>	<b>\$ 21,750,987</b>	<b>\$ 210,759</b>

The allowance for loan losses and recorded investment of the related loans by portfolio segment for risk graded and non-risk graded loans at December 31, 2018 is as follows (in thousands):

	Internally Risk Graded		Non-Graded		Total	
	Recorded Investment	Related Allowance	Recorded Investment	Related Allowance	Recorded Investment	Related Allowance
Commercial	\$ 13,586,654	\$ 101,303	\$ 49,424	\$ 923	\$ 13,636,078	\$ 102,226
Commercial real estate	4,764,813	60,026	—	—	4,764,813	60,026
Residential mortgage	505,046	3,310	1,724,987	14,654	2,230,033	17,964
Personal	948,890	6,633	76,916	2,840	1,025,806	9,473
<b>Total</b>	<b>19,805,403</b>	<b>171,272</b>	<b>1,851,327</b>	<b>18,417</b>	<b>21,656,730</b>	<b>189,689</b>
Nonspecific allowance	—	—	—	—	—	17,768
<b>Total</b>	<b>\$ 19,805,403</b>	<b>\$ 171,272</b>	<b>\$ 1,851,327</b>	<b>\$ 18,417</b>	<b>\$ 21,656,730</b>	<b>\$ 207,457</b>

Loans are considered to be performing if they are in compliance with the original terms of the agreement which is consistent with the regulatory guideline of "pass." Performing also includes loans considered to be "other loans especially mentioned" by regulatory guidelines and all residential mortgage loans guaranteed by agencies of the U.S. government that continue to accrue interest based on criteria of the guarantor's programs. Other loans especially mentioned are currently performing in compliance with the original terms of the agreement but may have a potential weakness that deserves management's close attention, consistent with regulatory guidelines.

The risk grading process identified certain loans that have a well-defined weakness (e.g. inadequate debt service coverage or liquidity or marginal capitalization; repayment may depend on collateral or other risk mitigation) that may jeopardize liquidation of the debt and represent a greater risk due to deterioration in the financial condition of the borrower. This is consistent with the regulatory guideline for "substandard." Because the borrowers are still performing in accordance with the original terms of the loan agreements, these loans were not placed in nonaccruing status.

Nonaccruing loans represent loans for which full collection of principal and interest in accordance with the original terms of the loan agreements is uncertain. This is substantially the same criteria used to determine whether a loan is impaired and includes certain loans considered “substandard” and all loans considered “doubtful” by regulatory guidelines.

The following table summarizes the Company’s loan portfolio at December 31, 2019 by the risk grade categories (in thousands):

	Internally Risk Graded				Non-Graded		Total
	Performing				Performing	Nonaccrual	
	Pass	Other Loans Especially Mentioned	Accruing Substandard	Nonaccrual			
Commercial:							
Energy	\$ 3,700,406	\$ 117,298	\$ 63,951	\$ 91,722	\$ —	\$ —	\$ 3,973,377
Services	3,050,946	29,943	33,791	7,483	—	—	3,122,163
Wholesale/retail	1,749,023	5,281	5,399	1,163	—	—	1,760,866
Manufacturing	623,219	18,214	13,883	10,133	—	—	665,449
Healthcare	2,995,514	13,117	20,805	4,480	—	—	3,033,916
Public finance	709,868	—	—	—	—	—	709,868
Other commercial and industrial	709,729	4,028	17,744	398	34,075	37	766,011
Total commercial	13,538,705	187,881	155,573	115,379	34,075	37	14,031,650
Commercial real estate:							
Residential construction and land development	150,529	—	—	350	—	—	150,879
Retail	743,343	12,067	1,243	18,868	—	—	775,521
Office	923,202	5,177	—	—	—	—	928,379
Multifamily	1,257,005	1,604	95	6,858	—	—	1,265,562
Industrial	852,539	1,658	1,011	909	—	—	856,117
Other commercial real estate	455,045	1,639	—	641	—	—	457,325
Total commercial real estate	4,381,663	22,145	2,349	27,626	—	—	4,433,783
Residential mortgage:							
Permanent mortgage	276,138	78	2,404	493	758,260	19,948	1,057,321
Permanent mortgages guaranteed by U.S. government agencies	—	—	—	—	191,694	6,100	197,794
Home equity	—	—	—	—	817,976	11,081	829,057
Total residential mortgage	276,138	78	2,404	493	1,767,930	37,129	2,084,172
Personal	1,116,196	45	—	56	84,853	232	1,201,382
Total	\$ 19,312,702	\$ 210,149	\$ 160,326	\$ 143,554	\$ 1,886,858	\$ 37,398	\$ 21,750,987

The following table summarizes the Company's loan portfolio at December 31, 2018 by the risk grade categories (in thousands):

	Internally Risk Graded				Non-Graded		Total
	Performing				Performing	Nonaccrual	
	Pass	Other Loans Especially Mentioned	Accruing Substandard	Nonaccrual			
Commercial:							
Energy	\$ 3,414,039	\$ 42,176	\$ 86,624	47,494	\$ —	\$ —	\$ 3,590,333
Services	3,167,203	49,761	32,661	8,567	—	—	3,258,192
Wholesale/retail	1,593,902	18,809	7,131	1,316	—	—	1,621,158
Manufacturing	668,438	30,934	22,230	8,919	—	—	730,521
Healthcare	2,730,121	14,920	37,698	16,538	—	—	2,799,277
Public finance	804,550	—	—	—	—	—	804,550
Other commercial and industrial	756,815	1,266	7,588	16,954	49,371	53	832,047
Total commercial	13,135,068	157,866	193,932	99,788	49,371	53	13,636,078
Commercial real estate:							
Residential construction and land development	148,234	—	—	350	—	—	148,584
Retail	885,588	11,926	1,289	20,279	—	—	919,082
Office	1,059,334	10,532	3,054	—	—	—	1,072,920
Multifamily	1,287,471	281	12	301	—	—	1,288,065
Industrial	776,898	—	1,208	—	—	—	778,106
Other commercial real estate	555,301	1,188	876	691	—	—	558,056
Total commercial real estate	4,712,826	23,927	6,439	21,621	—	—	4,764,813
Residential mortgage:							
Permanent mortgage	269,678	52	9,730	1,991	819,199	21,960	1,122,610
Permanent mortgages guaranteed by U.S. government agencies	—	—	—	—	183,734	7,132	190,866
Home equity	223,298	—	296	—	682,491	10,472	916,557
Total residential mortgage	492,976	52	10,026	1,991	1,685,424	39,564	2,230,033
Personal	944,256	115	4,443	76	76,762	154	1,025,806
Total	\$ 19,285,126	\$ 181,960	\$ 214,840	123,476	\$ 1,811,557	\$ 39,771	\$ 21,656,730

## Impaired Loans

Loans are considered to be impaired when it is probable that the Company will not be able to collect all amounts due according to the contractual terms of the loan agreement. This includes all nonaccruing loans, all loans modified in a troubled debt restructuring and all loans repurchased from GNMA pools.

A summary of impaired loans follows (in thousands):

	As of December 31, 2019					Year Ended December 31, 2019	
	Unpaid Principal Balance	Recorded Investment			Related Allowance	Average Recorded Investment	Interest Income Recognized
		Total	With No Allowance	With Allowance			
<b>Commercial:</b>							
Energy	\$ 149,441	\$ 91,722	\$ 44,244	\$ 47,478	\$ 16,854	\$ 69,119	\$ —
Services	10,923	7,483	6,301	1,182	240	5,854	—
Wholesale/retail	1,980	1,163	902	261	101	916	—
Manufacturing	10,848	10,133	9,914	219	219	9,144	—
Healthcare	13,774	4,480	4,480	—	—	7,798	—
Public finance	—	—	—	—	—	—	—
Other commercial and industrial	8,227	435	435	—	—	8,568	—
<b>Total commercial</b>	<b>195,193</b>	<b>115,416</b>	<b>66,276</b>	<b>49,140</b>	<b>17,414</b>	<b>101,399</b>	<b>—</b>
<b>Commercial real estate:</b>							
Residential construction and land development	1,306	350	350	—	—	350	—
Retail	20,265	18,868	18,868	—	—	19,573	—
Office	—	—	—	—	—	—	—
Multifamily	6,858	6,858	6,858	—	—	3,580	—
Industrial	909	909	909	—	—	454	—
Other commercial real estate	801	641	641	—	—	666	—
<b>Total commercial real estate</b>	<b>30,139</b>	<b>27,626</b>	<b>27,626</b>	<b>—</b>	<b>—</b>	<b>24,623</b>	<b>—</b>
<b>Residential mortgage:</b>							
Permanent mortgage	24,868	20,441	20,441	—	—	22,196	1,198
Permanent mortgage guaranteed by U.S. government agencies <sup>1</sup>	204,187	197,794	197,794	—	—	195,009	7,733
Home equity	12,967	11,081	11,081	—	—	10,776	—
<b>Total residential mortgage</b>	<b>242,022</b>	<b>229,316</b>	<b>229,316</b>	<b>—</b>	<b>—</b>	<b>227,981</b>	<b>8,931</b>
Personal	360	287	287	—	—	259	—
<b>Total</b>	<b>\$ 467,714</b>	<b>\$ 372,645</b>	<b>\$ 323,505</b>	<b>\$ 49,140</b>	<b>\$ 17,414</b>	<b>\$ 354,262</b>	<b>\$ 8,931</b>

<sup>1</sup> All permanent mortgage loans guaranteed by U.S. government agencies are considered impaired as we do not expect full collection of contractual principal and interest. At December 31, 2019, \$6.1 million of these loans are nonaccruing and \$192 million are accruing based on the guarantee by U.S. government agencies.

Generally, no interest income is recognized on impaired loans until all principal balances, including amounts charged-off, have been recovered.

	As of December 31, 2018					Year Ended	
	Unpaid Principal Balance	Recorded Investment			December 31, 2018		
		Total	With No Allowance	With Allowance	Related Allowance	Average Recorded Investment	Interest Income Recognized
<b>Commercial:</b>							
Energy	\$ 79,675	\$ 47,494	\$ 18,639	\$ 28,855	\$ 5,362	\$ 69,645	\$ —
Services	13,437	8,567	8,489	78	74	4,509	—
Wholesale/retail	1,722	1,316	1,015	301	101	1,784	—
Manufacturing	10,055	8,919	8,673	246	246	7,249	—
Healthcare	24,319	16,538	10,563	5,975	2,949	14,297	—
Public finance	—	—	—	—	—	—	—
Other commercial and industrial	26,955	17,007	17,007	—	—	17,976	—
<b>Total commercial</b>	<b>156,163</b>	<b>99,841</b>	<b>64,386</b>	<b>35,455</b>	<b>8,732</b>	<b>115,460</b>	<b>—</b>
<b>Commercial real estate:</b>							
Residential construction and land development	1,306	350	350	—	—	1,091	—
Retail	27,680	20,279	20,279	—	—	10,278	—
Office	—	—	—	—	—	137	—
Multifamily	301	301	301	—	—	151	—
Industrial	—	—	—	—	—	—	—
Other commercial real estate	851	691	691	—	—	581	—
<b>Total commercial real estate</b>	<b>30,138</b>	<b>21,621</b>	<b>21,621</b>	<b>—</b>	<b>—</b>	<b>12,238</b>	<b>—</b>
<b>Residential mortgage:</b>							
Permanent mortgage	28,716	23,951	23,951	—	—	24,572	1,233
Permanent mortgage guaranteed by U.S. government agencies <sup>1</sup>	196,296	190,866	190,866	—	—	180,813	7,172
Home equity	12,196	10,472	10,472	—	—	11,774	—
<b>Total residential mortgage</b>	<b>237,208</b>	<b>225,289</b>	<b>225,289</b>	<b>—</b>	<b>—</b>	<b>217,159</b>	<b>8,405</b>
Personal	278	230	230	—	—	250	—
<b>Total</b>	<b>\$ 423,787</b>	<b>\$ 346,981</b>	<b>\$ 311,526</b>	<b>\$ 35,455</b>	<b>\$ 8,732</b>	<b>\$ 345,107</b>	<b>\$ 8,405</b>

<sup>1</sup> All permanent mortgage loans guaranteed by U.S. government agencies are considered impaired as we do not expect full collection of contractual principal and interest. At December 31, 2018, \$7.1 million of these loans are nonaccruing and \$184 million are accruing based on the guarantee by U.S. government agencies.

### *Troubled Debt Restructurings*

At December 31, 2019 the Company has \$132 million in troubled debt restructurings (TDRs), of which \$92 million are accruing residential mortgage loans guaranteed by U.S. government agencies. Approximately \$57 million of TDRs are performing in accordance with the modified terms. The loans designated as TDRs had \$18.6 million in charge offs during the year ended December 31, 2019.

At December 31, 2018, TDRs totaled \$166 million, of which \$86 million were accruing residential mortgage loans guaranteed by U.S. government agencies. Approximately \$71 million of TDRs were performing. The loans designated as TDRs had \$16.1 million in charge offs during the year ended December 31, 2018.

TDRs generally consist of interest rate concessions, payment stream concessions or a combination of concessions to distressed borrowers. During the year ended December 31, 2019, \$37 million of loans were restructured. During the year ended December 31, 2018, \$75 million of loans were restructured.

## Nonaccrual & Past Due Loans

Past due status for all loan classes is based on the actual number of days since the last payment was due according to the contractual terms of the loans.

A summary of loans currently performing, loans past due and accruing and nonaccrual loans as of December 31, 2019 is as follows (in thousands):

	Current	Past Due			Nonaccrual	Total
		30 to 59 Days	60 to 89 Days	90 Days or More		
<b>Commercial:</b>						
Energy	\$ 3,881,244	\$ 401	10	\$ —	\$ 91,722	\$ 3,973,377
Services	3,105,621	1,737	523	6,799	7,483	3,122,163
Wholesale/retail	1,758,878	712	113	—	1,163	1,760,866
Manufacturing	654,329	410	190	387	10,133	665,449
Healthcare	3,027,329	2,039	—	68	4,480	3,033,916
Public finance	707,638	2,230	—	—	—	709,868
Other commercial and industrial	764,390	414	772	—	435	766,011
<b>Total commercial</b>	<b>13,899,429</b>	<b>7,943</b>	<b>1,608</b>	<b>7,254</b>	<b>115,416</b>	<b>14,031,650</b>
<b>Commercial real estate:</b>						
Residential construction and land development	147,379	3,093	—	57	350	150,879
Retail	756,653	—	—	—	18,868	775,521
Office	928,379	—	—	—	—	928,379
Multifamily	1,258,704	—	—	—	6,858	1,265,562
Industrial	855,208	—	—	—	909	856,117
Other commercial real estate	454,253	1,827	250	354	641	457,325
<b>Total commercial real estate</b>	<b>4,400,576</b>	<b>4,920</b>	<b>250</b>	<b>411</b>	<b>27,626</b>	<b>4,433,783</b>
<b>Residential mortgage:</b>						
Permanent mortgage	1,034,716	2,011	153	—	20,441	1,057,321
Permanent mortgages guaranteed by U.S. government agencies	46,898	24,203	18,187	102,406	6,100	197,794
Home equity	814,325	3,343	308	—	11,081	829,057
<b>Total residential mortgage</b>	<b>1,895,939</b>	<b>29,557</b>	<b>18,648</b>	<b>102,406</b>	<b>37,622</b>	<b>2,084,172</b>
<b>Personal</b>	<b>1,196,362</b>	<b>4,664</b>	<b>54</b>	<b>15</b>	<b>287</b>	<b>1,201,382</b>
<b>Total</b>	<b>\$ 21,392,306</b>	<b>\$ 47,084</b>	<b>20,560</b>	<b>\$ 110,086</b>	<b>\$ 180,951</b>	<b>\$ 21,750,987</b>



A summary of loans currently performing, loans past due and accruing and nonaccrual loans as of December 31, 2018 is as follows (in thousands):

	Current	Past Due			Nonaccrual	Total
		30 to 59 Days	60 to 89 Days	90 Days or More		
<b>Commercial:</b>						
Energy	\$ 3,542,839	\$ —	—	\$ —	\$ 47,494	\$ 3,590,333
Services	3,237,578	6,009	6,038	—	8,567	3,258,192
Wholesale/retail	1,619,290	515	37	—	1,316	1,621,158
Manufacturing	721,204	392	6	—	8,919	730,521
Healthcare	2,781,944	241	—	554	16,538	2,799,277
Public finance	804,550	—	—	—	—	804,550
Other commercial and industrial	814,489	518	25	8	17,007	832,047
<b>Total commercial</b>	<b>13,521,894</b>	<b>7,675</b>	<b>6,106</b>	<b>562</b>	<b>99,841</b>	<b>13,636,078</b>
<b>Commercial real estate:</b>						
Residential construction and land development	147,705	249	280	—	350	148,584
Retail	884,424	14,379	—	—	20,279	919,082
Office	1,072,920	—	—	—	—	1,072,920
Multifamily	1,287,483	281	—	—	301	1,288,065
Industrial	776,898	1,208	—	—	—	778,106
Other commercial real estate	556,239	412	—	714	691	558,056
<b>Total commercial real estate</b>	<b>4,725,669</b>	<b>16,529</b>	<b>280</b>	<b>714</b>	<b>21,621</b>	<b>4,764,813</b>
<b>Residential mortgage:</b>						
Permanent mortgage	1,095,097	3,196	366	—	23,951	1,122,610
Permanent mortgages guaranteed by U.S. government agencies	37,459	24,369	16,345	105,561	7,132	190,866
Home equity	904,572	1,102	352	59	10,472	916,557
<b>Total residential mortgage</b>	<b>2,037,128</b>	<b>28,667</b>	<b>17,063</b>	<b>105,620</b>	<b>41,555</b>	<b>2,230,033</b>
Personal	1,024,298	479	796	3	230	1,025,806
<b>Total</b>	<b>\$ 21,308,989</b>	<b>\$ 53,350</b>	<b>24,245</b>	<b>\$ 106,899</b>	<b>\$ 163,247</b>	<b>\$ 21,656,730</b>

## (5) Premises and Equipment and Leases

Premises and equipment at December 31 are summarized as follows (in thousands):

	December 31,	
	2019	2018
Land	\$ 69,960	\$ 70,575
Buildings and improvements	421,952	266,733
Software and related integration	98,487	150,207
Furniture and equipment	135,153	129,988
Construction in progress	53,498	27,514
Premises and equipment	779,050	645,017
Less accumulated depreciation	243,531	314,984
Premises and equipment, net of accumulated depreciation	\$ 535,519	\$ 330,033

Depreciation expense of premises and equipment was \$51.6 million, \$51.2 million and \$47.7 million for the years ended December 31, 2019, 2018 and 2017, respectively.

Effective January 1, 2019, premises and equipment included right-of-use assets for leased office space and facilities. Leases are at market rates at inception and may contain escalations based on consumer price index or similar benchmarks and options to renew at then market rates.

At December 31, 2019, right-of-use assets of \$180 million are included in buildings and improvements and related right-of-use liabilities are included in other liabilities. The weighted-average remaining lease term was 11.1 years and the weighted average discount rate on operating leases was 3.2 percent. Operating lease costs recognized as occupancy and equipment expense were \$24.2 million for the year ended December 31, 2019. Operating cash flows from operating leases were \$23.3 million for the year ended December 31, 2019.

Total rent expense for BOK Financial was \$43.0 million in 2019, \$28.5 million in 2018 and \$27.5 million in 2017. At December 31, 2019, un-discounted operating lease liabilities are scheduled to mature as follows: \$27.5 million in 2020, \$25.7 million in 2021, \$20.1 million in 2022, \$18.9 million in 2023, \$18.2 million in 2024 and \$127 million thereafter. Operating expense and short term lease costs total \$12.6 million for the year ended December 31, 2019. BOKF, NA is obligated under a long-term lease for its bank premises in downtown Tulsa. The original lease dated November 1, 1976 was renegotiated on July 1, 2019. The new lease will terminate on December 31, 2034. The Company has the option to renew for an additional 10 years. Premises leases may include options to renew at then current market rates and may include escalation provisions based upon changes in consumer price index or similar benchmarks.

The Company may lease owned properties or sublease unoccupied leased facilities. Income on these leases is immaterial.

## (6) Goodwill and Intangible Assets

On October 1, 2018, the Company acquired CoBiz Financial, Inc. ("CoBiz"), parent company of CoBiz Bank. The Company paid total consideration of \$944 million, which included \$243 million in cash along with the issuance of 7.2 million shares of BOK Financial common stock valued at \$701 million in exchange for all the outstanding shares of CoBiz. Goodwill acquired was attributed to synergies expected to be gained through consolidation of administrative functions resulting in cost savings. The purchase price allocation was completed in 2019 with no significant change from the preliminary purchase price allocation.

On May 1, 2018, the Company acquired a majority voting interest in Switchgrass Holdings, LLC, a restaurant franchise owner and operator, pursuant to merchant banking regulations and restrictions. The purchase price for the acquisition was \$14 million and included \$6.7 million of intangible assets.

The following table presents the original cost and accumulated amortization of intangible assets (in thousands):

	Dec. 31,	
	2019	2018
Core deposit premiums	\$ 103,200	\$ 103,200
Less accumulated amortization	19,364	5,032
Net core deposit premiums	83,836	98,168
Other identifiable intangible assets	74,372	63,497
Less accumulated amortization	32,937	26,816
Net other identifiable intangible assets	41,435	36,681
Total intangible assets, net	\$ 125,271	\$ 134,849

Expected amortization expense for intangible assets that will continue to be amortized (in thousands):

	Core Deposit Premiums	Other Identifiable Intangible Assets	Total
2020	\$ 12,892	\$ 7,405	\$ 20,297
2021	11,893	6,706	18,599
2022	10,981	5,339	16,320
2023	10,145	4,298	14,443
2024	9,379	3,284	12,663
Thereafter	28,546	14,403	42,949
	\$ 83,836	\$ 41,435	\$ 125,271

The changes in the carrying value of goodwill by operating segment are as follows (in thousands):

	Commercial Banking	Consumer Banking	Wealth Management	Funds Management and Other	Total
Balance, December 31, 2017	313,270	43,458	90,702	—	447,430
Goodwill recognized during 2018 <sup>1</sup>	—	—	—	601,833	601,833
Balance, December 31, 2018	313,270	43,458	90,702	601,833	1,049,263
Adjustment <sup>1</sup>	600,661	—	—	(601,833)	(1,172)
Balance, December 31, 2019	\$ 913,931	\$ 43,458	\$ 90,702	\$ —	\$ 1,048,091

<sup>1</sup> Goodwill related to the CoBiz acquisition was not yet allocated to the operating segments as of December 31, 2018 and was included in Funds Management and Other in 2018 then allocated during 2019.

The annual goodwill evaluations for 2019 and 2018 did not indicate impairment for any reporting unit. Economic conditions did not indicate that impairment existed for any identifiable intangible assets and therefore no impairment evaluation was performed.

## (7) Mortgage Banking Activities

### *Residential Mortgage Loan Production*

The Company originates, markets and services conventional and government-sponsored residential mortgage loans. Generally, conforming fixed rate residential mortgage loans are held for sale in the secondary market and non-conforming and adjustable-rate residential mortgage loans are held for investment. The volume of mortgage loans originated for sale and secondary market prices are the primary drivers of originating and marketing revenue.

Residential mortgage loan commitments are generally outstanding for 60 to 90 days, which represents the typical period from commitment to originate a residential mortgage loan to when the closed loan is sold to an investor. Residential mortgage loan commitments are subject to both credit and interest rate risk. Credit risk is managed through underwriting policies and procedures, including collateral requirements, which are generally accepted by the secondary loan markets. Exposure to interest rate fluctuations is partially managed through forward sales of residential mortgage-backed securities and forward sales contracts. These latter contracts set the price for loans that will be delivered in the next 60 to 90 days.

The unpaid principal balance of residential mortgage loans held for sale, notional amounts of derivative contracts related to residential mortgage loan commitments and forward contract sales and their related fair values included in Mortgage loans held for sale on the Consolidated Balance Sheets were (in thousands):

	December 31, 2019		December 31, 2018	
	Unpaid Principal Balance/Notional	Fair Value	Unpaid Principal Balance/Notional	Fair Value
Residential mortgage loans held for sale	\$ 175,117	\$ 177,703	\$ 145,057	\$ 146,971
Residential mortgage loan commitments	158,460	5,233	160,848	5,378
Forward sales contracts	315,203	(665)	274,000	(3,128)
		<u>\$ 182,271</u>		<u>\$ 149,221</u>

No residential mortgage loans held for sale were 90 days or more past due or considered impaired as of December 31, 2019 or December 31, 2018. No credit losses were recognized on residential mortgage loans held for sale for the years ended December 31, 2019, 2018 and 2017.

Mortgage banking revenue was as follows (in thousands):

	Year Ended		
	2019	2018	2017
Production revenue:			
Net realized gains on sales of mortgage loans	\$ 39,730	\$ 36,379	\$ 45,128
Net change in unrealized gain on mortgage loans held for sale	672	(674)	2,031
Net change in the fair value of mortgage loan commitments	(145)	(1,145)	(3,210)
Net change in the fair value of forward sales contracts	2,463	(2,870)	(5,451)
Total mortgage production revenue	42,720	31,690	38,498
Servicing revenue	64,821	66,097	66,221
Total mortgage banking revenue	\$ 107,541	\$ 97,787	\$ 104,719

Mortgage production revenue includes gain (loss) on residential mortgage loans held for sale and changes in the fair value of derivative contracts not designated as hedging instruments related to residential mortgage loan commitments and forward sales contracts. Servicing revenue includes servicing fee income and late charges on loans serviced for others.

## Residential Mortgage Servicing

The Company generally retains the right to service residential mortgage loans sold and may purchase mortgage servicing rights. The unpaid principal balance of loans serviced for others is the primary driver of servicing revenue.

The following represents a summary of mortgage servicing rights (Dollars in thousands):

	December 31,		
	2019	2018	2017
Number of residential mortgage loans serviced for others	126,828	132,463	136,528
Outstanding principal balance of residential mortgage loans serviced for others	\$ 20,727,106	\$ 21,658,335	\$ 22,046,632
Weighted average interest rate	3.98%	3.99%	3.94%
Remaining contractual term (in months)	289	293	297

Activity in capitalized mortgage servicing rights during the three years ended December 31, 2019 is as follows (in thousands):

Balance, December 31, 2016	\$ 247,073
Additions, net	39,149
Change in fair value due to loan runoff	(33,527)
Change in fair value due to market changes	172
Balance, December 31, 2017	252,867
Additions, net	35,247
Change in fair value due to loan runoff	(33,528)
Change in fair value due to market changes	4,668
Balance, December 31, 2018	259,254
Additions, net	35,128
Change in fair value due to loan runoff	(38,979)
Change in fair value due to market changes	(53,517)
Balance, December 31, 2019	\$ 201,886

Changes in the fair value of mortgage servicing rights due to market changes are included in Other operating revenue in the Consolidated Statements of Earnings. Changes in fair value due to loan runoff are included in Mortgage banking costs.

Mortgage servicing rights are not traded in active markets. Fair value is determined by discounting the projected net cash flows. Significant assumptions used to determine fair value considered to be significant unobservable inputs were as follows:

	December 31,	
	2019	2018
Discount rate – risk-free rate plus a market premium	9.81%	9.90%
Prepayment rate - based upon loan interest rate, original term and loan type	8.28% - 16.05%	8.05% - 15.74%
Loan servicing costs – annually per loan based upon loan type:		
Performing loans	\$68 - \$94	\$67 - \$93
Delinquent loans	\$150 - \$500	\$150 - \$500
Loans in foreclosure	\$1,000 - \$4,000	\$1,000 - \$4,000
Primary/secondary mortgage rate spread	104 bps	105 bps
Escrow earnings rate – indexed to rates paid on deposit accounts with comparable average life	1.73%	2.57%
Delinquency rate	2.73%	2.74%

Changes in primary residential mortgage interest rates directly affect the prepayment speeds used in valuing our mortgage servicing rights. A separate third party model is used to estimate prepayment speeds based on interest rates, housing turnover rates, estimated loan curtailment, anticipated defaults and other relevant factors. The prepayment model is updated periodically for changes in market conditions and adjusted to better correlate with actual performance of BOK Financial's servicing portfolio.

## (8) Deposits

Interest expense on deposits is summarized as follows (in thousands):

	Year Ended December 31,		
	2019	2018	2017
Transaction deposits	\$ 132,854	\$ 65,859	\$ 28,627
Savings	677	439	359
Time:			
Certificates of deposits under \$100,000	8,299	5,751	7,702
Certificates of deposits \$100,000 and over	29,288	19,739	12,393
Other time deposits	4,420	3,729	4,722
Total time	42,007	29,219	24,817
Total	\$ 175,538	\$ 95,517	\$ 53,803

The aggregate amounts of time deposits in denominations of \$250,000 or more at December 31, 2019 and 2018 were \$845 million and \$756 million, respectively.

Time deposit maturities are as follows: 2020 – \$1.5 billion, 2021 – \$230 million, 2022 – \$104 million, 2023 – \$103 million, 2024 – \$55 million and \$228 million thereafter.

The aggregate amount of overdrawn customer transaction deposits that have been reclassified as loan balances was \$8.7 million at December 31, 2019 and \$27 million at December 31, 2018.

## (9) Other Borrowed Funds

Information relating to other borrowings is summarized as follows (dollars in thousands):

	As of December 31, 2019		Year Ended December 31, 2019		Maximum Outstanding At Any Month End
	Balance	Rate	Average Balance	Rate	
Funds purchased	3,390,528	1.53%	2,438,376	2.08%	3,390,528
Repurchase agreements	427,822	0.50%	399,785	0.57%	427,822
Other borrowings:					
Federal Home Loan Bank advances	4,500,000	1.79%	7,122,466	2.44%	8,000,000
GNMA repurchase liability	15,417	4.32%	13,746	4.47%	19,581
Other	11,638	5.09%	11,144	5.30%	34,676
Total other borrowings	4,527,055		7,147,356	2.45%	
Subordinated debentures <sup>1</sup>	275,923	5.15%	276,075	5.47%	275,923
Total other borrowed funds	\$ 8,621,328		\$ 10,261,592	2.37%	

	As of December 31, 2018		Year Ended December 31, 2018		Maximum Outstanding At Any Month End
	Balance	Rate	Average Balance	Rate	
Funds purchased	402,450	2.34%	419,322	1.89%	949,531
Repurchase agreements	615,961	0.36%	464,582	0.28%	615,961
Other borrowings:					
Federal Home Loan Bank advances	6,100,000	2.65%	6,207,142	2.06%	6,500,000
GNMA repurchase liability	15,552	4.43%	14,783	4.47%	16,529
Other	8,838	2.90%	14,516	2.67%	20,422
Total other borrowings	6,124,390		6,236,441	2.07%	
Subordinated debentures <sup>1</sup>	275,913	5.34%	177,884	5.52%	275,913
Total other borrowed funds	\$ 7,418,714		\$ 7,298,229	2.03%	

	As of December 31, 2017		Year Ended December 31, 2017		Maximum Outstanding At Any Month End
	Balance	Rate	Average Balance	Rate	
Funds purchased	58,628	1.00%	58,064	0.73%	80,967
Repurchase agreements	516,335	0.17%	433,791	0.10%	536,094
Other borrowings:					
Federal Home Loan Bank advances	5,100,000	1.47%	5,882,466	1.13%	6,200,000
GNMA repurchase liability	19,947	4.22%	20,509	4.59%	24,139
Other	14,950	2.61%	16,317	3.35%	18,610
Total other borrowings	5,134,897		5,919,292	1.15%	
Subordinated debentures <sup>1</sup>	144,677	5.60%	147,954	5.57%	151,875
Total other borrowed funds	\$ 5,854,537		\$ 6,559,101	1.18%	

<sup>1</sup> Parent Company only.

Aggregate annual principal repayments at December 31, 2019 are as follows (in thousands):

2020	\$ 8,335,742
2021	1,244
2022	575
2023	1,454
2024	3,599
Thereafter	278,714
<b>Total</b>	<b>\$ 8,621,328</b>

Funds purchased are unsecured and generally mature within one day to ninety days from the transaction date. Securities repurchase agreements are recorded as secured borrowings that generally mature within ninety days and are secured by certain available for sale securities.

Additional information relating to securities sold under agreements to repurchase and related liabilities at December 31, 2019 and 2018 is as follows (dollars in thousands):

Security Sold/Maturity	December 31, 2019			
	Amortized Cost	Fair Value	Repurchase Liability <sup>1</sup>	Rate
U.S. government agency mortgage-backed securities:				
Overnight <sup>1</sup>	\$ 431,939	\$ 435,898	\$ 427,822	0.50%
Long-term	—	—	—	—%
<b>Total Agency Securities</b>	<b>\$ 431,939</b>	<b>\$ 435,898</b>	<b>\$ 427,822</b>	<b>0.50%</b>

Security Sold/Maturity	December 31, 2018			
	Amortized Cost	Fair Value	Repurchase Liability <sup>1</sup>	Rate
U.S. government agency mortgage-backed securities:				
Overnight <sup>1</sup>	\$ 636,864	\$ 628,229	\$ 615,961	0.36%
Long-term	—	—	—	—%
<b>Total Agency Securities</b>	<b>\$ 636,864</b>	<b>\$ 628,229</b>	<b>\$ 615,961</b>	<b>0.36%</b>

<sup>1</sup> BOK Financial maintains control over the securities underlying overnight repurchase agreements and generally transfers control over securities underlying longer-term dealer repurchase agreements to the respective counterparty.

Borrowings from the Federal Home Loan Banks are used for funding purposes. In accordance with policies of the Federal Home Loan Banks, BOK Financial has granted a blanket pledge of eligible assets (generally unencumbered U.S. Treasury and residential mortgage-backed securities, 1-4 family loans and multifamily loans) as collateral for these advances. The Federal Home Loan Banks have issued letters of credit totaling \$661 million to secure BOK Financial's obligations to depositors of public funds. The unused credit available to BOK Financial at December 31, 2019 pursuant to the Federal Home Loan Bank's collateral policies is \$4.9 billion.

In 2016, BOK Financial issued \$150 million of subordinated debt that will mature on June 30, 2056. Interest on this debt bears an interest rate of 5.375%, payable quarterly. On June 30, 2021, BOK Financial will have the option to redeem the debt at the principal amount plus accrued interest, subject to regulatory approval.

As a result of the acquisition of CoBiz Financial, we obtained \$60 million of subordinated debt issued in June 2015 that will mature on June 25, 2030. This debt bears interest at the rate of 5.625% through June 2025 and thereafter, the notes will bear interest at an annual floating rate equal to three-month LIBOR plus 3.17%. The debt contains a call option that allows for repayment prior to contractual maturity. The call option is available on June 25, 2025 and quarterly thereafter at 100% of the principal amount.



Also through CoBiz Financial, we acquired junior subordinated debentures split across three issuance tranches. Junior subordinated debentures of \$21 million will mature September 17, 2033 and bear an interest rate of three-month LIBOR plus 2.95% that resets quarterly. Junior subordinated debentures of \$31 million will mature on July 23, 2034 and bear an interest rate of three-month LIBOR plus 2.60% that resets quarterly. Junior subordinated debentures of \$20 million will mature on September 30, 2035 and bear an interest rate of three-month LIBOR plus 1.45% that resets quarterly. The junior subordinated debentures are subject to early redemption prior to maturity.

BOK Financial Securities, Inc. may borrow funds from Pershing, LLC ("Pershing"), a clearing broker/dealer and a wholly owned subsidiary of Bank of New York Mellon, for the purposes of financing securities purchases or to facilitate funding of investment banking activities, on terms to be negotiated at the time of the borrowing. BOK Financial Securities, Inc. had no borrowings outstanding at December 31, 2019 and none at December 31, 2018.

The Company has a liability related to the repurchase of certain delinquent residential mortgage loans previously sold into GNMA mortgage pools. Interest is payable at rates contractually due to investors.

## (10) Federal and State Income Taxes

Deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes. Significant components of deferred tax assets and liabilities are as follows (in thousands):

	December 31,	
	2019	2018
Deferred tax assets:		
Credit loss reserves	\$ 50,611	\$ 49,804
Lease liability	46,084	—
Deferred compensation	25,976	25,608
Purchased loan discount	18,042	27,283
Unearned fees	9,080	9,814
Share-based compensation	7,392	4,434
Valuation adjustments	1,545	9,619
Available for sale securities mark to market	—	24,441
Other	26,384	31,489
<b>Total deferred tax assets</b>	<b>185,114</b>	<b>182,492</b>
Deferred tax liabilities:		
Mortgage servicing rights	48,435	61,844
Right-of-use asset	42,180	—
Available for sale securities mark to market	33,140	—
Acquired identifiable intangible	23,181	28,620
Depreciation	18,909	15,966
Lease financing	10,720	10,040
Other	34,826	30,566
<b>Total deferred tax liabilities</b>	<b>211,391</b>	<b>147,036</b>
<b>Net deferred tax assets (liabilities)</b>	<b>\$ (26,277)</b>	<b>\$ 35,456</b>

No valuation allowance was necessary on deferred tax assets as of December 31, 2019 and 2018.

The significant components of the provision for income taxes attributable to continuing operations for BOK Financial are shown below (in thousands):

	Year Ended December 31,		
	2019	2018	2017
Current income tax expense:			
Federal	\$ 110,887	\$ 103,748	\$ 141,607
State	15,088	15,253	14,592
<b>Total current income tax expense</b>	<b>125,975</b>	<b>119,001</b>	<b>156,199</b>
Deferred income tax expense:			
Federal	3,416	(190)	25,525
State	792	250	869
<b>Total deferred income tax expense</b>	<b>4,208</b>	<b>60</b>	<b>26,394</b>
<b>Total income tax expense</b>	<b>\$ 130,183</b>	<b>\$ 119,061</b>	<b>\$ 182,593</b>

The reconciliations of income attributable to continuing operations at the U.S. federal statutory tax rate to income tax expense are as follows (in thousands):

	Year Ended December 31,		
	2019	2018	2017
Amount:			
Federal statutory tax	\$ 132,482	\$ 118,752	\$ 181,397
Tax exempt revenue	(12,227)	(8,311)	(12,402)
Effect of state income taxes, net of federal benefit	12,715	12,430	10,701
Utilization of tax credits, net of proportional amortization of low-income housing limited partnership investments	(5,127)	(4,559)	(6,811)
Other, net	2,340	749	9,708
<b>Total income tax expense</b>	<b>\$ 130,183</b>	<b>\$ 119,061</b>	<b>\$ 182,593</b>

	Year Ended December 31,		
	2019	2018	2017
Percent of pretax income:			
Federal statutory tax	21.0%	21.0%	35.0%
Tax exempt revenue	(1.9)	(1.5)	(2.4)
Effect of state income taxes, net of federal benefit	2.0	2.2	2.0
Utilization of tax credits, net of proportional amortization of low-income housing limited partnership investments	(0.8)	(0.8)	(1.3)
Other, net	0.3	0.2	1.9
<b>Total</b>	<b>20.6%</b>	<b>21.1%</b>	<b>35.2%</b>

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

	2019	2018	2017
Balance as of January 1	\$ 18,869	\$ 18,110	\$ 15,841
Additions for tax for current year positions	5,649	2,649	4,645
Settlements during the period	—	—	—
Lapses of applicable statute of limitations	(4,053)	(1,890)	(2,376)
<b>Balance as of December 31</b>	<b>\$ 20,465</b>	<b>\$ 18,869</b>	<b>\$ 18,110</b>

Of the above unrecognized tax benefits, \$14.7 million, if recognized, would have affected the effective tax rate.

BOK Financial recognizes interest and penalties accrued related to unrecognized tax benefits in income tax expense. The Company recognized \$2.2 million for 2019, \$1.7 million for 2018 and \$1.2 million for 2017 in interest and penalties. The Company had approximately \$5.6 million and \$5.0 million accrued for the payment of interest and penalties at December 31, 2019 and 2018, respectively. Federal statutes remain open for federal tax returns filed in the previous three reporting periods. Various state income tax statutes remain open for the previous three to six reporting periods.

## (11) Employee Benefits

BOK Financial sponsors a defined benefit cash balance Pension Plan for all employees who satisfy certain age and service requirements. Pension Plan benefits were curtailed as of April 1, 2006. No participants may be added to the plan and no additional service benefits will be accrued. Interest continues to accrue on employees' account balances at a variable rate tied to the five-year trailing average of five-year U.S. Treasury securities plus 1.5%. The rate has a floor of 3.0% and a ceiling of 5.0%. The 2019 quarterly variable rates ranged from 3.32% to 3.40%.

The projected benefit obligation and fair value of plan assets, respectively, were \$24.5 million and \$36.4 million at December 31, 2019 and \$24.5 million and \$33.6 million at December 31, 2018. The net periodic benefit credit was \$815 thousand for December 31, 2019, \$583 thousand for December 31, 2018 and \$704 thousand for December 31, 2017. Total expected future benefit payments related to the Pension Plan were \$27.8 million at December 31, 2019.

The following table presents the weighted-average assumptions used in the measurement of the Company's net periodic benefit cost as of December 31:

	<b>2019</b>	<b>2018</b>
Discount rate	<b>4.10%</b>	3.30%
Expected return on plan assets	<b>5.50%</b>	5.50%

Assets of the Pension Plan consist primarily of shares in the Cavanal Hill Active Core Fund. The stated objective of this fund is to provide an attractive total return with a well-balanced mix of equities and bonds. The typical portfolio mix is approximately 60% equities and 40% bonds. The net asset value of shares in the Cavanal Hill Funds is reported daily based on market quotations for the Fund's securities. Management considers the Fund's recent and long-term performance as indicators when setting the expected return on plan assets. No minimum contribution was required for 2019, 2018 or 2017.

Employee contributions to the Thrift Plan are eligible for Company matching equal to 6% of base compensation, as defined in the plan. The Company-provided matching contribution rates range from 50% for employees with less than 4 years of service to 200% for employees with 15 or more years of service. Additionally, a maximum Company-provided, non-elective annual contribution of up to \$750 per participant is provided for employees whose annual base compensation is less than \$40,000. Participants may direct investments in their accounts to a variety of options, including a BOK Financial common stock fund and Cavanal Hill funds. Employer contributions, which are invested in accordance with the participant's investment options, vest over five years. Thrift Plan expenses were \$27.6 million for 2019, \$25.1 million for 2018 and \$22.8 million for 2017.

## (12) Share-Based Compensation Plans

The shareholders and Board of Directors of BOK Financial have approved various share-based compensation plans. An independent compensation committee of the Board of Directors determines the number of awards granted to the Chief Executive Officer and other senior executives. Share-based compensation is granted to other officers and employees as determined by the Chief Executive Officer.

The following table presents stock options outstanding under these plans (in thousands, except for per share data):

	Number	Weighted-Average Exercise Price	Aggregate Intrinsic Value
<b>Options outstanding at:</b>			
December 31, 2017	117,551	\$ 53.26	\$ 4,592
December 31, 2018	63,058	54.89	1,163
<b>December 31, 2019</b>	<b>36,100</b>	<b>56.75</b>	<b>1,106</b>
<b>Options vested at:</b>			
December 31, 2017	51,286	\$ 48.62	\$ 2,241
December 31, 2018	33,573	53.09	679
<b>December 31, 2019</b>	<b>27,193</b>	<b>57.08</b>	<b>824</b>

No options have been awarded since 2013. At December 31, 2019, the weighted average remaining contractual life of options outstanding was 1.76 years and the weighted average remaining contractual life of vested options was 1.35 years. The aggregate intrinsic value of options exercised was \$761 thousand for 2019, \$2.3 million for 2018 and \$3.5 million for 2017.

The Company also awards restricted stock to certain officers and employees and restricted stock units ("RSUs") to certain executives, (collectively "non-vested shares"). Vesting of all non-vested shares is subject to service requirements. Additionally, vesting of certain non-vested shares is subject to performance criteria based on changes in the Company's earnings per share relative to defined peers. The following represents a summary of the non-vested shares for the three years ended December 31, 2019 (in thousands):

	Restricted Stock		Restricted Stock Units	
	Shares	Weighted Average Grant Date Fair Value	Units	Weighted Average Grant Date Fair Value
Non-vested at January 1, 2017	786,706		—	
Granted	177,807	\$ 86.95	—	—
Vested	(194,419)	63.07	—	—
Forfeited	(102,991)	78.70	—	—
Non-vested at December 31, 2017	667,103		—	
Granted	150,419	\$ 85.58	—	—
Vested	(242,215)	74.85	—	—
Forfeited	(47,700)	75.68	—	—
Non-vested at December 31, 2018	527,607		—	
Granted	145,724	\$ 76.74	46,689	\$ 87.40
Vested	(114,201)	61.28	—	—
Forfeited	(131,952)	83.69	—	—
Non-vested at December 31, 2019	427,178		46,689	

Compensation expense recognized on non-vested shares totaled \$15.1 million for 2019, \$3.6 million for 2018 and \$23.2 million for 2017. Unrecognized compensation cost of non-vested shares totaled \$14.9 million at December 31, 2019. We expect to recognize compensation expense of \$9.4 million in 2020, \$5.3 million in 2021, and \$144 thousand in 2022.

Compensation cost for restricted stock units is variable based on the current fair value of BOK Financial common shares. Vesting of 222,164 non-vested shares may be increased or decreased based on performance criteria defined in the plan documents.

### (13) Related Parties

In compliance with applicable banking regulations, the Company may extend credit to certain executive officers, directors, principal shareholders and their affiliates (collectively referred to as “related parties”) in the ordinary course of business. The Company’s loans to related parties do not involve more than the normal credit risk.

Activity in loans to related parties is summarized as follows (in thousands):

	<b>Year Ended December 31,</b>	
	<b>2019</b>	<b>2018</b>
Beginning balance	\$ 75,265	\$ 110,246
Advances	886,610	1,479,735
Payments	(896,643)	(1,514,841)
Adjustments <sup>1</sup>	9,957	125
Ending balance	\$ 75,189	\$ 75,265

<sup>1</sup> Adjustments generally consist of changes in status as a related party.

As defined by banking regulations, loan commitments and equity investments from the subsidiary banks to a single affiliate may not exceed 10% of unimpaired capital and surplus while loan commitments and equity investments to all affiliates may not exceed 20% of unimpaired capital and surplus. All loans to affiliates must be fully secured by eligible collateral. At December 31, 2019, loan commitments and equity investments were limited to \$370 million to a single affiliate and \$739 million to all affiliates. The largest loan commitment and equity investment to a single affiliate was \$257 million and the aggregate loan commitments and equity investments to all affiliates were \$392 million. The largest outstanding amount to a single affiliate at December 31, 2019 was \$4.3 million and the total outstanding amounts to all affiliates were \$5.0 million. At December 31, 2018, total loan commitments and equity investments to all affiliates were \$313 million and the total outstanding amounts to all affiliates were \$883 thousand.

Certain related parties are customers of the Company for services other than loans, including consumer banking, corporate banking, risk management, wealth management, brokerage and trading, or fiduciary/trust services. The Company engages in transactions with related parties in the ordinary course of business in compliance with applicable regulations.

QuikTrip Corporation has entered into a fee sharing agreement with TransFund, BOKF’s electronic funds transfer network (“TransFund”), respecting transactions completed at TransFund automated teller machines placed in QuikTrip locations. In 2019, BOKF paid QuikTrip approximately \$10.0 million pursuant to this agreement. A BOK Financial director is Chief Executive Officer, Chairman, and a significant shareholder of QuikTrip Corporation.

Cavanal Hill Investment Management, Inc., a wholly-owned subsidiary of BOKF, NA, is the administrator to and investment advisor for the Cavanal Hill Funds (the "Funds"), a diversified, open-ended investment company established as a business trust under the Investment Company Act of 1940 (the "1940 Act"). BOKF, NA is custodian and Cavanal Hill Distributors, Inc. is distributor for the Funds. The Funds’ products are offered to customers, employee benefit plans, trusts and the general public in the ordinary course of business. Approximately 84% of the Funds’ assets of \$3.7 billion are held for the Company's clients. A Company executive officer serves on the Funds' board of trustees and officers of BOKF, NA serve as president and secretary of the Funds. A majority of the members of the Funds’ board of trustees are, however, independent of the Company and the Funds are managed by its board of trustees.

## **(14) Commitments and Contingent Liabilities**

### *Litigation Contingencies*

As a member of Visa, BOK Financial is obligated for a proportionate share of certain covered litigation losses incurred by Visa under a retrospective responsibility plan. A contingent liability was recognized for the Company's share of Visa's covered litigation liabilities. Visa funded an escrow account to cover litigation claims, including covered litigation losses under the retrospective responsibility plan, with proceeds from its initial public offering in 2008 and from available cash.

BOK Financial currently owns 252,233 Visa Class B shares which are convertible into 409,324 shares of Visa Class A shares after the final settlement of all covered litigation. Class B shares may be diluted in the future if the escrow fund is not adequate to cover future covered litigation costs. No value has been currently assigned to the Class B shares.

On June 24, 2015, BOKF, NA received a complaint alleging that an employee had colluded with a bond issuer and an individual in misusing revenues pledged to municipal bonds for which BOKF, NA served as trustee under the bond indenture. The Company conducted an investigation and concluded that employees in one of its Corporate Trust offices had, with respect to a single group of affiliated bond issuances, violated Company policies and procedures by waiving financial covenants, granting forbearances and accepting, without disclosure to the bondholders, debt service payments from sources other than pledged revenues. The relationship manager was terminated. The Company reported the circumstances to, and cooperated with an investigation by, the Securities and Exchange Commission ("SEC").

On December 28, 2015, in an action brought by the SEC, the United States District Court for the District of New Jersey entered a judgment against the principals involved in issuing the bonds, precluding the principals from denying the alleged violations of the federal securities laws and requiring the principals to pay all outstanding principal, accrued interest, and other amounts required under the bond documents, less the value of the facilities securing repayment of the bonds, subject to oversight by a court appointed monitor ("Payment Plan").

On September 7, 2016, BOKF, NA agreed, and the SEC entered, a consent order finding that BOKF, NA had violated Section 17(a) of the Securities Act of 1933 and Section 10(b) of the Securities Exchange Act and requiring BOKF, NA to disgorge \$1,067,721 of fees and pay a civil penalty of \$600,000. BOKF, NA disgorged the fees and paid the penalty.

On August 26, 2016, BOKF, NA was sued in the United States District Court for New Jersey by two bondholders in a putative class action on behalf of all holders of the bonds alleging BOKF, NA participated in the fraudulent sale of securities by the principals. The New Jersey Federal District Action has been stayed until March 20, 2020. On September 14, 2016, BOKF, NA was sued in the District Court of Tulsa County, Oklahoma by 19 bondholders alleging BOKF, NA participated in the fraudulent sale of securities by the principals. The Tulsa County District Court Action is pending on BOKF, NA's motion to dismiss. Four separate small groups of bondholders filed arbitration complaints with the Financial Institutions Regulatory Association respecting the bonds and other bonds for which BOKF, NA served as indenture trustee. BOKF, NA challenged the FINRA proceedings in the United States District Court of Nevada. On appeal, the United States Court of Appeals for the Ninth Circuit held BOKF, NA was not subject to FINRA jurisdiction. The four FINRA complaints were then dismissed.

On July 9, 2019, the New Jersey Federal District Court terminated the Payment Plan except with respect to facilities then under contract to be sold as to which the Payment Plan continued until January 17, 2020. On January 8, 2020, the New Jersey District Court entered judgment against the principal individual and his wife for \$36,805,051 in principal amount and \$10,937,831 in pre-judgment interest. Management is no longer able to conclude that the individual principal and his wife will be successful in paying the obligations they have to pay the bonds in full. Under all circumstances, the obligation of the principals to repay the bonds continues as an obligation not dischargeable in bankruptcy. If the individual principal and his wife do not have the financial ability to pay the bonds in full, a bondholder loss could become probable. Management has been advised by counsel that BOKF, NA has valid defenses to claims of bondholders and that no loss to the company is probable. No provision for losses has been made at this time. BOKF, NA estimates that, upon sale of all facilities securing payment of the bonds, including those currently under contract and those not currently under contract, approximately \$20 million will remain outstanding. A reasonable estimate cannot be made of the amount of any bondholder loss, though the amount of bondholder loss could be material to the company in the event a loss to the company becomes probable.

On March 5, 2018, BOKF, NA was sued in the Fulton, Georgia County District Court by the administratrix of a deceased resident who had sued for and obtained a judgment for wrongful death against one of the operators of a nursing home financed by one of the bonds which are the subject of the litigation discussed above. The judgment is alleged to total approximately \$8 million in principal and interest at this time. Plaintiff alleges that BOKF, in its capacity as indenture trustee for the bonds, colluded with the borrower and others to defraud creditors of the nursing home by misleading the public about the solvency of the nursing home. Plaintiff alleges that this conduct has prevented her from collecting on her judgment. BOKF, NA is advised by counsel that BOKF, NA has valid defenses to the plaintiffs' claims and no loss is probable.

On March 14, 2017, BOKF, NA was sued in the United States District Court for the Northern District of Oklahoma by bondholders in a second putative class action representing a different set of municipal securities. The bondholders in this second action allege two individuals purchased facilities from the principals who are the subject of the SEC New Jersey proceedings by means of the fraudulent sale of \$60 million of municipal securities for which BOKF, NA also served as indenture trustee. The bondholders allege BOKF, NA failed to disclose that the seller of the purchased facilities had engaged in the conduct complained of in the New Jersey action. BOKF, NA properly performed all duties as indenture trustee of this second set of municipal securities, timely commenced proceedings against the issuer of the securities when default occurred, is cooperating with the SEC in actions against the two principals, is not a target of the SEC proceedings, and has been advised by counsel that BOKF, NA has valid defenses to the claims of these bondholders. Management is advised by counsel that a loss is not probable and that the loss, if any, cannot be reasonably estimated.

On March 7, 2017, a plaintiff filed a putative class action in the United States District Court for the Northern District of Texas alleging an extended overdraft fee charged by BOKF, NA is interest and exceeds permitted rates. On September 18, 2018, the District Court dismissed the Texas action and the plaintiff appealed the dismissal to the United States Court of Appeals for the Fifth Circuit which heard argument on October 8, 2019. On August 22, 2018, a plaintiff filed a second putative class action in the United States District Court for New Mexico making the same allegations as the Texas action. The District Court dismissed the plaintiff's action. The plaintiffs filed a motion for reconsideration and the action is pending on that motion. Management is advised by counsel that a loss is not probable in either the now dismissed Texas action or the New Mexico action and that the loss, if any, cannot be reasonably estimated.

On July 6, 2018, a plaintiff served a petition in a putative class action in the Oklahoma District Court for Tulsa County Oklahoma alleging BOKF, NA breached its Demand Deposit Agreements by charging overdraft and not sufficient funds fees to deposit accounts on the day of the transaction triggering the fee and by the bank's debit hold process causing overdraft fees. Management is advised by counsel that a loss is not probable and that the loss, if any, cannot be reasonably estimated.

In the ordinary course of business, BOK Financial and its subsidiaries are subject to legal actions and complaints. Management believes, based upon the opinion of counsel, that the actions and liability or loss, if any, resulting from the final outcomes of the proceedings, will not have a material effect on the Company's financial condition, results of operations or cash flows.

#### *Alternative Investment Commitments*

The Company sponsors a private equity fund and invests in several tax credit entities and other funds as permitted by banking regulations. Consolidation of these investments is based on the variable interest model.

At December 31, 2019, the Company has \$259 million in interests in various alternative investments generally consisting of unconsolidated limited partnership interests in entities for which investment return is in the form of low income housing tax credits or other investments in merchant banking activities. The investment balance also included of \$82 million in unfunded commitments included in Other liabilities on the Consolidated Balance Sheets. At December 31, 2018, the Company had \$237 million in interests in various alternative investments and included \$74 million in unfunded commitments included in Other liabilities.

#### *Other Commitments and Contingencies*

Cavalan Hill Funds' assets include U.S. Treasury and government securities money market funds. Assets of these funds consist of highly-rated, short-term obligations of the U.S. Treasury and Agencies. The net asset value of units in these funds was \$1.00 at December 31, 2019. An investment in these funds is not insured by the Federal Deposit Insurance Corporation or guaranteed by BOK Financial or any of its subsidiaries. BOK Financial may, but is not obligated to purchase assets from these funds to maintain the net asset value at \$1.00. No assets were purchased from the funds in 2019 or 2018.



The Federal Reserve Bank requires member banks to maintain certain minimum average cash balances. Member banks may satisfy reserve balance requirements through holdings of vault cash and balances maintained directly with a Federal Reserve Bank. The combined average balance of vault cash and balances held at the Federal Reserve Bank was \$618 million for the year ended December 31, 2019 and \$1.2 billion for the year ended December 31, 2018.

## **(15) Shareholders Equity**

### *Preferred Stock*

One billion shares of preferred stock with a par value of \$0.00005 per share are authorized. The Series A Preferred Stock has no voting rights except as otherwise provided by Oklahoma corporate law and may be converted into one share of Common Stock for each 36 shares of Series A Preferred Stock at the option of the holder. Dividends are cumulative at an annual rate of ten percent of the \$0.06 per share liquidation preference value when declared and are payable in cash. Aggregate liquidation preference is \$15 million. No Series A Preferred Stock was outstanding in 2019, 2018 or 2017.

### *Common Stock*

Common stock consists of 2.5 billion authorized shares with a \$0.00006 par value. Holders of common shares are entitled to one vote per share at the election of the Board of Directors and on any question arising at any shareholders' meeting and to receive dividends when and as declared. Additionally, regulations restrict the ability of national banks and bank holding companies to pay dividends.

### *Subsidiary Banks*

The amounts of dividends that BOK Financial's subsidiary bank can declare and the amounts of loans the subsidiary bank can extend to affiliates are limited by various federal banking regulations and state corporate law. Generally, dividends declared during a calendar year are limited to net profits, as defined, for the year plus retained profits for the preceding two years. Dividends are further restricted by minimum capital requirements.

### *Regulatory Capital*

BOK Financial and the subsidiary bank is subject to various capital requirements administered by the federal banking agencies. Failure to meet minimum capital requirements can initiate certain mandatory and additional discretionary actions by regulators that could have a material effect on BOK Financial's operations. These capital requirements include quantitative measures of assets, liabilities and certain off-balance sheet items. The capital standards are also subject to qualitative judgments by the regulators.

New capital rules were effective for BOK Financial on January 1, 2015. Components of these rules phased in through January 1, 2019. A bank falling below the minimum capital requirements, including the capital conservation buffer, would be subject to regulatory restrictions on capital distributions (including but not limited to dividends and share repurchases) and executive bonus payments. For a banking institution to qualify as well capitalized, Common Equity Tier 1, Tier I, Total and Leverage capital ratios must be at least 6.5%, 8%, 10% and 5%, respectively. Tier I capital consists primarily of common stockholders' equity, excluding unrealized gains or losses on available for sale securities, less goodwill, core deposit premiums and certain other intangible assets. Total capital consists primarily of Tier I capital plus preferred stock, subordinated debt and allowances for credit losses, subject to certain limitations. The subsidiary banks exceeded the regulatory definition of well capitalized as of December 31, 2019 and December 31, 2018.

A summary of regulatory capital minimum requirements and levels follows (dollars in thousands):

	<b>Minimum Capital Requirement</b>	<b>Capital Conservation Buffer<sup>1</sup></b>	<b>Minimum Capital Requirement Including Capital Conservation Buffer</b>	<b>Well Capitalized Bank Requirement</b>	<b>December 31, 2019</b>		<b>December 31, 2018</b>	
Common Equity Tier 1 Capital (to Risk Weighted Assets):								
Consolidated	<b>4.50%</b>	<b>2.50%</b>	<b>7.00%</b>	<b>N/A</b>	<b>\$ 3,608,821</b>	<b>11.39%</b>	<b>\$3,356,524</b>	<b>10.92 %</b>
BOKF, NA	<b>4.50%</b>	<b>N/A</b>	<b>4.50%</b>	<b>6.50%</b>	<b>3,414,446</b>	<b>10.90%</b>	<b>2,894,119</b>	<b>10.50 %</b>
CoBiz Bank <sup>2</sup>	<b>4.50%</b>	<b>N/A</b>	<b>4.50%</b>	<b>6.50%</b>	<b>—</b>	<b>—%</b>	<b>317,944</b>	<b>10.65 %</b>
Tier I Capital (to Risk Weighted Assets):								
Consolidated	<b>6.00%</b>	<b>2.50%</b>	<b>8.50%</b>	<b>N/A</b>	<b>\$ 3,608,821</b>	<b>11.39%</b>	<b>\$3,356,524</b>	<b>10.92 %</b>
BOKF, NA	<b>6.00%</b>	<b>N/A</b>	<b>6.00%</b>	<b>8.00%</b>	<b>3,414,446</b>	<b>10.90%</b>	<b>2,894,119</b>	<b>10.50 %</b>
CoBiz Bank <sup>2</sup>	<b>6.00%</b>	<b>N/A</b>	<b>6.00%</b>	<b>8.00%</b>	<b>—</b>	<b>—%</b>	<b>317,944</b>	<b>10.65 %</b>
Total Capital (to Risk Weighted Assets):								
Consolidated	<b>8.00%</b>	<b>2.50%</b>	<b>10.50%</b>	<b>N/A</b>	<b>\$ 4,097,087</b>	<b>12.94%</b>	<b>\$3,841,684</b>	<b>12.50 %</b>
BOKF, NA	<b>8.00%</b>	<b>N/A</b>	<b>8.00%</b>	<b>10.00%</b>	<b>3,692,010</b>	<b>11.79%</b>	<b>3,103,366</b>	<b>11.26 %</b>
CoBiz Bank <sup>2</sup>	<b>8.00%</b>	<b>N/A</b>	<b>8.00%</b>	<b>10.00%</b>	<b>—</b>	<b>—%</b>	<b>382,944</b>	<b>12.83 %</b>
Leverage (Tier I Capital to Average Assets):								
Consolidated	<b>4.00%</b>	<b>N/A</b>	<b>4.00%</b>	<b>N/A</b>	<b>\$ 3,608,820</b>	<b>8.40%</b>	<b>\$3,356,524</b>	<b>8.96 %</b>
BOKF, NA	<b>4.00%</b>	<b>N/A</b>	<b>4.00%</b>	<b>5.00%</b>	<b>3,414,446</b>	<b>7.98%</b>	<b>2,894,119</b>	<b>8.56 %</b>
CoBiz Bank <sup>2</sup>	<b>4.00%</b>	<b>N/A</b>	<b>4.00%</b>	<b>5.00%</b>	<b>—</b>	<b>—%</b>	<b>317,944</b>	<b>8.25 %</b>

<sup>1</sup> Capital conservation buffer was effective January 1, 2016 and phased in through 2019. The phased in capital conservation buffer was 2.50% at December 31, 2019 and 1.875% at December 31, 2018. The fully phased in requirement of 2.50% is included in the table above.

<sup>2</sup> CoBiz Bank was acquired by BOK Financial effective October 1, 2018 and merged into BOKF, NA during the first quarter of 2019.

*Accumulated Other Comprehensive Income (Loss)*

AOCI includes unrealized gains and losses on available for sale ("AFS") securities and non-credit related unrealized losses on AFS securities for which an other-than-temporary impairment has been recorded in earnings. Unrealized losses on employee benefit plans will be reclassified into income as pension plan costs are recognized over the remaining service period of plan participants. Gains and losses in AOCI are net of deferred income taxes.

A rollforward of the components of accumulated other comprehensive income (loss) is included as follows (in thousands):

	<b>Unrealized Gain (Loss) on</b>		
	<b>Available for Sale Securities</b>	<b>Employee Benefit Plans</b>	<b>Total</b>
Balance, December 31, 2016	\$ (9,087)	\$ (1,880)	\$ (10,967)
Net change in unrealized gain (loss)	(28,170)	2,018	(26,152)
Reclassification adjustments included in earnings:			
Gain on available for sale securities, net	(4,428)	—	(4,428)
Other comprehensive income (loss), before income taxes	(32,598)	2,018	(30,580)
Federal and state income tax <sup>1</sup>	(12,708)	785	(11,923)
Other comprehensive income (loss), net of income taxes	(19,890)	1,233	(18,657)
Reclassification of stranded accumulated other comprehensive loss related to tax reform	(6,408)	(142)	(6,550)
Balance, December 31, 2017	(35,385)	(789)	(36,174)
Transition adjustment for net unrealized gains on equity securities	(2,709)	—	(2,709)
Net change in unrealized gain (loss)	(46,941)	(1,069)	(48,010)
Reclassification adjustments included in earnings:			
Loss on available for sale securities, net	2,801	—	2,801
Other comprehensive income (loss), before income taxes	(44,140)	(1,069)	(45,209)
Federal and state income tax <sup>2</sup>	(11,235)	(272)	(11,507)
Other comprehensive income (loss), net of income taxes	(32,905)	(797)	(33,702)
Balance, December 31, 2018	(70,999)	(1,586)	(72,585)
Net change in unrealized gain (loss)	<b>239,017</b>	<b>2,030</b>	<b>241,047</b>
Reclassification adjustments included in earnings:			
Gain on available for sale securities, net	<b>(5,597)</b>	—	<b>(5,597)</b>
Other comprehensive income (loss), before income taxes	<b>233,420</b>	<b>2,030</b>	<b>235,450</b>
Federal and state income tax <sup>2</sup>	<b>57,425</b>	<b>517</b>	<b>57,942</b>
Other comprehensive income (loss), net of income taxes	<b>175,995</b>	<b>1,513</b>	<b>177,508</b>
Balance, December 31, 2019	<b>\$ 104,996</b>	<b>\$ (73)</b>	<b>\$ 104,923</b>

<sup>1</sup> Calculated using a 39 percent blended federal and state statutory tax rate.

<sup>2</sup> Calculated using a 25 percent blended federal and state statutory tax rate.

## (16) Earnings Per Share

The following table presents the computation of basic and diluted earnings per share (dollars in thousands, except per share data):

	Year Ended		
	2019	2018	2017
Numerator:			
Net income attributable to BOK Financial Corp. shareholders	\$ 500,758	\$ 445,646	\$ 334,644
Less: Earnings allocated to participating securities	3,227	3,737	3,561
Numerator for basic earnings per share – income available to common shareholders	497,531	441,909	331,083
Effect of reallocating undistributed earnings of participating securities	—	1	2
Numerator for diluted earnings per share – income available to common shareholders	\$ 497,531	\$ 441,910	\$ 331,085
Denominator:			
Weighted average shares outstanding	71,250,081	67,190,257	65,440,832
Less: Participating securities included in weighted average shares outstanding	462,381	561,617	695,468
Denominator for basic earnings per common share	70,787,700	66,628,640	64,745,364
Dilutive effect of employee stock compensation plans	14,912	33,633	60,920
Denominator for diluted earnings per common share	70,802,612	66,662,273	64,806,284
Basic earnings per share	\$ 7.03	\$ 6.63	\$ 5.11
Diluted earnings per share	\$ 7.03	\$ 6.63	\$ 5.11

## (17) Reportable Segments

BOK Financial operates three principal lines of business: Commercial Banking, Consumer Banking and Wealth Management. Commercial Banking includes lending, treasury and cash management services and customer risk management products to small businesses, middle market and larger commercial customers. Commercial Banking also includes the TransFund EFT network. Consumer Banking includes retail lending and deposit services, lending and deposit services to small business customers served through the consumer branch network and all mortgage banking activities. Wealth Management provides fiduciary services, private bank services, insurance and investment advisory services in all markets. Wealth Management also underwrites state and municipal securities and engages in brokerage and trading activities.

In addition to its lines of business, BOK Financial has a Funds Management unit. The primary purpose of this unit is to manage overall liquidity needs and interest rate risk. Each line of business borrows funds from and provides funds to the Funds Management unit as needed to support their operations. Operating results for Funds Management and Other include the effect of interest rate risk positions and risk management activities, securities gains and losses including impairment charges, the provision for credit losses in excess of net loans charged off, tax planning strategies and certain executive compensation costs that are not attributed to the lines of business.

BOK Financial allocates resources and evaluates performance of its lines of business after allocation of funds, actual net credit losses and capital costs. In addition, we measure the performance of our business lines after allocation of certain indirect expenses and taxes on statutory rates. The allocation for the prior comparable periods have been revised on a comparable basis.

The cost of funds borrowed from the Funds Management unit by the operating lines of business is transfer priced at rates that approximate market rates for funds with similar duration. Market rates are generally based on the applicable LIBOR or interest rate swap rates, adjusted for prepayment risk. This method of transfer-pricing funds that support assets of the operating lines of business tends to insulate them from interest rate risk.

The value of funds provided by the operating lines of business to the Funds Management unit is based on rates which approximate the wholesale market rates for funds with similar duration and re-pricing characteristics. Market rates are generally based on LIBOR or interest rate swap rates. The funds credit formula applied to deposit products with indeterminate maturities is established based on their re-pricing characteristics reflected in a combination of the short-term LIBOR rates and a moving average of an intermediate term swap rate, with an appropriate spread applied to both. Shorter duration products are weighted towards the short-term LIBOR rate and longer duration products are weighted towards intermediate swap rates. The expected duration ranges from 30 days for certain rate-sensitive deposits to five years.

Substantially all revenue is from domestic customers. No single external customer accounts for more than 10% of total revenue.

Net loans charged off and provision for credit losses represents net loans charged off as attributed to the lines of business and the provision for credit losses in excess of net charge-offs attributed to Funds Management and Other.

The operations of CoBiz, acquired on October 1, 2018 were allocated to the operating segments in the second quarter of 2019. Prior to April 1, 2019, CoBiz operations were included in Funds Management and other.

Reportable segments reconciliation to the Consolidated Financial Statements for the year ended December 31, 2019 is as follows (in thousands):

	Commercial	Consumer	Wealth Management	Funds Management and Other	BOK Financial Consolidated
Net interest and dividend revenue from external sources	\$ 919,148	\$ 99,679	\$ 61,277	\$ 32,775	\$ 1,112,879
Net interest revenue (expense) from internal sources	(242,907)	95,775	38,815	108,317	—
Net interest and dividend revenue	676,241	195,454	100,092	141,092	1,112,879
Provision for credit losses	39,011	6,271	(308)	(974)	44,000
Net interest and dividend revenue after provision for credit losses	637,230	189,183	100,400	142,066	1,068,879
Other operating revenue	170,412	187,500	341,389	(4,931)	694,370
Other operating expense	252,459	230,916	277,267	371,739	1,132,381
Net direct contribution	555,183	145,767	164,522	(234,604)	630,868
Gain (loss) on financial instruments, net	106	30,375	2	(30,483)	—
Change in fair value of mortgage servicing rights	—	(53,517)	—	53,517	—
Gain (loss) on repossessed assets, net	331	496	—	(827)	—
Corporate expense allocations	43,055	47,169	36,239	(126,463)	—
Net income before taxes	512,565	75,952	128,285	(85,934)	630,868
Federal and state income taxes	137,759	19,346	32,954	(59,876)	130,183
Net income	374,806	56,606	95,331	(26,058)	500,685
Net income attributable to non-controlling interests	—	—	—	(73)	(73)
Net income attributable to BOK Financial Corp. shareholders	\$ 374,806	\$ 56,606	\$ 95,331	\$ (25,985)	\$ 500,758
Average assets	\$ 22,807,589	\$ 9,301,341	\$ 10,204,426	\$ (219,009)	\$ 42,094,347

Reportable segments reconciliation to the Consolidated Financial Statements for the year ended December 31, 2018 is as follows (in thousands):

	<b>Commercial</b>	<b>Consumer</b>	<b>Wealth Management</b>	<b>Funds Management and Other</b>	<b>BOK Financial Consolidated</b>
Net interest and dividend revenue from external sources	\$ 726,855	\$ 83,231	\$ 81,528	\$ 93,253	\$ 984,867
Net interest revenue (expense) from internal sources	(159,954)	73,448	31,480	55,026	—
Net interest and dividend revenue	566,901	156,679	113,008	148,279	984,867
Provision for credit losses	30,358	5,143	(288)	(27,213)	8,000
Net interest and dividend revenue after provision for credit losses	536,543	151,536	113,296	175,492	976,867
Other operating revenue	162,701	178,123	296,369	(20,409)	616,784
Other operating expense	202,095	231,075	257,650	337,346	1,028,166
Net direct contribution	497,149	98,584	152,015	(182,263)	565,485
Gain (loss) on financial instruments, net	26	(25,021)	7	24,988	—
Change in fair value of mortgage servicing rights	—	4,668	—	(4,668)	—
Gain (loss) on repossessed assets, net	(6,532)	247	—	6,285	—
Corporate expense allocations	36,670	44,398	35,920	(116,988)	—
Net income before taxes	453,973	34,080	116,102	(38,670)	565,485
Federal and state income taxes	120,458	8,681	30,075	(40,153)	119,061
Net income	333,515	25,399	86,027	1,483	446,424
Net income attributable to non-controlling interests	—	—	—	778	778
Net income attributable to BOK Financial Corp. shareholders	\$ 333,515	\$ 25,399	\$ 86,027	\$ 705	\$ 445,646
Average assets	\$ 18,432,035	\$ 8,303,263	\$ 8,447,784	\$ (245,552)	\$ 34,937,530

Reportable segments reconciliation to the Consolidated Financial Statements for the year ended December 31, 2017 is as follows (in thousands):

	<b>Commercial</b>	<b>Consumer</b>	<b>Wealth Management</b>	<b>Funds Management and Other</b>	<b>BOK Financial Consolidated</b>
Net interest and dividend revenue from external sources	\$ 618,325	\$ 84,286	\$ 45,024	\$ 94,066	\$ 841,701
Net interest revenue (expense) from internal sources	(92,055)	53,916	38,344	(205)	—
Net interest and dividend revenue	526,270	138,202	83,368	93,861	841,701
Provision for credit losses	13,877	4,786	(696)	(24,967)	(7,000)
Net interest and dividend revenue after provision for credit losses	512,393	133,416	84,064	118,828	848,701
Other operating revenue	208,404	184,878	301,434	378	695,094
Other operating expense	235,793	241,805	254,495	293,424	1,025,517
Net direct contribution	485,004	76,489	131,003	(174,218)	518,278
Gain (loss) on financial instruments, net	52	(2,052)	—	2,000	—
Change in fair value of mortgage servicing rights	—	172	—	(172)	—
Gain on repossessed assets, net	(2,681)	223	387	2,071	—
Corporate expense allocations	28,060	49,344	32,693	(110,097)	—
Net income before taxes	454,315	25,488	98,697	(60,222)	518,278
Federal and state income taxes	186,518	9,915	38,848	(52,688)	182,593
Net income	267,797	15,573	59,849	(7,534)	335,685
Net loss attributable to non-controlling interests	—	—	—	1,041	1,041
Net income attributable to BOK Financial Corp. shareholders	\$ 267,797	\$ 15,573	\$ 59,849	\$ (8,575)	\$ 334,644
Average assets	\$ 17,766,027	\$ 8,544,117	\$ 7,072,622	\$ (435,272)	\$ 32,947,494

## (18) Fees and Commissions Revenue

Fees and commissions revenue by reportable segment and primary service line is as follows for the year ended December 31, 2019.

	Commercial	Consumer	Wealth Management	Funds Management and Other	Consolidated	Out of Scope <sup>1</sup>	In Scope <sup>2</sup>
Trading revenue	\$ —	\$ —	\$ 88,558	\$ —	\$ 88,558	\$ 88,558	\$ —
Customer hedging revenue	8,422	—	9,667	852	18,941	18,941	—
Retail brokerage revenue	—	—	16,251	(115)	16,136	—	16,136
Insurance brokerage revenue	—	—	10,131	3,730	13,861	—	13,861
Investment banking revenue	10,136	—	12,194	—	22,330	8,678	13,652
Brokerage and trading revenue	18,558	—	136,801	4,467	159,826	116,177	43,649
TransFund EFT network revenue	73,479	3,924	(82)	3	77,324	—	77,324
Merchant services revenue	8,607	56	—	123	8,786	—	8,786
Corporate card revenue	1,072	—	32	2	1,106	—	1,106
Transaction card revenue	83,158	3,980	(50)	128	87,216	—	87,216
Personal trust revenue	—	—	81,763	—	81,763	—	81,763
Corporate trust revenue	—	—	24,635	—	24,635	—	24,635
Institutional trust & retirement plan services revenue	—	—	44,352	—	44,352	—	44,352
Investment management services and other	—	—	24,725	1,550	26,275	—	26,275
Fiduciary and asset management revenue	—	—	175,475	1,550	177,025	—	177,025
Commercial account service charge revenue	42,251	1,713	2,137	1,804	47,905	—	47,905
Overdraft fee revenue	313	35,134	138	(229)	35,356	—	35,356
Check card revenue	—	21,865	—	165	22,030	—	22,030
Automated service charge and other deposit fee revenue	823	6,155	168	48	7,194	—	7,194
Deposit service charges and fees	43,387	64,867	2,443	1,788	112,485	—	112,485
Mortgage production revenue	—	42,724	—	(4)	42,720	42,720	—
Mortgage servicing revenue	—	66,692	—	(1,871)	64,821	64,821	—
Mortgage banking revenue	—	109,416	—	(1,875)	107,541	107,541	—
Other revenue	23,564	9,733	26,664	(1,853)	58,108	39,428	18,680
Total fees and commissions revenue	\$ 168,667	\$ 187,996	\$ 341,333	\$ 4,205	\$ 702,201	\$ 263,146	\$ 439,055

<sup>1</sup> Out of scope revenue generally relates to financial instruments or contractual rights and obligations within the scope of other applicable accounting guidance.

<sup>2</sup> In scope revenue represents revenue subject to FASB ASC Topic 606, *Revenue from Contracts with Customers*.



Fees and commissions revenue by reportable segment and primary service line is as follows for the year ended December 31, 2018.

	Commercial	Consumer	Wealth Management	Funds Management and Other	Consolidated	Out of Scope <sup>1</sup>	In Scope <sup>2</sup>
Trading revenue	\$ —	\$ —	\$ 28,077	\$ —	\$ 28,077	\$ 28,077	\$ —
Customer hedging revenue	7,748	—	27,512	3,574	38,834	38,834	—
Retail brokerage revenue	—	—	19,030	(1,078)	17,952	—	17,952
Insurance brokerage revenue	—	—	—	4,198	4,198	—	4,198
Investment banking revenue	7,628	—	11,634	—	19,262	6,380	12,882
Brokerage and trading revenue	15,376	—	86,253	6,694	108,323	73,291	35,032
TransFund EFT network revenue	72,280	4,017	(82)	6	76,221	—	76,221
Merchant services revenue	7,666	59	—	79	7,804	—	7,804
Corporate card revenue	—	—	—	—	—	—	—
Transaction card revenue	79,946	4,076	(82)	85	84,025	—	84,025
Personal trust revenue	—	—	96,839	—	96,839	—	96,839
Corporate trust revenue	—	—	22,292	—	22,292	—	22,292
Institutional trust & retirement plan services revenue	—	—	44,400	76	44,476	—	44,476
Investment management services and other	—	—	19,729	1,367	21,096	—	21,096
Fiduciary and asset management revenue	—	—	183,260	1,443	184,703	—	184,703
Commercial account service charge revenue	41,931	1,445	2,331	1,565	47,272	—	47,272
Overdraft fee revenue	370	36,177	134	(145)	36,536	—	36,536
Check card revenue	—	20,967	—	339	21,306	—	21,306
Automated service charge and other deposit fee revenue	282	6,621	62	74	7,039	—	7,039
Deposit service charges and fees	42,583	65,210	2,527	1,833	112,153	—	112,153
Mortgage production revenue	—	31,690	—	—	31,690	31,690	—
Mortgage servicing revenue	—	67,980	—	(1,883)	66,097	66,097	—
Mortgage banking revenue	—	99,670	—	(1,883)	97,787	97,787	—
Other revenue	24,044	9,218	24,507	(1,584)	56,185	38,306	17,879
Total fees and commissions revenue	\$ 161,949	\$ 178,174	\$ 296,465	\$ 6,588	\$ 643,176	\$ 209,384	\$ 433,792

<sup>1</sup> Out of scope revenue generally relates to financial instruments or contractual rights and obligations within the scope of other applicable accounting guidance.

<sup>2</sup> In scope revenue represents revenue subject to FASB ASC Topic 606, *Revenue from Contracts with Customers*.

## (19) Fair Value Measurements

Fair value is defined by applicable accounting guidance as the price to sell an asset or transfer a liability in an orderly transaction between market participants in the principal market for the given asset or liability at the measurement date based on market conditions at that date. An orderly transaction assumes exposure to the market for a customary period for marketing activities prior to the measurement date and not a forced liquidation or distressed sale. Certain assets and liabilities are recorded in the Company's financial statements at fair value. Some are recorded on a recurring basis and some on a non-recurring basis.

For some assets and liabilities, observable market transactions and market information might be available. For other assets and liabilities, observable market transactions and market information might not be available. A hierarchy for fair value has been established which categorizes into three levels the inputs to valuation techniques used to measure fair value. The three levels are as follows:

Quoted Prices in Active Markets for Identical Assets or Liabilities (Level 1) - fair value is based on unadjusted quoted prices in active markets for identical assets or liabilities.

Significant Other Observable Inputs (Level 2) - fair value is based on significant other observable inputs which are generally determined based on a single price for each financial instrument provided to us by an applicable third-party pricing service and is based on one or more of the following:

- Quoted prices for similar, but not identical, assets or liabilities in active markets;
- Quoted prices for identical or similar assets or liabilities in inactive markets;
- Inputs other than quoted prices that are observable, such as interest rate and yield curves, volatilities, prepayment speeds, loss severities, credit risks and default rates;
- Other inputs derived from or corroborated by observable market inputs.

Significant Unobservable Inputs (Level 3) - fair value is based upon model-based valuation techniques for which at least one significant assumption is not observable in the market.

Transfers between levels are recognized as of the end of the reporting period. There were no transfers in or out of quoted prices in active markets for identical instruments to significant other observable inputs or significant unobservable inputs during the year ended December 31, 2019 and 2018, respectively. Transfers between significant other observable inputs and significant unobservable inputs during the year ended December 31, 2019 and 2018 are included in the summary of changes in recurring fair values measured using unobservable inputs. Additionally, \$208 million of held-to-maturity other debt securities were transferred from significant other observable inputs to significant unobservable inputs at December 31, 2018 due to a lack of currently available observable inputs.

The underlying methods used by the third-party pricing services are considered in determining the primary inputs used to determine fair values. Management has evaluated the methodologies employed by the third-party pricing services by comparing the price provided by the pricing service with other sources, including brokers' quotes, sales or purchases of similar instruments and discounted cash flows to establish a basis for reliance on the pricing service values. Significant differences between the pricing service provided value and other sources are discussed with the pricing service to understand the basis for their values. Based on all observable inputs, management may adjust prices obtained from third-party pricing services to more appropriately reflect the prices that would be received to sell assets or paid to transfer liabilities in orderly transactions in the current market. No significant adjustments were made to prices provided by third-party pricing services at December 31, 2019 and 2018.

## Assets and Liabilities Measured at Fair Value on a Recurring Basis

The fair value of financial assets and liabilities that are measured on a recurring basis is as follows as of December 31, 2019 (in thousands):

	<b>Total</b>	<b>Quoted Prices in Active Markets for Identical Instruments</b>	<b>Significant Other Observable Inputs</b>	<b>Significant Unobservable Inputs</b>
Assets:				
Trading securities:				
U.S. government agency debentures	\$ 44,264	\$ —	\$ 44,264	\$ —
Residential agency mortgage-backed securities	1,504,651	—	1,504,651	—
Municipal and other tax-exempt securities	26,196	—	26,196	—
Asset-backed securities	14,084	—	14,084	—
Other trading securities	34,726	—	34,726	—
<b>Total trading securities</b>	<b>1,623,921</b>	<b>—</b>	<b>1,623,921</b>	<b>—</b>
Available for sale securities:				
U.S. Treasury	1,600	1,600	—	—
Municipal and other tax-exempt securities	1,861	—	1,861	—
Residential agency mortgage-backed securities	8,046,096	—	8,046,096	—
Residential non-agency mortgage-backed securities	41,609	—	41,609	—
Commercial agency mortgage-backed securities guaranteed	3,178,005	—	3,178,005	—
Other debt securities	472	—	—	472
<b>Total available for sale securities</b>	<b>11,269,643</b>	<b>1,600</b>	<b>11,267,571</b>	<b>472</b>
Fair value option securities:				
U.S. Treasury	9,917	9,917	—	—
Residential agency mortgage-backed securities	1,088,660	—	1,088,660	—
<b>Total fair value option securities</b>	<b>1,098,577</b>	<b>9,917</b>	<b>1,088,660</b>	<b>—</b>
Residential mortgage loans held for sale	182,271	—	173,958	8,313
Mortgage servicing rights, net <sup>1</sup>	201,886	—	—	201,886
Derivative contracts, net of cash margin <sup>2</sup>	323,375	8,944	314,431	—
Liabilities:				
Derivative contracts, net of cash margin <sup>2</sup>	251,128	—	251,128	—

<sup>1</sup> A reconciliation of the beginning and ending fair value of mortgage servicing rights and disclosures of significant assumptions used to determine fair value are presented in Note 7, Mortgage Banking Activities.

<sup>2</sup> See Note 3 for detail of fair value of derivative contracts by contract type. Derivative contracts in a net asset position that were valued based on quoted prices in active markets or identical instruments (Level 1) are exchange-traded interest rate and energy derivative contracts, net of cash margin. Derivative contracts in a net liability position that were valued using quoted prices in active markets for identical instruments (Level 1) are exchange-traded interest rate and agricultural derivative contracts, fully offset by cash margin.

The fair value of financial assets and liabilities that are measured on a recurring basis is as follows as of December 31, 2018 (in thousands):

	<b>Total</b>	<b>Quoted Prices in Active Markets for Identical Instruments</b>	<b>Significant Other Observable Inputs</b>	<b>Significant Unobservable Inputs</b>
Assets:				
Trading securities:				
U.S. government agency debentures	\$ 63,765	\$ —	\$ 63,765	\$ —
Residential agency mortgage-backed securities	1,791,584	—	1,791,584	—
Municipal and other tax-exempt securities	34,507	—	34,507	—
Asset-backed securities	42,656	—	42,656	—
Other trading securities	24,411	—	24,411	—
<b>Total trading securities</b>	<b>1,956,923</b>	<b>—</b>	<b>1,956,923</b>	<b>—</b>
Available for sale securities:				
U.S. Treasury	493	493	—	—
Municipal and other tax-exempt securities	2,864	—	2,864	—
Residential agency mortgage-backed securities	5,804,708	—	5,804,708	—
Residential non-agency mortgage-backed securities	59,736	—	59,736	—
Commercial agency mortgage-backed securities guaranteed	2,953,889	—	2,953,889	—
Other debt securities	35,430	—	34,958	472
<b>Total available for sale securities</b>	<b>8,857,120</b>	<b>493</b>	<b>8,856,155</b>	<b>472</b>
Fair value option securities – Residential agency mortgage-backed securities	283,235	—	283,235	—
Residential mortgage loans held for sale	149,221	—	134,014	15,207
Mortgage servicing rights, net <sup>1</sup>	259,254	—	—	259,254
Derivative contracts, net of cash margin <sup>2</sup>	320,929	44,074	276,855	—
Liabilities:				
Derivative contracts, net of cash margin <sup>2</sup>	362,306	—	362,306	—

<sup>1</sup> A reconciliation of the beginning and ending fair value of mortgage servicing rights and disclosures of significant assumptions used to determine fair value are presented in Note 7, Mortgage Banking Activities.

<sup>2</sup> See Note 3 for detail of fair value of derivative contracts by contract type. Derivative contracts in a net asset position that were valued based on quoted prices in active markets for identical instruments (Level 1) are exchange-traded interest rate, energy and agricultural derivative contracts, net of cash margin. Derivative contracts in a net liability position that were valued using quoted prices in active markets for identical instruments based on quoted prices in active markets for identical instruments (Level 1) are exchange-traded interest rate derivative contracts, fully offset by cash margin.

Following is a description of the Company's valuation methodologies used for assets and liabilities measured on a recurring basis:

#### *Securities*

The fair values of trading, available for sale and fair value option securities are based on quoted prices for identical instruments in active markets, when available. If quoted prices for identical instruments are not available, fair values are based on significant other observable inputs such as quoted prices of comparable instruments or interest rates and credit spreads, yield curves, volatilities, prepayment speeds and loss severities.

The fair value of certain available for sale and held-to-maturity municipal and other debt securities may be based on significant unobservable inputs. These significant unobservable inputs include limited observed trades, projected cash flows, current credit rating of the issuers and, when applicable, the insurers of the debt and observed trades of similar debt. Discount rates are primarily based on reference to interest rate spreads on comparable securities of similar duration and credit rating as determined by the nationally-recognized rating agencies adjusted for a lack of trading volume. Significant unobservable inputs are developed by investment securities professionals involved in the active trading of similar securities. A summary of significant inputs used to value these securities follows. A management committee composed of senior members from the Company's Capital Markets, Risk Management and Finance departments assess the appropriateness of these inputs quarterly.

#### *Derivatives*

All derivative instruments are carried on the balance sheet at fair value. Fair values for exchange-traded contracts are based on quoted prices. Fair values for over-the-counter interest rate, commodity and foreign exchange contracts are based on valuations provided either by third-party dealers in the contracts, quotes provided by independent pricing services, or a third-party provided pricing model that uses significant other observable market inputs.

Credit risk is considered in determining the fair value of derivative instruments. Management determines fair value adjustments based on various risk factors including but not limited to counterparty credit rating or equivalent loan grading, derivative contract notional size, price volatility of the underlying commodity, duration of the derivative contracts and expected loss severity. Expected loss severity is based on historical losses for similarly risk graded commercial loan customers. Decreases in counterparty credit rating or grading and increases in price volatility and expected loss severity all tend to increase the credit quality adjustment which reduces the fair value of asset contracts.

We also consider our own credit risk in determining the fair value of derivative contracts. Changes in our credit rating would affect the fair value of our derivative liabilities. In the event of a credit downgrade, the fair value of our derivative liabilities would increase.

#### *Residential Mortgage Loans Held for Sale*

Residential mortgage loans held for sale are carried on the balance sheet at fair value. The fair values of conforming residential mortgage loans held for sale are based upon quoted market prices of such loans sold in securitization transactions, including related unfunded loan commitments. The fair value of mortgage loans that are unable to be sold to U.S. government agencies is determined using quoted prices of loans that are sold in securitization transactions with a liquidity discount applied.

The following represents the changes related to assets measured at fair value on a recurring basis using significant unobservable inputs (in thousands):

	Available for Sale Securities		Residential mortgage loans held for sale
	Municipal and other tax-exempt securities	Other debt securities	
Balance, December 31, 2017	\$ 4,802	\$ 472	\$ 12,299
Transfer to Level 3 from Level 2 <sup>1</sup>	—	—	6,183
Purchases and capital calls	—	—	—
Redemptions and distributions	(5,095)	—	—
Proceeds from sales	—	—	(2,706)
Gain (loss) recognized in earnings:			
Mortgage banking revenue	—	—	(569)
Other comprehensive income (loss):			
Net change in unrealized gain (loss)	293	—	—
Balance, December 31, 2018	—	472	15,207
Transfer to Level 3 from Level 2 <sup>1</sup>	—	—	2,449
Purchases and capital calls	—	—	—
Redemptions and distributions	—	—	—
Proceeds from sales	—	—	(9,972)
Gain (loss) recognized in earnings:			
Mortgage banking revenue	—	—	629
Other comprehensive income (loss):			
Net change in unrealized gain (loss)	—	—	—
Balance, December 31, 2019	\$ —	\$ 472	\$ 8,313

<sup>1</sup> Recurring transfers to Level 3 from Level 2 consist of residential mortgage loans intended for sale to U.S. government agencies that fail to meet conforming standards.

A summary of quantitative information about assets measured at fair value on a recurring basis using significant unobservable inputs (Level 3) as of December 31, 2019 follows (in thousands):

Quantitative Information about Level 3 Recurring Fair Value Measurements				
	Fair Value	Valuation Technique(s)	Significant Unobservable Input	Range (Weighted Average)
Available for sale securities:				
Other debt securities	472	Discounted cash flows <sup>1</sup>	Interest rate spread	7.08%-7.08% (7.08%) <sup>3</sup>
Residential mortgage loans held for sale	8,313	Quoted prices of loans sold in securitization transactions, with a liquidity discount applied	Liquidity discount applied to the market value of mortgage loans qualifying for sale to U.S. government agencies	94.4%-94.4% (94.4%) <sup>2</sup>
				95.23%

<sup>1</sup> Discounted cash flows developed using discount rates primarily based on reference to interest rate spreads for comparable securities of similar duration and credit rating as determined by the nationally-recognized rating agencies, adjusted for lack of trading volume.

<sup>2</sup> Represents fair value as a percentage of par value.

<sup>3</sup> Interest rate yields used to value investment grade taxable securities based on comparable short-term taxable securities which are generally yielding approximately 3%.

A summary of quantitative information about Recurring Fair Value Measurements based on Significant Unobservable Inputs (Level 3) as of December 31, 2018 follows (in thousands):

**Quantitative Information about Level 3 Recurring Fair Value Measurements**

	<b>Fair Value</b>	<b>Valuation Technique(s)</b>	<b>Significant Unobservable Input</b>	<b>Range (Weighted Average)</b>
Available for sale securities:				
Other debt securities	472	Discounted cash flows <sup>1</sup>	Interest rate spread	7.88%-7.88% (7.88%) <sup>3</sup> 94.44%-94.44% (94.44%) <sup>2</sup>
Residential mortgage loans held for sale	15,207	Quoted prices of loans sold in securitization transactions, with a liquidity discount applied	Liquidity discount applied to the market value of mortgage loans qualifying for sale to U.S. government agencies	92.38%

<sup>1</sup> Discounted cash flows developed using discount rates primarily based on reference to interest rate spreads for comparable securities of similar duration and credit rating as determined by the nationally-recognized rating agencies, adjusted for lack of trading volume.

<sup>2</sup> Represents fair value as a percentage of par value.

<sup>3</sup> Interest rate yields used to value investment grade taxable securities based on comparable short-term taxable securities which are generally yielding less than 3%.

## Fair Value of Assets and Liabilities Measured on a Non-Recurring Basis

Assets measured at fair value on a non-recurring basis include pension plan assets, which are based on quoted prices in active markets for identical instruments, collateral for certain impaired loans and real property and other assets acquired to satisfy loans, which are based primarily on comparisons to completed sales of similar assets.

The following represents the carrying value of assets measured at fair value on a non-recurring basis and related losses recorded during the year. The carrying value represents only those assets with the balance sheet date for which the fair value was adjusted during the year:

	Carrying Value at December 31, 2019			Fair Value Adjustments for the Year Ended December 31, 2019 Recognized In:	
	Quoted Prices in Active Markets for Identical Instruments	Significant Other Observable Inputs	Significant Unobservable Inputs	Gross charge-offs against allowance for loan losses	Net losses (gains) and expenses of repossessed assets, net
Impaired loans	\$ —	\$ 41	\$ 55,665	\$ 31,305	\$ —
Real estate and other repossessed assets	—	5,986	1,551	—	(461)

	Carrying Value at December 31, 2018			Fair Value Adjustments for the Year Ended December 31, 2018 Recognized In:	
	Quoted Prices in Active Markets for Identical Instruments	Significant Other Observable Inputs	Significant Unobservable Inputs	Gross charge-offs against allowance for loan losses	Net losses (gains) and expenses of repossessed assets, net
Impaired loans	\$ —	\$ 1,074	\$ 17,401	\$ 17,434	\$ —
Real estate and other repossessed assets	—	4,795	6,366	—	7,269

The fair value of collateral-dependent impaired loans and real estate and other repossessed assets and the related fair value adjustments are generally based on unadjusted third-party appraisals. Our appraisal review policies require appraised values to be supported by observed inputs derived principally from or corroborated by observable market data. Appraisals that are not based on observable inputs or that require significant adjustments or fair value measurements that are not based on third-party appraisals are considered to be based on significant unobservable inputs. Non-recurring fair value measurements of collateral-dependent impaired loans and real estate and other repossessed assets based on significant unobservable inputs are generally due to estimates of current fair values between appraisal dates. Significant unobservable inputs include listing prices for comparable assets, uncorroborated expert opinions or management's knowledge of the collateral or industry. Non-recurring fair value measurements of collateral dependent loans secured by mineral rights are generally determined by our internal staff of engineers on projected cash flows under current market conditions and are based on significant unobservable inputs. Projected cash flows are discounted according to risk characteristics of the underlying oil and gas properties. Assets are evaluated to demonstrate with reasonable certainty that crude oil, natural gas and natural gas liquids can be recovered from known oil and gas reservoirs under existing economic and operating conditions at current prices with existing conventional equipment, operating methods and costs. Significant unobservable inputs are developed by asset management and workout professionals and approved by senior Credit Administration executives.



A summary of quantitative information about Non-recurring Fair Value Measurements based on Significant Unobservable Inputs (Level 3) as of December 31, 2019 follows (in thousands):

**Quantitative Information about Level 3 Non-recurring Fair Value Measurements**

	<b>Fair Value</b>	<b>Valuation Technique(s)</b>	<b>Significant Unobservable Input</b>	<b>Range (Weighted Average)</b>
Impaired loans	\$ 55,665	Discounted cash flows	Management knowledge of industry and non-real estate collateral including but not limited to recoverable oil & gas reserves, forward looking commodity prices, and estimated operating costs	4% - 94% (55%) <sup>1</sup>
Real estate and other repossessed assets	1,551	Discounted cash flows	Marketability adjustments off appraised value <sup>2</sup>	74% - 86% (84%)

<sup>1</sup> Represents fair value as a percentage of the unpaid principal balance.

<sup>2</sup> Marketability adjustments include consideration of estimated costs to sell which is approximately 10% of the fair value.

A summary of quantitative information about Non-recurring Fair Value Measurements based on Significant Unobservable Inputs (Level 3) as of December 31, 2018 follows (in thousands):

**Quantitative Information about Level 3 Non-recurring Fair Value Measurements**

	<b>Fair Value</b>	<b>Valuation Technique(s)</b>	<b>Significant Unobservable Input</b>	<b>Range (Weighted Average)</b>
Impaired loans	\$ 17,401	Discounted cash flows	Management knowledge of industry and non-real estate collateral including but not limited to recoverable oil & gas reserves, forward looking commodity prices, and estimated operating costs	35% - 80% (50%) <sup>1</sup>
Real estate and other repossessed assets	6,366	Discounted cash flows	Recoverable oil and gas reserves, forward-looking commodity prices and estimated operating costs	N/A

<sup>1</sup> Represents fair value as a percentage of the unpaid principal balance.

The table above excludes the initial measurement of assets and liabilities that were acquired as part of the CoBiz acquisition in October 1, 2018. These assets and liabilities were recorded at their fair value upon acquisition in accordance with U.S. GAAP and were not re-measured during the periods presented unless specifically required by U.S. GAAP. Acquisition date fair values represent either Level 2 fair value measurements (investment securities, deposits, property, equipment, and debt) or Level 3 fair value measurements (loans and core deposit intangible assets).

The fair value of pension plan assets was approximately \$36 million at December 31, 2019 and \$34 million at December 31, 2018, determined by significant other observable inputs. Fair value adjustments of pension plan assets along with changes in the projected benefit obligation are recognized in other comprehensive income.

## Fair Value of Financial Instruments

The following table presents the carrying values and estimated fair values of all financial instruments, including those financial assets and liabilities that are not measured and reported at fair value on a recurring basis or non-recurring (dollars in thousands):

	December 31, 2019				
	Carrying Value	Estimated Fair Value	Quoted Prices in Active Markets for Identical Instruments (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Cash and due from banks	\$ 735,836	\$ 735,836	\$ 735,836	\$ —	\$ —
Interest-bearing cash and cash equivalents	522,985	522,985	522,985	—	—
Trading securities:					
U.S. government agency debentures	44,264	44,264	—	44,264	—
Residential agency mortgage-backed securities	1,504,651	1,504,651	—	1,504,651	—
Municipal and other tax-exempt securities	26,196	26,196	—	26,196	—
Asset-backed securities	14,084	14,084	—	14,084	—
Other trading securities	34,726	34,726	—	34,726	—
Total trading securities	1,623,921	1,623,921	—	1,623,921	—
Investment securities:					
Municipal and other tax-exempt securities	93,653	96,897	—	96,897	—
Residential agency mortgage-backed securities	10,676	11,164	—	11,164	—
Other debt securities	189,089	206,341	—	8,206	198,135
Total investment securities	293,418	314,402	—	116,267	198,135
Available for sale securities:					
U.S. Treasury	1,600	1,600	1,600	—	—
Municipal and other tax-exempt securities	1,861	1,861	—	1,861	—
Residential agency mortgage-backed securities	8,046,096	8,046,096	—	8,046,096	—
Residential non-agency mortgage-backed securities	41,609	41,609	—	41,609	—
Commercial agency mortgage-backed securities	3,178,005	3,178,005	—	3,178,005	—
Other debt securities	472	472	—	—	472
Total available for sale securities	11,269,643	11,269,643	1,600	11,267,571	472
Fair value option securities:					
U.S. Treasury	9,917	9,917	9,917	—	—
Residential agency mortgage-backed securities	1,088,660	1,088,660	—	1,088,660	—
Total fair value option securities	1,098,577	1,098,577	9,917	1,088,660	—
Residential mortgage loans held for sale	182,271	182,271	—	173,958	8,313
Loans:					
Commercial	14,031,650	13,966,221	—	—	13,966,221
Commercial real estate	4,433,783	4,422,717	—	—	4,422,717
Residential mortgage	2,084,172	2,098,093	—	—	2,098,093
Personal	1,201,382	1,202,298	—	—	1,202,298
Total loans	21,750,987	21,689,329	—	—	21,689,329
Allowance for loan losses	(210,759)	—	—	—	—
Loans, net of allowance	21,540,228	21,689,329	—	—	21,689,329
Mortgage servicing rights	201,886	201,886	—	—	201,886
Derivative instruments with positive fair value, net of cash margin	323,375	323,375	8,944	314,431	—
Deposits with no stated maturity	25,403,319	25,403,319	—	—	25,403,319
Time deposits	2,217,849	2,212,467	—	—	2,212,467
Other borrowed funds	8,345,405	8,315,860	—	—	8,315,860
Subordinated debentures	275,923	284,627	—	284,627	—
Derivative instruments with negative fair value, net of cash margin	251,128	251,128	—	251,128	—

December 31, 2018

	Carrying Value	Estimated Fair Value	Quoted Prices in Active Markets for Identical Instruments (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Cash and due from banks	\$ 741,749	\$ 741,749	\$ 741,749	\$ —	\$ —
Interest-bearing cash and cash equivalents	401,675	401,675	401,675	—	—
Trading securities:					
U.S. government agency debentures	63,765	63,765	—	63,765	—
Residential agency mortgage-backed securities	1,791,584	1,791,584	—	1,791,584	—
Municipal and other tax-exempt securities	34,507	34,507	—	34,507	—
Asset-backed securities	42,656	42,656	—	42,656	—
Other trading securities	24,411	24,411	—	24,411	—
Total trading securities	1,956,923	1,956,923	—	1,956,923	—
Investment securities:					
Municipal and other tax-exempt securities	137,296	138,562	—	138,562	—
Residential agency mortgage-backed securities	12,612	12,770	—	12,770	—
Other debt securities	205,279	215,966	—	7,905	208,061
Total investment securities	355,187	367,298	—	159,237	208,061
Available for sale securities:					
U.S. Treasury securities	493	493	493	—	—
Municipal and other tax-exempt securities	2,864	2,864	—	2,864	—
Residential agency mortgage-backed securities	5,804,708	5,804,708	—	5,804,708	—
Residential non-agency mortgage-backed securities	59,736	59,736	—	59,736	—
Commercial agency mortgage-backed securities	2,953,889	2,953,889	—	2,953,889	—
Other debt securities	35,430	35,430	—	34,958	472
Total available for sale securities	8,857,120	8,857,120	493	8,856,155	472
Fair value option securities – Residential agency mortgage-backed securities	283,235	283,235	—	283,235	—
Residential mortgage loans held for sale	149,221	149,221	—	134,014	15,207
Loans:					
Commercial	13,636,078	13,526,162	—	—	13,526,162
Commercial real estate	4,764,813	4,713,747	—	—	4,713,747
Residential mortgage	2,230,033	2,213,951	—	—	2,213,951
Personal	1,025,806	1,024,368	—	—	1,024,368
Total loans	21,656,730	21,478,228	—	—	21,478,228
Allowance for loan losses	(207,457)	—	—	—	—
Loans, net of allowance	21,449,273	21,478,228	—	—	21,478,228
Mortgage servicing rights	259,254	259,254	—	—	259,254
Derivative instruments with positive fair value, net of cash margin	320,929	320,929	44,074	276,855	—
Deposits with no stated maturity	23,150,383	23,150,383	—	—	23,150,383
Time deposits	2,113,380	2,073,538	—	—	2,073,538
Other borrowed funds	7,142,801	7,071,953	—	—	7,071,953
Subordinated debentures	275,913	261,977	—	261,977	—
Derivative instruments with negative fair value, net of cash margin	362,306	362,306	—	362,306	—

Because no market exists for certain of these financial instruments and management does not intend to sell these financial instruments, the fair values shown in the tables above may not represent values at which the respective financial instruments could be sold individually or in the aggregate at the given reporting date.

**Fair Value Election**

As more fully disclosed in Note 2 and Note 7 to the Consolidated Financial Statements, the Company has elected to carry all U.S. government agency residential mortgage-backed securities held as economic hedges against changes in the fair value of mortgage servicing rights and all residential mortgage loans originated for sale at fair value. Changes in the fair value of these financial instruments are recognized in earnings.

## (20) Parent Company Only Financial Statements

Summarized financial information for BOK Financial – Parent Company Only follows:

### Balance Sheets

(In thousands)

	December 31,	
	2019	2018
<b>Assets</b>		
Cash and cash equivalents	\$ 214,779	\$ 167,093
Loan to bank subsidiary	65,220	65,228
Investment in bank subsidiaries	4,602,977	4,236,654
Investment in non-bank subsidiaries	216,542	218,007
Other assets	38,082	32,999
<b>Total assets</b>	<b>\$ 5,137,600</b>	<b>\$ 4,719,981</b>
<b>Liabilities and Shareholders' Equity</b>		
Liabilities:		
Other liabilities	\$ 5,882	\$ 11,959
Subordinated debentures	275,923	275,913
<b>Total liabilities</b>	<b>281,805</b>	<b>287,872</b>
Shareholders' equity:		
Common stock	5	5
Capital surplus	1,350,995	1,334,030
Retained earnings	3,729,778	3,369,654
Treasury stock	(329,906)	(198,995)
Accumulated other comprehensive income (loss)	104,923	(72,585)
<b>Total shareholders' equity</b>	<b>4,855,795</b>	<b>4,432,109</b>
<b>Total liabilities and shareholders' equity</b>	<b>\$ 5,137,600</b>	<b>\$ 4,719,981</b>

### Statements of Earnings

(In thousands)

	Year Ended December 31,		
	2019	2018	2017
Dividends, interest and fees received from bank subsidiaries	\$ 344,007	\$ 426,071	\$ 150,149
Dividends, interest and fees received from non-bank subsidiaries	9,325	12,800	17,500
Other revenue	1,036	954	936
<b>Total revenue</b>	<b>354,368</b>	<b>439,825</b>	<b>168,585</b>
Interest expense	15,113	9,827	8,239
Other operating expense	2,352	12,110	2,014
<b>Total expense</b>	<b>17,465</b>	<b>21,937</b>	<b>10,253</b>
Net income before taxes, other losses, net, and equity in undistributed income of subsidiaries	336,903	417,888	158,332
Other gains (losses), net	3,310	(3,921)	—
Net income before taxes and equity in undistributed income of subsidiaries	340,213	413,967	158,332
Federal and state income taxes	(4,516)	(7,078)	(4,305)
Net income before equity in undistributed income of subsidiaries	344,729	421,045	162,637
Equity in undistributed income of bank subsidiaries	166,797	37,515	181,552
Equity in undistributed income of non-bank subsidiaries	(10,768)	(12,914)	(9,545)
<b>Net income attributable to BOK Financial Corp. shareholders</b>	<b>\$ 500,758</b>	<b>\$ 445,646</b>	<b>\$ 334,644</b>

## Statements of Cash Flows

(In thousands)

	Year Ended December 31,		
	2019	2018	2017
<b>Cash Flows From Operating Activities:</b>			
Net income	\$ 500,758	\$ 445,646	\$ 334,644
Adjustments to reconcile net income to net cash provided by operating activities:			
Equity in undistributed income of bank subsidiaries	(166,797)	(37,515)	(181,552)
Equity in undistributed income of non-bank subsidiaries	10,768	12,914	9,545
Change in other assets	(5,075)	(1,072)	12
Change in other liabilities	855	(13,434)	7,457
Net cash provided by operating activities	340,509	406,539	170,106
<b>Cash Flows From Investing Activities:</b>			
Proceeds from sales of available for sale securities	—	—	3,000
Investment in subsidiaries	(19,837)	(31,901)	(4,355)
Acquisitions, net of cash acquired	—	(232,680)	—
Net cash used in investing activities	(19,837)	(264,581)	(1,355)
<b>Cash Flows From Financing Activities:</b>			
Net change in other borrowed funds	—	—	(7,217)
Issuance of common and treasury stock, net	(7)	(88)	4,368
Dividends paid	(143,496)	(127,188)	(116,041)
Repurchase of common stock	(129,483)	(53,465)	(7,403)
Net cash used in financing activities	(272,986)	(180,741)	(126,293)
Net increase (decrease) in cash and cash equivalents	47,686	(38,783)	42,458
Cash and cash equivalents at beginning of period	167,093	205,876	163,418
<b>Cash and cash equivalents at end of period</b>	<b>\$ 214,779</b>	<b>\$ 167,093</b>	<b>\$ 205,876</b>
<b>Cash paid for interest</b>	<b>\$ 15,099</b>	<b>\$ 11,457</b>	<b>\$ 6,211</b>

### (21) Subsequent Events

The Company evaluated events from the date of the Consolidated Financial Statements on December 31, 2019 through the issuance of those consolidated financial statements included in this Annual Report on Form 10-K. No events were identified requiring recognition in and/or disclosure in the Consolidated Financial Statements.

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**Annual Financial Summary – Unaudited**

Consolidated Daily Average Balances, Average Yields and Rates

(Dollars in Thousands, Except Per Share Data)

	Year Ended		
	December 31, 2019		
	Average Balance	Revenue/Expense	Yield/Rate
<b>Assets</b>			
Interest-bearing cash and cash equivalents	\$ 536,853	\$ 12,214	2.28%
Trading securities	1,772,660	61,960	3.55%
Investment securities	319,451	14,417	4.51%
Available for sale securities	10,108,409	254,101	2.58%
Fair value option securities	1,145,800	32,936	2.95%
Restricted equity securities	441,756	26,860	6.08%
Residential mortgage loans held for sale	186,207	7,105	3.82%
Loans	22,106,979	1,134,037	5.13%
Allowance for loan losses	(204,679)		
Loans, net of allowance	21,902,300	1,134,037	5.18%
Total earning assets	36,413,436	1,543,630	4.27%
Receivable on unsettled securities sales	1,597,098		
Cash and other assets	4,083,813		
Total assets	\$ 42,094,347		
<b>Liabilities and equity</b>			
Interest-bearing deposits:			
Transaction	\$ 13,072,914	\$ 132,854	1.02%
Savings	553,057	677	0.12%
Time	2,215,405	42,007	1.90%
Total interest-bearing deposits	15,841,376	175,538	1.11%
Funds purchased and repurchase agreements	2,838,161	53,003	1.87%
Other borrowings	7,147,356	175,425	2.45%
Subordinated debentures	276,075	15,113	5.47%
Total interest-bearing liabilities	26,102,968	419,079	1.61%
Non-interest bearing demand deposits	9,809,905		
Due on unsettled securities purchases	702,450		
Other liabilities	801,475		
Total equity	4,677,549		
Total liabilities and equity	\$ 42,094,347		
<b>Tax-equivalent Net Interest Revenue</b>		\$ 1,124,551	2.66%
<b>Tax-equivalent Net Interest Revenue to Earning Assets</b>			3.11%
Less tax-equivalent adjustment		11,672	
<b>Net Interest Revenue</b>		1,112,879	
Provision for credit losses		44,000	
Other operating revenue		694,370	
Other operating expense		1,132,381	
<b>Net income before taxes</b>		630,868	
Federal and state income taxes		130,183	
<b>Net income</b>		500,685	
Net income attributable to non-controlling interests		(73)	
<b>Net income attributable to BOK Financial Corporation shareholders</b>		\$ 500,758	
<b>Earnings Per Average Common Share Equivalent:</b>			
Net income:			
Basic		\$ 7.03	
Diluted		\$ 7.03	

Yield calculations are shown on a tax equivalent at the statutory federal and state rates for the periods presented. The yield calculations exclude security trades that have been recorded on trade date with no corresponding interest income and the unrealized gains and losses. The yield calculation also include average loan balances for which the accrual of interest has been discontinued and are net of unearned income. Yield/rate calculations are generally based on the conventions that determine how interest income and expense is accrued.



**Annual Financial Summary – Unaudited (continued)**

Consolidated Daily Average Balances, Average Yields and Rates

(Dollars in Thousands, Except Per Share Data)

	Year Ended					
	December 31, 2018			December 31, 2017		
	Average Balance	Revenue/ Expense	Yield/ Rate	Average Balance	Revenue/ Expense	Yield/ Rate
<b>Assets</b>						
Interest-bearing cash and cash equivalents	\$ 1,240,600	\$ 22,333	1.80%	\$ 2,009,011	\$ 22,128	1.10%
Trading securities	1,530,400	57,948	3.84%	521,742	17,637	3.51%
Investment securities	395,895	15,848	4.00%	491,989	18,792	3.82%
Available for sale securities	8,309,355	197,472	2.35%	8,453,415	178,068	2.13%
Fair value option securities	464,160	15,205	3.18%	593,744	16,755	2.81%
Restricted equity securities	347,447	21,555	6.20%	318,744	18,490	5.80%
Residential mortgage loans held for sale	201,218	8,123	4.07%	245,133	8,706	3.59%
Loans	18,709,433	898,896	4.80%	17,176,102	709,378	4.13%
Allowance for loan losses	(218,840)			(249,430)		
Loans, net of allowance	18,490,593	898,896	4.86%	16,926,672	709,378	4.19%
Total earning assets	30,979,668	1,237,380	3.98%	29,560,450	989,954	3.36%
Receivable on unsettled securities sales	795,723			545,338		
Cash and other assets	3,162,139			2,841,706		
Total assets	\$ 34,937,530			\$ 32,947,494		
<b>Liabilities and equity</b>						
Interest-bearing deposits:						
Transaction	\$ 10,581,732	\$ 65,859	0.62%	\$ 10,220,068	\$ 28,627	0.28%
Savings	503,597	439	0.09%	458,451	359	0.08%
Time	2,133,427	29,219	1.37%	2,193,273	24,817	1.13%
Total interest-bearing deposits	13,218,756	95,517	0.72%	12,871,792	53,803	0.42%
Funds purchased and repurchase agreements	883,904	9,207	1.04%	491,855	856	0.17%
Other borrowings	6,236,441	129,008	2.07%	5,919,292	68,152	1.15%
Subordinated debentures	177,884	9,827	5.52%	147,954	8,239	5.57%
Total interest-bearing liabilities	20,516,985	243,559	1.19%	19,430,893	131,050	0.67%
Non-interest bearing demand deposits	9,590,455			9,312,989		
Due on unsettled securities purchases	531,071			183,902		
Other liabilities	559,801			584,843		
Total equity	3,739,218			3,434,867		
Total liabilities and equity	\$ 34,937,530			\$ 32,947,494		
<b>Tax-equivalent Net Interest Revenue</b>		\$ 993,821	2.79%		\$ 858,904	2.69%
<b>Tax-equivalent Net Interest Revenue to Earning Assets</b>			3.20%			2.92%
Less tax-equivalent adjustment		8,954			17,203	
<b>Net Interest Revenue</b>		984,867			841,701	
Provision for credit losses		8,000			(7,000)	
Other operating revenue		616,784			695,094	
Other operating expense		1,028,166			1,025,517	
<b>Net income before taxes</b>		565,485			518,278	
Federal and state income taxes		119,061			182,593	
<b>Net income</b>		446,424			335,685	
Net income attributable to non-controlling interests		778			1,041	
<b>Net income attributable to BOK Financial Corporation shareholders</b>		\$ 445,646			\$ 334,644	
<b>Earnings Per Average Common Share Equivalent:</b>						
Net income:						
Basic		\$ 6.63			\$ 5.11	
Diluted		\$ 6.63			\$ 5.11	

**Quarterly Financial Summary – Unaudited**

Consolidated Daily Average Balances, Average Yields and Rates

(In Thousands, Except Per Share Data)

	Three Months Ended					
	December 31, 2019			September 30, 2019		
	Average Balance	Revenue/ Expense	Yield/ Rate	Average Balance	Revenue/ Expense	Yield/ Rate
<b>Assets</b>						
Interest-bearing cash and cash equivalents	\$ 573,203	\$ 2,335	1.62%	\$ 500,823	\$ 3,050	2.42%
Trading securities	1,672,426	13,015	3.19%	1,696,568	14,546	3.49%
Investment securities	298,567	3,500	4.69%	308,090	3,434	4.46%
Available for sale securities	11,333,524	69,692	2.52%	10,747,439	67,640	2.60%
Fair value option securities	1,521,528	9,488	2.62%	1,553,879	10,708	2.79%
Restricted equity securities	479,687	6,441	5.37%	476,781	7,558	6.34%
Residential mortgage loans held for sale	203,535	1,797	3.55%	203,319	1,891	3.73%
Loans	22,236,000	266,315	4.75%	22,412,918	289,316	5.12%
Allowance for loan losses	(205,417)			(201,714)		
Loans, net of allowance	22,030,583	266,315	4.80%	22,211,204	289,316	5.17%
Total earning assets	38,113,053	372,583	3.93%	37,698,103	398,143	4.25%
Receivable on unsettled securities sales	1,973,604			1,742,794		
Cash and other assets	4,126,697			4,139,451		
Total assets	\$ 44,213,354			\$ 43,580,348		
<b>Liabilities and equity</b>						
Interest-bearing deposits:						
Transaction	\$ 14,685,385	\$ 36,897	1.00%	\$ 13,131,542	\$ 35,713	1.08%
Savings	554,605	154	0.11%	557,122	190	0.14%
Time	2,247,717	10,970	1.94%	2,251,800	11,014	1.94%
Total interest-bearing deposits	17,487,707	48,021	1.09%	15,940,464	46,917	1.17%
Funds purchased and repurchase agreements	4,120,610	16,212	1.56%	3,106,163	15,731	2.01%
Other borrowings	6,247,194	31,621	2.01%	8,125,023	49,650	2.42%
Subordinated debentures	275,916	3,754	5.40%	275,900	3,813	5.48%
Total interest-bearing liabilities	28,131,427	99,608	1.40%	27,447,550	116,111	1.68%
Non-interest bearing demand deposits	9,612,533			9,759,710		
Due on unsettled securities purchases	784,174			745,893		
Other liabilities	837,732			847,195		
Total equity	4,847,488			4,780,000		
Total liabilities and equity	\$ 44,213,354			\$ 43,580,348		
<b>Tax-equivalent Net Interest Revenue</b>		\$ 272,975	2.53%		\$ 282,032	2.57%
<b>Tax-equivalent Net Interest Revenue to Earning Assets</b>			2.88%			3.01%
Less tax-equivalent adjustment		2,726			2,936	
<b>Net Interest Revenue</b>		270,249			279,096	
Provision for credit losses		19,000			12,000	
Other operating revenue		178,585			186,450	
Other operating expense		288,795			279,292	
<b>Net income before taxes</b>		141,039			174,254	
Federal and state income taxes		30,257			32,396	
<b>Net income</b>		110,782			141,858	
Net income attributable to non-controlling interests		430			(373)	
<b>Net income attributable to BOK Financial Corp. shareholders</b>		\$ 110,352			\$ 142,231	
<b>Earnings Per Average Common Share Equivalent:</b>						
Basic		\$ 1.56			\$ 2.00	
Diluted		\$ 1.56			\$ 2.00	

Yield calculations are shown on a tax equivalent at the statutory federal and state rates for the periods presented. The yield calculations exclude security trades that have been recorded on trade date with no corresponding interest income and the unrealized gains and losses. The yield calculation also include average loan balances for which the accrual of interest has been discontinued and are net of unearned income. Yield/rate calculations are generally based on the conventions that determine how interest income and expense is accrued

**Quarterly Financial Summary – Unaudited (continued)**  
 Consolidated Daily Average Balances, Average Yields and Rates

**Three Months Ended**

June 30, 2019			March 31, 2019			December 31, 2018		
Average Balance	Revenue / Expense	Yield / Rate	Average Balance	Revenue / Expense	Yield / Rate	Average Balance	Revenue / Expense	Yield / Rate
\$ 535,491	\$ 3,432	2.57%	\$ 537,903	\$ 3,397	2.56%	\$ 563,132	\$ 3,170	2.23%
1,757,335	15,609	3.59%	1,968,399	18,790	3.88%	1,929,601	19,636	4.10%
328,482	3,621	4.41%	343,282	3,862	4.50%	364,737	3,887	4.26%
9,435,668	59,888	2.63%	8,883,054	56,881	2.57%	8,704,963	55,085	2.51%
898,772	7,503	3.34%	594,349	5,237	3.62%	277,575	2,578	3.56%
413,812	6,516	6.30%	395,432	6,345	6.42%	362,729	5,798	6.39%
192,102	1,754	3.65%	145,040	1,663	4.58%	179,553	1,795	4.00%
22,004,405	295,978	5.39%	21,766,065	282,428	5.26%	21,579,331	276,711	5.09%
(205,532)			(206,092)			(209,613)		
21,798,873	295,978	5.45%	21,559,973	282,428	5.31%	21,369,718	276,711	5.14%
35,360,535	394,301	4.51%	34,427,432	378,603	4.46%	33,752,008	368,660	4.33%
1,437,462			1,224,700			799,548		
4,046,780			4,020,549			3,834,187		
\$ 40,844,777			\$ 39,672,681			\$ 38,385,743		
\$ 12,512,282	\$ 32,540	1.04%	\$ 11,931,539	\$ 27,704	0.94%	\$ 11,773,651	\$ 23,343	0.79%
558,738	173	0.12%	541,575	160	0.12%	526,275	148	0.11%
2,207,391	10,470	1.90%	2,153,277	9,553	1.80%	2,146,786	8,309	1.54%
15,278,411	43,183	1.13%	14,626,391	37,417	1.04%	14,446,712	31,800	0.87%
2,066,950	10,704	2.08%	2,033,036	10,356	2.07%	1,205,568	4,135	1.36%
7,175,617	47,700	2.67%	7,040,279	46,454	2.68%	6,361,141	40,220	2.51%
275,887	3,801	5.53%	275,882	3,745	5.51%	276,378	3,752	5.38%
24,796,865	105,388	1.70%	23,975,588	97,972	1.66%	22,289,799	79,907	1.42%
9,883,965			9,988,088			10,648,683		
821,688			453,937			493,887		
744,216			775,574			610,286		
4,598,043			4,479,494			4,343,088		
\$ 40,844,777			\$ 39,672,681			\$ 38,385,743		
	\$ 288,913	2.81%		\$ 280,631	2.80%		\$ 288,753	2.91%
		3.30%			3.30%			3.40%
	3,481			2,529			3,067	
	285,432			278,102			285,686	
	5,000			8,000			9,000	
	172,065			157,270			136,455	
	277,137			287,157			284,643	
	175,360			140,215			128,498	
	37,580			29,950			20,121	
	137,780			110,265			108,377	
	217			(347)			(79)	
	\$ 137,563			\$ 110,612			\$ 108,456	
	\$ 1.93			\$ 1.54			\$ 1.50	
	\$ 1.93			\$ 1.54			\$ 1.50	

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

None.

### **ITEM 9A. CONTROLS AND PROCEDURES**

As of the end of the period covered by this report and pursuant to Rule 13a-15 of the Securities Exchange Act of 1934 (the "Exchange Act"), the Company's management, including the Chief Executive Officer and Chief Financial Officer, conducted an evaluation of the effectiveness and design of the Company's disclosure controls and procedures (as that term is defined in Rules 13a-15(e) and 15d-15(e) of the Exchange Act). Based upon that evaluation, the Company's Chief Executive Officer and Chief Financial Officer concluded, as of the end of the period covered by this report, that the Company's disclosure controls and procedures were effective in recording, processing, summarizing and reporting information required to be disclosed by the Company, within the time periods specified in the Securities and Exchange Commission's rules and forms.

In addition and as of the end of the period covered by this report, there have been no changes in internal control over financial reporting (as defined in Rule 13a-15(f) and 15d-15(f), as amended, of the Exchange Act) during the Company's fourth fiscal quarter that have materially affected, or are reasonably likely to materially affect, the internal control over financial reporting.

Management's Report on Internal Control over Financial Reporting appears within Item 8, "Financial Statements and Supplementary Data." The independent registered public accounting firm, Ernst & Young LLP, has audited the financial statements included in Item 8 and has issued an audit report on the Company's internal control over financial reporting, which appears therein.

### **ITEM 9B. OTHER INFORMATION**

None.

## **PART III**

### **ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE**

The information set forth under the headings "Election of Directors," "Executive Officers," "Insider Reporting," "Director Nominations," and "Report of the Audit Committee" in BOK Financial's 2020 Annual Proxy Statement is incorporated herein by reference.

The Company has a Code of Ethics which is applicable to all Directors, officers and employees of the Company, including the Chief Executive Officer and the Chief Financial Officer, the principal executive officer and principal financial and accounting officer, respectively. A copy of the Code of Ethics will be provided without charge to any person who requests it by writing to the Company's headquarters at Bank of Oklahoma Tower, P.O. Box 2300, Tulsa, Oklahoma 74192 or telephoning the Chief Risk Officer at (918) 588-6000. The Company will also make available amendments to or waivers from its Code of Ethics applicable to Directors or executive officers, including the Chief Executive Officer and the Chief Financial Officer, in accordance with all applicable laws and regulations.

There are no material changes to the procedures by which security holders may recommend nominees to the Company's board of directors since the Company's 2019 Annual Proxy Statement to Shareholders.

### **ITEM 11. EXECUTIVE COMPENSATION**

The information set forth under the heading "Compensation Discussion and Analysis," "Compensation Committee Interlocks and Insider Participation", "Compensation Committee Report," "Executive Compensation Tables," and "Director Compensation" in BOK Financial's 2020 Annual Proxy Statement is incorporated herein by reference.

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

The information set forth under the headings “Security Ownership of Certain Beneficial Owners and Management” and “Election of Directors” in BOK Financial's 2020 Annual Proxy Statement is incorporated herein by reference.

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

Information regarding related parties is set forth in Note 13 of the Company's Notes to Consolidated Financial Statements, which appears elsewhere herein. Additionally, the information set forth under the headings “Certain Transactions,” “Director Independence” and “Related Party Transaction Review and Approval Process” in BOK Financial's 2020 Annual Proxy Statement is incorporated herein by reference.

## **ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES**

The information set forth under the heading “Principal Accountant Fees and Services” in BOK Financial's 2020 Annual Proxy Statement is incorporated herein by reference.

## **PART IV**

## **ITEM 15. EXHIBITS, FINANCIAL STATEMENT SCHEDULES**

### **(a) (1) Financial Statements**

The following financial statements of BOK Financial Corporation are filed as part of this Form 10-K in Item 8:

- Consolidated Statements of Earnings for the years ended December 31, 2019, 2018 and 2017
- Consolidated Statements of Comprehensive Income for the years ended December 31, 2019, 2018 and 2017
- Consolidated Balance Sheets as of December 31, 2019 and 2018
- Consolidated Statements of Changes in Equity for the years ended December 31, 2019, 2018 and 2017
- Consolidated Statements of Cash Flows for the years ended December 31, 2019, 2018 and 2017
- Notes to Consolidated Financial Statements
- Annual Financial Summary - Unaudited
- Quarterly Financial Summary - Unaudited
- Reports of Independent Registered Public Accounting Firm

### **(a) (2) Financial Statement Schedules**

The schedules to the Consolidated Financial Statements required by Regulation S-X are not required under the related instructions or are inapplicable and are therefore omitted.

**(a) (3) Exhibits**

Exhibit Number	Description of Exhibit
2.0	Agreement and Plan of Merger by and among BOK Financial Corporation, CoBiz Financial Inc., and BOKF Merger Corporation Number Sixteen dated June 17, 2018, incorporated by reference to EX 99.1 of Form 8-K filed on June 18, 2018.
3.0	The Articles of Incorporation of BOK Financial, incorporated by reference to (i) Amended and Restated Certificate of Incorporation of BOK Financial filed with the Oklahoma Secretary of State on May 28, 1991, filed as Exhibit 3.0 to S-1 Registration Statement No. 33-90450, and (ii) Amendment attached as Exhibit A to Information Statement and Prospectus Supplement filed November 20, 1991.
3.1	Bylaws of BOK Financial, as amended and restated as of October 30, 2007, incorporated by reference to Exhibit 3.1 of Form 8-K filed on November 5, 2007.
4.0	The rights of the holders of the Common Stock of BOK Financial are set forth in its Certificate of Incorporation.
4.1	Subordinated Notes Indenture, dated as of June 27, 2016, between the Company and U.S. Bank National Association, as trustee (incorporated by reference to Exhibit 4.1 to the Company's filing on Form 8-K filed June 27, 2016).
4.2	Form of 5.375% Subordinated Notes due 2056 Global Security (incorporated by reference to Exhibit 4.2 to the Company's Registration Statement on Form 8-A filed on June 24, 2016).  Pursuant to Item 601(b)(4)(iii)(A) of Regulation S-K, BOK Financial is not filing certain documents. BOK Financial agrees to furnish a copy of each such documents to the Commission upon the request of the Commission.
4.3	Form of Subordinated Notes Indenture, to be dated as of June 25, 2015 between CoBiz Financial Inc. and U.S. Bank National Association, as trustee, incorporated by reference to Exhibit 4.1 to CoBiz Financial Inc. Form 8-K filed June 25, 2015.
4.5	Form of 5.625% Subordinated Notes due June 25, 2030, incorporated by reference to Exhibit 4.2 to CoBiz Financial Inc. Form 8-K filed June 25, 2015.
10.4	Employment and Compensation Agreements.
10.4.2	Amended and Restated Deferred Compensation Agreement (Amended as of December 1, 2003) between Steven G. Bradshaw and BOK Financial Corporation, incorporated by reference to Exhibit 10.4.2 of Form 10-K for the fiscal year ended December 31, 2003.
10.4.2 (a)	409A Deferred Compensation Agreement between Steven G. Bradshaw and BOK Financial Corporation dated December 31, 2004, incorporated by reference to Exhibit 10.4.2 (a) of Form 8-K filed on January 5, 2005.
10.4.2 (b)	Amended and Restated Employment Agreement (amended as of June 30, 2013) between BOK Financial and Steven G. Bradshaw, incorporated by reference to Exhibit 99.A of Form 8-K filed August 20, 2013.
10.4.7	Amended and Restated Employment Agreement (amended June 15, 2013) between BOK Financial and Steven Nell incorporated by reference to Exhibit 99.B of Form 8-K filed September 4, 2013.
10.4.9	Amended and Restated Employment Agreement (amended as of June 15, 2013) between BOK Financial and Norman Bagwell, incorporated by reference to Exhibit 99.A of Form 8-K filed September 4, 2013.
10.4.10	Amended and Restated Employment Agreement (amended as of June 15, 2013) between BOK Financial and Stacy C. Kymes incorporated by reference to Exhibit 10.4.10 of Form 10-K for the fiscal year ended December 31, 2015.
10.4.11	Employment Agreement between BOK Financial and Scott B. Grauer dated December 18, 2013.
10.7.7	BOK Financial Corporation 2001 Stock Option Plan, incorporated by reference to Exhibit 4.0 of S-8 Registration Statement No. 333-62578.

Exhibit Number	Description of Exhibit
10.7.8	BOK Financial Corporation Directors' Stock Compensation Plan, incorporated by reference to Exhibit 4.0 of S-8 Registration Statement No. 33-79836.
10.7.9	Bank of Oklahoma Thrift Plan (Amended and Restated Effective as of January 1, 1995), incorporated by reference to Exhibit 10.7.6 of Form 10-K for the year ended December 31, 1994.
10.7.10	Trust Agreement for the Bank of Oklahoma Thrift Plan (December 30, 1994), incorporated by reference to Exhibit 10.7.7 of Form 10-K for the year ended December 31, 1994.
10.7.11	BOK Financial Corporation 2003 Stock Option Plan, incorporated by reference to Exhibit 4.0 of S-8 Registration Statement No. 333-106531.
10.7.12	BOK Financial Corporation 2003 Executive Incentive Plan, incorporated by reference to Exhibit 4.0 of S-8 Registration Statement No. 333-106530.
10.7.13	10b5-1 Repurchase Plan between BOK Financial Corporation and BOSCO, Inc. dated May 27, 2008, incorporated by reference to Exhibit 10.1 of Form 8-K filed May 30, 2008.
10.7.14	BOK Financial Corporation 2003 Executive Incentive Plan, as amended and restated, for the Chief Executive Officer and for Direct Reports to the Chief Executive Officer, incorporated by reference to the Schedule 14 A Definitive Proxy Statement filed on March 15, 2011.
10.7.16	BOK Financial Corporation 2009 Omnibus Incentive Plan, Amended and Restated effective April 30, 2013, incorporated by reference to the Schedule 14A Definitive Proxy Statement filed on March 20, 2013.
10.8	Lease Agreement between Williams Headquarters Building LLC and BOKF, NA dated July 1, 2019.
10.8.1	First Amendment to Lease Agreement between Williams Headquarters Building LLC and BOKF, NA dated November 8th, 2019.
21	Subsidiaries of BOK Financial, filed herewith.
23	Consent of independent registered public accounting firm - Ernst & Young LLP, filed herewith.
31.1	Certification of Chief Executive Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002, filed herewith.
31.2	Certification of Chief Financial Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002, filed herewith.
32	Certification of Chief Executive Officer and Chief Financial Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, filed herewith.
99	Additional Exhibits.
101	Interactive data files pursuant to Rule 405 of Regulation S-T: (i) the Consolidated Balance Sheets, (ii) the Consolidated Statements of Earnings, (iii) the Consolidated Statements of Changes in Equity, (iv) the Consolidated Statement of Cash Flows and (v) the Notes to the Consolidated Financial Statements, filed herewith. The XBRL instance document does not appear in the Interactive Data File because its XBRL tags are embedded within the Inline XBRL document.

**(b) Exhibits**

See Item 15 (a) (3) above.

**(c) Financial Statement Schedules**

See Item 15 (a) (2) above.

**SIGNATURES**

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

BOK FINANCIAL CORPORATION

DATE: February 27, 2020

BY: /s/ George B. Kaiser  
George B. Kaiser  
Chairman of the Board of Directors

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below on February 27, 2020, by the following persons on behalf of the registrant and in the capacities indicated.

**OFFICERS**

/s/ George B. Kaiser  
George B. Kaiser  
Chairman of the Board of Directors

/s/ Steven G. Bradshaw  
Steven G. Bradshaw  
Director, President and Chief Executive Officer

/s/ Steven E. Nell  
Steven E. Nell  
Director, Executive Vice President and  
Chief Financial Officer

/s/ John C. Morrow  
John C. Morrow  
Senior Vice President and  
Chief Accounting Officer



**DIRECTORS**

---

Alan S. Armstrong

---

/s/ C. Frederick Ball, Jr.  
C. Frederick Ball, Jr.

---

/s/ Steve Bangert  
Steve Bangert

---

/s/ Peter C. Boylan III  
Peter C. Boylan III

---

/s/ Chester E. Cadieux, III  
Chester E. Cadieux, III

---

/s/ Gerard P. Clancy  
Gerard P. Clancy

---

/s/ John W. Coffey  
John W. Coffey

---

/s/ Joseph W. Craft, III  
Joseph W. Craft, III

---

/s/ Jack E. Finley  
Jack E. Finley

---

/s/ David F. Griffin  
David F. Griffin

---

/s/ V. Burns Hargis  
V. Burns Hargis

---

/s/ Douglas D. Hawthorne  
Douglas D. Hawthorne

---

/s/ Kimberley D. Henry  
Kimberley D. Henry

---

/s/ E. Carey Joullian, IV  
E. Carey Joullian, IV

---

/s/ Stanley A. Lybarger  
Stanley A. Lybarger

---

/s/ Steven J. Malcolm  
Steven J. Malcolm

---

/s/ Emmet C. Richards  
Emmet C. Richards

---

Claudia San Pedro

---

/s/ Michael C. Turpen  
Michael C. Turpen

---

R.A. Walker

---

/s/ Rose M. Washington  
Rose M. Washington

**BANK OF OKLAHOMA TOWER  
TULSA, OKLAHOMA  
LEASE AGREEMENT**

**BOKF, NA,  
D/B/A BANK OF OKLAHOMA**

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**BANK OF OKLAHOMA TOWER  
TULSA, OKLAHOMA  
LEASE AGREEMENT**

**BOKF, NA**

THIS LEASE AGREEMENT ("Lease"), dated and effective as of July 1, 2019 (the "Effective Date"), is made by and between **WILLIAMS HEADQUARTERS BUILDING LLC**, a Delaware limited liability company ("Landlord"), and **BOKF, NA**, a national banking association, d/b/a Bank of Oklahoma ("Tenant") (collectively the "parties" or individually a "party").

WITNESSETH: Upon and subject to the terms of this Lease, Landlord hereby leases to Tenant and Tenant hereby leases from Landlord, certain Premises situated within the Building located at the Complex, for the Term, except that Landlord reserves and Tenant shall have no right in and to (a) the use of the exterior faces of all perimeter walls of the Building (except as otherwise expressly provided herein), (b) the use of the roof of the Building (except as otherwise expressly provided herein (if at all)), or (c) the use of the air space above the Building.

**1 Certain Definitions.**

1.1 Additional Charges: All amounts payable by Tenant to Landlord under this Lease other than Total Base Rent, including but not limited to: (i) Tenant's Expansion Premises Proportionate Share of Operating Expenses; (ii) Tenant's Expansion Premises Proportionate Share of Real Estate Taxes; (iii) Tenant's Existing Premises Proportionate Share of Operating Expenses; and (iv) Tenant's Existing Premises Proportionate Share of Real Estate Taxes. All Additional Charges shall be deemed to be additional rent and all remedies applicable to the non-payment of Net Base Rent shall be applicable thereto.

1.2 Affiliate: As to any Person, any other Person that, directly or indirectly through one or more intermediaries or otherwise, Controls (as hereinafter defined), is Controlled by, or is under common Control with, such Person, including, as to Landlord and Tenant, any Person Controlling or Controlled by or under common Control with any general partner of Landlord or Tenant, as the case may be.

1.3 Alterations: Any improvement, decoration, removal, addition, installation or physical change made in, on or to the Premises or any adjacent space to specifically accommodate Alterations in, on or to the Premises.

1.4 Building: The Bank of Oklahoma Tower located at One Williams Center, Tulsa, Oklahoma; provided that, should Landlord, in its sole discretion, elect to calculate and charge Tenant for Operating Expenses based on both the Building and the Resource Center, then references to the Building with respect to Operating Expense calculations shall be deemed to include the Resource Center.

1.5 Commencement Date for Existing Premises: The Effective Date.

1.6 Commencement Date for Expansion Premises: January 1, 2020.

1.7 Common Areas: All areas, improvements, space, equipment and special services in or at the Building or at the Complex provided by Landlord, at Landlord's discretion, for the common or joint use and benefit of tenants, customers, and other invitees of the Building, which may include lobbies, service areas, connecting driveways, entrances and exits, retaining walls, landscaped areas, malls, truck serviceways or tunnels, loading docks, pedestrian walkways, atriums, walls, courtyards, concourses, stairs, ramps, sidewalks, washrooms, signs identifying or advertising the Building or Complex, maintenance buildings, utility buildings, maintenance and utility rooms and closets or hallways, elevators and their housing and rooms, common window areas, walls and ceiling in Common Areas, and trash or rubbish areas.

1.8 Complex: The group of buildings and connecting concourses, courtyards, bridges, and green spaces located in Tulsa, Oklahoma known as the "Williams Center Complex."

1.9 Control: The possession, direct or indirect, of the power to direct or cause the direction of the management of such controlled Person; or the ownership, directly or indirectly, of at least 51% of the voting interest of such controlled Person; or the possession of the right to vote in the ordinary direction of its affairs of at least 51% of the voting interest in such controlled Person.

1.10 Default Rate: The rate described in Section 14.3 of this Lease.

1.11 Existing Premises: That certain portion of the Building occupied by Tenant on the Effective Date, located on the garage level, service level, ground level, plaza level, plaza intermediate level, 8th, 9th, 10th, 11th, 12th, 14th, 15th, and 16th floors, collectively, consisting of approximately 226,221 square feet and depicted on Exhibit "A" attached hereto. Pursuant to Section 3.2 hereof, on and after the Commencement Date for Expansion Premises, the total square feet of the Existing Premises shall be 222,055 square feet.

1.12 Expansion Premises: That certain portion of the Building located on the 18th, 19th, 22nd, 23rd, and 24th floors of the Building, collectively, consisting of approximately 113,144 square feet and depicted on Exhibit "A" attached hereto.

1.13 Landlord: The landlord and the Building property manager named herein and any successors thereto.

1.14 Landlord's Group: Landlord's officers, directors, shareholders, agents, partners, employees, contractors, servants, and any third party operator or manager of the Building and/or the Complex.

1.15 Landlord's Notice and Rent Payment Address:

Williams Headquarters Building LLC  
One Williams Center  
MD: GR-265  
Tulsa, Oklahoma 74172  
Attn: Property Manager

DeAnn.Johnson@williams.com - Email  
(918) 573-1527 - Facsimile

1.16 Net Base Rent for Existing Premises: The annual amount equal to the product obtained by multiplying the Net Rentable Area of the Existing Premises times the Net Base Rent per Square Foot for Existing Premises.

1.17 Net Base Rent for Expansion Premises: The annual amount equal to the product obtained by multiplying the Net Rentable Area of the Expansion Premises times the Net Base Rent per Square Foot for Expansion Premises.

1.18 Net Base Rent per Square Foot for Expansion Premises: The Net Base Rent per Square Foot for Expansion Premises is \$17.00, escalated at 2% per year throughout the Term. For the avoidance of doubt: (i) the 2% escalation in Net Base Rent per Square Foot for Expansion Premises shall become effective upon the one-year anniversary of the Rent Commencement Date and shall be effective on each one-year anniversary during the Term thereafter; and (ii) such escalation shall continue during the Renewal Term.

1.19 Net Base Rent Per Square Foot for Existing Premises: The Net Base Rent per Square Foot for the Existing Premises shall be determined as follows: Promptly after execution of this Lease, Landlord shall undertake an engineering study (such study, the "Podium Engineering Study") to determine the annual cost for extraordinary, unusual or excessive demand for electrical or other utility services for the Podium Floors not required to be provided by Landlord pursuant to Section 8.1 hereof (collectively, the "Above-Standard Utilities for the Podium Floors") that are in addition to: (i) utilities for the Podium Floors that are currently metered by Landlord; and (ii) any HVAC services for the Podium Floors that are to be billed by Landlord pursuant to Section 8.2(i) hereof. The Podium Engineering Study shall be conducted by either ESDC Engineering or Phillips + Gomez, or another qualified professional engineer mutually agreed upon by Landlord and Tenant, and shall bear the seal of a professional engineer licensed in the state of Oklahoma. The per unit cost of electrical and other utilities services for the Podium Floors used to determine the annual cost for Above-Standard Utilities for the Podium Floors will be the average per unit cost of such services in the Building for the calendar year 2018. Landlord shall use reasonable efforts to complete the Podium Engineering Study no later than the Rent Commencement Date. The Net Base Rent per Square Foot for Existing Premises shall be \$10.17 per square foot, reduced by the per square foot number (the "Podium Utilities Adjustment Amount") determined by dividing the Above Standard Utilities for Podium Floors by the square footage of the Existing Premises as of the Commencement Date for Expansion Premises, which the parties acknowledge is 222,055 square feet. Notwithstanding the foregoing, the Net Base Rent per Square Foot for Existing Premises shall in no event be lower than \$9.78 per square foot. Upon determination of the Podium Utilities Adjustment

Amount, the Parties shall execute an amendment to this Lease evidencing the amount of the Net Base Rent per Square Foot for Existing Premises as determined pursuant to this paragraph. Tenant shall pay Net Base Rent for the Existing Premises at the rate of \$10.17 per square foot, until such determination is made, after which time a retroactive adjustment shall be made as necessary to reflect the actual Net Base Rent per Square Foot for Existing Premises for such time period.

1.20 Net Rentable Area of the Building: For purposes of this Lease, the Net Rentable Area of the Building shall be 1,140,684 square feet; provided that, should Landlord elect to begin calculating Operating Expenses based on the Building and the Resource Center combined, then the combined Net Rentable Area of the Building shall be 1,373,733 square feet (1,140,684 square feet for the Building and 233,049 square feet for the Resource Center).

1.21 Net Rentable Area of the Existing Premises: The sum of: (1) the net useable area which is computed by measuring from the inside face of the exterior glass, to the exterior side of partitions which separate the Existing Premises from the Building's interior nonrentable areas which are not within the Existing Premises, and to the center of partitions that separate the Existing Premises from adjoining rentable areas; plus (2) a pro-rata portion of the Building's floor area used for corridors, elevator lobbies, ground floor lobbies, vestibules, service and freight areas, restrooms, elevator machine rooms, telephone closets, mechanical equipment rooms and other similar facilities provided for the benefit of all tenants of the Building, visitors to the Building, or Landlord. No deduction shall be made for columns or projections necessary to the Building. As of the Effective Date of this Lease, the parties acknowledge and agree that the Net Rentable Area of the Existing Premises is deemed to be 226,221 square feet; however, pursuant to Section 3.2 hereof, on and after the Commencement Date for Expansion Premises, the Net Rentable Area of the Existing Premises shall be 222,055 square feet. Notwithstanding the foregoing, the Net Rentable Area of the Existing Premises is subject to recalculation from time to time pursuant to the provisions of Section 3.2 hereof.

1.22 Net Rentable Area of the Expansion Premises: The sum of: (1) the net useable area which is computed by measuring from the inside face of the exterior glass, to the exterior side of partitions which separate the Expansion Premises from the Building's interior nonrentable areas which are not within the Expansion Premises, and to the center of partitions that separate the Expansion Premises from adjoining rentable areas; plus (2) a pro-rata portion of the Building's floor area used for corridors, elevator lobbies, ground floor lobbies, vestibules, service and freight areas, restrooms, elevator machine rooms, telephone closets, mechanical equipment rooms and other similar facilities provided for the benefit of all tenants of the Building, visitors to the Building, or Landlord. No deduction shall be made for columns or projections necessary to the Building. As of the Effective Date of this Lease, the parties acknowledge and agree that the Net Rentable Area of the Expansion Premises is deemed to be 113,144 square feet.

1.23 Net Rentable Area of the Premises: Collectively, the Net Rentable Area of the Existing Premises and the Net Rentable Area of the Expansion Premises.

1.24 Operating Expenses: The aggregate of all costs and expenses paid or incurred on an accrual basis (in accordance with generally accepted accounting principles consistently applied) by Landlord in connection with the ownership, management, operation, insurance (including the cost

of self-insurance), and maintenance of the Building and Complex including all utility and central plant charges of the Building, the Complex, the grounds and land on which they are situated, and the Common Areas. If Landlord makes an expenditure for capital improvements to the Building or Complex which are: (i) reasonably intended to reduce Operating Expenses; and (ii) with respect to the Existing Premises only, are approved by Tenant pursuant to Section 5.2 hereof (which improvements are commenced or completed during the Term) or to comply with the request or directives of a governmental agency or body, and if such expenditure is not a current expense under generally accepted accounting principles, the cost thereof shall be amortized over a period equal to the useful life of such improvements, determined in accordance with generally accepted accounting principles, and the amortized cost allocated to each calendar year during the Term shall be treated as an Operating Expense.

The following shall be excluded from Operating Expenses: (a) charges which are reimbursed to Landlord for any reason, including without limitation reimbursements of payments made from reserves previously accrued, except to the extent such reserves were deposited by Landlord and not previously charged; (b) depreciation (unless otherwise expressly authorized in Section 1.23 above); (c) debt service, including interest and late charges; (d) costs of repair and restoration of the Complex following casualty loss or condemnation to the extent reimbursed by insurance or by a condemnation award; (e) leasing commissions, rental concessions, and buy-outs; (f) income, franchise, and similar taxes which are personal to Landlord; (g) any capital expenses, except those expressly authorized in Section 1.23 above or which normally would be regarded as operating, maintenance, or repair costs; (h) principal payments on mortgage and other non-operating debts of Landlord; and (i) legal and other related expenses associated with the negotiation or enforcement of leases, the defense of Landlord's title to the Complex, or any action based solely on an alleged breach by Landlord of a lease pertaining to space within the Building.

1.25 Person: A natural person, a partnership, a limited liability company, a corporation or any other form of business or legal association or entity.

1.26 Podium Floors: The garage, service, ground, and plaza levels of the Premises.

1.27 Premises: Collectively, that certain portion of the Building located on the garage level, service level, ground level, plaza level, plaza intermediate level, 8th, 9th, 10th, 11th, 12th, 14th, 15th, 16th, 18th, 19th, 22nd, 23<sup>rd</sup>, and 24th floors, collectively, including all improvements therein or to be provided by Tenant, and including all Common Areas which are for the non-exclusive use of tenants in the Building. The delineation of the Premises, including the Existing Premises and the Expansion Premises, is shown on Exhibit "A" attached hereto. As of the Effective Date of this Lease, the parties acknowledge and agree that the Premises consists of 339,365 square feet; however, pursuant to Section 3.2 hereof, on and after the Commencement Date for Expansion Premises, the total square feet of the Premises consists of 335,199 square feet.

1.28 Real Estate Taxes: Any form of assessment, license fee, commercial rental tax, levy, penalty, charge or tax (other than taxes on general net income and inheritance and estate taxes) imposed by any authority having the direct or indirect power to tax, including any city, county, state or federal government, or any school, agricultural, lighting, drainage, flood control, transit, special benefit or other district, as against any legal or equitable interest of Landlord in the Premises or in



the real property of which the Premises and the Building are a part, or the Complex or as against Landlord's right to rent or other income therefrom, or as against Landlord's business of leasing the Premises or collecting rent, or any tax imposed in substitution, partially or totally, or any tax previously included in the definition of "Real Estate Taxes", or any additional tax the nature of which was previously included within the definition of "Real Estate Taxes", and shall include any increases in such taxes, levies, charges or assessments occasioned by increases in tax rates or increases in assessed valuations, whether occurring by sale or otherwise. In no event shall "Real Estate Taxes" include federal, state or local income, franchise (except any franchise tax required to be paid in connection with the purchase of utility services), inheritance or estate taxes, nor any interest or penalties incurred by Landlord for late payment of any Real Estate Taxes.

1.29 Renewal Term: The additional period for which Tenant may extend the Term of this Lease pursuant to the option to renew set forth in Section 3.4.

1.30 Rent Commencement Date: The Commencement Date for Expansion Premises.

1.31 Resource Center: The building known as the Williams Resource Center located at 2 East 1st Street, Tulsa, Oklahoma, 74172, containing 233,049 net rentable square feet.

1.32 Security Deposit: N/A

1.33 Sole Permitted Use: Tenant, its Affiliates, permitted successors and permitted assignees and subtenants, shall have the right to use the Premises for general, administrative and executive office purposes, including Tenant's operation of its national banking business as of the Effective Date, and for all other incidental purposes as shall be reasonably required by Tenant in the operation of its national banking business and businesses related to the operation of a national bank (but only to the extent that such related businesses do not conflict with any written obligations of Landlord to other tenants in the Building or the Resource Center at the time that such proposed related business is commenced), except that in no event may any of the following be permitted in the Premises:

- (i) offices or agencies of a foreign government or political subdivisions thereof;
- (ii) offices of any governmental bureau or agency of the United States or any state or political subdivision thereof, other than an office or offices used by employees of the Office of the Comptroller of the Currency (the "OCC"), or similar federal banking regulatory agency who have been assigned by the OCC or similar federal banking regulatory agency to temporarily or permanently audit or exercise regulatory oversight authority over Tenant;
- (iii) personnel agencies; or
- (iv) customer service offices of any public utility company.

1.34 Tenant: The tenant named herein, its successors and any permitted assignee or subtenant under Section 10.

1.35 Tenant's Existing Premises Proportionate Share: Tenant's Existing Premises Proportionate Share shall be a fraction, expressed as a percentage, the numerator of which is Net Rentable Area of the Existing Premises and the denominator of which is Net Rentable Area of the Building. As of the Effective Date, and until the Commencement Date for Expansion Premises, Tenant's Existing Premises Proportionate Share is 19.83%; provided that, if Landlord elects to calculate costs set forth in Section 5.5.1 below based on the Building and the Resource Center combined, then Tenant's Existing Premises Proportionate Share is 16.47%. As of the Commencement Date for Expansion Premises, Tenant's Existing Premises Proportionate Share is 19.47%; provided that, if Landlord elects to calculate costs set forth in Section 5.5.1 below based on the Building and the Resource Center combined, then Tenant's Existing Premises Proportionate Share shall be 16.16% of the combined square footage of the Building and the Resource Center.

1.36 Tenant's Expansion Premises Proportionate Share: Tenant's Expansion Premises Proportionate Share shall be a fraction, expressed as a percentage, the numerator of which is Net Rentable Area of the Expansion Premises and the denominator of which is Net Rentable Area of the Building. As of the Commencement Date for Expansion Premises, Tenant's Expansion Premises Proportionate Share is 9.92%; provided that, if Landlord elects to calculate Operating Expenses based on the Building and the Resource Center combined, then Tenant's Expansion Premises Proportionate Share shall be 8.24% of the combined square footage of the Building and the Resource Center.

1.37 Tenant's Group: Tenant's partners, directors, officers, shareholders, employees, agents, contractors, servants, licensees, invitees, visitors, and permitted subtenants and/or assignees.

1.38 Tenant's Notice Address:  
BOKF, NA  
PO Box 2300  
Tulsa, Oklahoma 74102  
Attn: Michael D. Nalley, CCIM, CPM, RPA  
Senior Vice President  
Director Corporate Real Estate  
(918) 619-1744 - Facsimile  
Michael.Nalley@bokf.com - Email

With Copy to:

Frederic Dorwart  
Frederic Dorwart, Lawyers, PLLC  
Old City Hall  
124 East Fourth Street  
Tulsa, Oklahoma 74103  
(918) 583-9922 - Telephone  
(918) 583-8251 - Facsimile

1.39 Tenant's Total Proportionate Share: Tenant's Total Proportionate Share shall be the fraction, expressed as a percentage, the numerator of which is Net Rentable Area of the Premises and the denominator of which is Net Rentable Area of the Building. As of the Effective Date, and until the Commencement Date for Expansion Premises, Tenant's Total Proportionate Share is 29.75%; provided that, if Landlord elects to calculate costs under this Lease based on the Building and Resource Center combined, then Tenant's Total Proportionate Share from the Effective Date until the Commencement Date for Expansion Premises is 24.70%. As of the Commencement Date for Expansion Premises, Tenant's Total Proportionate Share is 29.39%; provided that, if Landlord elects to calculate Operating Expenses based on the Building and the Resource Center combined, then Tenant's Total Proportionate Share shall be 24.40% of the combined square footage of the Building and the Resource Center.

1.40 Term: the period of time commencing on the Effective Date and ending on the Termination Date, as extended pursuant to Tenant's exercise of any renewal option(s).

1.41 Termination Date: The Termination Date is 11:59 P.M. on December 31, 2034, or such later date to which the Term may be extended upon exercise of the option to renew pursuant to Section 3.4.

1.42 Total Base Rent: Collectively, the Net Base Rent for Existing Premises plus the Net Base Rent for Expansion Premises.

1.43 Trade Fixtures: Tenant's machinery and equipment that can be removed from the Premises without doing material damage to the Premises.

1.44 Unavoidable Delays: Delays caused by strikes, terrorism, acts of God, lockouts, labor difficulties, riots, explosions, sabotage, accidents, inability to obtain labor or materials, governmental restrictions, enemy action, civil commotion, fire, unavoidable casualty or any other cause beyond the reasonable control of Landlord or Tenant, as the case may be.

1.45 Untenantable: A condition whereby Tenant is not reasonably able to use or access the Premises or a portion thereof for the conduct of its business in accordance with its customary practices, provided that it shall be an express condition to untenability that Tenant does in fact NOT use the portion of the Premises purported to be untenable for the conduct of its business (provided, that entering such portion of the Premises for the purpose of retrieving documents or other personal property or otherwise in connection with the relocation of Tenant's operations therein to other space shall not be deemed to constitute use of such space for the purposes of this definition).

## **2. Exhibits.**

The following exhibits and riders are attached hereto and incorporated herein by this reference:

Exhibit "A": Delineation of the Premises  
Exhibit "B": Returned Premises  
Exhibit "C-1": [INTENTIONALLY DELETED]  
Exhibit "C-2": [INTENTIONALLY DELETED]  
Exhibit "D-1": Landlord's Statement of Expansion Premises  
Exhibit "D-2": Landlord's Statement of Existing Premises  
Exhibit "E": Rules and Regulations  
Exhibit "F": Janitorial Specifications  
Exhibit "G": As-Is Work Letter  
Exhibit "H": Kiosk License Premises

### 3. Term.

3.1 Term. The initial Term of this Lease shall commence on the Effective Date, subject to the terms and conditions of this Lease, and shall expire at 11:59 p.m. on December 31, 2034, unless otherwise extended by the parties pursuant to this Section.

3.2 Existing Premises. On and after the Effective Date, Tenant shall continue to occupy the Existing Premises pursuant to the terms and conditions of this Lease. On the Commencement Date for Expansion Premises, Tenant shall return to Landlord that portion of the Existing Premises located on the service level of the Building consisting of 4,166 square feet, and more particularly described in Exhibit "B" attached hereto and incorporated herein (the "Returned Premises"), and the Returned Premises shall thereafter not be included in this Lease.

3.3 Expansion Premises. Landlord agrees to deliver possession of the Expansion Premises to Tenant no later than the Effective Date, at which time Tenant may make Alterations pursuant to the terms and provisions of Section 13 of this Lease. Notwithstanding Tenant's possession of the Expansion Premises, Tenant shall not pay Net Base Rent for Expansion Premises, Tenant's Expansion Premises Proportionate Share of Operating Expenses or Tenant's Expansion Premises Proportionate Share of Real Estate Taxes until the Rent Commencement Date.

3.4 Renewal Term; Renewal Net Base Rent; Appraisals. Provided Tenant is not then in default under the terms and provisions of this Lease and subject to the terms and conditions hereinafter contained, Tenant shall have the option ("Renewal Option"), exercisable at its sole discretion, to renew this Lease for one (1) additional period of ten (10) years (the "Renewal Term"), upon the same terms and conditions set forth in this Lease, except that upon Tenant's exercise of the Renewal Option: (a) the Net Base Rent for Existing Premises shall thereafter be calculated at the same rate as the Net Base Rent for Expansion Premises (hereinafter known as the "Renewal Net Base Rent per Square Foot"); and (b) the Renewal Net Base Rent per Square Foot for the Premises for the Renewal Term shall be an amount equal to the greater of (i) the last year's Net Base Rent per Square Foot for the Expansion Premises paid by Tenant in the expiring term, or (ii) fair market rental value for a net lease in Class A office space in buildings of comparable size and quality in downtown Tulsa, Oklahoma (the "FMRR"). The Renewal Option shall be personal to Tenant and may not be exercised by any assignee or subtenant of this Lease or any portion of the Premises; provided, however, that if this Lease is assigned or the entire Premises are subleased to a Related Entity pursuant to Section 10.10 hereof, then such assignee or sublessee shall have the right to

exercise the Renewal Option. The Renewal Option must be exercised by written notice to Landlord ("Renewal Notice") at least one (1) year prior to the Termination Date. Upon receipt of a Renewal Notice, Landlord will submit its proposal regarding its determination of FMRR no later than three hundred and thirty-five (335) days before the end of the current Term. Tenant, at its option, may accept the terms as quoted or elect to enter into good faith negotiations with Landlord for a period not to exceed sixty (60) days. If at the end of said 60-day period Tenant and Landlord have not reached an agreement regarding the FMRR, then Tenant may elect to terminate this Lease at the end of the current Term or elect to have the FMRR be determined by three (3) independent appraisers, each of whom must have at least five (5) years of experience in the appraisal of the office rental market in the central business district of Tulsa, Oklahoma. Landlord and Tenant shall each select an appraiser, and the two so selected shall select a third appraiser. If the two appraisers selected by Landlord and Tenant shall be unable to agree on a third appraiser within five (5) business days of their selection, the third appraiser shall be selected by the then-President of the Tulsa County Bar Association (or, if he or she shall refuse or be unable to do so, by a comparable independent public or semi-public official in Tulsa). In determining the FMRR each such appraiser shall take into consideration the current availability of similar space in comparable buildings in Tulsa, giving due consideration to location, the term and other conditions of this Lease, the amount of space, the credit rating of Tenant, concessions, tenant improvement allowances, and all other relevant factors. Said appraisers shall assume the area to be leased is in its then current condition. Such appraisers shall be instructed to determine the FMRR independently without consulting with each other, and thereafter, to submit the appraisals to both the Landlord and Tenant contemporaneously in writing no later than forty-five (45) days after the selection of the third appraiser is complete. The Renewal Net Base Rent per Square Foot shall be determined by eliminating the highest and lowest appraisals, and the remaining appraisal shall apply. Each party shall pay the cost of its own appraiser. The cost of the third appraiser and the other costs incurred in connection with the appraisal shall be borne equally by Landlord and Tenant. Upon determination of the FMRR, the parties shall execute an appropriate document evidencing said fair market rental value which shall be the Renewal Net Base Rent per Square Foot for the Renewal Term.

#### **4. Condition.**

4.1 "As Is" Condition. It is hereby understood and acknowledged by Tenant that Landlord is leasing the Premises to Tenant in "as is" condition with all faults and Landlord has made no representation or warranty, express or implied, with respect to the condition of the Premises, the Building or the Complex or with respect to their suitability for the conduct of Tenant's business, except as expressly set forth herein. Tenant acknowledges that Tenant has inspected the Premises, and that the Premises are in a good and habitable condition. Except as expressly set forth herein, Landlord shall have no liability to Tenant arising from the condition of the Building or the Premises, and Tenant shall defend, indemnify and hold Landlord harmless from and against any claims, causes of action, damages and liability arising from the condition of the Premises.

4.2 Condition Upon Surrender. At the time Tenant surrenders the Premises at the end of the Term, or within five (5) business days thereafter, Landlord and Tenant, or their respective agents, shall make an inspection of the Premises and shall prepare and sign an inspection form to describe the condition of the Premises at the time of surrender.

4.3 Tenant Improvements. Landlord shall not provide a tenant improvement allowance.

**5. Rent.**

Except as set forth in Sections 8.3, 12.3, 19.3 and 20.2 below, Tenant shall pay to Landlord, without any setoff or deduction whatsoever at Landlord's Notice and Rent Payment Address or at such place or to such agent as Landlord may from time to time designate in writing, rental comprised of Net Base Rent for Expansion Premises, Net Base Rent for Existing Premises, and Additional Charges as defined in Section 1 hereof (collectively, "Rent").

5.1 Total Base Rent. Commencing on the Effective Date, Tenant shall pay the Net Base Rent for Existing Premises in equal monthly installments in advance on the first day of each month until the Rent Commencement Date. Commencing on the Rent Commencement Date, Tenant shall pay Total Base Rent in equal monthly installments in advance on the first day of each month during the Term. Total Base Rent for any period during the Term which is less than one full month shall be prorated upon the actual number of days of the month involved. If Tenant makes any payment to Landlord by check, such payment shall be by check of Tenant and Landlord shall not be required to accept the check of any other person or entity, and any check received by Landlord shall be deemed received subject to collection. If any check is mailed by Tenant, Tenant shall post such check in sufficient time prior to the date when payment is due so that such check will be received by Landlord on or before the date when payment is due. Tenant shall assume the risk of lateness or failure of delivery of the mails, and no lateness or failure of the mails will excuse Tenant from its obligation to have made the payment in question when required under this Lease. If during the Term, Landlord receives a check from Tenant which is returned by Tenant's bank for insufficient funds or is otherwise returned unpaid, Tenant agrees that upon written demand by Landlord all checks thereafter shall either be bank certified, cashiers' or treasurers' checks. All bank service charges resulting from any bad checks shall be borne by Tenant.

5.2 Operating Expenses and Real Estate Taxes. In addition to Total Base Rent, Tenant shall pay to Landlord Tenant's Expansion Premises Proportionate Share of Operating Expenses, Tenant's Expansion Premises Proportionate Share of Real Estate Taxes, Tenant's Existing Premises Proportionate Share of Operating Expenses, and Tenant's Existing Premises Proportionate Share of Real Estate Taxes (all of the foregoing, collectively "Tenant's Share of Costs") on a monthly basis in advance, promptly on the first day of every month during the Term. Tenant's monthly payment of Tenant's Share of Costs for each year shall be determined by an estimated forecast reasonably prepared by Landlord and submitted to Tenant in writing after Landlord's calculation of actual expenses for each calendar year, but in no event later than April 30 of each calendar year.

5.2.1 In the event that at the end of any calendar year occurring during the Term (including the calendar year in which the Termination Date occurs), Tenant's Share of Costs exceed the amount paid by Tenant during the period, Landlord shall, simultaneously with delivery of Landlord's Statements for the Premises (as defined in Sections 5.3.2 and 5.3.3), bill Tenant for such excess and Tenant shall promptly pay such excess amount to Landlord in a lump sum payment. Should Tenant's Share of Costs be less than the amount paid by Tenant during the period, Landlord shall credit (effective as of the date Tenant received Landlord's Statements for the Premises) Tenant with such amount and apply such credit to

the payment of Rent next coming due. Landlord shall refund to Tenant any overpayment of Real Estate Taxes and/or Operating Expenses for the Premises for the calendar year in which this Lease terminates. If the Termination Date shall occur prior to the last day of the calendar year in which it occurs, Tenant's Share of Costs shall be prorated based on the number of days in such partial calendar year divided by 365.

### 5.3 Recordkeeping; Landlord's Statement; Audit Rights.

5.3.1 Landlord's Records. Landlord shall maintain books and records in accordance with generally accepted accounting practices and sound management principles consistently applied showing in reasonable detail all Operating Expenses and Real Estate Taxes.

5.3.2 Landlord's Statement for Expansion Premises. Within one hundred twenty (120) days after the end of each calendar year occurring during the Term, Landlord shall provide Tenant with a reasonably detailed statement ("Landlord's Statement for Expansion Premises") of Tenant's Expansion Premises Proportionate Share of Operating Expenses and Tenant's Expansion Premises Proportionate Share of Real Estate Taxes actually incurred during such calendar year, and any amounts due to either party pursuant to Section 5.2.1. For the avoidance of doubt, Landlord and Tenant acknowledge that Exhibit "D-1" attached hereto and incorporated herein depicts a sample of the Landlord's Statement for Expansion Premises.

5.3.3 Landlord's Statement for Existing Premises. Within one hundred twenty (120) days after the end of each calendar year occurring during the Term, Landlord shall provide Tenant with a reasonably detailed statement ("Landlord's Statement for Existing Premises") of Tenant's Existing Premises Proportionate Share of Operating Expenses and Tenant's Existing Premises Proportionate Share of Real Estate Taxes actually incurred during such calendar year, and any amounts due to either party pursuant to Section 5.2.1. For the avoidance of doubt, Landlord and Tenant acknowledge that Exhibit "D-2" attached hereto and incorporated herein depicts a sample of the Landlord's Statement for Existing Premises.

5.3.4 Disputes; Audit Rights. Within ninety (90) days of Tenant's receipt of Landlord's Statement for Expansion Premises or Landlord's Statement for Existing Premises for the previous calendar year, certified by Landlord, Tenant shall have the right to audit (but no more frequently than once per calendar year), at Tenant's expense, the books and records of Landlord relating to the calculation of Operating Expenses and Real Estate Taxes for the previous calendar year ("Landlord's Books and Records"); provided that, such right to audit is conditioned upon Tenant having paid all amounts then due and owing to Landlord. Such audit shall take place on the Landlord's premises (or at Landlord's discretion by Landlord providing Tenant or Tenant's Auditor (as defined hereinbelow), with requested digital or electronic copies of Landlord's Books and Records), and shall be conducted by a nationally recognized public accounting firm, Tenant's internal audit group, or other persons experienced in reviewing and auditing landlord operating expenses and taxes of commercial office projects, such as, by way of example and not limitation, CBRE (the "Auditor"). Notwithstanding the foregoing: (i) with the sole exception of Tenant's internal audit group,

the Auditor must be a nationally-recognized and qualified organization; and (ii) if the Auditor is also engaged in the real estate brokerage business, the Auditor must take all reasonable measures (including without limitation signing a nondisclosure agreement with Landlord) to ensure that information obtained or prepared in the course of the audit shall not be disclosed to or obtained by the brokerage group of the Auditor and shall not be disclosed to any outside party other than Tenant. Once Tenant has conducted an audit for any calendar year, such audit shall be considered final and Tenant shall have no right to reaudit during such calendar year. If the results of the audit reveal an overcharge to Tenant of more than five percent (5.0%) of the actual, annual aggregate amounts charged to Tenant and paid thereby under either Landlord's Statement for Expansion Premises or Landlord's Statement for Existing Premises, then Landlord shall credit Tenant with the amount of such overcharge(s) and apply such credit to the payment of Total Base Rent next coming due.

5.4 Taxes Imposed Upon Tenant. Tenant shall pay all license and permit fees required for the operation of its business or equipment within the Premises, and all taxes and increase in taxes, including but not limited to ad valorem taxes, levied and assessed by any governmental body on the personal property located in the Premises and on any special leasehold improvements installed in the Premises or by virtue of Tenant conducting its described use, business or operation on the Premises, the employment of agents, servants, or other third parties, the bringing, keeping or selling of personal property or chattel, or whatsoever nature from the Premises. The foregoing is intended to bind Tenant to pay, and promptly discharge, all taxes and/or levies, together with related interest and penalties, whether assessed by federal or state authority or any political subdivision thereof, directly or indirectly related to its business, improvements, functioning, employment, assets, existence, sales, entertainment or the like. Tenant specifically agrees to reimburse Landlord for any increase in ad valorem taxes resulting from fixtures or improvements installed by Tenant which Landlord becomes obligated to pay (except building standard leasehold improvements).

5.5 Certain Capital Expenditures. With respect to the Existing Premises only, Tenant's Existing Premises Proportionate Share of depreciation on capital additions shall be payable only for such additions which reduce Operating Expenses and are approved by Tenant, which approval shall not be unreasonably withheld, and such additions as are required by a governmental agency. Should Landlord finance all or any portion of such additions through borrowings, then Tenant shall pay Tenant's Existing Premises Proportionate Share of the interest thereon.

**6. Security Deposit.**

Tenant shall not be required to make a security deposit in connection with this Lease.



## 7. Possession and Use of Premises.

7.1 Sole Permitted Use. Tenant shall use and occupy the Premises only for the Sole Permitted Use and for no other purpose. Tenant shall not use or permit the use of the Premises in a manner that (i) violates any law or requirement of public authorities, (ii) causes structural injury to the Building or any part thereof, (iii) interferes with the normal operations of the HVAC, plumbing or other mechanical or electrical systems of the Building or the elevators installed therein, (iv) increases the ratio of employees to net rentable area greater than one hundred forty (140) square feet per person, (v) constitutes a public or private nuisance, (vi) alters the appearance of the exterior of the Building or of any portion of the interior of the Building other than the Premises, (vii) violates or fails to comply with the Building Rules and Regulations attached hereto as Exhibit "E", as they may be changed from time to time by Landlord, Landlord to act reasonably in making such changes, or (viii) causes or result in any occurrence which, in the reasonable good faith judgment of Landlord, is disreputable. The Premises shall not be used for any purpose which would, in Landlord's reasonable opinion, diminish the first class character of the Complex or any part thereof, create unreasonable or excessive elevator or floor loads, unreasonably interfere with any of the operations of the Complex or any part thereof or the proper and economic heating, air conditioning, cleaning or other servicing of the Complex or any part thereof or unreasonably interfere with the use of the other areas of the Complex by any other tenants.

### 7.2 Compliance with Legal Requirements.

7.2.1 Tenant's Compliance. Tenant shall, at Tenant's sole cost and expense, fully, diligently and in a timely manner, comply with all "Legal Requirements" (which term is used in this Lease to mean all laws, rules, regulations, ordinances, codes, directives, covenants, easements and restrictions of record, permits, and the requirements of any applicable fire, insurance, life or safety policy, underwriter or rating bureau), which shall, with respect to the Premises or the use and occupation thereof or the abatement of any nuisance, impose any violation, order or duty on Landlord or Tenant arising from (a) Tenant's particular use of the Premises, (b) the manner or conduct of Tenant's business or operations of its installations, equipment or other property therein, (c) any cause or condition created by or at the instance of Tenant, other than by Landlord's performance of any work for or for the benefit of Tenant, or (d) the breach of any of Tenant's obligations hereunder. However, Tenant shall not be so required to make any structural or other substantial change in the Premises unless the requirement arises from a cause or condition referred to in clauses (b), (c) or (d) above. Tenant shall have the right to equip the Premises with such security alarms, devices, safeguards, systems, and services as Tenant deems reasonable and necessary to ensure the security of Tenant's operations and compliance with present and future bank security Legal Requirements (Tenant's "Bank Security"). Unless detrimental to the health, safety or welfare of the Building and its occupants, Tenant need not comply with any such Legal Requirement so long as Tenant shall be contesting the validity thereof, or the applicability thereof to the Premises in which case Tenant shall be liable for all costs, fines, penalties or damages arising from such failure to comply. Tenant shall promptly notify Landlord of any written notice it receives of the violation of any Legal Requirement.

Notwithstanding the foregoing, Tenant may contest any Legal Requirement only so long as the contest or delay does not subject Landlord to criminal liability. Landlord will not be required to join any proceedings pursuant to this Section unless the provision of any applicable law, rule or regulation at the time in effect requires that the proceedings be brought by or in the name of Landlord, or both. In that event, Landlord will join the proceedings or permit them to be brought in its name if Tenant pays all related expenses.

7.2.2 Landlord Compliance. Except as required of Tenant pursuant to Section 7.2.1, Landlord at its expense shall comply with all Legal Requirements as shall affect the Building, Common Areas and Complex, but may similarly contest the same, provided such contest shall not unreasonably interfere with the performance of any Alterations.

## **8. Utilities and Services.**

8.1 Landlord's General Services. Throughout the Term, Landlord agrees that, subject to Legal Requirements and the terms hereof, Landlord shall furnish the following services:

(i) heat, air-conditioning and ventilation ("HVAC") in the Premises, Monday through Friday from 7:00 a.m. to 6:00 p.m. and, upon oral or written request, Saturday from 7:00 a.m. to 1:00 p.m., excluding Sundays and Holidays. All HVAC services will be provided to the extent necessary for the comfortable occupancy of the Premises under normal business operations with customary office equipment and in the absence of the use of any non-customary machines, lights, equipment or devices which adversely affect the temperature otherwise maintained in the Premises;

(ii) hot and cold city water from the regular Building fixtures for drinking, lavatory and toilet purposes;

(iii) customary cleaning and janitorial services in the Premises Monday through Friday, excluding Holidays. Janitorial services shall be consistent with the janitorial specifications set forth in Exhibit "F" attached hereto and made a part hereof, subject to work limitations as may be set forth in any applicable union or other collective bargaining agreement with Landlord. Such services shall not include washing dishes, cups and/or similar items;

(iv) subject to break-down, maintenance and repairs, normal passenger elevator service, normal freight elevator service in common with Landlord, other tenants and visitors to the Building, Monday through Friday from 7:00 a.m. to 6:00 p.m. and on Saturdays from 7:00 a.m. to 1:00 p.m., Sundays and Holidays excepted. Such normal elevator service, if furnished at other times, shall be optional with Landlord, and shall never be deemed a continuing obligation. Subject to break-down, maintenance and repairs, Landlord, however, shall provide continuous limited passenger elevator service daily at all times such normal passenger service is not furnished, subject to such reasonable security regulations as may be prescribed by Landlord from time to time. Operatorless automatic elevator service shall be deemed "elevator service" within the meaning of this paragraph;

(v) electricity for normal business usage. Tenant's use of electrical energy in the Premises shall not at any time exceed the capacity of any of the electrical conductors and equipment in or otherwise serving the Premises. Landlord shall furnish only 120/208 volt, single phase service to the Premises. Tenant shall not utilize any electric equipment within the Premises with a rated capacity in excess of 0.5 kilowatts. Lighting in the Premises shall not exceed 2 watts per square foot and overall utilization of electricity in the Premises shall not exceed 3 watts per square foot. To insure that such capacity is not exceeded and to avert possible adverse effects upon the Building's electric service, Tenant shall not connect additional reproducing equipment, electronic data processing equipment, heating equipment, or special lighting in excess of building standard.

(vi) For all purposes under this Lease, the term "Holidays" shall mean New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day and Christmas Day only and the term "business day" shall mean any weekday that is not a Holiday.

(vii) Landlord will provide security on a 24/7 basis to the Building subject to Landlord's building and security rules as may be modified from time to time for all other tenants in the Building. Access to the Building outside of normal Building hours will only be available using a card key or some other reasonable means. Tenant's visitors will check in at the security desk in the main lobby, receive a badge and proceed to Tenant's space. Tenant will have the right to install its own security system(s) protecting the Premises, provided that the system allows for Landlord access.

8.2 Additional and After-Hours Services. Except as hereinafter provided, Landlord shall not be obligated to furnish any services or utilities, other than those stated in Section 8.1 above. If Landlord elects to furnish services requested by Tenant in addition to those listed in Section 8.1, or at times other than those stated in Section 8.1, Tenant shall pay to Landlord the prevailing charges in the Building for such services on the due date of the next monthly installment of Total Base Rent. Notwithstanding the foregoing, (i) base Building HVAC provided after normal business hours shall be billed to Tenant at \$12.50 per fan hour; and (ii) additional electricity shall be billed to Tenant at cost, without mark-up, profit or overhead. All costs for extraordinary, unusual or excessive demand for electrical or other utility service and all costs of submetering or monitoring of such use shall be borne by Tenant and Landlord reserves the right to impose an additional charge on Tenant for extraordinary, unusual or excessive demand for electrical or other utility service in an amount reasonably determined by Landlord to be due for such extraordinary, unusual or excessive demand. These unusual costs include, but are not limited to, 24-hour service, high consumption equipment, high concentration lighting, additional HVAC supplement for equipment or lighting-induced heat build-up and installation of metering equipment. Subject to the Alterations provisions of Section 13, Landlord shall have the right to install, at Tenant's sole cost and expense, submeters and related equipment, relating to Tenant's extraordinary, unusual or excessive use of electrical or other utilities services. If Landlord consents thereto (which consent may not be unreasonably withheld or delayed), additional Building riser capacity for electricity or other utility services may be provided, and the cost of installation thereof, plus fifteen percent (15%) thereof for overhead, shall be paid by Tenant upon Landlord's demand. If Tenant fails to make any payment hereunder, Landlord may, upon

forty-five (45) days prior written notice to Tenant, and in addition to Landlord's other remedies under this Lease, discontinue any or all of such additional or after-hours services.

For HVAC and humidity control systems requiring special operating hours or other conditions which necessitate the use of self-contained units not served by the Building HVAC system (a "Special System"), Landlord shall furnish chilled water and/or electrical power to Tenant, at Tenant's sole cost and expense but without markup, profit, overhead costs, or other usage fees, for Tenant's use in installing and operating one or more Special Systems.

8.3 Interruption in Services. Landlord may, upon advance notice to Tenant when possible, curtail or temporarily terminate any service to make alterations, repairs or improvements, and Landlord may, upon advance notice to Tenant when possible, curtail or temporarily terminate any service due to breakdown, accident, weather, strikes, labor disputes, fuel or material scarcity, governmental or other lawful regulations or requirements, or failure of any corporation, firm or person with whom Landlord may contract for any such services, to furnish the same. Landlord shall use commercially reasonable efforts to promptly restore such service and otherwise avoid or minimize disruption to Tenant's operations. Failure to any extent to furnish or any stoppage or interruption of these defined services resulting from any cause beyond the reasonable control of Landlord shall not render Landlord liable in any respect for damages to property or business, nor be construed as an actual or constructive eviction, in whole or in part, nor relieve Tenant from any of its obligations under this Lease, nor entitle Tenant to any abatement or diminution of Rent, except as expressly provided for herein. Notwithstanding anything to the contrary herein contained, if any such failure to furnish any service or delay in furnishing said service continues, even though Landlord is not at fault, and provided such is not due to the fault of Tenant, for a period of at least three (3) consecutive business days or for a total of ten (10) business days in any twelve-month period, then Rent with respect to that portion of the Premises rendered Untenantable shall abate for the period commencing at the end of the third consecutive business day (or for each business day in excess of ten (10) in such twelve-month period) during which said service is not furnished to the extent the Premises are Untenantable by reason thereof of and ending on the date on which said service is substantially restored. Further, if such interruption continues for a total of sixty (60) days during any twelve-month period, Tenant shall have the right to terminate this Lease effective as of the date ten (10) days following written notice of election to terminate by Tenant to Landlord, unless such service is restored within such ten-day period. Notwithstanding the foregoing, Rent shall not abate, and Tenant shall have no right to terminate, in the event that Tenant is then in default under the terms of this Lease beyond the expiration of any applicable notice and cure period.

## **9. Quiet Enjoyment.**

Upon payment of the Rent and other charges as may be provided in this Lease, and performing all covenants and agreements herein contained on the part of Tenant as provided in this Lease, and subject in all cases to the terms, covenants and conditions in this Lease, Tenant shall peaceably and quietly have, hold and enjoy the Premises for the Term and subject to the terms and provisions hereof, against all parties lawfully claiming adversely thereto by, through or under Landlord.

## 10. Assignment and Subletting

10.1 Prohibited and Permitted Assignments. Except as hereinafter provided, Tenant shall not, either voluntarily or by operation of law, assign, mortgage, pledge, sell, hypothecate or transfer this Lease, or sublet the Premises or any part thereof, or permit or suffer the Premises or any part thereof to be used or occupied as work space, storage space, concession or otherwise by anyone other than Tenant or Tenant's employees, without the prior written consent of Landlord in each instance, which consent shall not unreasonably be withheld. Notwithstanding the foregoing: (i) any proposed or actual assignee or subtenant shall be required to have, as of the effective date of such assignment or sublease, a financial condition substantially equivalent to that which would reasonably be required of a new tenant who would be approved to occupy the space proposed to be assigned or subleased; (ii) there shall be no change in the Sole Permitted Use of the Premises by such assignee or subtenant; (iii) Landlord shall have no obligation to consent to any assignment of less than the entire Lease or to any sublease which would result in Tenant having subleased, in the aggregate, more than 167,600 square feet of Net Rentable Area; and (iv) any proposed assignment or sublease (other than pursuant to Section 10.10 hereof) shall be subject to the Recapture provisions of Section 11.1 hereof.

10.2 Requests for Landlord's Consent and Fee. Each request for consent to an assignment or subletting shall be made in writing at least thirty (30) days before the proposed effective date, and shall be accompanied by a copy of the proposed assignment or sublease and information relevant to Landlord's determination as to the financial and operational responsibility and appropriateness of the proposed assignee or sublessee, including but not limited to the intended use and/or required modification of the Premises, if any, together with a non-refundable fee of \$1,000.00, representing the sole and entire reasonable fee for Landlord's processing the request for consent. Tenant agrees to provide Landlord with such other and additional information and/or documentation as may be reasonably requested by Landlord. Landlord shall give its written consent to any such request (or provide a written refusal of consent together with the reasons therefor) within twenty (20) days after receipt of such request.

10.3 Assignees Bound by Lease. Any assignee or sublessee under this Lease shall, by reason of accepting such assignment or entering into such sublease, be deemed, for the benefit of Landlord, to have assumed and agreed to conform and comply with each and every term, covenant, condition and obligation herein to be observed or performed by Tenant during the term of said assignment or sublease, other than such obligations as are contrary to or inconsistent with provisions of an assignment or sublease to which Landlord has specifically consented in writing.

10.4 Excess Rent. The "net effective" rent or other consideration payable to Tenant in any permitted assignment or sublease shall not exceed the rent specified to be paid by Tenant under this Lease. In determining the "net effective" rent or other consideration payable to Tenant, reasonable expenses of the subject transaction, including brokerage commissions, attorneys' fees and disbursements, allowances, rent concessions, and construction costs shall be deducted from the amounts payable to Tenant under the applicable assignment or sublease. In no event shall the sale or other disposition of Tenant's furniture, fixtures and equipment in connection with any permitted sublease or assignment be deemed part of sublease rent or assignment consideration for purposes

of calculating the "net effective" rent or other consideration payable to Tenant. This Section 10.4 shall not apply to any assignment for which the consent of Landlord is not required hereunder.

10.5 Tenant Not Released. In the event of any approved or permitted sublease or assignment, Tenant shall not be released or discharged from any liability, whether past, present or future, under this Lease, including any Renewal Term of this Lease.

10.6 Changes of Ownership of Tenant. If Tenant is a corporation, any transfer of any of Tenant's issued and outstanding capital stock or any issuance of additional capital stock, as a result of which the majority of the issued and outstanding capital stock of Tenant is held by a Person who does not hold a majority of the issued and outstanding capital stock of Tenant on the date hereof shall constitute an assignment. If Tenant is a partnership or limited liability company, any transfer of any interest in the partnership or limited liability company, or any other change in the composition of the partnership or limited liability company which results in a change in the control of Tenant from the Person controlling the partnership or limited liability company on the date hereof shall constitute an assignment. If Tenant is a corporation whose shares of stock are not traded publicly, any transfer, on a cumulative basis, of twenty-five percent (25%) or more of the voting control of Tenant shall constitute an assignment.

10.7 Landlord's Right to Collect. Tenant hereby irrevocably assigns to Landlord all of Tenant's right, title and interest in and to, and hereby grants to Landlord the right to collect, all rents from any assignee of Tenant's interest in this Lease and from any subtenant of all or any part of the Premises, whether or not such assignment or sublease is in violation of this Section; provided that, so long as no Event of Default is in existence hereunder, Tenant may continue to collect rent from the assignee or sublessee, as the case may be. Landlord shall apply any amounts collected pursuant to the preceding sentence to the Rent reserved in this Lease, but neither any such assignment, subletting, occupancy or use, whether with or without Landlord's prior consent, nor any such collection or application, shall be deemed a waiver of any term, covenant or condition of this Lease or the acceptance by Landlord of such assignee, subtenant, occupant or user as tenant.

10.8 Effect of Prohibited Assignment. Any sale, assignment, hypothecation or transfer of this Lease or subletting of Premises that is not in compliance with this Section 10 shall be void and shall, at the option of Landlord, terminate this Lease.

10.9 Further Consents. The consent by Landlord to an assignment or subletting shall not relieve Tenant or any assignee of this Lease or sublessee of the Premises from obtaining the consent of Landlord to any further assignment or subletting or as releasing Tenant or any assignee or sublessee of Tenant from full and primary liability.

10.10 Assignment or Sublease to a Related Entity. Notwithstanding anything in this Section 10 or Lease to the contrary, Tenant shall have the absolute right, without the prior written consent of Landlord, but upon thirty (30) days prior notice to Landlord, to sublease the Premises in whole or in part, or to assign this Lease, to any Affiliate, or a successor entity to Tenant created by merger, consolidation, liquidation or reorganization, and/or an entity which acquires ownership of all or substantially all of the assets and/or stock of Tenant, whether or not there is a change in Tenant's

name (collectively hereinafter a "Related Entity"), and such Related Entity shall have the same rights and duties as Tenant hereunder. Notwithstanding the foregoing, there shall be no change in the Sole Permitted Use of the Premises by such Related Entity.

## **11. Recapture.**

11.1 In the event that: (i) Tenant desires to enter into any sublease or assignment of all or any portion of the Premise; (ii) such sublease or assignment would commence during any portion of the last five (5) years of the initial Term or Renewal Term of this Lease, as the case may be; and (iii) such sublease or assignment would expire or terminate within the last six (6) months of the initial Term or Renewal Term of this Lease, as the case may be, then in such event Landlord shall have the option to recapture from the Premises covered by this Lease the space proposed to be sublet or assigned by Tenant, effective as of the proposed commencement date of such sublease or assignment of said space by Tenant. Landlord may exercise said option by giving Tenant written notice (Landlord's "Recapture Notice") within twenty (20) days after receipt by Landlord of Tenant's notice of the proposed sublease or assignment or proposal to sublease or assign. If Landlord exercises said option, Tenant shall have the right to rescind the proposed sublease or assignment by notice to Landlord (Tenant's "Rescission Notice"), within twenty (20) days after receipt by Tenant of Landlord's Recapture Notice, in which said space shall continue to be included in the Premises without interruption. If Tenant does not elect to rescind, Tenant shall surrender possession of the proposed sublease or assigned space to Landlord on the effective date of recapture of said space from the Premises covered by this Lease, and neither party hereto shall have any further rights or liabilities with respect to said space under this Lease accruing after the effective date thereof. Provided, however, such recapture shall not release or discharge either party from any obligation that has accrued hereunder prior to such recapture. Effective as of the date of recapture of any subleased space of any portion of the Premises covered by this Lease pursuant to this paragraph, (i) the Rent shall be reduced in the same proportion as the number of square feet of Net Rentable Area of the Premises contained in the portion of the Premises so recaptured bears to the number of square feet of Net Rentable Area of the Premises contained in the Premises immediately prior to such recapture, and (ii) the Net Rentable Area of the Premises specified in Section 1.22 shall be decreased by the number of square feet of Net Rentable Area of the Premises contained in the portion of the Premises so recaptured. The provisions of this Section 11 shall not apply to an assignment or sublease to a Related Entity pursuant to Section 10.10 hereof.

## **12. Maintenance and Repairs.**

12.1 Landlord's Obligations. Landlord shall maintain, and keep in good order, condition, and repair and make repairs to and perform maintenance upon the exterior and structural elements, and exterior windows of, the Building and the Common Areas, and all Building systems, Building equipment, and Building facilities, including the electrical, plumbing, heating, ventilation and air conditioning, elevator, and life safety (including fire prevention/sprinkler) systems of the Building and the Common Areas, except that:

- (i) Landlord shall not be responsible for the maintenance, repair or replacement of: (a) any such systems located within the Premises which are supplemental or in addition to the Building's standard systems, whether installed

pursuant to the Work Letter or otherwise; and (b) any such systems as to which Tenant made changes or additions without the approval of Landlord; and

(ii) the cost of performing any of said maintenance or repairs caused by the negligence of Tenant, its employees, agents, servants, licensees, subtenants, contractors or invitees, or the failure of Tenant to perform its obligations under this Lease shall be paid by Tenant.

All such repairs and maintenance shall be performed so as to keep the Building in first class condition and repair and in compliance with all applicable Legal Requirements.

12.2 Tenant's Obligations. Except as otherwise set forth in Section 12.1, Tenant shall, throughout the term of this Lease, at Tenant's sole cost and expense keep the Premises and every part thereof in good condition and repair, except for ordinary wear and tear and damage due to casualty. Tenant shall also maintain and repair wiring, cabling or specialty lighting installed in the Premises by Tenant. Landlord shall maintain and replace all base Building lighting and Building standard ballasts located in the Premises. Tenant shall make all repairs and replacements to the Premises necessitated or caused by: (i) the acts or omissions of Tenant or Tenant's Group; or (ii) the use or occupancy or manner of use or occupancy of the Premises by Tenant, in either case except for ordinary wear and tear, and in either case except to the extent that insurance proceeds are available for damage due to casualty if covered by insurance.

12.3 No Abatement. There shall be no abatement or diminution of Rent and no liability of Landlord by reason of any injury or interference with Tenant's business arising from the making of any repairs or maintenance in or to any portion of the Premises, unless the Premises is made Untenantable for the conduct of Tenant's normal business operations for a period in excess of three (3) business days after notice from Tenant of such condition or if such Untenantability occurs more than a total of ten (10) business days in any twelve-month period. In all such events, Rent shall abate as to that portion of the Premises rendered Untenantable for the period commencing at the end of the third consecutive business day (or for each business day in excess of ten (10) in such twelve month period, as the case may be) during such period of Untenantability until the condition has been cured by Landlord. Landlord shall, at all times during the making of any repairs or maintenance in or to any portion of the Premises, use reasonable, good faith efforts to minimize interference with Tenant's use, access, occupancy or quiet enjoyment of the Premises and to protect Tenant's property located in the Premises from damage.

12.4 Landlord Self-Help Maintenance. If repairs or replacements become necessary which by the terms of this Lease are the responsibility of Tenant and Tenant fails to make the repairs or replacements or fails to be making diligent efforts to do so within thirty (30) days after notice from Landlord of such failure, (or, if such repair or replacement cannot be completed within such thirty (30) day period, and Tenant fails to be making diligent efforts to make such repairs or replacements; provided, however, that such repairs or replacements must be completed within one hundred twenty (120) days after such notice), Landlord may make the repairs or replacements and Tenant shall within ten (10) business after receipt of an invoice therefor pay to Landlord one hundred fifteen percent (115%) of the reasonable cost thereof.



12.5 Common Areas. The Common Areas and Complex shall be subject to the control, management, operation and maintenance of Landlord. Landlord shall have the right to construct, maintain and operate lighting and other facilities in the Building and in and on the Complex and Common Areas; to grant third-parties temporary rights of use thereof; from time to time to change the area, level, location or arrangement of parking areas and other facilities; to grant exclusive use of or lease the Common Areas to other persons; to temporarily close all or any portion of the Complex and Common Areas; to temporarily close all or any part of the parking areas or parking facilities within the Building; and to do and perform such other acts in and to the Building, the Complex and Common Areas as Landlord shall reasonably determine to be advisable, provided in all cases Tenant's access to and use of the Premises are not materially and adversely impaired. Landlord will operate and maintain the Common Areas in such manner, as Landlord, in its sole discretion, shall determine from time to time.

### 13. Alterations.

13.1 Alterations Require Landlord's Consent. In the event Tenant desires to make any alterations to the Premises after the Effective Date, Tenant's Alterations shall be subject to this Section 13 and to the As-Is Work Letter attached hereto as Exhibit "G" as long as the terms of said Work Letter are consistent with this Section 13, provided that, if there is a conflict between said Work Letter and the provisions of this Section 13, this Section 13 shall prevail. Tenant shall not make or cause to be made any Alteration in or to the Premises without the prior written consent of Landlord, which consent shall not be unreasonably withheld or delayed. Notwithstanding anything to the contrary contained in this Lease, Tenant may, without first obtaining Landlord's consent but upon prior notice to Landlord and presentation of appropriate documents, perform those Alterations which (i) do not require that a building permit be obtained under applicable law, (ii) are located exclusively within the Premises and not visible from adjacent space; and (iii) do not affect the Building systems ("Cosmetic Alterations"). Tenant shall not be permitted to make any Alteration which would adversely affect any life, safety, fire sprinkler, heating, ventilation, air conditioning, electrical or plumbing system or equipment without Landlord's prior written consent, which consent may be withheld for any reason whatsoever. If any Alterations are made by Landlord at Tenant's request, or are required due to any other Tenant Alteration on or to the Premises, such Alterations shall be at the sole cost and expense of Tenant plus fifteen percent (15%) representing Landlord's overhead costs.

13.2 Requirements. Notwithstanding Landlord's consent to any Alterations, all Alterations, whether made prior to or during the Term, shall be made and performed in conformity with and subject to the following provisions:

- (i) All Alterations shall be made and performed at Tenant's sole cost and expense and at such time and in such manner as Landlord may reasonably approve.
- (ii) Alterations shall be made only by contractors or mechanics approved by Landlord, which approval shall not be unreasonably withheld or delayed.

(iii) No Alteration shall adversely affect any part of the Building other than the Premises or adversely affect any service required to be furnished by Landlord to Tenant or to any other tenant or occupant of the Building.

(iv) All business machines and mechanical equipment shall be placed and maintained by Tenant in settings sufficient in Landlord's reasonable judgment to absorb and prevent vibration, noise and annoyance to other tenants or occupants of the Building.

(v) Tenant shall submit to Landlord reasonably detailed architectural and engineering plans and specifications for any proposed Alteration involving structural work, or otherwise requiring a consent hereunder (but only to the extent plans are customary for such Alteration). Tenant shall not commence any such Alteration without first obtaining Landlord's written approval of such plans and specifications, which approval shall not be unreasonably withheld, conditioned or delayed. Landlord reserves the right to retain an engineer to review plans and specifications for any Alterations that might affect or impair the structural integrity of the Building or any mechanical, electrical, HVAC or other Building system. The actual out of pocket cost of any such engineering review shall be paid by Tenant.

(vi) All Alterations shall be made in full compliance with all Legal Requirements and in accordance with the Rules and Regulations.

(vii) All materials and equipment to be incorporated in the Premises as a result of all Alterations shall be of good quality.

(viii) Tenant shall include in its contract documents for the Alterations a requirement that any contractor performing Alterations carry and maintain at all times during the performance of the work, at no expense to Landlord, a policy of (a) commercial general liability insurance with a combined single limit of not less than \$2,000,000 per occurrence for bodily injury and property damage, including contractual liability coverage, personal injury coverage, independent contractors coverage, completed operations coverage, contractor's protective liability coverage, and broad form property damage, with an endorsement naming Landlord, its parent, subsidiary and affiliated companies and its and their directors, officers, employees, representatives and agents, as additional insured(s); (b) workers' compensation complying with the laws of the State of Oklahoma and employer's liability with limits of \$500,000 each accident, \$500,000 disease each employee and \$500,000 disease policy limit; and (c) automobile liability insurance with a combined single limit of \$1,000,000 each occurrence for bodily injury and property damage to include coverage for all owned, non-owned, and hired vehicles, and shall use all commercially reasonable efforts to enforce such requirement. In each of the policies providing the required insurance herein, contractor agrees to waive and will require its insurers to waive any rights of subrogation or recovery they may have against Landlord, its parent, subsidiary and affiliated companies and its and their directors, officers, employees, representatives and agents. The policies providing the required

insurance shall be endorsed to provide to Landlord thirty (30) days (ten (10) days for non-payment) in advance of any non-renewal or cancellation of such policies. Prior to commencing Alterations hereunder, Tenant will deliver to Landlord contractor's certificate(s) of insurance evidencing the existence of the insurance and conditions required herein. Tenant shall be fully responsible to Landlord for any deficiencies in its contractor's insurance and shall defend, indemnify and hold harmless Landlord from or against any claim asserted or arising as a result of such deficiencies. Irrespective of the insurance requirements, the insolvency, bankruptcy, or failure of any such insurance company providing insurance for contractor, or the failure of any such insurance company to pay claims that occur will not be held to waive any of the provisions hereof. Landlord will not insure nor be responsible for any loss of or damage to, regardless of cause, property of any kind, including loss of use thereof, owned, leased or borrowed by contractor, its employees, agents or subcontractors.

(ix) Tenant shall indemnify, defend, and hold Landlord harmless from and against any and all claims, costs, expenses, damages and liabilities which may arise in connection with such work.

13.3 Landlord's Right to Monitor. Tenant shall permit Landlord, at Landlord's sole cost and expense, to monitor construction operations in connection with such work; provided, however, that such monitoring or right to monitor by Landlord and the approval or disapproval of plans and specifications for such work in any situation (when required hereunder) shall be for the Landlord's sole benefit and shall not constitute any warranty by Landlord to Tenant or any other person of the adequacy of the design, workmanship or quality of such work or materials for Tenant's intended use or impose any liability upon Landlord in connection with the performance of such work; provided, further, that any such monitoring shall not unreasonably interfere or delay the performance of such construction by Tenant.

13.4 Final Drawings. Tenant shall, within thirty (30) days of completion of any of its work, deliver to Landlord "as-built" architectural and engineering drawings and/or a CADD file of such work prepared and certified by a licensed architect and engineer.

13.5 Alterations Part of Building. Except for Tenant's Trade Fixtures, all Alterations to or on the Premises (including but not limited to carpets, drapes and anything bolted, nailed, plumbed or otherwise secured in a manner customarily deemed to be permanent) shall be deemed upon termination of this Lease to be a fixture inuring to the Building and becoming a part of the Premises and shall be and remain the property of Landlord without compensation or credit to Tenant and covered by Landlord's insurance therefor; provided however, Landlord may waive its ownership right as to any Alteration (a "Specialty Alteration"), such as an internal staircase or a raised floor, which is not standard for typical office uses, by written notification of same to Tenant at the time Landlord shall give its consent thereto. Any replacements of any Alterations deemed upon termination of this Lease to be property of Landlord, whether made at Tenant's expense or otherwise, shall be and remain the property of Landlord. Unless otherwise directed by Landlord, Tenant shall remove all Trade Fixtures and those Specialty Alterations of which Landlord has waived ownership from the Premises, upon the expiration or sooner termination of this Lease, at Tenant's expense,

and subject to the condition that (i) Tenant must repair any and all damage occasioned by the installation, use and/or removal of such Specialty Alteration, and (ii) the Premises must be promptly restored to its condition prior to installation thereof, normal wear and tear and damage from insured casualty excepted. In the event Tenant shall fail to remove the same, Landlord may do so on Tenant's behalf and at Tenant's expense.

13.6 Tenant's Right to Cure. If Tenant defaults under this Section by reason of making any Alteration not hereby authorized or by reason of failure to give any notice or to obtain any approval required herein, Tenant may, after receipt of notice of such default from Landlord, cure such default by promptly removing such Alteration and restoring the Premises to their former condition.

13.7 Directory. Landlord agrees to provide a directory of the names and locations of its tenants and to maintain the same at a convenient location in the lobby of the Building.

13.8 No Liens. Tenant shall not permit any lien or claim for lien of any mechanic, laborer or supplier or any other lien to be filed against the Complex, the Building, the Common Areas, the land which comprises the Complex, the Premises, or any part of such property arising out of work performed, or alleged to have been performed by, or at the direction of, or for the benefit of Tenant or otherwise arising from the acts or omissions of Tenant. If any such lien or claim for lien is filed, Tenant shall give notice to Landlord immediately upon becoming aware of such filing or claimed lien and Tenant shall within thirty (30) days after Tenant's actual knowledge of such filing, either have such lien or claim for lien released of record or shall deliver to Landlord a bond or other security in form, content, amount, and issued by a company reasonably satisfactory to Landlord indemnifying Landlord, the Building manager and others designated by Landlord against the total amount claimed and all costs and liabilities, including attorneys' fees, which may result from such lien or claim for lien and the foreclosure or attempted foreclosure thereof. If Tenant fails to have such lien or claim for lien so released or to deliver such bond to Landlord, Landlord, without investigating the validity of such lien, may pay or discharge the same and Tenant shall reimburse Landlord, within ten (10) business days after receipt of any invoice therefor, for the amount so paid by Landlord, including Landlord's interest expense and reasonable attorneys' fees.

#### **14. Allocation of Risks and Indemnification.**

14.1 Waiver of Subrogation. Tenant hereby waives any and all rights of recovery or subrogation Tenant or its insurance carrier may have against Landlord for loss or damage incurred by Tenant caused by fire or any of the risks covered by a standard "all risk" property insurance policy maintained by Tenant or any other insurance maintained by Tenant pursuant to this Lease, except to the extent that the insurance provided is invalidated by acts or omissions of Landlord, its employees or agents. Further, Landlord hereby waives any and all rights of recovery or subrogation Landlord or its insurance carriers may have against Tenant for loss or damage incurred by Landlord caused by fire or any of the risks covered by a standard "all risk" property insurance policy or any other insurance maintained by Landlord pursuant to this Lease (or based on a claim normally covered by an "all risk" property insurance policy to the extent Landlord is self-insured), except to the extent that the insurance provided is invalidated by acts or omissions of Tenant its employees or agents.

The effect of such waivers is not limited to the amount of insurance actually carried or required to be carried or to the actual proceeds received. The above waivers and covenants not to sue are further intended to bind each party's insurers providing insurance required hereunder, and each party agrees to obtain from their respective insurance companies permission to allow such party to waive the insurance companies' rights of subrogation.

14.2 Indemnities of Landlord and Tenant. Tenant shall indemnify and hold harmless Landlord and its successors and assigns from and against any and all claims arising from or in connection with (a) the conduct or management of the Premises or of any business therein, or any work or thing whatsoever done or any condition created by Tenant in or about the Premises during the Term of this Lease or, with respect to the Expansion Premises, during the period of time after the Effective Date and prior to the Commencement Date for Expansion Premises that Tenant may have been given access to the Expansion Premises, (b) any act, omission or negligence of Tenant in the Complex, (c) any accident, injury or damage whatever caused by Tenant occurring in, at or upon the Premises or the Complex; and (d) any breach or default by Tenant in the full and prompt payment and performance of Tenant's obligations under this Lease beyond any applicable notice and cure periods, including but not limited to the compliance with all Building Rules and Regulations by Tenant and Tenant's Group; together with all costs, expenses, and liability incurred in or in connection with each such claim or action or proceeding brought thereon, including without limitation all reasonable attorneys fees and expenses. Landlord shall indemnify and hold harmless Tenant and its successors and assigns from and against any and all claims arising from or in connection with (a) the operation or management of the Complex (exclusive of the Premises) or of any work or thing whatsoever done, or any condition created by Landlord in or about the Complex during or prior to the Term of this Lease, (b) any act, omission or negligence of Landlord in the Complex, (c) any accident, injury or damage whatever caused by Landlord or Landlord's Group occurring in, at or upon the Complex; and (d) any breach or default by Landlord in the full and prompt payment and performance of Landlord's obligations under this Lease beyond any applicable notice and cure periods; together with all costs, expenses, and liability incurred in or in connection with each such claim or action or proceeding brought thereon, including without limitation all reasonable attorneys fees and expenses.

14.3 Right to Perform. In the event of a party's failure to perform in accordance with this Section 14, the indemnified party, at its option, may so perform without relieving the other party of its obligations hereunder, and such other party shall reimburse the indemnified party for all reasonably necessary and documented costs and expenses, including attorneys' fees, incurred in so performing together with interest on the amount of such costs and expenses at the greater of (i) the highest rate permitted by law, or (ii) the prime rate of interest announced as charged from time to time by BOKF, NA, to its preferred commercial customers for ninety-day unsecured loans plus two (2) points (and if such rate ceases to be announced by BOKF, NA, then ten percent (10%) per annum) (the "Default Rate"), payable from the date incurred by the indemnified party until reimbursed by such other party.

14.4 Security. Security devices and services, if any, while intended to deter crime may not in given instances prevent theft or other criminal acts and it is agreed that Landlord shall not be liable, for injuries or losses caused by criminal acts of third parties and the risk that any security device or service may malfunction or otherwise be circumvented by a criminal is assumed by Tenant,

except to the extent that such criminal acts are the result of the gross negligence or willful misconduct or omissions of Landlord. Tenant may at Tenant's cost obtain insurance coverage to the extent Tenant desires protection against such criminal acts.

14.5 Other Tenants. Landlord and Tenant shall not be liable to the other party for any damages arising from any act or neglect of any other tenant in the Building or Complex.

## 15. Insurance.

15.1 The Tenant, at its expense, will carry or cause to be carried and maintained in force throughout the entire term of this Lease insurance as described below with insurance companies licensed to do business in the State of Oklahoma and which are rated A- or better by A.M. Best Company or similar rating from another recognized rating agency, or through underwriters at Lloyd's London. The limits and insurance set forth below are minimum limits and types and will not be construed to limit Tenant's liability or represent the types and limits of insurance a reasonable and prudent business would maintain. All costs and deductible amounts associated with the required insurance will be for the sole account of the Tenant.

- (A) Workers' Compensation insurance complying with the laws of the State or States having jurisdiction over each employee, and Employer's Liability with limits of \$500,000 each accident, \$500,000 disease each employee, and \$500,000 disease policy limit.
- (B) Commercial General Liability insurance on an occurrence form with a combined single limit of \$2,000,000 each occurrence, and annual aggregates of \$2,000,000, for bodily injury and property damage, including coverage for premises-operations, blanket contractual liability, broad form property damage, personal injury liability, independent contractors, and products/completed operations.
- (C) Automobile Liability insurance with a combined single limit of \$1,000,000 each occurrence for bodily injury and property damage to include coverage for all owned, non-owned, and hired vehicles.
- (D) Property insurance on an "all risk" basis for the full replacement value of Tenant's property (including fixtures, Alterations, Tenant's trade fixtures, furnishings, equipment and all other items of personal property of Tenant or which Tenant is required to replace under this Lease in the event of loss, damage or destruction) located in the Premises.
- (E) Such other insurance as Landlord may reasonably require from time to time with ninety (90) days prior written notice to Tenant, so long as such other insurance is at such time customarily required by landlords of Class A office space in buildings of comparable size and quality in downtown Tulsa, Oklahoma.

15.2 Insurance Policies. Under the policies described in 15.1(B) and 15.1(C) above, Landlord, its parent, subsidiary and affiliated companies and its directors, officers, employees, representatives and agents will be named as additional insureds to the extent of the indemnifications provided by Tenant under this lease. Under the policy described in 15.1(D) above, Landlord, its

parent, subsidiary and affiliated companies shall be named as a loss payee to the extent of their respective interests. Any added cost associated with naming these additional insureds/loss payee shall be borne by Tenant. The policies described in 15.1(B) and 15.1(C) above will be primary insurance with respect to the additional insureds, and any other insurance maintained by the additional insureds is excess and not contributory with this insurance. The liability limits required of Tenant hereunder may be met under a primary or umbrella or excess liability policy or any combination thereof.

15.3 Non-Renewal or Cancellation. The policies providing Tenant's required insurance shall be endorsed to provide thirty (30) days (10 days for non-payment of premium) to Landlord from the insurance company in advance of any non-renewal or cancellation. Prior to Lease commencement and at or prior to the expiration of any policies providing such insurance, Tenant will deliver to Landlord certificates of insurance to Landlord, evidencing the existence of the insurance required above.

15.4 Other Property. Landlord will not insure nor be responsible for any loss or damage, regardless of cause, to property of any kind, including loss of use thereof, owned, leased or borrowed by the Tenant or its employees, servants, agents or contractors.

15.5 Landlord's Insurance. Landlord shall, during the Term (as the same may be extended) carry and maintain in full force and effect (a) property insurance in an amount sufficient to pay for the full replacement cost of the restoration or replacement of the Building and Landlord's property therein, (b) commercial general or excess liability insurance with a combined single limit of not less than \$2,000,000 each occurrence, and annual aggregates of not less than \$2,000,000, for bodily injury and property damage, including coverage for premises-operations, blanket contractual liability, broad form property damage, personal injury liability, independent contractors, and products/completed operations, and (c) Workers' Compensation insurance complying with the laws of the State or States having jurisdiction over each employee, and Employer's Liability. Landlord retains sole right to decide to restore or replace the Building should loss or damage occur. Landlord shall have the right to self-insure any or all of the insurance required herein.

15.6 Waiver of Subrogation. All insurance policies of property insurance carried by Landlord or Tenant in covering the Premises, its contents, and the property of either of them in the Premises will waive any right of the insurer to subrogation against the other to the extent permitted by law.

## **16. Default and Remedies.**

16.1 Tenant's Default. The following shall be "Events of Default" by Tenant under this Lease:

- (i) Tenant does not pay any installment of Rent when due and thereafter fails to cure such failure within ten (10) days after notice of such failure is given (provided, however, that Landlord shall not be required to give notice of non-payment more than twice in any twelve month period); or

(ii) Tenant fails to perform any other obligation under this Lease and thereafter fails to cure such breach within thirty (30) days after notice thereof is given (or if such cure reasonably takes more than thirty (30) days, if Tenant fails to commence such cure within such thirty (30) day period and thereafter diligently prosecute same to completion, but in any event no more than one hundred twenty (120) days after notice thereof). Landlord shall include in such notice a reasonably detailed description of the obligation which Tenant has failed to perform; provided, however, that any failure of Landlord to include such description, or the failure of any such description to be sufficiently specific, shall not render the notice ineffective; or

(iii) An execution or attachment lien shall be issued against substantially all of Tenant's property, and such execution or attachment shall not be vacated or removed by Court order, bonding or otherwise, within a period of ninety (90) days after the issuance thereof; or

(iv) Any petition is filed by or against Tenant under any section or chapter of the Bankruptcy Code, as amended, or under any similar law or statute of the United States or any state thereof and not vacated within ninety (90) days; or

(v) Tenant becomes insolvent or makes a transfer in fraud of creditors; or

(vi) Tenant makes a general assignment for the benefit of creditors; or

(vii) A receiver is appointed for Tenant or substantially all of Tenant's assets.

16.2 Landlord's Remedies. In the event of the occurrence of any such Events of Default, Landlord shall have the option to pursue any one or more of the following remedies or any other remedies provided by law:

(i) Lease Termination. Landlord may terminate this Lease by giving written notice to Tenant of its election to do so in which event Tenant shall immediately surrender the Premises to Landlord, and if Tenant fails to do so, Landlord may, without prejudice to any other remedy which he may have for possession or arrearages in rent, enter upon and take possession and expel or remove Tenant and any other person who may be occupying the Premises or any part thereof, either by summary dispossession proceedings or any suitable action or proceeding at law or in equity, without being liable for prosecution on any claim or damage which Tenant might incur or have. At Landlord's demand (whether or not Landlord elects to terminate this Lease), Tenant agrees to pay to Landlord Accelerated Rent. "Accelerated Rent" means the total amount of Rent due hereunder through the Termination Date, less the fair market rental value of the Premises through the Termination Date, discounted to present value using a discount rate equal to the prime rate, as published in the Wall Street Journal on the date closest to the date that the Event of Default occurred, which amount shall



be accelerated and due in one lump sum payment upon demand and shall bear interest from the Event of Default at the Default Rate until paid.

(ii) Re-Entry. Landlord may enter upon and take possession of the Premises and expel or remove Tenant and any other person who may be occupying said Premises or any part thereof, either by summary dispossession proceedings or any suitable action or proceeding at law or in equity, without being liable for prosecution on any claim or damage which Tenant might incur, and Landlord shall use reasonable efforts to relet the Premises and mitigate Tenant's damages. In the event rent for reletting of the Premises is higher than Rent under the terms of this Lease, then such excess shall belong to Landlord and Tenant shall have no claim therefor. In the event that the rent received for reletting of the Premises is less than the Rent due under the terms of this Lease, then Tenant shall be liable to the Landlord for payment of the deficiency. Tenant further agrees to pay Landlord on the several rent days specified hereunder, as liquidated damages, sums equivalent to the monthly Rent reserved hereunder, less the avails of reletting, if any, and any additional amounts as provided in Section 16.2(v) hereof. In any event, however, unless the Lease is terminated, Tenant shall be liable for all Rent, whether in or out of possession of the Premises, to the end of the Term.

(iii) Self Help. Without terminating the Lease or removing Tenant from the Premises, Landlord may enter upon the Premises (but without causing a disturbance of the peace), without being liable for prosecution on any claim or damage which Tenant might incur or have, and do whatever Tenant is obligated to do under the terms of this Lease; and Tenant agrees to reimburse Landlord, on demand, for any reasonably necessary and documented expenses which Landlord may incur in thus effecting compliance with Tenant's obligations under this Lease, and Tenant further agrees that Landlord shall not be liable for any damages resulting to Tenant from such action, unless caused by the gross negligence or intentional act of Landlord or otherwise.

(iv) Property of Tenant. Any property belonging to Tenant or to any person holding by, through or under Tenant, or otherwise found upon the Premises at the time of re-entry or termination by the Landlord and not removed by Tenant pursuant to Section 18, shall be dealt with by Landlord in compliance with 41 O.S. §§ 51-52, as amended. Notwithstanding the foregoing: (x) any notice given in compliance with Section 27 of this Lease shall be deemed sufficient notice for all purposes of the foregoing statutes; and (y) Landlord shall have no obligation to Tenant to notify any parties claiming any interest in such property other than parties whose name and correct mailing address have been provided by Tenant to Landlord.

(v) Reletting, Costs of Alterations and Damages. Upon any reletting, Tenant shall be immediately liable to pay to Landlord, without further demand or process of law, the reasonably necessary and documented cost and expense of reletting, the documented cost of any alterations and repairs reasonably deemed

necessary by Landlord to effect reletting, Landlord's reasonable attorney fees and reasonably necessary and documented administrative costs occasioned by such reletting, leasing commissions, whether payable in installments or not, and the full amount, if any, by which the Rent reserved in this Lease for the period of reletting (but not beyond the term of this Lease) exceeds the amount agreed to be paid as rent for the Premises for the period of reletting. If Tenant has been credited with any rent to be received by reletting and the rent shall not be promptly paid to Landlord by the new tenant, Tenant shall immediately be liable to pay any deficiency to Landlord. For purposes of calculating damages under this Section 16.2 after an Event of Default, occupancy of all or any part of the Premises by Landlord or any Affiliate of Landlord without a lease, or with a lease to an Affiliate providing below market rent, shall be treated as if such occupant paid fair market value for such occupancy.

(vi) Additional Remedies. In the event of any breach by Tenant of any covenants, agreements, terms or conditions of this Lease, Landlord shall be entitled to enjoin the breach, and in addition to the rights and remedies provided hereunder, shall have any other right or remedy allowed by law or equity. The provisions of this Section shall be construed so that remedies of Landlord shall be available to Landlord to the full extent that they are valid or enforceable under the laws of the State of Oklahoma.

(vii) Remedies Cumulative. The rights and remedies given to the parties shall be cumulative and the exercise of any of them shall not be deemed to be an election excluding the exercise by any party at any time of a different or inconsistent remedy, and shall be deemed to be given to such party in addition to any other and further rights granted to the Landlord by the terms hereof, or by law. The failure of any party at any time to exercise any right or remedy herein granted shall not be deemed to operate as a waiver of such right or remedy.

(viii) No Waiver. No act or thing done by Landlord or its agents during the Term shall be deemed an acceptance of an attempted surrender of the Premises, and no agreement to accept a surrender of the Premises shall be valid unless made in writing and signed by Landlord. No re-entry or taking possession of the Premises by Landlord shall be construed as an election on its part to terminate this Lease, unless a written notice of such intention to be given to Tenant. Notwithstanding any such reletting or re-entry or taking possession, Landlord may at any time thereafter elect to terminate this Lease for a previous default. Landlord's acceptance of Rent or other sums due hereunder following an event of default shall not be construed as Landlord's waiver of such event of default. No waiver by Landlord or Tenant of any violation or breach of any of the terms, provisions and covenants herein contained shall be deemed or construed to constitute a waiver of any other violation or breach of any of the terms, provisions and covenants herein contained. Forbearance to enforce one or more of the remedies herein provided upon the occurrence of default shall not be deemed or construed to constitute a waiver of any other violation or default. The failure of Landlord to enforce the Rules and Regulations of the Buildings against Tenant or any other tenant in the Buildings shall not be deemed a waiver thereof; provided that Landlord shall not enforce the Rules and Regulations in an unreasonable

or discriminatory manner. No provision of this Lease shall be deemed to have been waived unless such waiver be in writing signed by the party against whom such waiver is asserted.

16.3 Landlord's Default. Landlord shall not be in default under this Lease unless: (i) Landlord fails to pay any sum of money required to be paid by Landlord to Tenant or satisfy any non-monetary obligation which Landlord has failed to perform, and such failure shall continue for thirty (30) days after notice thereof is delivered by Tenant to Landlord; provided, however, that if such cure reasonably takes more than thirty (30) days, Landlord shall not be in default so long as Landlord commences such cure within such thirty (30) day period and thereafter diligently prosecutes same to completion, but in any event no more than one hundred twenty (120) days after notice thereof. Tenant shall include in such notice a reasonably detailed description of the obligation which Landlord has failed to perform; provided, however, that any failure of Tenant to include such description, or the failure of any such description to be sufficiently specific, shall not render the notice ineffective. If Landlord shall default, then Tenant, without being obligated to and without thereby waiving such default, shall have the following remedies, which remedies shall be cumulative and shall be in addition to those remedies Tenant may have at law or in equity: (a) terminate this Lease upon notice to Landlord, (b) bring an action against Landlord seeking compensatory and/or injunctive relief, or (c) incur any reasonable expense (or, in the case of any payment Landlord is obligated to make, make such payment), necessary to perform the covenant, warranty, duty, or obligation of Landlord specified in such notice. The full amount of the reasonable costs and expenses incurred by Tenant (including reasonable attorneys' fees in connection with Tenant performing such obligation) or the payment so made, together with the amount of any reasonable attorneys' fees in instituting, prosecuting or defending any action or proceeding by reason of any default of Landlord hereunder, shall, at Tenant's option, either be: (i) paid by Landlord to Tenant within thirty (30) days after receipt of an invoice therefor with interest at the Default Rate thereon from the date paid by Tenant to the time paid by Landlord, or (ii) deducted by Tenant from the next due Rent under this Lease, together with interest at the Default Rate, from the date due until paid, until Tenant has been fully reimbursed for Tenant's necessary and reasonable expenditures. The provisions of this Section 16.3 shall not limit or modify the Limitation of Landlord's Liability provided for in Section 28.19 hereof.

**17. Attorney's Fees.**

In any action brought by a party hereto to enforce the obligations of the other party hereto or to recover possession of any portion of the Premises, the prevailing party shall be entitled to collect from the opposing party to such action such prevailing party's reasonable litigation costs and attorney's fees and expenses (including court costs, reasonable fees of accountants and experts, and other expenses incidental to the litigation).

**18. Surrender of Premises.**

Upon the expiration or termination of this Lease or termination of Tenant's right of possession of the Premises, Tenant shall surrender and vacate the Premises immediately and deliver possession thereof to Landlord in a clean and good condition, ordinary wear and tear and loss or damage by fire or other casualty which Tenant is not obligated to insure or repair excepted, and shall surrender

all keys for the Premises to Landlord at the place then fixed for the payment of rent. Upon any termination, Tenant shall remove from the Premises all unattached and movable Trade Fixtures, Specialty Alterations which Landlord has required to be removed pursuant to Section 13.5, and personal property of Tenant ("Tenant Property") without credit or compensation from Landlord for the costs of removal, provided Tenant immediately shall repair all material damage resulting from such removal and shall restore the Premises to its pre-existing condition and repair prior to removal. In the event possession of the Premises is not delivered to Landlord when due, Section 28.9 hereinbelow shall control. If Tenant, prior to such time, shall fail to remove any Tenant Property, Landlord shall remove and deal with same in compliance with 41 O.S. §§ 51-52, as amended. Notwithstanding the foregoing: (x) any notice given in compliance with Section 27 of this Lease shall be deemed sufficient notice for all purposes of the foregoing statutes; and (y) Landlord shall have no obligation to Tenant to notify any parties claiming any interest in such property other than parties whose name and correct mailing address have been provided by Tenant to Landlord.

**19. Damage by Fire or Other Casualty.**

19.1 Substantial Untenantability. If either the Premises or the Building is rendered substantially Untenantable by fire or other casualty, Landlord shall elect by giving Tenant written notice within sixty (60) days after the date of said fire or casualty (unless Landlord does not have access to the Premises or the Building due to said fire or casualty, in which case the notice period under this Section 19.1 shall not begin to run until Landlord gains access to the Premises or the Building), either to:

- (i) terminate this Lease as of the date of the fire or other casualty if Landlord's good faith estimate of the time required to substantially complete such repair or restoration will exceed one hundred eighty (180) days from the date of such notice and if Landlord is also terminating the lease of other tenants similarly situated subject to such casualty with a remaining lease term approximating the same period of time as that remaining in the Term; or
- (ii) proceed to repair or restore the Premises or the Building (other than Alterations installed by or for the benefit of Tenant, Tenant's trade fixtures, furnishings, equipment and all other items of personal property installed by or for the benefit of Tenant) to substantially the same condition as existed immediately prior to such fire or casualty. For avoidance of doubt, Landlord shall have no obligation to repair or restore any tenant improvements, including without limitation flooring, interior walls and partitions within the Premises, cabinetry, fixtures and interior ceilings.

19.1.1 If Landlord elects to proceed pursuant to subsection (ii) above, Landlord's notice shall contain Landlord's good faith estimate of the time required to substantially complete such repair or restoration. If such estimate indicates that the time so required will exceed one hundred eighty (180) days from the date of the notice, then Tenant shall have the right to terminate this Lease as of the date of such casualty by giving written notice to

Landlord not later than twenty (20) days after the date of Landlord's notice which termination shall be effective as of the later to occur of (i) the date of such casualty or (ii) the date Tenant vacates the Premises. Tenant shall vacate the Premises within thirty (30) days of the date such notice of termination is given. If Landlord's estimate indicates that the repair or restoration can be substantially completed within one hundred eighty (180) days, or if Tenant fails to exercise its said right to terminate this Lease within the twenty (20) days as provided immediately above, this Lease shall remain in force and effect. Provided, however, in the event such repair or restoration is not substantially completed within two hundred ten (210) days after the date of Landlord's notice, Tenant may terminate this Lease by thirty (30) days' prior written notice to Landlord; except that if Landlord completes such restoration within said thirty-day period, this Lease will not terminate notwithstanding Tenant's notice of termination.

19.2 Insubstantial Untenantability. If either the Premises or the Building is damaged by fire or other casualty but is not rendered substantially Untenantable, then Landlord shall diligently proceed to repair and restore the damaged portions thereof, other than Alterations installed by or for the benefit of Tenant, Tenant's trade fixtures, furnishings, equipment and other items of personal property installed by or for the benefit of Tenant, to substantially the same condition as such existed immediately prior to such fire or casualty, unless such damage occurs during the last twelve (12) months of the Term and such damage cannot be substantially repaired within forty-five (45) days from the date of casualty (as determined in good faith by Landlord or Landlord's architect or engineer), in which event Landlord or Tenant shall have the right to terminate this Lease as of the date of such fire or other casualty by giving written notice to the other within thirty (30) days after the date of such fire or other casualty.

19.3 Rent Abatement. If all or any part of the Premises are damaged by fire or other casualty as hereinabove provided, all Rent shall abate for that part of the Premises which are Untenantable on a per diem and proportionate area basis from the date of the fire or other casualty causing such damage (provided such Untenantability shall continue for at least three (3) business days after the date of such fire or other casualty) until such time as Landlord or Tenant, as applicable, has substantially completed the repair and restoration work in the Premises which it is required to perform, provided, that as a result of such fire or other casualty, Tenant does not occupy the portion of the Premises for the conduct of its normal business operations which are Untenantable during such period. Notwithstanding the foregoing, in the event any casualty to the Premises or Building is caused in whole or in part by the negligence or intentional act of Tenant, its agents, employees, contractors, servants, guests or invitees, then Rent shall abate only so long as Tenant has commenced to repair the Premises as required by this Lease and Tenant continues such efforts with due diligence.

19.4 Tenant's Restoration. If all or any part of the Premises are damaged by fire or other casualty and this Lease is not terminated, Tenant shall promptly and with due diligence repair and restore the leasehold improvements (other than improvements which Tenant is permitted to remove in accordance with the terms of this Lease upon expiration of the Lease) and personal property previously installed by Tenant pursuant to this Lease.

19.5 Insurance Proceeds Regarding Leasehold Improvements. In case of any insurance proceeds payable to Landlord and Tenant, for damage to the leasehold improvements, Tenant agrees to endorse checks for such sums promptly to the order of Landlord to be held in trust by Landlord as hereinafter provided. Landlord shall retain such proceeds to the extent of its interest therein if the Lease is terminated pursuant to the provisions hereinabove contained. If however, the Lease is not terminated as provided hereinabove, Tenant or its contractors shall be entitled to payment from such retained funds for repairing, restoring or reconstructing the leasehold improvements promptly upon Tenant's presenting to Landlord customary waivers of materialmen's and mechanic's liens or claims and an itemized statement of work performed showing the amount charged therefor. Further, such work shall be performed by Tenant in accordance with the terms, provisions and conditions of a work letter agreement to be entered into by the parties hereto at such time in a form then in general use by Landlord and reasonably acceptable to Tenant for work performed in or upon the Building. If, upon completion of the repair or restoration, any such insurance proceeds are left unexpended, Landlord shall pay the same to Tenant, upon demand. If the insurance proceeds are insufficient for the cost of the repair or restoration, Tenant shall pay the same to the extent of such insufficiency.

19.6 Landlord's Right to Repair or Restore. If Tenant does not commence promptly to repair or restore the damage or destruction to the leasehold improvements or if, having commenced the repair or restoration, Tenant does not proceed diligently to complete the same within thirty (30) days after written notice from Landlord, Landlord shall be entitled at any time thereafter to enter the Premises and repair or restore the damage or destruction and to apply any insurance proceeds held by it as hereinabove provided to the payment of the cost thereof. If the insurance proceeds are insufficient for the cost of the repair or restoration, Tenant shall pay to Landlord, upon demand and as additional rent as the work progresses, such reasonably necessary and documented amounts as shall from time to time be shown to be due and payable by Tenant.

## **20. Eminent Domain.**

20.1 Permanent Taking. If all or any part of the Premises, Complex or the Building is permanently taken or condemned by any competent authority for any public use or purpose (including a deed given in lieu of condemnation) which renders the Premises substantially Untenantable, this Lease shall terminate as of the date title vests in such authority, and Net Base Rent shall be apportioned as of such date.

20.2 Insubstantial Taking. If any part of the Premises is taken or condemned for any public use or purpose (including a deed given in lieu of condemnation) and this Lease is not terminated pursuant to Section 20.1, Total Base Rent (and Tenant's Total Proportionate Share) shall be reduced for the period of such taking by an amount which bears the same ratio to the Total Base Rent then in effect as the number of square feet of Net Rentable Area of the Premises so taken or condemned bears to the number of square feet of Net Rentable Area of the Building. Landlord, upon receipt and to the extent of the award in condemnation or proceeds of sale, shall make necessary repairs and restorations (exclusive of leasehold improvements and personal property installed by Tenant) to restore the Premises remaining to as near its former condition as circumstances will permit. Rent shall abate for that portion of the Premises rendered Untenantable until such restoration is completed. Upon the taking or condemnation described in this Section 20.2, the Net Rentable Area of the

Premises shall be reduced for all purposes under this Lease by the number of square feet of Net Rentable Area of the Premises so taken or condemned as determined and certified by an independent, professional architect reasonably selected by Landlord, at Landlord's expense, and Tenant's Total Proportionate Share shall be appropriately reduced.

20.3 Compensation. Landlord shall be entitled to receive the entire price or award from any such sale, taking or condemnation without any payment to Tenant, and Tenant hereby assigns to Landlord Tenant's interest, if any, in such award; provided, however, Tenant shall have the right to separately pursue against the condemning authority an award in respect of the loss, if any, to the then unamortized value of leasehold improvements paid for by Tenant without any credit or allowance from Landlord. Tenant shall also have the right to seek a separate award for the taking or condemnation of its leasehold interest, loss of personal property and moving expenses by such judicial proceeding.

## **21. Rules and Regulations.**

Tenant shall (and shall cause Tenant's Group to) abide by, and keep and observe all reasonable rules and regulations ("Rules and Regulations") which Landlord may make from time to time for the management, reputation, safety, care, or cleanliness of the Building, the Common Areas and/or the Premises, and/or the operations and maintenance thereof and the equipment therein, or for the comfort of Tenant and the other tenants of the Building. The current Rules and Regulations are attached hereto as Exhibit "E". Landlord shall have the right to make reasonable changes to the Rules and Regulations (which changes shall become effective as to Tenant upon delivery of a copy of such amended Rules and Regulations to Tenant) and waive in writing any or all of the Rules and Regulations in the case of any one or more tenants, provided in all events Landlord shall not enforce the Rules and Regulations in an unreasonable or discriminatory manner. All such Rules and Regulations are of the essence hereof without which this Lease would not have been entered into by the Landlord, and any breach of any provision of the Rules and Regulations by the Tenant which is material in the judgment of the Landlord shall constitute a default hereunder. If there is a conflict between the provisions contained in this Lease and the Rules and Regulations, the provisions of this Lease shall prevail.

## **22. Landlord's Rights.**

22.1 Landlord shall have the following rights exercisable without notice (except as expressly provided to the contrary), and without being deemed an eviction or disturbance of Tenant's use or possession of the Premises or giving rise to any claim for set-off or abatement of Rent: (1) to change the street address of the Building or the Complex upon thirty (30) days' prior written notice to Tenant; (2) except as provided in Section 23 hereof, to reasonably designate and/or approve, install, affix and maintain all signs, including Tenant plaques, logos and graphics, on the exterior and/or interior of the Building and in and about the Complex; (3) except as provided in Section 23 hereof, to reasonably designate and/or approve prior to installation, all types of signs, window shades, blinds, drapes, awnings or other similar items, and all internal lighting that may be visible from the exterior of the Premises; (4) to display the Premises to prospective tenants during the last twelve (12) months of the Term (as the same may be extended) at reasonable hours upon reasonable prior notice to Tenant, which may be verbal; provided that Landlord shall use reasonable, good faith efforts to minimize interference with Tenant's use, access, occupancy or quiet enjoyment of the

Premises and to protect Tenant's property located in the Premises from damage during any such authorized entry; (5) to change the arrangement of entrances, doors, corridors, elevators and stairs in the Building, provided Tenant's access to the Premises is not materially adversely affected thereby; (6) except as provided in Section 29.3 hereof, to grant to any party the exclusive right to conduct any business or render any service in or to the Building, provided that any such grant shall not restrict Tenant's use and occupancy of the Premises for the Sole Permitted Use; (7) to have access for Landlord and other tenants of the Building to any mail chutes and boxes located in or on the Premises to the extent that it may be permitted by the United States Postal Service; (8) to close the Building after normal business hours, except that Tenant and its employees and invitees shall be entitled to admission at all times (on a twenty-four hour, seven day a week basis) under such reasonable regulations as Landlord prescribes for security purposes; (9) to take any and all reasonable measures, including inspections and repairs to the Premises or to the Building, as may be necessary or desirable for the operation, safety, preservation, or protection thereof; provided that Landlord shall, at all times during the making of any such inspections or repairs in or to any portion of the Premises, use reasonable, good faith efforts to minimize interference with Tenant's use, access, occupancy or quiet enjoyment of the Premises and to protect Tenant's property located in the Premises from damage; (10) subject to Tenant's Bank Security, to retain at all times master keys or pass keys to such areas of the Premises as Tenant shall from time to time reasonably designate, subject to such reasonable regulations and controls by Tenant as are necessary to ensure the security of Tenant's operations and compliance with present and future bank security Legal Requirements; provided that Tenant covenants that: (i) master keys or pass keys for all areas of the Premises for which Landlord shall not be given keys (other than safes and vaults) shall be available on the Premises at all times for use by Landlord in event of emergency, and (ii) Tenant shall keep Landlord informed at all times of the person or persons in control of such keys; (11) to install, operate and maintain security systems which monitor and identify, by closed circuit television or otherwise, all persons entering and leaving the Building or the Complex; (12) to install and maintain pipes, ducts, conduits, wires and structural elements located in the Premises which serve other parts or other tenants of the Building or any other property, provided such pipes, ducts, conduits, and wires are hidden behind walls, floors or ceilings, and further provided that such structural elements shall not unreasonably interfere with Tenant's use of the Premises (it being agreed that in the case of any reduction in the Net Rentable Area of the Premises, Total Base Rent and Tenant's Total Proportionate Share shall be proportionately reduced); (12) to reasonably alter, amend and change the Rules and Regulations for protection of the health, safety and welfare of persons or property; and (13) to enter the Premises at all reasonable times following notice of such desired entry to Tenant, which may be oral, provided that Tenant shall make available to Landlord a designated individual within the Premises to accompany Landlord in such instance to examine the Premises and to show such to prospective purchasers, mortgagees, or to public officials lawfully having an interest therein, provided that Landlord shall use reasonable, good faith efforts to minimize interference with Tenant's use, access, occupancy or quiet enjoyment of the Premises and to protect Tenant's property located in the Premises from damage during any such authorized entry. In the event Tenant fails to make available to Landlord an individual to accompany Landlord in any particular instance, Landlord shall not be required to be accompanied by a Tenant designee.

22.2 For the avoidance of doubt, Landlord shall not be required to give notice to Tenant of any entry on to the Premises in the following circumstances: (1) in the case of emergency as reasonably determined by Landlord; (2) at any time during the Term of this Lease that Landlord's



maintenance staff enter the Premises to perform maintenance obligations of the Landlord under the provisions of this Lease; or (3) at any time during the Term of this Lease that Landlord's security staff enter the Premises to perform security services; provided that Landlord and Landlord's staff shall use reasonable, good faith efforts to minimize interference with Tenant's use, access, occupancy or quiet enjoyment of the Premises and to protect Tenant's property located in the Premises from damage during any such authorized entrance. Said enumerated rights in this Section 22 are in addition to all other rights of Landlord afforded under law and the terms of this Lease.

### **23. Tenant's Signage.**

23.1 Tenant shall have the right to install appropriate signs, including Tenant's name and/or logo, and such other information as Tenant shall deem appropriate on the entrance doors to the Premises and at suitable and convenient locations in the Premises, subject to the prior written consent of Landlord, which consent shall not be unreasonably withheld or delayed. Except as provided in this Section 23.1 and the Existing License Agreement as defined in Section 23.2 hereinbelow, Tenant shall not erect or install any sign or other type display whatsoever either upon the exterior of the Building or the Complex, upon or in any window, or in any lobby, hallway or door therein located, without the prior express written consent of Landlord, which consent Landlord may withhold in its discretion. All signs shall be installed at Tenant's sole cost and expense, including repair, maintenance and removal. Notwithstanding the foregoing, Landlord and Tenant agree and acknowledge that all signs, including the existing monument signs located on 1st Street and 2nd Street outside the Building, the Tenant's existing logo sculpture in the south lobby of the Building, and all other signs existing or installed in and around the Building as of the Effective Date of this Lease have been previously approved by Landlord. Tenant shall indemnify and hold harmless Landlord and its successors and assigns from and against any and all claims arising from or in connection with any of Tenant's signs and/or logos existing or installed in and around the Building as of the Effective Date of this Lease, including, without limitation any accident, injury or damage whatsoever caused by Tenant's signs or logos occurring in, at or upon the Premises or the Complex; together with all costs, expenses, and liability incurred in or in connection with each such claim or action or proceeding brought thereon, including without limitation all reasonable attorneys fees and expenses. The provisions of this Section 23.1 are in addition to, and shall not limit, the provisions of Section 14.2 hereof.

23.2 Reference is hereby made to that certain License Agreement by and between Landlord and Tenant dated as of December 22, 1995, as amended by that certain Amendment to License Agreement dated as of April 30, 2004, as further amended by the Second Amendment to License Agreement dated as of May 1, 2009 (collectively, the "Existing License Agreement"). Contemporaneously with the execution of this Lease, Landlord and Tenant shall enter into a Third Amendment to the Existing License Agreement as more particularly described therein.

### **24. Estoppel Certificate.**

Each party hereto shall from time to time, upon no less than ten (10) business days' prior written request from the other or any mortgagee or ground lessor of the Complex, deliver to the other or such mortgagee or ground lessor a statement in writing certifying:

- (i) that this Lease and the Work Letter are unmodified and in full force and effect or, if there have been modifications, that this Lease and the Work Letter, as modified, are in full force and effect;
- (ii) the amount of Net Base Rent then payable under this Lease and the date to which Rent has been paid;
- (iii) that to the other party's knowledge, the requesting party is not in default under this Lease or any work letter agreement, or, if in default, a detailed description of such default(s);
- (iv) that Tenant is or is not in possession of the Premises, as the case may be; and,
- (v) such other factual information as may be reasonably requested.

## **25. Real Estate Brokers.**

25.1 Tenant represents that Tenant has not dealt with any real estate broker, salesperson, or finder in connection with this Lease, and no such person initiated or participated in the negotiation of this Lease, or showed the Premises to Tenant. Tenant agrees to indemnify, defend and hold harmless Landlord and Landlord's Group from and against any and all liabilities and claims for commissions and fees arising out of a breach of the foregoing representation.

25.2 Landlord represents that Landlord has not dealt with any real estate broker, salesperson, or finder in connection with this Lease, and no such person initiated or participated in the negotiation of this Lease, or showed the Premises on behalf of Landlord. Landlord agrees to indemnify, defend and hold harmless Tenant and Tenant's Group from and against any and all liabilities and claims for commissions and fees arising out of a breach of the foregoing representation.

## **26. Subordination and Attornment.**

26.1 Subordination. It is understood and agreed that this Lease (including all rights of the Tenant hereunder) is subject and subordinate to any ground lease or underlying lease of the land comprising the Building or Complex (hereinafter called "Ground Lease") which may now or hereafter affect the land or Building or Complex of which the Premises form a part and is further subject and subordinate to any mortgage or deed of trust or trust indenture (hereinafter called "Mortgage") which may now or hereafter affect any such lease or the real property of which the Premises form a part, and to any and all advances made under any such mortgage and to the interest thereon, and all renewals, replacements and extensions thereof. This section shall be self-operative and no further instrument or subordination shall be required, but Tenant shall nevertheless at any time hereafter, on the demand of Landlord, execute any instruments, releases or other documents that may be required by any such mortgage holder or ground lessor or any of their respective successors in interest to evidence such subordination. If in connection with the financing (existing or future financing) of the Building or Complex, the prospective lender, the holder of any such mortgage, or with respect to any bond financing, the trustee for any such bond holders, shall request reasonable modifications in this Lease as a condition of approval of such financing, Tenant will not

unreasonably withhold, delay or defer making such modifications, provided that they do not materially increase the obligations of Tenant hereunder or adversely affect the leasehold interest created by this Lease or diminish Tenant's rights hereunder, except to a *de minimis* degree. In the event of termination of this Lease through foreclosure of any mortgage to which this Lease is subordinated, or if the Ground Lease is terminated, Tenant will upon the demand of the purchaser of the Premises at the foreclosure sale thereof, or of the lessor under the ground lease, attorn to and accept such purchaser or ground lessor as landlord under this Lease or, upon demand, enter into a new lease agreement with such purchaser or ground lessor for the unexpired term of this Lease as extended pursuant to the terms hereunder at the same rent and under the same provisions of this Lease; provided that Tenant's obligation to attorn to any such purchaser or ground lessor, and such attornment, shall be expressly subject to and wholly contingent upon such purchaser's or ground lessor's: (i) non-disturbance of Tenant in Tenant's use, peaceful possession, and quiet enjoyment of the Premises in accordance with and during the Term, and Renewal Term, if applicable so long as Tenant is not in default under this Lease, and (ii) written recognition of this Lease as binding upon the interest of such transferee and remaining in full force and effect during the Term and Renewal Term, if applicable. It is further agreed by Tenant that this Lease shall be subject and subordinate at all times to any other financing arrangement or right to possession, such as by way of example, a synthetic lease or sublease, under which Landlord is in control of the Premises, and to the rights of the owner or owners of the Premises, the Building, the Complex or the land of which the Building or Complex is a part. Landlord represents and warrants that, as of the date of this Lease, (a) there are no Ground Leases of the Building or Complex and (b) there are no Mortgages affecting the land, Building or Complex.

26.2 Attornment. In the event of the cancellation or termination of any such ground lease in accordance with its terms or by the surrender of such ground leasehold estate, whether voluntary, involuntary or by operation of law, or by summary proceedings, or the foreclosure of any such mortgage or deed of trust by voluntary agreement or deed in lieu of foreclosure or otherwise, or the commencement of any judicial action seeking such foreclosure, Tenant, at the request of the then Landlord, shall attorn to and recognize such ground lessor, mortgagee, beneficiary, or purchaser in foreclosure as Tenant's Landlord under this Lease; provided that Tenant's obligation to attorn to any such ground lessor, mortgagee, beneficiary, or purchaser in foreclosure, and such attornment, shall be expressly subject to and wholly contingent upon such ground lessor's, mortgagee's, beneficiary's, or purchaser in foreclosure's: (i) non-disturbance of Tenant in Tenant's use, peaceful possession, and quiet enjoyment of the Premises in accordance with and during the Term, and Renewal Term, if applicable so long as Tenant is not in default under this Lease, and (ii) written recognition of this Lease as binding upon the interest of such transferee and remaining in full force and effect during the Term and Renewal Term, if applicable. Subject to the immediately preceding sentence, Tenant agrees to execute and deliver at any time upon request of such ground lessor, mortgagee, beneficiary, purchaser, or their successors, any reasonable instrument to further evidence such attornment.

26.3 Nondisturbance. Tenant's agreement to subordinate the Lease to any future ground lessor or underlying lessor or mortgagee for the Building is conditioned upon Landlord's obtaining a commercially reasonable non-disturbance and attornment agreement which shall not increase the obligations of Tenant hereunder or adversely affect the leasehold interest created by this Lease or diminish Tenant's rights hereunder, except to a *de minimis* degree (an "SNDA"), whereby such

lessor or mortgagee agrees not to evict or disturb Tenant's occupancy of the Premises or terminate this Lease in the event of a default by Landlord under such lease or mortgage and further agrees to recognize all of Tenant's rights under this Lease.

**27. Notices.**

All notices or advices required or permitted to be given by or pursuant to this Lease, shall be given in writing and in the English language. All such notices and advices shall be: (i) delivered personally, (ii) by email to the appropriate email address set forth below provided receipt is acknowledged by the addressee by email originated by the addressee or other written means, (iii) by email to the appropriate email address set forth below with a follow-up copy by overnight courier service the next business day at the location of the addressee, (iv) delivered by facsimile, (v) delivered by U.S. Registered or Certified Mail, Return Receipt Requested, or (vi) delivered for overnight delivery by a nationally recognized overnight courier service. Such notices and advices shall be deemed to have been given: (i) the first business day following the date of delivery if delivered personally, by facsimile, or by email, (ii) on the third business day following the date of mailing if mailed by U.S. Registered or Certified Mail, Return Receipt Requested, or (iii) on the date of receipt if delivered for overnight delivery by a nationally recognized overnight courier service. All such notices and advices and all other communications related to this Agreement shall be given as follows:

If to Landlord:                   At the address provided in Section 1.16 hereof;

and

If to Tenant:                    At the address provided in Section 1.34 hereof

or to such other address as the party may have furnished to the other party in accordance herewith, except that notice of change of addresses shall be effective only upon receipt.

**28. Miscellaneous.**

28.1 Parties. Except as otherwise expressly provided herein, if more than one person or entity is named herein as either Landlord or Tenant, the obligations of such multiple parties shall be the joint and several responsibility of all persons or entities named herein as such Landlord or Tenant.

28.2 Non-Waiver. The failure of either party to seek redress for violation of, or to insist upon the strict performance of, any covenant or condition of the Lease or (in the case of Landlord only) of any of the Rules and Regulations incorporated herein or hereafter adopted by Landlord, shall not prevent a subsequent act, which would have originally constituted a violation, from having all the force and effect of an original violation. The receipt by Landlord of rent with knowledge of the breach of any covenant of this Lease, or breach of the Rules and Regulations, shall not be deemed a waiver of such breach. The failure of, Landlord to enforce any of the Rules and Regulations as incorporated herein or hereafter adopted against Tenant and/or any other tenant in the Building shall not be deemed a waiver of any such Rules and Regulations; provided that Landlord shall not enforce the Rules and Regulations in an unreasonable or discriminatory manner.

No act or thing done or omitted to be done by Landlord or Landlord's agents during the term of the Lease, which is necessary to enforce the terms of the Lease, or the Rules and Regulations, shall constitute an eviction by Landlord nor shall it be deemed an acceptance or surrender of said Premises, and no agreement to accept such surrender shall be valid unless in writing signed by Landlord. No employee of Landlord or Landlord's agent shall have any power to accept the keys of said Premises prior to the termination of the Lease. The delivery of keys to any employee of Landlord or Landlord's agents shall not operate as a termination of the Lease or a surrender of the Premises.

28.3 Late Charges. All delinquent Rent shall bear interest at the Default Rate from the occurrence of default until paid.

28.4 Entire Agreement. This Lease, the Exhibits and any riders identified herein and attached hereto contain the entire agreement between Landlord and Tenant concerning the Premises and there are no other representations, promises or agreements, either oral or, written. All negotiations, considerations, representations and understandings between the parties are incorporated herein and are superseded hereby. There are no terms, obligations, covenants, statements, representations, warranties or conditions relating to the subject matters hereof other than those specifically contained herein.

28.5 Landlord and Tenant Defined. The words "Landlord" and "Tenant", wherever used in this Lease, shall be construed to mean Landlords and Tenants in all cases where there is more than one Person constituting Landlord or Tenant, and the necessary grammatical changes required to make the provisions hereof apply either to corporations or individuals, men or women, shall in all cases be assumed as though in each case fully expressed. With respect to the provisions hereof regarding indemnification or waiver of liability of the Landlord, the term "Landlord" shall be deemed to include any third party operator or owner of the Building.

28.6 No Reservation/Option. The execution of this Lease by Tenant and delivery of same to Landlord does not constitute a reservation of or option for the Premises or an agreement to enter into a Lease and this Lease shall become effective only if and when Landlord executes and delivers same to Tenant; provided, however, the execution and delivery by Tenant of this Lease to Landlord shall constitute an irrevocable offer by Tenant to lease the Premises on the terms and conditions herein contained, which offer may not be withdrawn or revoked for thirty (30) days after such execution and delivery, but such offer shall become null and void, without the need for any additional action on the part of Tenant if Landlord shall not execute and deliver the Lease to Tenant within such thirty (30) day period. If Tenant is a corporation, it shall, if requested by Landlord, deliver to Landlord certified resolutions of Tenant's directors authorizing execution and delivery of this Lease and the performance by Tenant of its obligations hereunder.

28.7 Amendment. This Lease may not be amended or modified by any act or conduct of the parties or by oral agreements unless reduced and agreed to in a writing which specifically references this Lease and which has been signed by both Landlord and Tenant. No waiver of any of the terms of this Lease by either party shall be binding upon the waiving party unless reduced to writing and signed by such party.

28.8 [Intentionally Omitted].

28.9 Holdover. In the event Tenant remains in possession of the Premises after the expiration or termination of the Term, and without the execution of a new lease or an amendment to this Lease or without good faith negotiations between Landlord and Tenant occurring, Tenant shall be deemed to be occupying the Premises as a Tenant from month-to-month and the Total Base Rent due for the first three (3) months of occupancy shall be one hundred twenty-five percent (125%) of the Total Base Rent last in effect. In the event that the holdover continues beyond ninety (90) days after the expiration of the Term, the Total Base Rent for each month of continued occupancy shall be one hundred fifty percent (150%) of the Total Base Rent last in effect during the Term. If Landlord is unable to deliver possession of the Premises to a new tenant, or to perform improvements for a new tenant, as a result of Tenant's holdover, Tenant shall be liable to Landlord for all damages, including, without limitation, special or consequential damages, that Landlord suffers from the holdover.

28.10 Accord and Satisfaction. No payment by Tenant or receipt by Landlord of a lesser amount than any installment or payment of Rent due shall be deemed to be other than on account of the amount due, and no endorsement or statement on any check or any letter accompanying any check or payment of Rent shall be deemed an accord and satisfaction, and Landlord may accept such check or payment without prejudice to Landlord's right to recover the balance of such installment or payment of Rent or pursue any other remedies available to Landlord. No receipt of money by Landlord from Tenant after the termination of this Lease or Tenant's right of possession of the Premises shall reinstate, continue or extend the Term.

28.11 Binding Effect. This Lease shall be binding upon and inure to the benefit of Landlord and Tenant and their respective heirs, legal representatives, successors and permitted assigns.

28.12 Force Majeure. Neither Landlord nor Tenant shall be deemed in default with respect to any of the terms, covenants and conditions of this Lease on such party's part to be performed (except, in all events monetary obligations), if such party fails to timely perform same and such failure is due in whole or in part to an Unavoidable Delay as defined in Section 1.42 or by any act or omission caused directly or indirectly by the other party or the Tenant's Group (as to a Landlord failure) or the Landlord's Group (as to a Tenant failure). In the event of an occurrence under this Section 28.12 preventing either party from performing any obligation as herein provided, such party shall give the other party notice thereof as soon as reasonably practicable and such party shall exercise commercially reasonable efforts to resume performance hereunder.

28.13 Captions. The headings of the several articles, paragraphs and sections contained herein are for convenience only and do not define, limit or construe the content or scope of such articles, paragraphs and sections.

28.14 Applicable Law; WAIVER OF TRIAL BY JURY. This Lease shall be subject to, and interpreted by and in accordance with, the laws (excluding conflict of law provisions), of the State of Oklahoma. **IN ANY ACTION OR PROCEEDING ARISING HEREFROM, LANDLORD AND TENANT HEREBY CONSENT TO: (1) THE VENUE AND JURISDICTION OF ANY FEDERAL OR STATE COURT OF COMPETENT JURISDICTION WITHIN THE STATE OF OKLAHOMA, (2) SERVICE OF PROCESS BY**

**ANY MEANS AUTHORIZED BY THE FEDERAL RULES OF CIVIL PROCEDURE (FOR ACTIONS FILED IN FEDERAL COURT), OR THE LAW OF THE STATE OF OKLAHOMA (FOR ACTIONS FILED IN OKLAHOMA STATE COURT), AND (3) IN THE INTEREST OF SAVING TIME AND EXPENSE, TRIAL TO AND BY THE COURT WITHOUT A JURY (TRIAL BY JURY IS HEREBY KNOWINGLY AND EXPRESSLY WAIVED BY THE PARTIES), IN ANY ACTION, PROCEEDING, OR COUNTERCLAIM BROUGHT BY EITHER OF THE PARTIES HERETO AGAINST THE OTHER PARTY HERETO OR THEIR SUCCESSORS OR ASSIGNS IN ANY WAY REGARDING OR RELATED TO THE PREMISES, BUILDING, OR COMPLEX, OR ANY MATTER ARISING OUT OF OR IN CONNECTION WITH THIS LEASE, THE RELATIONSHIP OF LANDLORD AND TENANT, ANY CLAIM FOR INJURY OR DAMAGE, OR ANY CLAIM FOR LEGAL, EQUITABLE, EMERGENCY, OR STATUTORY REMEDY OR RELIEF. LANDLORD'S AND TENANT'S WAIVER OF JURY TRIAL SET FORTH IN THIS SECTION 28.14 SHALL SURVIVE THE TERMINATION DATE OR EARLIER TERMINATION OF THIS LEASE.**

28.15 Time. Time is of the essence of this Lease and the performance of all obligations hereunder.

28.16 [Intentionally Deleted].

28.17 Licenses and Permits. Tenant shall be solely responsible for obtaining, all licenses and/or permits as may be required for Tenant to lawfully conduct its business in the Premises.

28.18 Limitation of Tenant's Liability. Notwithstanding anything to the contrary contained in this Lease, Landlord shall look only to the assets of Tenant for the satisfaction of any liability of Tenant under this Lease, it being expressly understood and agreed that any partner, officer, director, member, manager, shareholder, employee or agent of Tenant as an individual shall not be held personally liable for such obligations and Landlord shall not pursue satisfaction of any judgment against Tenant arising under the Lease against the assets of any individual partner, officer, director, member, manager, shareholder, employee or agent of Tenant. Subject only to Section 28.9 hereinabove, in no event shall Tenant be liable for consequential, special or punitive damages.

28.19 Limitation of Landlord's Liability. Notwithstanding any other provision contained in the Lease to the contrary, Tenant shall look only to the interest of Landlord in the Building, including any available applicable condemnation and insurance proceeds, for satisfaction of any liability of Landlord under the Lease, it being expressly understood and agreed that any partner, officer, director, member, manager, shareholder, employee or agent of Landlord as an individual shall not be held personally responsible for such obligations and Tenant shall not pursue satisfaction of any judgment which Tenant obtains against Landlord arising under the Lease against the assets of any individual partner, officer, director, member, manager, shareholder, employee or agent of Tenant. In no event shall Landlord be liable for consequential, special or punitive damages.

28.20 Counterparts. This Lease may be executed in any number of counterparts, any or all of which may contain the signature of only one of the parties, and all of which shall be construed together as a single instrument. Counterparts of this Lease must be signed by both Landlord and Tenant to be effective. It shall not be necessary in making proof of this Lease to produce or account for more than a single counterpart containing the respective signatures of, or on behalf of, both of the parties hereto. Any signature page to any counterpart may be detached from such counterpart without impairing the legal effect of the signatures thereon and thereafter attached to another counterpart identical thereto except having attached to it additional signature pages. This Lease may be executed and delivered by a facsimile, digital, and/or electronic transmission of a counterpart signature page hereof.

28.21 Partial Invalidity. In the event any provision of this Lease, or the application of such provision to any person, entity, or set of circumstances, shall be determined to be invalid, unlawful, or unenforceable to any extent for any reason, the remainder of this Lease, and the application of such provision to persons, entities, or sets of circumstances other than those as to which it is determined to be invalid, unlawful, or unenforceable, shall not be affected and shall continue to be enforceable to the fullest extent permitted by law.

## **29. Special Provisions.**

29.1 Incorporation of Exhibits and Riders. All Exhibits and riders attached hereto, if any, shall form part of this Lease as if same were embodied herein.

29.2 Building Naming Rights. The Building shall be named the "Bank of Oklahoma Tower" but, at the request of Tenant and provided Tenant is not then in default under this Lease, said name may be changed from time to time subject to Landlord's consent, which shall not be unreasonably withheld, provided further that, if the changed name be other than the then name of the Tenant, the consent of The Williams Companies, Inc. shall also be required.

29.3 Restrictions on Other Banks in the Building. To the extent permitted by law, Landlord covenants and agrees that during the Term of this Lease no portion of the Building shall be leased to, used or occupied by any Person, firm, association or corporation for the operation of a national or state bank (or any branch office thereof), or a savings and loan association (or any branch office thereof) or any other financial institution which operates a business directly competing with Tenant. This prohibition shall not preclude the leasing of space for use and occupancy by small loan finance companies.

29.4 Combined Premises Square Footage. In the event Landlord re-measures, re-assesses, or re-surveys the Building, Landlord hereby agrees not to increase or decrease the square footage amount of the Net Rentable Area of the Premises; provided, however, in the event Tenant leases additional space in the Building from Landlord, or returns any of the Premises back to Landlord, Tenant agrees that Landlord will increase or decrease, as applicable, the square footage amount of the Net Rentable Area of the Premises.



## 29.5 License Premises for Kiosk.

29.5.1 Reference is hereby made to that certain plaza level premises within the Building more particularly described and depicted on Exhibit "H" attached hereto and incorporated herein by reference (the "Kiosk License Premises"). Landlord agrees to permit the Tenant to use Kiosk License Premises, subject to the terms and conditions contained herein (the "Kiosk License"); provided that the Kiosk License shall be terminable by either Landlord or Tenant upon thirty (30) days prior written notice. Tenant shall not pay rent to Landlord on the Kiosk License Premises. Tenant agrees that the use and maintenance of the Kiosk License Premises shall be governed by the terms of this Lease, including, without limitation, Lease terms related to insurance and indemnity. It is hereby understood and agreed that the Kiosk License is merely a license to use the Kiosk License Premises during normal business hours and that no right, title or interest in or to the Kiosk License Premises is granted to or vested in or intended to be granted to or vested in the Tenant by virtue of the Kiosk License. Tenant acknowledges that all use of the Kiosk License Premises by the Tenant shall be pursuant to the Kiosk License and that Tenant shall not by such use acquire any rights in or to the Kiosk License Premises by prescription, adverse possession or otherwise. The Kiosk License shall be limited to the signage currently existing on the wall and the kiosk as shown on Exhibit "H" attached hereto and incorporated herein. No temporary signage will be allowed.

29.5.2 Landlord and Tenant hereby ratify the respective rights and obligations with respect to the exterior garden terrace located on the plaza level of the Building (the "Garden Terrace") as set forth in that certain Letter Amendment to Lease between Landlord and Tenant dated June 4, 2008.

29.6 Parking Spaces. Landlord shall make or cause to be made available to Tenant eighteen (18) reserved parking spaces in the executive parking garage (the "Parking Garage") located on the garage level of the Building. The current market rate for each such parking space is \$160.00 per month, which rate is subject to increase when the rates in the Parking Garage increase from time to time for other tenants in the Complex. Parking in the Parking Garage will be on a reserved basis; provided that, Landlord reserves the right to reassign spaces in the Parking Garage from time to time at its sole discretion.

## 29.7 Right of First Offer.

29.7.1 Tenant shall have a right of first offer, subject to the restrictions set forth below ("Right of First Offer"), to lease space that comes available on any of the 17th, 20th, and 21st floors in the Building (collectively, the "ROFO Space") commencing on October 1, 2019, and so long as this Lease remains in effect. Tenant's rights hereunder in respect of any of the ROFO Space shall be subject and subordinate to the pre-existing written rights, if any, of all tenants in the Building as of the Effective Date. The Right of First Offer described in this Section 29.7 is personal to Tenant and is non-transferable, except in connection with a permitted assignment of the entire Lease to a Related Entity, or a permitted sublease of the entire Premises to a Related Entity. The Right of First Offer shall not be applicable to any space recaptured by Landlord pursuant to Section 11.1 of this Lease.

29.7.2 In the event that Landlord desires to lease any of the ROFO Space and Tenant is not then in default of the Lease, Landlord shall deliver a written notice (the "ROFO Notice") to Tenant which shall set forth the floors or space of the ROFO Space being offered (the "Offered Premises"). If Tenant desires to lease the Offered Premises, Tenant shall have ten (10) business days (the "ROFO Period") immediately following Landlord's delivery of the ROFO Notice to submit a written offer to Landlord for the Offered Premises (the "ROFO Offer"), which such offer shall include and shall be limited to the net base rent per square foot which Tenant is offering for the lease of the ROFO Space (the "Offered Premises Net Base Rent"). Time shall be of the essence with respect to such ROFO Period and the failure or refusal of Tenant for any reason whatsoever to deliver to Landlord the ROFO Offer in the time and in the manner herein prescribed shall be deemed an irrevocable waiver of Tenant's Right of First Offer as to the Offered Premises. Tenant shall not have the option to make a ROFO Offer on less or more ROFO Space than is offered in the ROFO Notice.

29.7.3 Landlord shall have ten (10) business days immediately following Tenant's delivery of the ROFO Offer to notify Tenant in writing if Landlord accepts or rejects Tenant's ROFO Offer (the "Landlord's Response"). Landlord may elect to accept or refuse Tenant's ROFO Offer, in Landlord's sole discretion. If Landlord timely accepts Tenant's ROFO Offer, then Landlord and Tenant shall enter into a lease or an appropriate amendment to this Lease for the Offered Premises within twenty (20) business days after Tenant's receipt of Landlord's Response. Such lease or amendment with respect to the Offered Premises shall be a triple net lease on the same terms and conditions as the Expansion Premises provisions of this Lease (including, without limitation, the Termination Date, annual escalations and Operating Expenses) except for the Offered Premises Net Base Rent.

29.7.4 If (i) Tenant declines to make a ROFO Offer on the Offered Premises, (ii) Landlord refuses the ROFO Offer, or (iii) Landlord and Tenant do not enter into a fully executed lease or an appropriate amendment to this Lease for the Offered Premises within such twenty (20) business day period described in Section 29.7.3 above, then such refusal or failure shall be deemed an irrevocable waiver of Tenant's Right of First Offer as to the Offered Premises covered by the ROFO Notice and Tenant's Right of First Offer as to the Offered Premises will terminate and be of no further force and effect, in which case Landlord will have the right to lease such Offered Premises to a third party on the same or any other terms and conditions, whether or not such terms and conditions are more or less favorable than those offered to Tenant. Such termination of the Tenant's Right of First Offer with respect to the Offered Premises shall be permanent and effective whether or not Landlord ultimately leases the Offered Premises to a third party. Notwithstanding such termination as to the Offered Premises, the Right of First Offer with respect to the other ROFO Space, if any, shall continue until similarly terminated in accordance with this paragraph. Notwithstanding anything in this Section 29.7 or Lease to the contrary, if: (i) Landlord shall enter into a lease for such Offered Premises and such Offered Premises shall thereafter become available during the Term, then the provisions of this Section 29.7 shall become applicable again with respect to such particular Offered Premises.

29.8 Plaza Level Teller Area Renovation. Landlord hereby acknowledges that Tenant desires to update and modify the existing bank teller area located in the northerly portion of the plaza level (the "Plaza Level Teller Area"). Prior to the Effective Date of this Lease, Tenant submitted conceptual drawings to Landlord regarding such Plaza Level Teller Area modification ("Teller Area Modification"). Prior to commencement of construction on the Teller Area Modification, Tenant shall have submitted finalized and refined drawings and specifications to Landlord, which such final drawings and specifications shall be substantially similar to the conceptual drawings submitted to Landlord prior to the Effective Date of this Lease, and shall be subject to Landlord's prior written approval, which approval shall not be unreasonably withheld or delayed. All costs of the plaza level Teller Area Modification shall be borne by Tenant.

29.9 Tenant Cabling. Subject to the availability of space as determined by Landlord in its sole discretion and subject to the other conditions set forth herein, Tenant shall have the right to install conduit up to 2" in size for cabling horizontally and vertically in the Building and the Building riser. The conduit and cabling installation shall be at Tenant's sole cost and expense provided any such installation shall be completed only by a contractor approved by Landlord, which approval shall not be unreasonably withheld or delayed. Tenant's plans and specifications and the manner of installation of any conduit and cabling installation shall be subject to Landlord's review and written approval, which shall not be unreasonably withheld or delayed, prior to commencement of said work. All conduits and cabling shall be labeled by Tenant in such manner as may be reasonably required by Landlord. Further, any installation of conduit and cabling shall be coordinated and supervised by Landlord's construction manager. A management fee equal to twenty percent (20%) of the conduit and cabling installation cost plus the construction manager's reasonably necessary and documented labor cost associated with the project shall be paid by Tenant, which Tenant agrees to pay within ten (10) business days of receipt of an invoice therefor. Upon request by Tenant, Landlord shall provide to Tenant an estimate of such fees. Any cabling previously installed by Tenant or hereafter installed by Tenant as provided herein shall be removed from the Building at the expiration of the Lease term at Tenant's sole cost and expense, unless Landlord otherwise directs in writing. Within one hundred twenty (120) days from the date of Rent Commencement Date, Tenant shall submit to Landlord detailed drawings, in form acceptable to Landlord, showing the as-built condition of Tenant's conduit from the point of origination in the Building to the point of termination in the Premises. Tenant's as-built drawings shall be revised upon the installation of any additional conduit and submitted to Landlord within thirty (30) days after completion of the conduit installation.

29.10 [Intentionally Omitted].

29.11 Termination of Prior Lease Agreement. Landlord and Tenant are parties to that certain Lease dated as of June 18, 1974, as amended by that certain Amendment One thereto dated as of May 31, 1977, as amended by that certain Second Amendment thereto dated as of January 1, 1996, as amended by that certain Third Amendment thereto dated as of February 1, 1997, as amended by that certain Fourth Amendment thereto dated as of May 7, 2001, as amended by that certain Fifth Amendment thereto dated as of May 1, 2005, as amended by that certain Sixth Amendment thereto dated as of September 1, 2010, and as amended by that certain Seventh Amendment thereto dated as of April 15, 2013 (collectively, as so amended, the "Prior Lease Agreement"). Landlord and

Tenant hereby agree and acknowledge that from and after the Effective Date of this Lease, the Prior Lease Agreement shall be terminated in its entirety, and the Prior Lease Agreement shall be of no further force and effect, and each of the Landlord and Tenant shall have no further obligations to each other under the terms of the Prior Lease Agreement except for obligations which have accrued as of the Effective Date. Notwithstanding the foregoing, after the Effective Date of this Lease Landlord may calculate and issue Landlord's Statement for Existing Premises to Tenant for any reconciliation of Additional Rental (as defined in the Prior Lease Agreement) for the Existing Premises pursuant to the Second Amendment to the Prior Lease Agreement for calendar year 2018 and for that portion of calendar year 2019 between January 1, 2019, and the Effective Date of this Lease. The obligations of the parties under this Lease shall be separate and apart from the obligations of the parties under the Prior Lease Agreement, and this Lease shall not be deemed to limit, affect, or re-impose any obligations arising under the Prior Lease Agreement.

29.12 Confidentiality. Tenant acknowledges that any information provided by Landlord pursuant to this Lease will be confidential information except to the extent such information (a) is generally available to the public other than as a result of disclosure by Tenant or (b) becomes available to Tenant on a non-confidential basis from a party other than Landlord. Tenant shall not disseminate such information to any third party unless (i) required to do so by applicable law or regulation, or (ii) demanded by subpoena or other validly issued administrative or judicial process. If Tenant is so required or requested to disclose any such information, Tenant shall provide Landlord with prompt written notice of such requirement or request so that Landlord may consider seeking a protective order. Landlord shall have a period of five (5) business days from receipt of Tenant's notice to apply for the appropriate protective order. During the pendency of such protective order proceedings, Tenant shall take lawfully permitted steps and use commercially reasonable efforts to cooperate with Landlord in preserving the confidentiality of the confidential information; provided, however, that nothing contained herein shall prevent Tenant from disclosing such information if legally required to do so. If such order is not obtained, or Landlord waives its right to seek a protective order, Tenant will furnish only that portion of such information that is required to be disclosed.

*[Signature Page Follows]*

This Lease was executed by the parties on the date first above written.

**LANDLORD:**

WILLIAMS HEADQUARTERS BUILDING LLC,  
a Delaware limited liability company

By:       /s/ Peter S. Burgess        
Printed:       Peter S. Burgess        
Title:       V.P. Treasurer      

**TENANT:**

BOKF, NA,  
a national banking association, d/b/a Bank of Oklahoma

By:       /s/ Michael D. Nalley        
Michael D. Nalley, CCIM, CPM, RPA  
Senior Vice President  
Director Corporate Real Estate

**EXHIBIT "A"**

Delineation of the Premises  
Bank of Oklahoma Tower

**EXHIBIT "B"**

Returned Premises

**EXHIBIT "C-1"**

[INTENTIONALLY DELETED]



**EXHIBIT "C-2"**

[INTENTIONALLY DELETED]

**EXHIBIT "D-1"**

Landlord's Statement for Expansion Premises

**EXHIBIT "D-2"**

Landlord's Statement for Existing Premises

**EXHIBIT "E"**Rules and Regulations  
Bank of Oklahoma Tower

1. Landlord may refuse admission to the Building outside of ordinary business hours to any person not known to the watchman in charge or not properly identified, and may require all persons admitted to or leaving the Building outside of ordinary business hours to register. Any person whose presence in the Building at any time shall, in the reasonable judgment of Landlord, be prejudicial to the safety, character, reputation and interests of the Building or its Tenant may be denied access to the Building or may be ejected therefrom. In case of invasion, riot, public excitement or other commotion, Landlord may prevent all access to the Building during the continuance of the same, by closing the doors or otherwise, for the safety of the Tenant, the Building and protection of property in the Building. Landlord may require any person leaving the Building with any package or other object to exhibit a pass from the Tenant from whose Premises the package or object is being removed, but the establishment and enforcement of such requirement shall not impose any responsibility on Landlord for the protection of any Tenant for damages or loss arising from the admission, exclusion or ejection against the removal of property from the Premises of the Tenant. Landlord shall in no way be liable to any Tenant for damages or loss arising from the admission, exclusion or ejection of any person to or from the Tenant's Premises or the Building under the provisions of this rule.
2. Landlord reserves the right to exclude or expel from the Building any person who in the judgment of Landlord is intoxicated or under the influence of liquor or drugs, or who shall in any manner do any act in violation of these Rules and Regulations.
3. Tenant shall not sell or permit the sale, at retail or wholesale, of newspapers, magazines, periodicals or theater tickets, in or from their Premises; nor shall Tenant carry on or permit or allow any employee or other person to carry on the business of stenography, typewriting, telephone answering service, or any similar business in or from their Premises for the service or accommodation of the occupants of any other portion of the Building, or the business of a barber shop, beauty shop, tobacco or pipe shop, liquor store, employment bureau, or a manicuring or chiropodist business, except with the prior written approval of Landlord. Tenant shall not occupy or permit any portion of their Premises to be occupied as an office or facility for the possession, storage, manufacture or sale of narcotics of any form or kind, without the prior written approval of Landlord.
4. Tenant shall not manufacture any commodity or prepare or dispense any foods or beverages in their Premises or use the same as sleeping apartments, unless the Premises are expressly leased for such purposes. The foregoing shall not prohibit in any way Tenant's use of a portion of the Premises as a lunch room/kitchen for us by Tenant with a microwave oven and such other typical office amenities.

5. Tenant shall not conduct directly or indirectly any auction upon their Premises, or permit any other person to conduct an auction upon the Premises. Tenant is not to conduct malodorous activities in or about their Premises or the Building. Tenant will not permit gambling to be conducted in or upon its Premises.
6. No noise, including the playing of any musical instruments, radio or television, which, in the judgment of Landlord, might disturb other tenants in the Building, shall be made or permitted by any Tenant, and no cooking shall be done in their Premises or the Building, except as expressly approved by Landlord. If cooking is permitted by Landlord, Tenant shall not permit any cooking or food odors emanating within the Building to seep into other portions of the Building. All electrical equipment used by Tenant shall be U.L. approved. Nothing shall be done or permitted in Tenant's Premises, and nothing shall be brought into or kept in the Premises which would impair or interfere with any of the Building services or the proper and economic heating, cooling, cleaning or other servicing of the Building or the Premises, or the use or enjoyment by any other tenant within the Building, nor shall there be installed by Tenant any ventilating, air- conditioning, electrical or other equipment of any kind, which, in the judgment of Landlord, might cause any such impairment or interference.
7. Tenant shall not install or operate any steam or gas engine or boiler, or carry on any mechanical business, in the Building. The use of oil, gas or inflammable liquids for heating, lighting or any other purpose is expressly prohibited. Explosives or other articles deemed extra hazardous shall not be brought into the Building. Tenant shall not use any other method of heating than that supplied by Landlord.
8. Tenant shall give Landlord prompt notice of all accidents to or defects in air-conditioning equipment, plumbing, electric facilities or any part or appurtenance of their Premises.
9. Tenant shall not cause unnecessary labor by reason of carelessness and indifference to the preservation of good order and cleanliness in their Premises and in the Building. Waste and unnecessary use of electricity and other utilities is prohibited.
10. Tenant shall use electric, gas and any other form of energy only from such sources of supply as are furnished in the Building.
11. All deliveries to the Building for or by any Tenant are to be made through the service entrance to Building as designated by Landlord, unless special permission is granted by Landlord for the use of other Building entrances. Landlord reserves the right to inspect all freight to be brought into the Building and to exclude from the Building all freight which violates any of these Rules and Regulations or the Lease of which these Rules and Regulations are a part. Landlord further reserves the right to change the Building entrance to be utilized for deliveries.
12. Furniture, equipment or supplies shall be moved in or out of the Building only upon the elevator designated by Landlord and then only during such hours and in such manner as may be prescribed by Landlord. Landlord shall have the absolute right to approve or disapprove

the movers or moving company employed by Tenant and Tenant shall cause said movers to use only the loading facilities and elevator designated by Landlord.

13. Should any Tenant desire to place in the Building any unusually heavy equipment, including, but not limited to, large files, safes and electronic data processing equipment, it shall first obtain written approval of Landlord to place such items within the Building, for the use of the Building elevators, and for the proposed location in which such equipment is to be installed. Landlord shall have the power to prescribe the weight and position of any equipment that may exceed the weight load limits for the building structure, and may further require, at the Tenant's expense, the reinforcement of any flooring on which such equipment may be placed, and/or to have an engineering study performed to determine such weight and position of equipment, to determine added reinforcement required, and/or determine whether or not such equipment can be safely placed within the Building. Landlord shall not be responsible for the loss of or damage to such furniture or equipment from any cause. There shall not be used in any space, or in the public halls of the Building, either by Tenant or by jobbers or others, in the delivery or receipt of merchandise, any hand trucks, except those equipped with rubber tires and side guards.
  
14. Tenant shall not place additional locks or bolts of any kind upon any of the doors or windows of their Premises and no lock on any door therein shall be changed or altered in any respect. Duplicate keys for Tenant's Premises and toilet rooms (if applicable) shall be procured only from Landlord, which may make a reasonable charge therefor. Upon the termination of a Tenant's lease, all keys of the Premises and toilet rooms shall be delivered to Landlord. Notwithstanding the foregoing, and subject to Landlord's prior approval of design and appearance, which approval shall not be unreasonably withheld, Tenant shall be permitted to place electric locks on entry doors to the Premises or within the Premises provided such comply with all Building and fire code requirements or other laws, ordinances or regulations which may be applicable thereto, and, in the event of an emergency, such doors-locks are automatically released to allow free ingress and egress to, from and within the Premises. In no event shall any secured areas include any of the mechanical/engineering rooms in or serving the Premises or Building. Tenant shall be required at all times to have designated an employee of Tenant and to provide the name of such individual to Landlord to allow Landlord's entry into and upon the Premises in accordance with Landlord's rights under this Lease. Landlord shall not be obligated to provide any services, notwithstanding any other provision of this Lease to the contrary, to any area to which Landlord does not have access during the ordinary and customary hours for providing such services unless Tenant makes arrangements for such access on terms and conditions acceptable to Landlord. Tenant shall be solely responsible throughout the Term and any renewals thereof for providing services requiring access not otherwise provided for herein to such areas and shall maintain such areas in a manner necessary for the health, safety and protection of the Premises, the Building and persons. In no event shall areas be equipped with electric locks which shall in any way interfere with Landlord's operation of the Building and security system of the Building. In no event shall the terms herein contained be deemed to increase the service or other obligations of Landlord contained in this Lease. Upon termination of this Lease, Tenant shall surrender to Landlord all keys or codes or other means of access to the Premises, and shall deliver to

Landlord the explanation of the combination or access requirements of any and all locks for the Premises, safes, safe cabinets and vault doors, if any, in the Premises.

15. Intentionally deleted.
16. Tenant shall permit the janitor of Landlord to clean their Premises. Landlord will not be responsible for lost or stolen personal property, equipment, money or any article taken from the Premises or Building, regardless of how or when loss occurs, unless caused by the gross negligence or intentional act of Landlord or its employees or agents.
17. In no event shall Tenant leave any refuse in the public hallways or other areas. In the event Tenant must dispose of crates, boxes, etc., which will not fit into office wastepaper baskets, it will be the responsibility of the Tenant to label items as trash and notify Landlord of the need for disposal. Landlord reserves the right to require Tenant (at Tenant's expense) to dispose of any large items that are unable to fit in the Complex trash receptacles.
18. Tenant shall not place in front of or affix to any part of the exterior of the Building, nor place in the halls, corridors or vestibules without the prior written consent of the Landlord any showcases or other articles.
19. Landlord shall have the right to prohibit any advertising by Tenant which mentions the Building or Complex, which, in reasonable Landlord's opinion, tends to impair the reputation of the Building or its desirability as a building or offices; upon written notice from Landlord, Tenant shall refrain from and discontinue such advertising.
20. Bicycles or other vehicles shall not be permitted in the offices, halls, corridors, lobbies and elevators of the Building, nor shall any obstruction of sidewalks or entrances of the Building by such be permitted.
21. The sidewalks, entries, passages, elevators and staircases shall not be obstructed or used by Tenant, its servants, agents or visitors for any other purpose than ingress and egress to and from the respective offices.
22. Canvassing, soliciting and peddling in the Building are prohibited and Tenant shall cooperate to prevent the same.
23. No animals, birds, or pets of any kind, excluding seeing eye dogs, shall be allowed in Tenant's Premises or Building.
24. The water closets, urinals, waste lines, vents or flues of the Building shall not be used for any purpose other than those for which they were constructed, and no rubbish, acids, vapors, newspapers or other such substances of any kind shall be thrown into them. The expense caused by any breakage, stoppage or damage resulting from a violation of this rule by any Tenant, its employees, visitors, guests or licensees, shall be paid by Tenant.

25. If any Tenant desires radio signal, communication, alarm or other utility or service connection installed or changed, such work shall be done at the expense of Tenant, with the prior written approval of Landlord and under the direction of Landlord. Landlord's approval of such contractors shall not be unreasonably withheld or delayed and shall take into consideration all matters affecting the Building and Complex. No wiring shall be installed in any part of the Building without Landlord's approval and direction. Landlord reserves the right to disconnect any radio, signal or alarm system when, in Landlord's reasonable opinion, such installation or apparatus interferes with the proper operation of the Building or systems within the Building.
26. Except with the approval of Landlord, Tenant shall not mark upon, paint signs upon, cut, drill into, drive nails or screws into, or in any way deface the walls, ceilings, partitions or floors of the Building (or the Premises, to the extent visible from the adjacent space) and the repair cost of any defacement, damage or injury caused by any Tenant, its agents or employees, shall be paid for by the Tenant. Landlord's approval shall not be unreasonably withheld or delayed, considering all matters affecting the Building and Premises, including, without limitation, visibility and re-leaseability, with respect to alterations, improvements, removals, additions or installations in or to the Premises which are of an aesthetic character and do not affect life safety, fire sprinkler, heating, ventilation, air conditioning, electrical or plumbing systems or equipment.
27. All glass, lighting fixtures, locks and trimmings in or upon the doors and windows of the Premises shall be kept whole and whenever any part thereof shall be broken through cause attributable to any Tenant, its agents, guests or employees, the same shall promptly be replaced or repaired at Tenant's expense, and put in order under the direction and to the satisfaction of Landlord and shall be left whole or in good repair, together with the same number and kind of keys as may be received by Tenant on entering upon possession of any part of said Building, or during the tenancy.
28. The cost of repairing any damage to the public portions of the Building or the public facilities or to any facilities used in common with other tenants, caused by any Tenant or the employees, licensees, agents or invitees of the Tenant, shall be paid by such Tenant.
29. Tenant shall not install any resilient tile or floor covering in the Premises except in a manner approved by Landlord, which approval shall not be unreasonably withheld. Tenant shall not remove any carpet, or wall coverings, window blinds, or window draperies in their Premises without the prior written approval of Landlord.
30. No awnings or other projections shall be attached to the outside walls of the Building or on or around the windows of the Premises by Tenant without the prior written consent of Landlord. No curtains, blinds, draperies, shades or screens shall be attached to or hung in, or used in connection with, any window or door of the Tenant's Premises by Tenant, without the prior written consent of Landlord. Such awnings, projections, curtains, blinds, draperies, shades, screens or other fixtures, if consented to by Landlord, must be of a quality, type, material and color, and attached in the manner approved by Landlord.



31. The sashes, sash doors, windows, side glass, glass floors and any lights or skylights that reflect or admit light into the halls or other places of Building shall not be covered or obstructed by Tenant without the prior written approval from Landlord.
32. Tenant shall not have access to the roof of the Building, nor make any installations upon or through the roof or walls of the Building, without the prior written consent of Landlord.
33. Tenant shall cooperate fully with the life safety plans of the Building as established and administered by Landlord, including participation by Tenant and employees of the Tenant in exit drills, fire inspections, life safety orientations and other programs relating to fire safety that may be promulgated by Landlord.
34. The parties recognize Landlord's interest in being free from labor difficulties, strikes, picketing, or handbilling on or near Premises in which Landlord has a possessory or reversionary interest. Should such difficulties, strikes, picketing, or handbilling be engaged in by Tenant's employees or the employees of Tenant's contractors, subcontractors, or agents, or be caused by the actions or presence of Tenant's employees, contractors, subcontractors, agents, or their employees, Tenant will take all reasonable steps to restore harmony. Furthermore, Tenant will be liable for all damages to Landlord occurring as a result of such difficulties, strikes, picketing or handbilling.

**EXHIBIT "F"**

## Janitorial Specifications

BOK Tower Janitorial Cleaning Specifications		
	Specifications of cleaning tasks and frequencies to be performed.	
	TASKS	FREQUENCY
<b>TENANT FLOORS GARAGE - 52ND FLOOR</b>	Empty all trash receptacles and remove collected waste to designated areas. Replace plastic liners as soiled, or a minimum of once per week - liners to be furnished by Contractor. Return trash receptacles to original location.	Daily
	Dust and spot clean all horizontal surfaces of counter tops, cleared area of desk tops, chairs, tables, office equipment, ledges, and heating units, partitions, filing cabinets and glass tops within reach.	Daily
	Vacuum all exposed carpeted floor surfaces in offices, conference rooms, copier rooms, hallways, aisles, kitchens, restrooms and other high traffic areas, including edges and under easily moved furniture.	Daily
	Spot clean doors, frames, kick and push plates, handles, light switches and any other obviously soiled areas for smudges and fingerprints.	Daily
	Dust mop resilient tile and wood floors; remove scuffs and debris.	Daily
	Mop or machine clean marble lobby floors, taking care to keep grout clean and free of debris.	
	Dust furniture and work surfaces in conference rooms, lobbies, and common areas.	Daily
		Properly position furniture and return to original location.
	Spot clean spills and stains from carpets, tile and wood floors.	Daily
	Spot clean all office glass doors and partitions in elevator lobbies.	Daily
	Spot clean doors, door frames, wall switches and counter tops.	Daily
	Clean sinks, table tops, counter tops, outside of appliances & trash receptacles in kitchen areas.	Daily
	Clean spills on walls, trash receptacles, cabinets, etc.	Daily
	Clean and maintain all janitor closets.	Daily
	Close all doors, lock where possible.	Daily
	Call Life Safety to turn off lights when cleaning is completed.	Daily
	Damp mop resilient tile floors in kitchen areas with appropriate cleaning solution.	Daily
	Dust all desks, work surfaces, chairs, file cabinets, credenzas, doors, ledges and baseboards.	Daily

	Vacuum all carpeted floor surfaces completely, including corners and edges	Weekly
<b>TENANT FLOORS GARAGE - 52ND FLOOR</b>  (CONT.)	Dust all doors, door louvers and other ventilation louvers within reach.	Weekly
	Wash out waste receptacles in kitchens, restrooms, conference rooms, and other common use areas.	Monthly
	Perform floor care on marble and wood floor surfaces per specific manufacturer recommendations.	Monthly
	Strip, apply finish and buff resilient tile floors.	Monthly
-----	Vacuum upholstered furniture.	Monthly
	Dust or vacuum all air vents and ceiling tiles adjacent to air vents.	Monthly
	Dust all picture frames and other wall hangings.	Monthly
	High dust locations exceeding 72" such as door tops, partitions, high ledges, etc.	Monthly
	Dust blinds in all locations where installed.	Monthly
	Dust walls, doors and other surfaces not dusted on a monthly basis.	Quarterly
	Pile lift carpeting.	Quarterly
	Lift chair pads and vacuum or clean as needed.	Quarterly
	Clean all light fixtures.	Semi-Annually
	Apply finish and machine polish all non-carpeted areas.	Semi-Annually
<b>DRINKING FOUNTAINS ALL FLOORS</b>	Fixtures will be cleaned, sanitized and polished to remove stains, rust and scale with an approved product.	Daily
<b>REST-ROOMS ALL FLOORS</b>	Clean, sanitize, wipe dry all porcelain fixtures. Remove rings from around drains.	Daily
	Clean and polish all chrome fitting and bright work, including shelves, flushometers and metal dispensers and receptacles.	Daily
	Clean and sanitize both sides of all toilet seats.	Daily
	Clean and polish all mirrors and glass.	Daily
	Clean and polish all toilet bowls, urinals and sinks with a disinfecting cleaning solution. Remove all calcium build up rings from around bowls and chrome fittings.	Daily
	Clean and sanitize door handles, push plates, etc. on entry doors into the restrooms (both sides).	Daily
	Empty waste receptacles and replace liners.	Daily
	Empty and sanitize sanitary napkin disposal receptacles; refill paper liners.	Daily
	Refill all dispensers including seat covers, hand soap, hand sanitizers, toilet tissue and paper towels.	Daily
	Sweep and damp mop tile floors with disinfecting cleaning solution.	Daily
	Remove scale from soap pumps, drains, faucets and fixtures as needed.	Daily
	Vacuum carpet floors in foyer/lobby area inside restrooms.	Daily

	Dust and spot clean toilet partitions and tile walls.	Daily
	Dust ledges and partitions.	Daily
	Clean and maintain all janitor closets. No blocking access into closet area.	Daily
	Spot clean walls, ledges, sills, counters and doors.	Daily
	Fill drain traps with water and disinfectant	Weekly
	Perform high dusting, including walls.	Weekly
	Wash/sanitize all walls, doors, partitions, etc.	Monthly
	Wash waste containers.	Monthly
	Machine scrub and buff floors; strip & wax as necessary.	Monthly
	Vacuum ceiling vents and ceiling tiles adjacent to vents.	Monthly
	Clean all light fixtures.	Semi-Annually
<b>EXTERIORS AND ENTRANCES</b>	Sweep entrances & sidewalks adjacent to building.	Daily
	Detail all door glass, pulls, push plates, and frames.	Daily
	Remove trash and debris; where needed remove gum or other adhesive material.	Daily
	Maintain debris free entries	Daily
	Extract dirt and grime from entrance walk off mats.	Daily
	Wipe down horizontal entrance ledges.	Daily
	Wet mop or flush clean exterior entrances.	Weekly
	Clean all metal finishes at entrances.	Weekly
<b>PLAZA LEVEL BREAKROOM/VENDING</b>	Wipe tables, chairs and counters. Position chairs neatly under tables.	Daily
	Vacuum carpets completely.	Daily
	Empty trash & replace liners.	Daily
	Clean/disinfect counters and sinks, remove rings around drain.	Daily
	Dust horizontal services.	Daily
	Sweep & Mop floors, keeping grout free of grime and debris.	Daily
	Dust vent covers and blinds.	Monthly
	Dust walls, doors, frames, switches, baseboards.	Monthly
<b>ENTRANCE LOBBYS &amp; CORRIDORS</b>	Marble and Terrazzo Floor Maintenance Programs will be performed as outlined in Exhibit A, 1.3 of the Agreement.	Daily
	Vacuum carpets completely.	Daily
	Lobbies and entrance floors will be clean and free of dirt.	Daily
	Dust all ledges within reach.	Daily
	Dust all wood paneling.	Daily
	Dust Visitor Desk.	Daily
	Clean glass on plasma screen directory.	Daily
	Spot clean walls as needed.	Daily
	Clean entrance door glass inside and out.	Daily
	Vacuum entrance mats.	Daily
	Spot clean carpet.	Daily

	Empty trash receptacles.	Daily
	Clean coffee table and chairs at Visitor Desk.	Daily
	Clean and disinfect public telephone area.	Daily
	Clean elevator doors, lobby sides.	Daily
	Dust all wood panels.	Weekly
	<b><i>Empty and wash trash receptacles.</i></b>	Weekly
	Extract entrance mats.	Weekly
	Clean all metal at entrances and other areas of lobbies.	Weekly
	Spot clean walls and doors.	Monthly
	Vacuum ceiling tiles adjacent to ceiling vents.	Quarterly
	Clean all light fixtures.	Quarterly
<b>KITCHENS/ BREAKROOMS (All Floors)</b>	Empty trash & replace liners.	Daily
	Clean/disinfect counters and sinks, remove rings around drains.	Daily
	Sweep & Mop floors, keeping grout free of grime and debris.	Daily
	Clean tables, counters, chairs. Position chairs neatly under tables.	Daily
	Wipe exterior of cabinets, waste receptacles, and appliances.	Daily
	Clean and refill paper towel dispensers.	Daily
	Dust horizontal services.	Daily
	Dust vent covers and blinds.	Monthly
	Dust walls, doors, frames, switches, baseboards.	Monthly
<b>ELEVATORS TWENTY-SIX (26) PASSENGER AND TWO (2) SERVICE</b>	Vacuum and edge carpeting daily.	Daily
	Clean and polish all metal surfaces of elevators, interior metal panels, and tracks.	Daily
	Spot shampoo carpet as necessary.	Daily
	Clean light fixtures, ceilings and grilles.	Daily
	Maintain tracks debris free.	Daily
	Dust all wood panels.	Daily
	Damp mop service elevator floors.	Daily
<b>ESCALATORS - SIX (6)</b>	Clean and disinfect handrails.	Daily
	Spot Clean glass panels.	Daily
	<b><i>Machine clean escalator treads a minimum of once per week, or more often if needed - (after business hours).</i></b>	<b><i>Weekly</i></b>
<b>EMERGENCY EXIT STAIRWELLS</b>	Inspect and remove debris daily. Sweep as necessary.	Daily
	Sweep west, north and south stairwells completely.	Weekly
	Dust all handrails from Ground Level to 52nd floor.	Weekly
	Wet mop west, north and south stairwells completely.	Monthly
	Spot clean by damp wiping walls, doors and any other surfaces.	Monthly
	Clean inside of fire extinguisher cabinets.	Quarterly
	Clean light fixtures.	Semi-Annually

<b>RECYCLING</b>	Pick up cardboard boxes from all office areas and take them to designated recycling area.	Daily
<b>SERVICE AREAS</b>	Keep waste paper, cardboard, rubbish, etc., stored in approved receptacles/assigned rooms.	Daily
	Clean floors, walls and doors, etc., as necessary.	Daily
	Clean all janitor closets at the end of each shift.	Daily
	Clean around compactor area and service dock.	Weekly
	Perform special assignments as requested.	Weekly
	Sweep and mop resilient tile floors.	Daily
	Strip, apply finish and buff resilient tile floors on Service Level.	Monthly
	Dust all pipes, ducts, ventilating grilles, air conditioning & other accessible equip. outside machinery spaces.	Quarterly

**EXHIBIT "G"**Work Letter  
Bank of Oklahoma Tower

THIS WORK LETTER Agreement, entered and agreed to this \_\_\_\_\_ day of \_\_\_\_\_, 20\_\_, by and between Williams Headquarters Building LLC, a Delaware limited liability company, hereinafter referred to as "Landlord", and BOKF, NA, a national banking association, d/b/a Bank of Oklahoma, hereinafter referred to as "Tenant";

WHEREAS, Landlord and Tenant, in conjunction with this Work Letter, have entered into a certain Lease Agreement (hereinafter referred to as the "Lease"), dated the \_\_\_\_\_ day of \_\_\_\_\_, 2019, for the "Premises" located on the garage level, service level, ground level, plaza level, plaza intermediate level, 8th, 9th, 10th, 11th, 12th, 14th, 15th, 16th, 18th, 19th, 22nd, 23<sup>rd</sup>, and 24th floors in the Bank of Oklahoma Tower (hereinafter referred to as the "Building") at One Williams Center in Tulsa, Oklahoma, as such Premises are more particularly described in the Lease; and

WHEREAS, Landlord and Tenant desire to enter into certain agreements regarding the performance of Alterations;

NOW, THEREFORE, in conjunction with said Lease, Landlord and Tenant hereby agree to the following:

1. Tenant acknowledges that it has inspected the Premises and said Premises are being leased to and are accepted by Tenant in "AS-IS" condition subject to the terms and conditions contained in paragraph 2 herein.
2. Tenant, in accordance with Section 13 of the Lease, shall construct certain improvements to be installed or constructed in or on the Premises (the "Alterations") in accordance with the Scope of Work attached hereto as Exhibit "F-1" (the "Scope of Work") and in accordance with any changes in or additions to the Scope of Work requested by Tenant. Tenant shall be responsible for all costs of the Alterations. Landlord has not agreed to perform any work in the Premises. All work on the Alterations is subject to the provisions of the Lease.
3. The "Rent Commencement Date" of the Lease shall be as set forth in Section 1.28 of the Lease and shall not be extended by reason of delays in completing the Alterations whether by Tenant or Landlord.
4. Tenant and Tenant's employees and agents may enter the Premises prior to completion of the Alterations so that Tenant may do such work ("Tenant's Work") as may be required to make the Premises ready for Tenant's use and occupancy. Such entry will be upon the condition that Tenant and its employees, agents, contractors and suppliers shall not interfere with the Alterations in the Premises or with the work of any other tenant or occupant, if applicable, in the remainder of the Building. If at any time such entry shall cause or threaten to cause such disharmony or interference, Landlord shall have the right to prevent Tenant and Tenant's employees entering the Premises upon 12 hours written notice to Tenant. Tenant agrees that any such entry or occupation of the Premises

shall be governed by all of the terms, covenants, conditions and provisions of the Lease, and further agrees that Landlord shall not be liable in any way for injury, loss or damage which may occur to any of Tenant's Work, the Alterations or installations made in such Premises, or to any personal property placed therein, the same being at Tenant's sole risk.

5. Tenant shall carry and maintain and cause its contractors to carry and maintain at all times during the term of this Work Letter and the performance of the work, at no expense to Landlord, insurance as required by the Lease. A certificate of insurance evidencing the foregoing insurance shall be delivered to Landlord before Tenant's Work is started and before any contractor's equipment is moved onto any part of the Building or area adjacent to the Building.

6. Tenant shall not employ any contractor unless previously approved in writing by Landlord, which approval shall not be unreasonably withheld or delayed. Contracts between Tenant and contractors shall require each contractor, to the extent of the work to be performed by the contractor, to be bound to Tenant by the terms of the Lease and this Work Letter, and to assume toward Tenant all of the obligations and responsibilities which Tenant, by the Lease, assumes toward Landlord, but in all cases only to the extent reasonably applicable thereto.

7. Each contractor and subcontractor participating in the Alterations or Tenant's Work shall obtain prior written approval from Landlord, which approval shall not be unreasonably withheld or delayed, for any space within the Building which such contractor or subcontractor desires to use for storage, handling and moving of his materials and equipment; in no event shall this paragraph be considered as a commitment of Landlord to provide Tenant, its contractors or subcontractors, any storage facilities outside of the Premises.

8. Tenant shall cause each of Tenant's contractors and subcontractors participating in the Alterations or Tenant's Work to remove and dispose of, at least once a day or more frequently as Landlord may direct, all debris and rubbish caused by or resulting from the construction of the Alterations or Tenant's Work and, upon completion of the Alterations and Tenant's Work, to remove all temporary structures, surplus materials, debris and rubbish of whatever kind remaining in the Building, which has been brought in or created by the contractors and subcontractors in the construction of the Alterations and Tenant's Work.

9. Tenant's contractors and subcontractors shall cause their employees and agents to enter and exit the Building via the entrance and elevators designated by Landlord. All materials, supplies and equipment shall be brought into the Building at times reasonably approved by Landlord.

10. Tenant shall cause each of Tenant's contractors and subcontractors to maintain continuous protection of adjacent premises in the Building in such manner as to prevent any damage to such adjacent property by reason of the performance of the Alterations and Tenant Work.

11. The performance of the Alterations and Tenant Work shall be coordinated with all work being performed or to be performed by Landlord and other tenants of the Building, to such extent that such performance will not interfere with or delay the completion of any such work in the Building. Tenant's contractor or subcontractor shall not at any time damage, injure, interfere with or delay any other construction within the project, and they and each of them shall comply with all procedures and regulations reasonably prescribed by Landlord.



12. In connection with the Tenant Work, Tenant shall file all drawings, plans and specifications, pay all fees and obtain all permits and applications from the City of Tulsa and County of Tulsa, the Department of Labor and any other authorities which may have jurisdiction. Tenant shall promptly provide to Landlord (and in no event later than ten (10) business days after written request therefore by Landlord) copies of all building permits and certificates of occupancy issued to Tenant from any of the foregoing jurisdictions. Landlord shall use commercially reasonable efforts to cooperate with Tenant to the extent required to obtain such permits and certificates.

13. Capitalized terms used in this Work Letter and not otherwise defined shall have the meaning given in the Lease.

IN WITNESS WHEREOF, the parties hereto have caused this Work Letter to be executed by their respective representatives thereunto duly authorized, as of the date first above written.

LANDLORD:  
WILLIAMS HEADQUARTERS BUILDING LLC

By: \_\_\_\_\_

Print: \_\_\_\_\_

Title: \_\_\_\_\_

Date: \_\_\_\_\_

TENANT:  
BOKF, NA, d/b/a Bank of Oklahoma

By: \_\_\_\_\_

Print: Michael D. Nalley, CCIM, CPM, RPA

Title: Senior Vice President

Director Corporate Real Estate

Date: \_\_\_\_\_

LANDLORD ACKNOWLEDGMENT:

STATE OF OKLAHOMA )  
 ) ss:  
COUNTY OF TULSA )

This instrument was acknowledged before me on this \_\_\_\_\_ day of \_\_\_\_\_, 2019, by \_\_\_\_\_ as \_\_\_\_\_ of Williams Headquarters Building LLC, a Delaware limited liability company.

Notary Public

My Commission No. \_\_\_\_\_  
Expires:

\_\_\_\_\_  
[Seal]

TENANT ACKNOWLEDGMENT:

STATE OF OKLAHOMA )  
 ) ss:  
COUNTY OF TULSA )

This instrument was acknowledged before me on this \_\_\_\_\_ day of \_\_\_\_\_, 2019, by Michael D. Nalley as Senior Vice President and Director of Corporate Real Estate of BOKF, NA, a national banking association, d/b/a Bank of Oklahoma.

Notary Public

My Commission No. \_\_\_\_\_  
Expires:

\_\_\_\_\_  
[Seal]

**EXHIBIT "H"**

Kiosk License Premises

[See attached.]

## **FIRST AMENDMENT TO LEASE AGREEMENT**

THIS FIRST AMENDMENT TO LEASE AGREEMENT (this "First Amendment"), is made and entered into effective as of the 8th day of November, 2019, by and between WILLIAMS HEADQUARTERS BUILDING LLC, a Delaware corporation ("Landlord"), and BOKF, NA, a national banking association, d/b/a Bank of Oklahoma ("Tenant").

### **RECITALS**

A. Landlord is the owner of the Bank of Oklahoma Tower located at One Williams Center, 101 East 2nd, Tulsa, Oklahoma 74103 (the "Building").

B. Landlord and Tenant are parties to a certain Lease Agreement dated as of July 1, 2019 (the "Lease"), pursuant to which Landlord leases to Tenant the Premises, as more particularly defined in the Lease.

C. Pursuant to that certain Podium Engineering Study, as more particularly described in the Lease, Landlord and Tenant have agreed to adjust the Net Base Rent Per Square Foot for Existing Premises, subject to the terms and conditions contained in the Lease and this First Amendment.

### **AGREEMENT**

NOW, THEREFORE, in consideration of the mutual covenants contained herein, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Landlord and Tenant hereby amend the Lease as follows:

1. Definitions. Capitalized terms used but not defined herein (including in the Recitals hereto) shall have the meaning assigned them in the Lease. In addition, the following term contained in Article I of the Lease is hereby replaced in its entirety as follows:

1.19 Net Base Rent Per Square Foot for Existing Premises: The Net Base Rent Per Square Foot for Existing Premises is \$10.16. Pursuant to the Lease and the Podium Engineering Study described therein, the Net Base Rent Per Square Foot for Existing Premises shall be \$10.16 commencing on the Effective Date defined in the Lease. Any required retroactive adjustments or true-ups shall be made by Landlord as necessary, including, but not limited to, adjustments to invoices for the Net Base Rent for Existing Premises, and adjustments to invoices for the Additional and After-Hours Services pursuant to Section 8.2 to include the Above Standard Utilities for the Podium Floors.

2. Full Force and Effect. Except as set forth in this First Amendment, the terms, provisions and conditions set forth in the Lease shall remain unmodified and in full force and effect. In case of a conflict between the Lease and this First Amendment, the terms of this First Amendment shall control.

3. Multiple Counterparts. This First Amendment may be executed in one or more counterparts, each of which shall be deemed an original copy of this First Amendment and all of which together shall be deemed to constitute one and the same agreement.

4. Entire Agreement. This First Amendment sets forth all covenants, agreements and understandings between Landlord and Tenant with respect to the subject matter hereof. There are no other covenants, conditions or understandings, either written or oral, between the parties hereto with respect to the subject matter hereof, except as set forth herein and in the Lease.

*[Signatures on Following Page]*

IN WITNESS WHEREOF, Landlord and Tenant have duly executed this First Amendment effective as of the date first above written.

"Landlord"

WILLIAMS HEADQUARTERS BUILDING LLC,  
a Delaware limited liability company

By:  /s/ Peter S. Burgess

Name:  Peter S. Burgess

Title:  V.P. Treasury & Insurance

"Tenant"

BOKF, NA,  
a national banking association, d/b/a Bank of Oklahoma

By:  /s/ Michael D. Nalley

Name:  Michael D. Nalley, CCIM, CPM, RPA

Title:  SVP, Director, Corporate Real Estate

**BOK FINANCIAL CORPORATION**  
**SUBSIDIARIES OF THE REGISTRANT**

**Banking Subsidiaries**

BOKF, National Association (1)

**Other subsidiaries of BOK Financial Corporation**

BOK Capital Service Corporation

BOKF Capital Corporation

BOKF-CC (Collision Works), LLC

BOKF-CC (FSE), LLC

BOKF-CC (O2 Concepts), LLC

BOKF-CC (MCA), LLC

BOKF-CC (QRC), LLC

BOKF-CC (Switchgrass), LLC

BOKFCC Merchant Banking Fund I, LLC

BOKF Energy Fund Investment I, LLC

BOKF Equity, LLC

BOKF Private Equity Limited Partnership II

BOK Financial Insurance, Inc. (7)

BOK Financial Private Wealth, Inc. (5)

BOK Financial Securities, Inc.

Cavanal Hill Distributors, Inc.

CoBiz Risk Management, Inc. (8)

RMA Holdings, Inc. (7)

Switchgrass I, LLC

Switchgrass II, LLC

Switchgrass III, LLC

Switchgrass IV, LLC

Switchgrass V, LLC

Switchgrass VI, LLC

Switchgrass Holdings, LLC  
Switchgrass Management, LLC  
Switchgrass Properties, LLC

**Subsidiaries of BOKF, National Association (1)**

Affiliated BancServices, Inc.  
Affiliated Financial Holding Co.  
Affiliated Financial Insurance Agency, Inc.  
AWREI, Inc. (7)  
BancOklahoma Agri-Service Corporation  
BOK Delaware, Inc. (3)  
BOK Financial Asset Management, Inc. (2)  
BOK Financial Equipment Finance, Inc.  
BOK Financial Public Finance, Inc. (7)  
BOK Funding Trust (3)  
BOKFCDF Fund I, LLC  
BOKF Community Development Fund, LLC  
BOKF Community Development Fund II  
BOKF Community Development Corporation  
BOKF Petro Holding, LLC  
BOKF Special Assets I, LLC  
BOSC Agency, Inc. (Oklahoma)  
BOSC Agency, Inc. (New Mexico) (4)  
BOSC Agency, Inc. (Texas) (2)  
Cavanal Hill Investment Management, Inc.  
Cottonwood Valley Ventures, Inc.  
CVV Management, Inc.  
CVV Partnership, an Oklahoma General Partnership  
Oklahoma New Markets Fund I, LLC  
Western Real Estate Investors, Inc. (7)



All Subsidiaries listed above were incorporated in Oklahoma, except as noted.

- (1) Chartered by the United States Government
- (2) Incorporated in Texas
- (3) Incorporated in Delaware
- (4) Incorporated in New Mexico
- (5) Incorporated in Colorado
- (6) Incorporated in Kansas
- (7) Incorporated in Colorado
- (8) Incorporated in Nevada

## Consent of Independent Registered Public Accounting Firm

We consent to the incorporation by reference in the following Registration Statements:

- Registration Statement (Form S-8, No. 33-44121) pertaining to the Reoffer Prospectus of the Bank of Oklahoma Master Thrift Plan and Trust Agreement as amended October 6, 2008.
- Registration Statement (Form S-8, No. 333-40280) pertaining to the Reoffer Prospectus of the BOK Financial Corporation Master Thrift Plan for Hourly Employees as amended October 6, 2008.
- Registration Statement (Form S-8, No. 33-79836) pertaining to the Reoffer Prospectus of the BOK Financial Corporation Directors' Stock Compensation Plan.
- Registration Statement (Form S-8, No. 333-32649) pertaining to the Reoffer Prospectus of the BOK Financial Corporation 1997 Stock Option Plan.
- Registration Statement (Form S-8, No. 333-93957) pertaining to the Reoffer Prospectus of the BOK Financial Corporation 2000 Stock Option Plan.
- Registration Statement (Form S-8, No. 333-62578) pertaining to the Reoffer Prospectus of the BOK Financial Corporation 2001 Stock Option Plan.
- Registration Statement (Form S-8, No. 333-106530) pertaining to the Reoffer Prospectus of the BOK Financial Corporation 2003 Executive Incentive Plan.
- Registration Statement (Form S-8, No. 333-106531) pertaining to the Reoffer Prospectus of the BOK Financial Corporation 2003 Stock Option Plan.
- Registration Statement (Form S-8, No. 333-135224) pertaining to the Reoffer Prospectus of the BOK Financial Corporation 2003 Stock Option Plan.
- Registration Statement (Form S-8, No. 333-158846) pertaining to the Reoffer Prospectus of the BOK Financial Corporation 2009 Omnibus Incentive Plan.
- Registration Statement (Form S-3, (No. 333-212120) pertaining to the Reoffer Prospectus of the BOK Financial Corporation 2016 Subordinated Note Issuance.
- Registration Statement (Form S-4, (No. 333-226211) pertaining to the Registration Statement for the registration of BOK Financial Corporation's common stock.

of our reports dated February 27, 2020, with respect to the consolidated financial statements of BOK Financial Corporation and the effectiveness of internal control over financial reporting of BOK Financial Corporation included in this Annual Report (Form 10-K) of BOK Financial Corporation for the year ended December 31, 2019.

/s/ Ernst & Young LLP

Tulsa, Oklahoma

February 27, 2020

**CERTIFICATION PURSUANT TO  
SECTION 302  
OF THE SARBANES-OXLEY ACT OF 2002  
FOR THE CHIEF EXECUTIVE OFFICER**

I, Steven G. Bradshaw, President and Chief Executive Officer of BOK Financial Corporation (“BOK Financial”), certify that:

1. I have reviewed this Annual Report on Form 10-K of BOK Financial;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
  - a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
  - a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 27, 2020

/s/ Steven G. Bradshaw

Steven G. Bradshaw

President

Chief Executive Officer

BOK Financial Corporation

**CERTIFICATION PURSUANT TO  
SECTION 302  
OF THE SARBANES-OXLEY ACT OF 2002  
FOR THE CHIEF FINANCIAL OFFICER**

I, Steven E. Nell, Chief Financial Officer of BOK Financial Corporation (“BOK Financial”), certify that:

1. I have reviewed this Annual Report on Form 10-K of BOK Financial;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer(s) and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
  - a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
  - b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
  - d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer(s) and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
  - a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
  - b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: February 27, 2020

/s/ Steven E. Nell

Steven E. Nell  
Executive Vice President  
Chief Financial Officer  
BOK Financial Corporation

**CERTIFICATION PURSUANT TO  
18 U.S.C. SECTION 1350,  
AS ADOPTED PURSUANT TO  
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Annual Report of BOK Financial Corporation (“BOK Financial”) on Form 10-K for the fiscal year ending December 31, 2019 as filed with the Securities and Exchange Commission on the date hereof (the “Report”), we, Steven G. Bradshaw and Steven E. Nell, Chief Executive Officer and Chief Financial Officer, respectively, of BOK Financial, certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that to our knowledge:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of BOK Financial as of, and for, the periods presented.

February 27, 2020

/s/ Steven G. Bradshaw

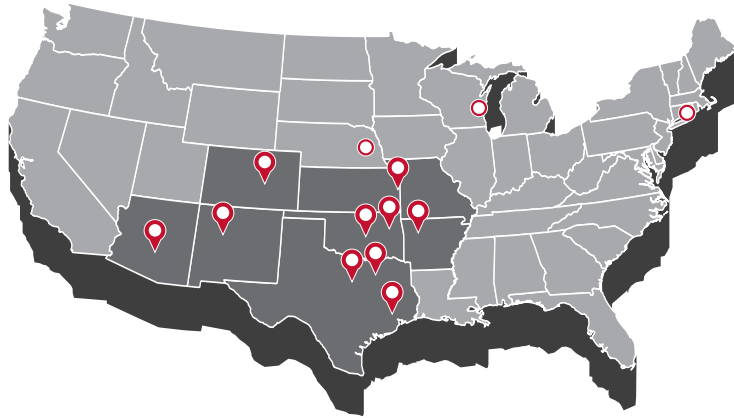
Steven G. Bradshaw  
President  
Chief Executive Officer  
BOK Financial Corporation

/s/ Steven E. Nell

Steven E. Nell  
Executive Vice President  
Chief Financial Officer  
BOK Financial Corporation

# A FAMILY OF BRANDS

BOK Financial has a long-time commitment to serving customers and communities throughout the United States. It provides a wide array of banking, fiduciary and investment services through our regional bank brands, a broker dealer, four registered investment advisor firms and an electronic funds network.



**📍 FULL SERVICE BANKING MARKETS**

- Albuquerque
- Arizona
- Arkansas
- Colorado
- Kansas
- Missouri
- Oklahoma
- Texas

**○ ADDITIONAL WEALTH MANAGEMENT OFFICES**

- Lincoln, NE
- Milwaukee, WI
- Stamford, CT

**BANKING:**



**WEALTH MANAGEMENT:**



**TRANSACTION AND PAYMENT PROCESSING:**



**MORTGAGE:**



