## BOK FINANCIAL CORP ET AL

Form 10-Q
July 29, 2016

## UNITED STATES

SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
FORM 10-Q
(Mark One)
ý QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF
For the quarterly period ended June 30, 2016
OR
TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from $\qquad$ to $\qquad$
Commission File No. 0-19341
BOK FINANCIAL CORPORATION
(Exact name of registrant as specified in its charter)

Oklahoma
(State or other jurisdiction
of Incorporation or Organization)

73-1373454
(IRS Employer
Identification No.)

Bank of Oklahoma Tower
Boston Avenue at Second Street
Tulsa, Oklahoma 74192
(Address of Principal Executive Offices) (Zip Code)
(918) 588-6000
(Registrant's telephone number, including area code)
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 ý No "
Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, 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 ý No "

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, or a non-accelerated filer. See definition of "accelerated filer and large accelerated filer" in Rule 12b-2 of the Exchange Act. (Check one):
Large accelerated filer ý $\quad$ Accelerated filer " Non-accelerated filer *

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes " No ý Indicate the number of shares outstanding of each of the issuer's classes of common stock, as of the latest practicable date: $65,866,317$ shares of common stock ( $\$ .00006$ par value) as of June 30, 2016.
BOK Financial Corporation
Form 10-Q
Quarter Ended June 30, 2016
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## Management's Discussion and Analysis of Financial Condition and Results of Operations Performance Summary

BOK Financial Corporation ("the Company") reported net income of $\$ 65.8$ million or $\$ 1.00$ per diluted share for the second quarter of 2016, compared to $\$ 79.2$ million or $\$ 1.15$ per diluted share for the second quarter of 2015 and $\$ 42.6$ million or $\$ 0.64$ per diluted share for the first quarter of 2016.

Highlights of the second quarter of 2016 included:
Net interest revenue totaled $\$ 182.6$ million for the second quarter of 2016, compared to $\$ 175.7$ million for the second quarter of 2015 and $\$ 182.6$ million for the first quarter of 2016 . Net interest revenue increased over the prior year primarily due to growth in average earning assets. Average earning assets were $\$ 28.8$ billion for the second quarter of 2016 and $\$ 27.6$ billion for the second quarter of 2015 . Net interest margin was 2.63 percent for the second quarter of 2016. Net interest margin was 2.61 percent for the second quarter of 2015 and 2.65 percent for the first quarter of 2016.

Fees and commissions revenue totaled $\$ 183.5$ million for the second quarter of 2016 , up $\$ 10.9$ million over the second quarter of 2015. All revenue categories grew over the prior year. Fees and commissions revenue increased $\$ 17.9$ million over the first quarter of 2016 , primarily due to a $\$ 7.2$ million increase in brokerage and trading revenue and a $\$ 3.8$ million increase in mortgage banking revenue. Fiduciary and asset management and transaction card revenue were both up over the prior quarter.
Changes in the fair value of mortgage servicing rights, net of economic hedges, decreased pre-tax net income by $\$ 1.2$ million in the second quarter of 2016, $\$ 1.1$ million in the second quarter of 2015 and $\$ 11.4$ million in the first quarter of 2016.
Operating expenses totaled $\$ 254.7$ million for the second quarter of 2016, an increase of $\$ 27.6$ million over the second quarter of 2015. Personnel expense increased $\$ 9.8$ million primarily due to increased incentive compensation expense. Non-personnel expense increased $\$ 17.8$ million largely due to growth in professional fees and mortgage banking expenses. Operating expenses increased $\$ 9.8$ million over the previous quarter.
The Company recorded a $\$ 20.0$ million provision for credit losses in the second quarter of 2016. The Company recorded a $\$ 35.0$ million provision in the first quarter of 2016 and a $\$ 4.0$ million provision for credit losses in the second quarter of 2015. Gross charge-offs were $\$ 8.8$ million in the second quarter of 2016, $\$ 2.9$ million in the second quarter of 2015 and $\$ 24.0$ million in the first quarter of 2016. Recoveries were $\$ 1.4$ million in the second quarter of 2016, compared to $\$ 2.2$ million in the second quarter of 2015 and $\$ 1.5$ million in the first quarter of 2016.
The combined allowance for credit losses totaled $\$ 252$ million or 1.54 percent of outstanding loans at June 30, 2016, compared to $\$ 240$ million or 1.50 percent of outstanding loans at March 31, 2016. The portion of the combined allowance attributed to the energy portfolio totaled 3.58 percent of outstanding energy loans at June 30, 2016, an increase from 3.19 percent of outstanding energy loans at March 31, 2016.
Nonperforming assets that are not guaranteed by U.S. government agencies totaled $\$ 251$ million or 1.55 percent of outstanding loans and repossessed assets (excluding those guaranteed by U.S. government agencies) at June 30, 2016 and $\$ 252$ million or 1.59 percent of outstanding loans and repossessed assets (excluding those guaranteed by U.S. government agencies) at March 31, 2016. Nonperforming energy loans increased $\$ 8.6$ million during the second quarter.

Average loans increased by $\$ 271$ million over the previous quarter due primarily to a $\$ 187$ million increase in - commercial real estate loans. Period-end outstanding loan balances were $\$ 16.4$ billion at June 30,2016 , a $\$ 384$ million increase over March 31, 2016, primarily due to growth in commercial real estate loans.
Average deposits decreased $\$ 159$ million compared to the previous quarter primarily due to decreased interest-bearing transaction account balances. Growth in demand deposit balances was offset by a decrease in time deposits. Period-end deposits were $\$ 20.8$ billion at June 30, 2016, an increase of $\$ 341$ million from March 31, 2016. The Company's common equity Tier 1 ratio was $11.86 \%$ at June 30, 2016. In addition, the Company's Tier 1 capital ratio was $11.86 \%$, total capital ratio was $13.51 \%$ and leverage ratio was $9.06 \%$ at June 30, 2016. The Company's common equity Tier 1 ratio was $12.00 \%$ at March 31, 2016. In addition, the Company's Tier 1 capital ratio was
$12.00 \%$, total capital ratio was $13.21 \%$ and leverage ratio was $9.12 \%$ at March 31, 2016. The total capital ratio increased due to the issuance of $\$ 150$ million of 40 year, fixed rate subordinated debt during the second quarter.

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The Company paid a regular quarterly cash dividend of $\$ 28$ million or $\$ 0.43$ per common share during the - second quarter of 2016. On July 26, 2016, the board of directors approved a regular quarterly cash dividend of $\$ 0.43$ per common share payable on or about August 26, 2016 to shareholders of record as of August 12, 2016. The Company repurchased 305,169 common shares at an average price of $\$ 58.23$ per share during the second quarter of 2016. No shares were repurchased during the second quarter of 2015 and the first quarter of 2016.
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.

Net interest revenue totaled $\$ 182.6$ million for the second quarter of 2016 compared to $\$ 175.7$ million for the second quarter of 2015 and $\$ 182.6$ million for the first quarter of 2016. Net interest margin was 2.63 percent for the second quarter of 2016, 2.61 percent for the second quarter of 2015 and 2.65 percent for the first quarter of 2016.

Tax-equivalent net interest revenue increased $\$ 8.2$ million over the second quarter of 2015. Table 1 shows the effect on net interest revenue from changes in average balances and interest rates for various types of earning assets and interest-bearing liabilities. Tax-equivalent net interest revenue increased $\$ 10.8$ million primarily due to the growth in average loan balances, partially offset by increased borrowing costs. Net interest revenue decreased $\$ 2.6$ million due to a change in rates from the increase in the federal funds rate by the Federal Reserve in the fourth quarter of 2015, a mix shift toward lower yielding floating rate loans, continued repricing of fixed rate loans and an increase in nonaccruing energy loans.

The tax-equivalent yield on earning assets was 2.91 percent for the second quarter of 2016 , up 7 basis points over the second quarter of 2015. The available for sale securities portfolio yield increased 10 basis points to 2.04 percent. The yield on interest-bearing cash and cash equivalents increased 26 basis points. Loan yields decreased 7 basis points, primarily due to growth in variable-rate loans and continued repricing in the low rate environment. In addition, the increase in nonaccruing energy loans impacted the loan yield by 2 basis points. Funding costs were up 6 basis points over the second quarter of 2015. The cost of interest-bearing deposits decreased 2 basis points. The cost of other borrowed funds increased 26 basis points primarily due to increase in the federal funds rate by the Federal Reserve in the fourth quarter of 2015. The cost of subordinated debentures decreased 69 basis points as $\$ 122$ million of fixed-rate subordinated debt matured on June 1, 2015. The cost of this subordinated debt was 5.56 percent. The benefit to net interest margin from earning assets funded by non-interest bearing liabilities was 13 basis points for the second quarter of 2016, up a basis point over the second quarter of 2015.

Average earning assets for the second quarter of 2016 increased $\$ 1.2$ billion or 4 percent over the second quarter of 2015. Average loans, net of allowance for loan losses, increased $\$ 1.3$ billion due primarily to growth in average commercial and commercial real estate loans. The average balance of trading securities increased $\$ 110$ million and the average balance of restricted equity securities increased $\$ 97$ million. The average balance of available for sale securities decreased $\$ 173$ million. The average balances of fair value option securities held as an economic hedge of our mortgage servicing rights, investment securities and residential residential mortgage loans held for sale all decreased compared to the prior year.

Average deposits decreased $\$ 626$ million compared to the second quarter of 2015. Average interest-bearing transaction accounts decreased $\$ 473$ million and average time deposits decreased $\$ 354$ million, partially offset by a
$\$ 165$ million increase in average demand deposit balances. Average savings account balances also grew over the prior year. Average borrowed funds increased $\$ 1.9$ billion over the second quarter of 2015, primarily due to increased borrowings from the Federal Home Loan Banks. The average balance of subordinated debentures decreased $\$ 75$ million.

Net interest margin decreased 2 basis points compared to the first quarter of 2016. The yield on average earning assets decreased 1 basis point. The loan portfolio yield increased by a basis point to 3.58 percent. The yield on the available for sale securities portfolio decreased 4 basis points to 2.04 percent. Funding costs were 0.41 percent, up 1 basis point over the prior quarter. The benefit to net interest margin from earning assets funded by non-interest bearing liabilities was unchanged compared to the prior quarter.

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Average earning assets increased $\$ 246$ million during the second quarter of 2016 , primarily due to growth in average outstanding loans of $\$ 271$ million over the previous quarter. Average commercial real estate loan balances increased $\$ 187$ million and average personal loan balances increased $\$ 89$ million. The average balance of residential mortgage loans held for sale was up $\$ 111$ million and trading securities balances increased $\$ 50$ million over the prior quarter. This growth was partially offset by an $\$ 82$ million decrease in the average balance of securities held as an economic hedge of mortgage servicing rights and a $\$ 61$ million decrease in the average balance of the available for sale securities portfolio. Increased restricted equity balances were offset by a decrease in the average balance of interest-bearing cash and cash equivalents and investment securities.
Average deposits decreased $\$ 159$ million compared to the previous quarter. Interest-bearing transaction account balances decreased $\$ 166$ million and time deposit balances decreased $\$ 69$ million, partially offset by a $\$ 56$ million increase in demand deposit balances. The average balance of borrowed funds increased $\$ 399$ million over the first quarter of 2016. Increased borrowings from the Federal Home Loan Banks were partially offset by decreased federal funds sold and repurchase agreement balances.

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. Approximately $82 \%$ of our commercial and commercial real estate loan portfolios are either variable rate or fixed rate 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 1 and in the interest rate sensitivity projections as shown in the Market Risk section of this report.

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Table 1 -- Volume/Rate Analysis
(In thousands)

|  | Three Months Ended June 30, 2016 / 2015 |  |  |  | Six Months Ended |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Change Due To ${ }^{1}$ |  |  |  | Change Due To ${ }^{1}$ |  |  |  |
|  | Change | Volu | meield/R |  | Change | Volum | m®ield/R |  |
| Tax-equivalent interest revenue: |  |  |  |  |  |  |  |  |
| Interest-bearing cash and cash equivalents | \$1,319 | \$18 | \$ 1,301 |  | \$2,603 | \$(26) | \$ 2,629 |  |
| Trading securities | 190 |  | 14 |  | 231 | 257 | (26 | ) |
| Investment securities: |  |  |  |  |  |  |  |  |
| Taxable securities | (182 | ) (135) |  | ) | (333 | ) (295) |  | ) |
| Tax-exempt securities | 352 |  |  |  | 773 | (466) | ) 1,239 |  |
| Total investment securities | 170 | (402) |  |  | 440 | (761) | 1,201 |  |
| Available for sale securities: |  |  |  |  |  |  |  |  |
| Taxable securities | 990 |  | 1,938 |  | 2,817 | (1,475 | 4,292 |  |
| Tax-exempt securities | 24 | (132) |  |  | (21 | ) (284) |  |  |
| Total available for sale securities | 1,014 | (1,08) | 02,094 |  | 2,796 | (1,75) | 4,555 |  |
| Fair value option securities | (258 | ) (277) |  |  | 328 | 184 |  |  |
| Restricted equity securities | 635 | 1,584 | (949 | ) | 2,349 | 3,177 | (828 | ) |
| Residential mortgage loans held for sale | (384 | ) (554) | 170 |  | (633 | ) $(1,076$ | 6443 |  |
| Loans | 9,105 | 12,01 | 12,906 | ) | 22,334 | 25,202 | 2(2,868 | ) |
| Total tax-equivalent interest revenue | 11,791 | 11,47 | 615 |  | 30,448 | 25,198 | 85,250 |  |
| Interest expense: |  |  |  |  |  |  |  |  |
| Transaction deposits | 1,063 |  | 1,210 |  | 1,915 | (428) | 2,343 |  |
| Savings deposits | (1 | ) 9 | (10 | ) | (2 | ) 17 | (19 | ) |
| Time deposits | (2,331) | ) $(1,10)$ | 5(1,226 | ) | (4,745 | ) $(2,054$ | (2,691 | ) |
| Funds purchased | 20 | 2 | 18 |  | 80 |  | 59 |  |
| Repurchase agreements | 11 | (20) |  |  | (4 | ) (49 ) |  |  |
| Other borrowings | 5,628 | 2,320 | 3,308 |  | 10,982 | 4,960 | 6,022 |  |
| Subordinated debentures | (817 | ) (351) | (466 | ) | (2,272 | ) (916) | (1,356 | ) |
| Total interest expense | 3,573 |  | 2,865 |  | 5,954 | 1,551 | 4,403 |  |
| Tax-equivalent net interest revenue | 8,218 | 10,76 | 82,550 | ) | 24,494 | 23,64 | 7847 |  |
| Change in tax-equivalent adjustment | 1,337 |  |  |  | 2,767 |  |  |  |
| Net interest revenue | \$6,881 |  |  |  | \$21,72 |  |  |  |

${ }^{1}$ Changes attributable to both volume and yield/rate are allocated to both volume and yield/rate on an equal basis.

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## Other Operating Revenue

Other operating revenue was $\$ 188.9$ million for the second quarter of 2016 , a $\$ 12.6$ million increase over the second quarter of 2015 and a $\$ 29.1$ million increase over the first quarter of 2016. Fees and commissions revenue was up $\$ 10.9$ million over the second quarter of 2015 and increased $\$ 17.9$ million over the prior quarter. The change in the fair value of mortgage servicing rights, net of economic hedges, decreased other operating revenue by $\$ 1.2$ million in the second quarter of 2016, $\$ 1.1$ million in the second quarter of 2015 and $\$ 11.4$ million in the first quarter of 2016.

Table 2 - Other Operating Revenue
(In thousands)

|  | Three Months Ended June 30, |  | Increase (Decrease) | \% <br> Increase (Decrease) |  | Three <br> Months <br> Ended <br> Mar. 31, <br> 2016 | Increase (Decrease) | \% <br> Increase <br> (Decrease) |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2016 | 2015 |  |  |  |  |  |  |  |
| Brokerage and trading revenue | \$39,530 | \$36,012 | \$3,518 | 10 | \% | \$32,341 | \$7,189 | 22 | \% |
| Transaction card revenue | 34,950 | 32,778 | 2,172 | 7 | \% | 32,354 | 2,596 | 8 | \% |
| Fiduciary and asset management revenue | 34,813 | 32,712 | 2,101 | 6 | \% | 32,056 | 2,757 | 9 | \% |
| Deposit service charges and fees | 22,618 | 22,328 | 290 | 1 | \% | 22,542 | 76 |  | \% |
| Mortgage banking revenue | 38,224 | 36,846 | 1,378 | 4 | \% | 34,430 | 3,794 | 11 | \% |
| Other revenue | 13,352 | 11,871 | 1,481 | 12 | \% | 11,904 | 1,448 | 12 | \% |
| Total fees and commissions revenue | 183,487 | 172,547 | 10,940 | 6 | \% | 165,627 | 17,860 | 11 | \% |
| Other gains, net | 1,307 | 1,457 | (150 | ) $\mathrm{N} / \mathrm{A}$ |  | 1,560 | (253 | N/A |  |
| Gain (loss) on derivatives, net | 10,766 | (1,032 | ) 11,798 | N/A |  | 7,138 | 3,628 | N/A |  |
| Gain (loss) on fair value option securities, net | 4,279 | (8,130 | ) 12,409 | N/A |  | 9,443 | (5,164 | N/A |  |
| Change in fair value of mortgage servicing rights | (16,283 | ) 8,010 | (24,293 | N/A |  | (27,988 | 11,705 | N/A |  |
| Gain on available for sale securities, net | 5,326 | 3,433 | 1,893 | N/A |  | 3,964 | 1,362 | N/A |  |
| Total other operating revenue | \$188,882 | \$176,285 | \$ 12,597 | , | \% | \$ 159,744 | \$ 29,138 | 18 | \% |
| Certain percentage increases (decrea purposes based on the nature of the i | s) in nonm. | -fees and con | mmissions re | venue |  | not meaning | gful for comp | paris |  |

Fees and commissions revenue
Diversified sources of fees and commissions revenue are a significant part of our business strategy and represented 50 percent of total revenue for the second quarter of 2016, excluding provision for credit losses and gains and losses on other assets, 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 that cause net interest revenue compression such as falling interest rates may also drive growth in our mortgage banking revenue. 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.

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Brokerage and trading revenue includes revenues from securities trading, customer hedging, retail brokerage and investment banking. Brokerage and trading revenue increased $\$ 3.5$ million or 10 percent over the second quarter of 2015. Securities trading revenue was $\$ 12.3$ million for the second quarter of 2016, an increase of $\$ 947$ thousand or 8 percent over the second quarter of 2015. Securities trading revenue includes net realized and unrealized gains primarily related to sales of U.S. government securities, residential mortgage-backed securities guaranteed by U.S. government agencies and municipal securities to institutional customers.

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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. Customer hedging revenue totaled $\$ 13.5$ million for the second quarter of 2016 , a $\$ 1.8$ million or 16 percent increase over the second quarter of 2015 primarily due to increased hedging activity by our energy customers.

Revenue earned from retail brokerage transactions increased $\$ 817$ thousand or 14 percent over the second quarter of 2015 to $\$ 6.7$ million. 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 product type. The increase in revenue due to transaction volume growth was partially offset by a change in product mix to products that pay a lower commission rate. In addition, volume has shifted from sales of products that pay a one-time transaction fee to accounts that pay us an on-going management fee.

Investment banking revenue, which includes fees earned upon completion of underwriting and financial advisory services and loan syndication fees, totaled $\$ 7.0$ million for the second quarter of 2016, largely unchanged compared to the second quarter of 2015. Investment banking revenue is primarily related to the timing and volume of completed transactions.

Brokerage and trading revenue increased $\$ 7.2$ million over the first quarter of 2016. Customer hedging revenue increased $\$ 4.6$ million primarily due to increased volumes of contracts with our mortgage banking and energy customers.Investment banking revenue grew by $\$ 2.9$ million primarily due to growth in loan syndication fees and bond underwriting fees, which are dependent on the timing and volume of completed transactions. Securities trading revenue decreased $\$ 627$ thousand and retail brokerage fees were up $\$ 271$ thousand over the prior quarter.

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 for the second quarter of 2016 increased $\$ 992$ thousand or 3 percent over the second quarter of 2015, excluding the impact of a customer early termination fee in the second quarter of 2016. Revenues from the processing of transactions on behalf of the members of our TransFund electronic funds transfer ("EFT") network totaled $\$ 17.1$ million, a $\$ 478$ thousand or 3 percent increase over the prior year. Merchant services fees totaled $\$ 11.7$ million, an increase of $\$ 410$ thousand or 4 percent based on increased transaction activity. Revenue from interchange fees paid by merchants for transactions processed from debit cards issued by the Company totaled $\$ 4.9$ million, an increase of $\$ 104$ thousand or 2 percent over the second quarter of 2015.
Excluding the impact of the customer early termination fee, transaction card revenue increased $\$ 1.4$ million primarily due to a seasonal increase in transaction volumes on our TransFund EFT network. Merchant services fees and revenue from interchange fees also increased over the prior quarter.

Fiduciary and asset management revenue increased $\$ 2.1$ million or 6 percent over the second quarter of 2015 largely due to decreased fee waivers. We earn fees as administrator to and investment adviser for the Cavanal Hill Funds, a diversified, open-ended investment company established as a business trust under the Investment Company Act of 1940. The Bank is custodian and BOK Financial Securities, Inc. is distributor for the Cavanal Hill Funds. Products of the Cavanal Hill Funds are offered to customers, employee benefit plans, trusts and the general public in the ordinary course of business. We have voluntarily waived administration fees on the Cavanal Hill money market funds in order to maintain positive yields on these funds in the current low short-term interest rate environment. Waived fees totaled $\$ 1.8$ million for the second quarter of 2016 compared to $\$ 2.9$ million for the second quarter of 2015 and $\$ 2.0$ million for the first quarter of 2016. The decrease in fee waivers was related to increased interest rates as a result of the Federal Reserve's federal funds rate increase in the fourth quarter of 2015. The remaining increase is primarily due to
growth in assets under management related to the Company's acquisition of Weaver and Tidwell Financial Advisors LTD d/b/a Weaver Wealth Management, a registered investment advisor, in the first quarter of 2016 and changes in market values.

Fiduciary and asset management revenue increased $\$ 2.8$ million over the first quarter of 2016 largely due to annual assessment of tax preparation fees and growth in assets under management.

The fair value of fiduciary assets administered by the Company totaled $\$ 39.9$ billion at June 30, 2016, $\$ 38.8$ billion at June 30, 2015 and $\$ 39.1$ billion at March 31, 2016. Fiduciary assets are assets for which the Company possesses investment discretion on behalf of another or any other similar capacity.

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Deposit service charges and fees were $\$ 22.6$ million for the second quarter of 2016, an increase of $\$ 290$ thousand or 1 percent over the second quarter of 2015 . Commercial account service charge revenue totaled $\$ 11.1$ million, up $\$ 677$ thousand or 7 percent over the prior year. Overdraft fees were $\$ 9.9$ million for the second quarter of 2016, a decrease of $\$ 229$ thousand or 2 percent compared to the second quarter of 2015. Service charges on deposit accounts with a standard monthly fee were $\$ 1.6$ million, a decrease of $\$ 165$ thousand or 9 percent compared to the second quarter of 2015. Deposit service charges and fees were largely unchanged compared to the prior quarter. Growth in overdraft fees were offset by a decrease in commercial account service charge revenue and service charges on account with a standard monthly fee.

Mortgage banking revenue increased $\$ 1.4$ million or $4 \%$ over the second quarter of 2015. Mortgage production revenue decreased $\$ 687$ thousand compared to the prior year. Narrowing of margins on mortgage loans sold offset an increase in mortgage loan commitments. Mortgage servicing revenue was up $\$ 2.1$ million or 15 percent over the second quarter of 2015. The outstanding principal balance of mortgage loans serviced for others totaled $\$ 21.2$ billion, an increase of $\$ 3.2$ billion or 18 percent.
Mortgage banking revenue increased $\$ 3.8$ million over the first quarter of 2016. Mortgage production revenue increased $\$ 3.4$ million due to growth in the volume of mortgage loans sold and mortgage loan commitments during the quarter. Average primary mortgage interest rates were 15 basis points lower than in the first quarter of 2016. Total mortgage loans originated during the second quarter of 2016 increased $\$ 575$ million compared to the previous quarter. Outstanding mortgage loan commitments at June 30, 2016 were $\$ 63$ million higher than at March 31, 2016. Revenue from mortgage loan servicing grew by $\$ 345$ thousand due to an increase in the volume of loans serviced. The outstanding balance of mortgage loans serviced for others increased $\$ 884$ million over March 31, 2016.

Table 3 - Mortgage Banking Revenue
(In thousands)

|  | Three Months Ended June 30, |  | Increase (Decrease) | \% <br> Increase <br> (Decrease) |  | Three <br> Months <br> Ended <br> Mar. 31, <br> 2016 | Increase (Decrease) | \% <br> Increase (Decrease) |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Net realized gains on mortgage loans sold | \$19,205 | \$23,856 | \$(4,651) | (19 | )\% | \$10,779 | \$8,426 | 78 | \% |
| Change in net unrealized gains on mortgage loans held for sale | 3,221 | (743 ) | 3,964 | (534 | )\% | 8,198 | (4,977 ) | 61 | \% |
| Total mortgage production revenue | 22,426 | 23,113 | (687 ) | (3 | )\% | 18,977 | 3,449 | 18 | \% |
| Servicing revenue | 15,798 | 13,733 | 2,065 | 15 | \% | 15,453 | 345 | 2 | \% |
| Total mortgage revenue | \$38,224 | \$36,846 | \$1,378 | 4 | \% | \$34,430 | \$3,794 | 11 | \% |
| Mortgage loans funded for sale | \$ 1,818,844 | \$ 1,828,230 | \$(9,386) | (1 | )\% | \$ 1,244,015 | \$574,829 | 46 | \% |
| Mortgage loans sold | 1,742,582 | 1,861,968 | (119,386) | (6) | )\% | 1,239,391 | 503,191 | 41 | \% |
| Period end outstanding mortgage commitments, net | $965,631$ | 849,619 | 116,012 | 14 | \% | 902,986 | 62,645 | 7 | \% |
| Outstanding principal balance of mortgage | 21,178,387 | 17,979,623 | 3,198,764 | 18 | \% | 20,294,662 | 883,725 | 4 | \% |

loans serviced for others

| Primary residential mortgage interest rate - 3.48 period end | \% 4.02 | \% (54 | $\begin{aligned} & \text { fps } \\ & \text { bin } \end{aligned}$ | 3.71 | \% (23 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Primary residential mortgage interest rate - 3.59 average | \% 3.82 | \% (23 | $\begin{aligned} & \text { ) } \\ & \text { bps } \end{aligned}$ | 3.74 | \% (15 |
| Secondary residential mortgage interest rate - 2.31 period end | \% 3.13 | \% (82 | $\begin{aligned} & \text { ) } \\ & \text { bps } \end{aligned}$ | 2.57 | \% (26 |
| Secondary residential mortgage interest rate - 2.52 average | \% 2.85 | \% (33 | $\begin{aligned} & \text { bps } \end{aligned}$ | 2.70 | \% (18 |

Primary rates disclosed in Table 3 above represent rates generally available to borrowers on 30 year conforming mortgage loans. Secondary rates generally represent yields on 30 year residential mortgage-backed securities guaranteed by U.S. government agencies.

Other revenue increased $\$ 1.5$ million over the second quarter of 2015 , primarily due to revenue from a merchant banking investment acquired in the second quarter of 2015. Other revenue increased $\$ 1.3$ million over the first quarter of 2016 .

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Net gains on securities, derivatives and other assets
In the second quarter of 2016, we recognized a $\$ 5.3$ million net gain from sales of $\$ 326$ million of available for sale securities. Securities were sold either because they had reached their expected maximum potential or to move into securities that are expected to perform better in the current rate environment. In the second quarter of 2015, we recognized a $\$ 3.4$ million net gain from sales of $\$ 379$ million of available for sale securities and in the first quarter of 2016, we recognized a $\$ 4.0$ million net gain on sales of $\$ 469$ million of available for sale securities.

We also maintain a portfolio of residential mortgage-backed securities issued by U.S. government agencies, U.S. Treasury securities and interest rate derivative contracts held as an economic hedge of the changes in the fair value of our mortgage servicing rights. The fair value of our mortgage servicing rights fluctuates due to changes in prepayment speeds and other assumptions as more fully described in Note 6 to the Consolidated Financial Statements. As benchmark mortgage rates increase, prepayment speeds slow and the value of our mortgage servicing rights increases. As benchmark mortgage rates fall, prepayment speeds increase and the value of our mortgage servicing rights decreases.

Changes in the fair value of mortgage servicing rights are highly dependent on changes in primary mortgage rates, rates offered to borrowers, and assumptions about servicing revenues, servicing costs and discount rates. Changes in the fair value of residential mortgage-backed securities are highly dependent on changes in secondary mortgage rates, or 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. Additionally, the fair value of mortgage servicing rights is dependent on intermediate-term interest rates that affect the value of custodial funds. Changes in the spread between short-term and long-term interest rates can also cause significant earnings volatility.

Table 4 following shows the relationship between changes in the fair value of mortgage servicing rights and the fair value of fair value option residential mortgage-backed securities and interest rate derivative contracts held as an economic hedge. Both period end primary and secondary mortgage rates fell during the second and first quarter of 2016. We increased the coverage of our hedge during the second quarter. During the first quarter, we observed a narrowing in the forward-looking spread between primary and secondary mortgage interest rates. A narrowing spread between primary and secondary mortgage interest rates decreases the fair value of mortgage servicing rights and is a risk that we cannot effectively hedge.

Table 4 - Gain (Loss) on Mortgage Servicing Rights
(In thousands)

Gain (loss) on mortgage hedge derivative contracts, net
Gain (loss) on fair value option securities, net
Gain (loss) on economic hedge of mortgage servicing rights, net
Gain (loss) on change in fair value of mortgage servicing rights
Loss on changes in fair value of mortgage servicing rights, net of economic hedges
Three Months Ended
June 30, Mar. 31, June 30,
201620162015
\$10,766 \$7,138 \$(1,005)
$4,279 \quad 9,443 \quad(8,130)$
$15,045 \quad 16,581 \quad(9,135)$
$(16,283)(27,988) 8,010$
\$(1,238) \$(11,407) \$(1,125)
Net interest revenue on fair value option securities
$\$ 1,348 \quad \$ 2,033 \quad \$ 1,985$

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## Other Operating Expense

Other operating expense for the second quarter of 2016 totaled $\$ 254.7$ million, a $\$ 27.6$ million or 12 percent increase over the second quarter of 2015. Personnel expenses increased $\$ 9.8$ million or 7 percent. Non-personnel expenses increased $\$ 17.8$ million or 19 percent over the prior year.

Operating expenses increased $\$ 9.8$ million over the previous quarter. Personnel expense increased $\$ 6.6$ million. Non-personnel expense increased $\$ 3.2$ million.

Table 5 -- Other Operating Expense (In thousands)

|  | Three Months |  |  |  |  | Three |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Increase (Decrease) |  |  | Months | Increase (Decrease |  |  |  |
|  | June 30, |  |  | Increase |  | Ended <br> Mar. 31, <br> 2016 |  |  | Increase |  |
|  | 2016 | 2015 |  |  |  |  |  |  |  |  |
| Regular compensation | \$82,441 | \$78,105 | \$4,336 | 6 | \% | \$81,167 | \$ 1,274 |  | 2 | \% |
| Incentive compensation: |  |  |  |  |  |  |  |  |  |  |
| Cash-based | 34,894 | 32,347 | 2,547 | 8 | \% | 30,444 | 4,450 |  | 15 | \% |
| Share-based | 3,701 | 3,057 | 644 | 21 | \% | 2,022 | 1,679 |  | 83 | \% |
| Deferred compensation | 211 | 118 | 93 | N/A |  | 69 | 142 |  | N/A |  |
| Total incentive compensation | 38,806 | 35,522 | 3,284 | 9 | \% | 32,535 | 6,271 |  | 19 | \% |
| Employee benefits | 21,243 | 19,068 | 2,175 | 11 | \% | 22,141 | (898 |  | (4 | )\% |
| Total personnel expense | 142,490 | 132,695 | 9,795 | 7 | \% | 135,843 | 6,647 |  | 5 | \% |
| Business promotion | 6,703 | 7,765 | (1,062 | ) (14 | )\% | 5,696 | 1,007 |  | 18 | \% |
| Professional fees and services | 14,158 | 9,560 | 4,598 | 48 | \% | 11,759 | 2,399 |  | 20 | \% |
| Net occupancy and equipment | 19,677 | 18,927 | 750 | 4 | \% | 18,766 | 911 |  | 5 | \% |
| Insurance | 7,129 | 5,116 | 2,013 | 39 | \% | 7,265 | (136 |  | (2 | )\% |
| Data processing and communications | 32,802 | 30,655 | 2,147 | 7 | \% | 32,017 | 785 |  | 2 | \% |
| Printing, postage and supplies | 3,889 | 3,553 | 336 | 9 | \% | 3,907 | (18 |  | - | \% |
| Net losses and operating expenses of repossessed assets | 1,588 | 223 | 1,365 | 612 | \% | 1,070 | 518 |  | 48 | \% |
| Amortization of intangible assets | 2,624 | 1,090 | 1,534 | 141 | \% | 1,159 | 1,465 |  | 126 | \% |
| Mortgage banking costs | 15,809 | 8,227 | 7,582 | 92 | \% | 12,379 | 3,430 |  | 28 | \% |
| Other expense | 7,856 | 9,302 | (1,446 ) | ) (16 | )\% | 15,039 | (7,183 |  | (48 | )\% |
| Total other operating expense | \$254,725 | \$227,113 | \$ 27,612 | 12 | \% | \$244,900 | \$ 9,825 |  | 4 | \% |
| Average number of employees (full-time equivalent) | 4,893 | 4,776 | 117 | 2 | \% | 4,821 | 72 |  | 1 | \% |

Certain percentage increases (decreases) are not meaningful for comparison purposes.
Personnel expense
Regular compensation, which consists of salaries and wages, overtime pay and temporary personnel costs, increased $\$ 4.3$ million or 6 percent over the second quarter of 2015. The average number of employees increased 2 percent over the prior year. Recent additions have primarily been higher-costing positions in compliance and risk management and technology. In addition, standard annual merit increases in regular compensation were effective for the majority of our staff on March 1.

Incentive compensation increased $\$ 3.3$ million or 9 percent over the second quarter of 2015. Cash-based incentive compensation plans 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. Total cash-based incentive compensation increased $\$ 2.5$ million or 8 percent over the second quarter of 2015.

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Share-based compensation expense represents expense for equity awards based on grant-date fair value. Non-vested shares awarded prior to 2013 generally cliff vest in 3 years and are subject to a two year holding period after vesting. Compensation costs related to certain shares is variable based on changes in the the fair value of BOK Financial common shares. Share-based compensation expense increased $\$ 644$ thousand or $21 \%$ over the prior year. Restricted shares subject to changes in BOK Financial's stock price increased and the fair value of BOK Financial common shares have appreciated subsequent to them being awarded.

Employee benefit expense increased $\$ 2.2$ million or 11 percent over the second quarter of 2015 primarily due to increased employee medical costs.
Personnel costs increased by $\$ 6.6$ million over the first quarter of 2016 , primarily due to a $\$ 6.3$ million increase in incentive compensation expense. Cash-based incentive compensation was up $\$ 4.5$ million primarily due to revenue growth. Share-based compensation expense was $\$ 1.7$ million higher due to the increase BOK Financial stock price. Regular compensation expense increased $\$ 1.3$ million over the prior quarter largely due to the standard annual merit increases. A $\$ 1.6$ million seasonal decrease in payroll tax expense was partially offset by a $\$ 1.1$ million increase in employee medical costs.

## Non-personnel operating expenses

Non-personnel operating expenses increased $\$ 17.8$ million or 19 percent over the second quarter of 2015. Mortgage banking costs increased $\$ 7.6$ million. The second quarter of 2015 included the benefit from an improvement in the estimated loss rates on outstanding claims on servicing certain defaulted residential mortgage loans guaranteed by U.S. government agencies. In addition, prepayments of loans serviced for others increased during the second quarter of 2016 due to lower mortgage interest rates. Professional fees and services expense increased $\$ 4.6$ million primarily due to costs incurred in preparation for the mobank acquisition and increased legal fees. Data processing and communications expense increased $\$ 2.1$ million due to increased transaction activity. Deposit insurance expense increased $\$ 2.0$ million, primarily due to an increase in criticized and classified assets, an input to the deposit insurance assessment, and overall growth in assets. The increase in criticized and classified assets was related to falling energy prices.
Non-personnel expense increased $\$ 3.2$ million over the first quarter of 2016. Mortgage banking expense increased $\$ 3.4$ million primarily from increased prepayments of loans serviced for others due to lower mortgage interest rates. Professional fees and services expense also increased $\$ 2.4$ million due largely to the annual cost of wealth management customer tax preparation services and costs incurred in preparation for the mobank acquisition. Intangible asset amortization was up $\$ 1.5$ million from an adjustment to a consolidated merchant-banking investment. Business promotion expense had a seasonal increase of $\$ 1.0$ million over the prior quarter. Other expense decreased $\$ 7.2$ million compared to the prior quarter. The first quarter of 2016 included $\$ 4.1$ million of litigation accruals and a $\$ 2.7$ million post-acquisition valuation adjustment to a consolidated merchant banking investment. All other expense categories increased $\$ 2.1$ million over the prior quarter on a combined basis.
Income Taxes
The Company's income tax expense from continuing operations was $\$ 30.5$ million or $31.5 \%$ of book taxable income for the second quarter of 2016 compared to $\$ 40.6$ million or $33.6 \%$ of book taxable income for the second quarter of 2015 and $\$ 21.4$ million or $34.3 \%$ of book taxable income for the first quarter of 2016 . The effective tax rate was lower in the second quarter of 2016 compared to the second quarter of 2015 and the first quarter of 2016, primarily due to a decrease in projected annual pre-tax book income.

The Company's effective tax rate is affected by recurring items such as amortization related to its investments in affordable housing investments net of affordable housing tax credits and other tax benefits, bank-owned life insurance and tax-exempt income. The effective tax rate is also affected by items that may occur in any given period but are not consistent from period to period. Accordingly, the comparability of the effective tax rate from period to period may be
impacted.
BOK Financial operates in numerous jurisdictions, which requires judgment regarding the allocation of income, expense and earnings under various laws and regulations of each of these taxing jurisdictions. Each jurisdiction may audit our tax returns and may take different positions with respect to these allocations. The reserve for uncertain tax positions was $\$ 13$ million at both June 30, 2016 and March 31, 2016 and $\$ 14$ million at June 30, 2015.

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## 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 banking services 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.

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 allocation 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 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 also based on rates which approximate 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 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.

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 6, net income attributable to our lines of business increased $\$ 1.6$ million or 2 percent compared to the second quarter of 2015 . Net interest revenue grew by $\$ 12.3$ million over the prior year. Other operating revenue was up $\$ 12.5$ million. This was offset by a $\$ 6.8$ million increase in net charge-offs primarily due to energy loans and an $\$ 18.6$ million increase in operating expense.

Table 6 -- Net Income by Line of Business
(In thousands)

|  | Three Months Ended |  | Six Months Ended |  |
| :---: | :---: | :---: | :---: | :---: |
|  | June 30, $2016$ | 2015 | June 30, $2016$ | 2015 |
| Commercial Banking | \$52,836 | \$48,670 | \$89,951 | \$97,272 |
| Consumer Banking | 4,231 | 8,874 | 4,342 | 16,155 |
| Wealth Management | 10,779 | 8,685 | 17,757 | 17,422 |
| Subtotal | 67,846 | 66,229 | 112,050 | 130,849 |
| Funds Management and other | (2,045 | ) 13,001 | (3,685 | 23,224 |
| Total | \$65,801 | \$79,230 | \$108,365 | \$ 154,073 |

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## Commercial Banking

Commercial Banking contributed $\$ 52.8$ million to consolidated net income in the second quarter of 2016, an increase of $\$ 4.2$ million or $9 \%$ over the second quarter of 2015 . Growth in net interest revenue and fees and commissions revenue was partially offset by increased loan charge-offs and higher operating expenses. Commercial Banking net loans charged off were $\$ 6.9$ million in the second quarter of 2016 compared to a net recovery of $\$ 47$ thousand in the second quarter of 2015. The increase was primarily related to energy portfolio loans.

Table 7 -- Commercial Banking
(Dollars in thousands)

\begin{tabular}{|c|c|c|c|c|c|c|}
\hline \& Three Month June 30, 2016 \& \& Increase (Decrease) \& Six Months E June 30, 2016 \& Ended

2015 \& Increase (Decrease) <br>
\hline Net interest revenue from external sources \& \$118,480 \& \$ 108,620 \& \$9,860 \& \$235,116 \& \$209,795 \& \$25,321 <br>
\hline Net interest expense from internal sources \& (14,575 \& ) $(12,643$ \& ) (1,932 \& (29,109 \& ) $(25,278$ \& ) $(3,831$ <br>
\hline Total net interest revenue \& 103,905 \& 95,977 \& 7,928 \& 206,007 \& 184,517 \& 21,490 <br>
\hline Net loans charged off (recovered) \& 6,852 \& (47 \& ) 6,899 \& 28,423 \& (8,949 \& 37,372 <br>
\hline Net interest revenue after net loans charged off (recovered) \& 97,053 \& 96,024 \& 1,029 \& 177,584 \& 193,466 \& (15,882 <br>
\hline Fees and commissions revenue \& 51,028 \& 45,173 \& 5,855 \& 96,504 \& 87,476 \& 9,028 <br>
\hline Other gains, net \& 469 \& 100 \& 369 \& 101 \& 244 \& (143 <br>
\hline Other operating revenue \& 51,497 \& 45,273 \& 6,224 \& 96,605 \& 87,720 \& 8,885 <br>
\hline Personnel expense \& 27,520 \& 27,131 \& 389 \& 54,147 \& 53,381 \& 766 <br>
\hline Non-personnel expense \& 25,074 \& 23,670 \& 1,404 \& 54,516 \& 46,566 \& 7,950 <br>
\hline Other operating expense \& 52,594 \& 50,801 \& 1,793 \& 108,663 \& 99,947 \& 8,716 <br>
\hline Net direct contribution \& 95,956 \& 90,496 \& 5,460 \& 165,526 \& 181,239 \& (15,713 <br>
\hline Loss on repossessed assets, net \& (598 \& ) (58 \& ) $(540$ \& ) (680 \& ) (14 \& ) (666 <br>
\hline Corporate expense allocations \& 8,883 \& 10,782 \& (1,899 ) \& 17,627 \& 22,023 \& (4,396 <br>
\hline Income before taxes \& 86,475 \& 79,656 \& 6,819 \& 147,219 \& 159,202 \& (11,983 <br>
\hline Federal and state income tax \& 33,639 \& 30,986 \& 2,653 \& 57,268 \& 61,930 \& (4,662 <br>
\hline Net income \& \$52,836 \& \$48,670 \& \$4,166 \& \$89,951 \& \$97,272 \& \$(7,321 <br>
\hline Average assets \& \$ 16,973,663 \& \$ 16,262,457 \& \$711,206 \& \$ 16,971,339 \& \$ 16,266,341 \& \$704,998 <br>
\hline Average loans \& 13,571,602 \& 12,260,003 \& 1,311,599 \& 13,444,470 \& 12,077,367 \& 1,367,103 <br>
\hline Average deposits \& 8,403,408 \& 8,928,997 \& (525,589 ) \& ) $8,430,579$ \& 8,961,834 \& (531,255 ) <br>
\hline Average invested capital \& 1,167,840 \& 1,028,989 \& 138,851 \& 1,160,485 \& 1,013,117 \& 147,368 <br>
\hline
\end{tabular}

Net interest revenue increased $\$ 7.9$ million or $8 \%$ over the prior year. Growth in net interest revenue was primarily due to a $\$ 1.3$ billion or $11 \%$ increase in average loan balances. Net interest revenue was $\$ 1.3$ million lower due to the impact of an increase in nonaccruing energy loans compared to the prior year. The remaining growth in net interest revenue was primarily related to increased yield on deposits sold to the funds management unit related to the increase in short-term interest rates from the Federal Reserve increase in the federal funds rate in the fourth quarter of 2015.

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Fees and commissions revenue grew by $\$ 5.9$ million or $13 \%$ over the second quarter of 2015 . Transaction card revenues from our TransFund electronic funds transfer network increased $\$ 2.0$ million primarily due to a customer early termination fee. Other revenue increased $\$ 1.9$ million primarily related to merchant banking activity. Brokerage and trading revenue increased $\$ 1.6$ million primarily due to increased hedging activity by our energy customers and growth in commercial loan syndication fees. Commercial deposit service charge revenue was up $\$ 623$ thousand.

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Operating expenses increased $\$ 1.8$ million or $4 \%$ over the the second quarter of 2015. Personnel expense increased $\$ 389$ thousand or $1 \%$ primarily due to standard annual merit increases, partially offset by lower incentive compensation expense. Non-personnel expense grew by $\$ 1.4$ million or $6 \%$. Intangible asset amortization increased $\$ 368$ thousand, net repossession expense increased $\$ 324$ thousand and professional fees and services expense increased $\$ 308$ thousand over the prior year. Corporate expense allocations decreased $\$ 1.9$ million compared to the prior year.

The average outstanding balance of loans attributed to Commercial Banking grew by $\$ 1.3$ billion or $11 \%$ over the second quarter of 2015 to $\$ 13.6$ 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 $\$ 8.4$ billion for the second quarter of 2016, a decrease of $\$ 526$ million or $6 \%$ compared to the second quarter of 2015.

## Consumer Banking

Consumer Banking provides retail banking services 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, through correspondent loan originators and through Home Direct Mortgage, an online origination channel.

Consumer Banking contributed $\$ 4.2$ million to consolidated net income for the second quarter of 2016 compared to $\$ 8.9$ million in the second quarter of 2015 . The decrease was largely due to a $\$ 10.5$ million increase in non-personnel expense.

Changes in the fair value of our mortgage servicing rights, net of economic hedge, resulted in a $\$ 756$ thousand decrease in Consumer Banking net income in the second quarter of 2016 compared to a $\$ 687$ thousand decrease in Consumer Banking net income in the second quarter of 2015.

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Table 8 -- Consumer Banking
(Dollars in thousands)

|  | Three Mont June 30, 2016 | ths Ended 2015 | Increase (Decrease) | Six Months June 30, 2016 | Ended $2015$ | Increase (Decrease) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Net interest revenue from external sources | \$22,349 | \$21,721 | \$628 | \$43,799 | \$42,440 | \$1,359 |
| Net interest revenue from internal sources | 8,876 | 6,838 | 2,038 | 18,229 | 13,658 | 4,571 |
| Total net interest revenue | 31,225 | 28,559 | 2,666 | 62,028 | 56,098 | 5,930 |
| Net loans charged off | 1,318 | 1,614 | (296 | ) 3,020 | 3,036 | (16 |
| Net interest revenue after net loans charged off | 29,907 | 26,945 | 2,962 | 59,008 | 53,062 | 5,946 |
| Fees and commissions revenue | 60,510 | 59,885 | 625 | 117,012 | 121,395 | (4,383 |
| Other losses (gains), net | 270 | (197 | ) 467 | 127 | (512 | 639 |
| Other operating revenue | 60,780 | 59,688 | 1,092 | 117,139 | 120,883 | (3,744 |
| Personnel expense | 29,505 | 26,341 | 3,164 | 56,630 | 52,123 | 4,507 |
| Non-personnel expense | 36,641 | 26,170 | 10,471 | 67,564 | 52,694 | 14,870 |
| Total other operating expense | 66,146 | 52,511 | 13,635 | 124,194 | 104,817 | 19,377 |
| Net direct contribution | 24,541 | 34,122 | (9,581 | 51,953 | 69,128 | (17,175 |
| Gain (loss) on financial instruments, net | 15,045 | (9,135 | ) 24,180 | 31,626 | (5,577 | 37,203 |
| Change in fair value of mortgage servicing rights | (16,283 | ) 8,010 | (24,293 | ) $(44,271$ | (512 | (43,759 |
| Gain on repossessed assets, net | 252 | 479 | (227 | ) 406 | 557 | (151 |
| Corporate expense allocations | 16,630 | 18,953 | (2,323 | ) 32,608 | 37,155 | (4,547 |
| Income before taxes | 6,925 | 14,523 | (7,598 | ) 7,106 | 26,441 | (19,335 |
| Federal and state income tax | 2,694 | 5,649 | (2,955 | ) 2,764 | 10,286 | (7,522 |
| Net income | \$4,231 | \$8,874 | \$(4,643 | ) $\$ 4,342$ | \$16,155 | \$(11,813 ) |
| Average assets | \$8,774,881 | \$8,970,936 | \$(196,055) | ) $\$ 8,731,085$ | \$8,885,400 | \$(154,315) |
| Average loans | 1,888,692 | 1,901,579 | (12,887 | ) $1,886,298$ | 1,920,829 | (34,531 |
| Average deposits | 6,634,362 | 6,724,188 | (89,826 | ) $6,605,127$ | 6,673,067 | (67,940 |
| Average invested capital | 266,561 | 269,388 | (2,827 | ) 262,762 | 270,738 | (7,976 |

Net interest revenue from Consumer Banking activities grew by $\$ 2.7$ million or $9 \%$ over the the second quarter of 2015 primarily due to increased rates on deposit balances sold to the Funds Management unit, partially offset by a $\$ 90$ million or $1 \%$ decrease in average deposit balances. Average loan balances were $\$ 13$ million or $1 \%$ lower than the prior year.

Fees and commissions revenue increased $\$ 625$ thousand or $1 \%$ over the second quarter of 2015, primarily due to a $\$ 1.4$ million increase in mortgage banking revenue primarily due to growth in mortgage servicing revenue. Mortgage loans funded for sale in the second quarter of 2016 were $\$ 9.4$ million or $1 \%$ lower than in the second quarter of 2015. Revenue from interchange fees paid by merchants for transactions processed from debit cards issued by the Company increased $\$ 222$ thousand or $4 \%$. Deposit service charges and fees decreased $\$ 341$ thousand or $3 \%$ compared to the prior year. Other revenue decreased $\$ 612$ thousand compared to the prior year.

Operating expense increased $\$ 13.6$ million or $26 \%$ over the second quarter of 2015. Personnel expenses increased $\$ 3.2$ million or $12 \%$. Regular compensation expense was up $\$ 1.8$ million primarily due to annual merit increases and growth in mortgage banking headcount. Incentive compensation expense was up $\$ 944$ thousand over the prior year. Non-personnel expense increased $\$ 10.5$ million or $40 \%$ over the prior year. Mortgage banking expense was up $\$ 8.4$ million over the prior year. The second quarter of 2015 included the benefit from an improvement in the estimated loss rates on outstanding claims on servicing certain defaulted residential mortgage loans guaranteed by U.S. government agencies. In addition, prepayments of loans serviced for others increased due to lower mortgage interest rates. Other expense increased $\$ 1.2$ million primarily due to a legal settlement during the quarter.

Corporate expense allocations decreased $\$ 2.3$ million compared to the second quarter of 2015.
Average consumer deposits decreased $\$ 90$ million or $1 \%$ compared to the second quarter of 2015 . Average time deposit balances decreased $\$ 251$ million or $18 \%$, partially offset by a $\$ 71$ million or $4 \%$ increase in demand deposit balances, a $\$ 60$ million or $2 \%$ increase in interest-bearing transaction accounts and a $\$ 31$ million or $8 \%$ increase in saving account balances.

Wealth Management
Wealth Management contributed $\$ 10.8$ million to consolidated net income in the second quarter of 2016, up $\$ 2.1$ million or $24 \%$ over the second quarter of 2015 . Fiduciary and asset management revenue, brokerage and trading revenue and net interest revenue all grew over the prior year. This revenue growth was partially offset by increased operating expense.

Table 9 -- Wealth Management
(Dollars in thousands)

|  | Three Months Ended <br> June 30, | Increase <br> (Decrease) | Six Months Ended <br> June 30, <br> 2016 | Increase |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| (Decrease) |  |  |  |  |


| Federal and state income tax | 6,863 | 5,529 | 1,334 | 11,305 | 11,092 | 213 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Net income | $\$ 10,779$ | $\$ 8,685$ | $\$ 2,094$ | $\$ 17,757$ | $\$ 17,422$ | $\$ 335$ |
|  |  |  |  |  |  |  |
| Average assets | $\$ 5,765,390$ | $\$ 5,319,568$ | $\$ 445,822$ | $\$ 5,665,218$ | $\$ 5,385,266$ | $\$ 279,952$ |
| Average loans | $1,098,178$ | $1,065,809$ | 32,369 | $1,094,252$ | $1,050,603$ | 43,649 |
| Average deposits | $4,521,031$ | $4,522,197$ | $(1,166$ | $) 4,608,522$ | $4,611,255$ | $(2,733$ |
| Average invested capital | 240,693 | 224,971 | 15,722 | 236,998 | 224,247 | 12,551 |
| $-15-$ |  |  |  |  |  |  |


|  | June 30, <br> 2016 | 2015 | Increase <br> (Decrease) |
| :--- | :--- | :--- | :--- |
| Fiduciary assets in custody for which BOKF has sole or joint discretionary <br> authority | $\$ 13,935,411$ | $\$ 15,170,488$ | $\$(1,235,077)$ |
| Fiduciary assets not in custody for which BOKF has sole or joint | $3,612,632$ | $3,471,856$ | 140,776 |
| discretionary authority | $22,376,691$ | $20,129,674$ | $2,247,017$ |
| Non-managed trust assets in custody | $39,924,734$ | $38,772,018$ | $1,152,716$ |
| Total fiduciary assets | $27,287,123$ | $24,099,473$ | $3,187,650$ |
| Assets held in safekeeping | $5,789,659$ | $5,739,210$ | 50,449 |
| Brokerage accounts under BOKF administration | $\$ 73,001,516$ | $\$ 68,610,701$ | $\$ 4,390,815$ |

Net interest revenue for the second quarter of 2016 increased $\$ 1.8$ million or $15 \%$ over the second quarter of 2015, primarily due to increased rates on deposit balances sold to the Funds Management unit. Average deposit balances were largely unchanged compared to the second quarter of 2015. Interest-bearing transaction account balances decreased $\$ 43$ million or $2 \%$ and time deposit balances decreased $\$ 89$ million or $11 \%$. Non-interest bearing demand deposits grew by $\$ 129$ million or $14 \%$. Average loan balances increased $\$ 32$ million or $3 \%$ over the prior year.

Fees and commissions revenue was up $\$ 5.2$ million or $8 \%$ over the second quarter of 2015 . Fiduciary and asset management revenue increased $\$ 2.1$ million or $6 \%$ over the prior year primarily due to decreased fee waivers, the Company's acquisition of Weaver and Tidwell Financial Advisors LTD d/b/a Weaver Wealth Management, a registered investment advisor, in the first quarter of 2016 and changes in market values. Brokerage and trading revenue grew by $\$ 1.9$ million or $6 \%$ primarily due to growth in securities trading revenue over the prior year. Growth in retail brokerage revenue was offset by lower investment banking revenue compared to the second quarter of 2015. Other revenue increased $\$ 1.3$ million or $29 \%$.

Other operating revenue includes fees earned from state and municipal bond and corporate debt underwriting and financial advisory services, primarily in the Oklahoma and Texas markets. In the second quarter of 2016, the Wealth Management division participated in 136 state and municipal bond underwritings that totaled $\$ 4.2$ billion. As a participant, the Wealth Management division was responsible for facilitating the sale of approximately $\$ 803$ million of these underwritings. The Wealth Management division also participated in two corporate debt underwritings that totaled $\$ 350$ million. Our interest in these underwritings was $\$ 44$ million. In the second quarter of 2015, the Wealth Management division participated in 148 state and municipal bond underwritings that totaled approximately $\$ 3.0$ billion. Our interest in these underwritings totaled approximately $\$ 844$ million. The Wealth Management division also participated in five corporate debt underwritings that totaled $\$ 2.5$ billion. Our interest in these underwritings was $\$ 43$ million.

Operating expense increased $\$ 3.1$ million or $5 \%$ over the second quarter of 2015. Personnel expenses increased $\$ 2.0$ million, primarily due to incentive compensation expense and standard merit increases to regular compensation. Non-personnel expense increased $\$ 1.2$ million. Professional fees and services expense increased $\$ 1.5$ million and data processing and communications expense increased $\$ 436$ thousand. Business promotion expense was $\$ 490$ thousand less than the prior year and other expense decreased $\$ 362$ thousand.

Corporate expense allocations increased $\$ 230$ thousand or $2 \%$ over the prior year.
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. See Note 2
to the consolidated financial statements for the composition of the securities portfolio as of June 30, 2016, December 31, 2015 and June 30, 2015.

At June 30, 2016, the carrying value of investment (held-to-maturity) securities was $\$ 561$ million and the fair value was $\$ 599$ million. Investment securities consist primarily of long-term, fixed rate Oklahoma and Texas municipal bonds, taxable Texas school construction bonds and residential mortgage-backed securities issued by U.S. government agencies. The investment security portfolio is diversified among issuers. The largest obligation of any single issuer is $\$ 30$ million. Substantially all of

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these bonds are general obligations of the issuers. Approximately $\$ 105$ million of the $\$ 201$ million portfolio of Texas school construction bonds are also guaranteed by the Texas Permanent School Fund Guarantee Program supervised by the State Board of Education for the State of Texas.

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 $\$ 8.6$ billion at June 30, 2016, a decrease of $\$ 95$ million compared to March 31, 2016. Available for sale securities consist primarily of U.S. government agency residential mortgage-backed securities and U.S. government agency commercial mortgage-backed securities. Commercial mortgage-backed securities have prepayment penalties similar to commercial loans. At June 30, 2016, residential mortgage-backed securities represented 66 percent 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 duration of the combined residential mortgage-backed securities portfolio held in investment and available for sale securities at June 30, 2016 is 2.6 years. Management estimates the duration extends to 3.3 years assuming an immediate 200 basis point upward shock. The estimated duration contracts to 2.4 years assuming a 50 basis point decline in the current low rate environment.

Residential mortgage-backed securities also 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. At June 30, 2016, approximately $\$ 5.6$ billion of the amortized cost of the Company's residential mortgage-backed securities were issued by U.S. government agencies. The fair value of these residential mortgage-backed securities totaled $\$ 5.7$ billion at June 30, 2016.

We also hold amortized cost of $\$ 115$ million in residential mortgage-backed securities privately issued by publicly-owned financial institutions, a decrease of $\$ 7.7$ million from March 31, 2016. The decrease was due to cash payments received during the quarter. The fair value of our portfolio of privately issued residential mortgage-backed securities totaled $\$ 126$ million at June 30, 2016.

The amortized cost of our portfolio of privately issued residential mortgage-backed securities included $\$ 66$ million of Jumbo-A residential mortgage loans and $\$ 50$ million of Alt-A residential mortgage loans. Jumbo-A residential mortgage loans generally meet government underwriting standards, but have loan balances that exceed agency maximums. Alt-A mortgage loans generally do not have sufficient documentation to meet government agency underwriting standards. Approximately 90 percent of our Alt-A mortgage-backed securities represent pools of fixed rate residential mortgage loans. None of the adjustable rate mortgages are payment option adjustable rate mortgages ("ARMs"). Approximately 29 percent of our Jumbo-A residential mortgage-backed securities represent pools of fixed rate residential mortgage loans and none of the adjustable rate mortgages are payment option ARMs.

The aggregate gross amount of unrealized losses on available for sale securities totaled $\$ 3.0$ million at June 30, 2016, compared to $\$ 5.9$ million at March 31, 2016. On a quarterly basis, we perform separate evaluations on debt and equity 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 during the second quarter of 2016.

Certain U.S. Treasury securities and residential mortgage-backed securities issued by U.S. government agencies included in fair value option securities on the Consolidated Balance Sheets are held as an economic hedge 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.

BOK Financial is required to hold stock as members of the Federal Reserve system and the Federal Home Loan Banks ("FHLB"). These restricted equity securities are carried at cost as these securities do not have a readily determined fair value because the ownership of these shares is restricted and they lack a market. Federal Reserve Bank stock totaled $\$ 36$ million and holdings of FHLB stock totaled $\$ 283$ million at June 30, 2016. Holdings of FHLB stock increased $\$ 4.9$ million over March 31, 2016. We are required to hold stock in the FHLB in proportion to our borrowings with the FHLB.

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## Bank-Owned Life Insurance

We have approximately $\$ 308$ million of bank-owned life insurance at June 30, 2016. This investment is expected to provide a long-term source of earnings to support existing employee benefit programs. Approximately $\$ 278$ 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. At June 30, 2016, the fair value of investments held in separate accounts was approximately $\$ 295$ million. As the underlying fair value of the investments held in a separate account at June 30, 2016 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 $\$ 30$ million primarily represents the cash surrender value of policies held in general accounts and other amounts due from various insurance companies.

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Loans
The aggregate loan portfolio before allowance for loan losses totaled $\$ 16$ billion at June 30, 2016, an increase of $\$ 384$ million over March 31, 2016. Outstanding commercial loans grew by $\$ 68$ million over March 31, 2016, largely due to growth in services, wholesale/retail, healthcare and other commercial and industrial sector loans, partially offset by a decrease in energy loan balances. Commercial real estate loan balances were up $\$ 211$ million primarily related to growth in loans secured by industrial facilities, office buildings, multifamily residential and other commercial real estate loans. Residential mortgage loans increased $\$ 11.6$ million compared to March 31, 2016 and personal loans increased $\$ 93$ million compared to March 31, 2016.

Table 10 -- Loans
(In thousands)

Commercial:
Energy
Services
Healthcare
Wholesale/retail
Manufacturing
Other commercial and industrial
Total commercial

| June 30, | March 31, | Dec. 31, | Sept. 30, | June 30, |
| :--- | :--- | :--- | :--- | :--- |
| 2016 | 2016 | 2015 | 2015 | 2015 |

Commercial real estate:

| Retail | 795,419 | 810,522 | 796,499 | 769,449 | 688,447 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Multifamily | 787,200 | 733,689 | 751,085 | 758,658 | 711,333 |
| Office | 769,112 | 695,552 | 637,707 | 626,151 | 563,085 |
| Industrial | 645,586 | 564,467 | 563,169 | 563,871 | 488,054 |
| Residential construction and land development | 157,576 | 171,949 | 160,426 | 153,510 | 148,574 |
| Other commercial real estate | 427,073 | 394,328 | 350,147 | 363,428 | 434,004 |
| Total commercial real estate | $3,581,966$ | $3,370,507$ | $3,259,033$ | $3,235,067$ | $3,033,497$ |
| Residential mortgage: |  |  |  |  |  |
| Permanent mortgage | 969,007 | 948,405 | 945,336 | 937,664 | 946,324 |
| Permanent mortgages guaranteed by U.S. | 192,732 | 197,350 | 196,937 | 192,712 | 190,839 |
| government agencies | 719,184 | 723,554 | 734,620 | 738,619 | 747,565 |
| Home equity | $1,880,923$ | $1,869,309$ | $1,876,893$ | $1,868,995$ | $1,884,728$ |
| Total residential mortgage | 587,423 | 494,325 | 552,697 | 465,957 | 430,190 |

Total
\$16,406,749 \$ 16,022,566 \$15,941,154 \$15,367,441 \$15,124,136

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, 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.

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Commercial loans totaled $\$ 10.4$ billion or 63 percent of the loan portfolio at June 30, 2016, an increase of $\$ 68$ million over March 31, 2016. Service sector loans increased by $\$ 102$ million and wholesale/retail sector loans increased $\$ 81$ million. Healthcare sector loans grew by $\$ 56$ million and other commercial and industrial loans were up $\$ 45$ million over the prior quarter. Energy loan balances decreased $\$ 211$ million compared to March 31, 2016.

Table 11 presents the commercial sector of our loan portfolio distributed primarily by collateral location. Loans for which collateral location is less relevant, such as unsecured loans and reserve-based energy loans, are distributed by the borrower's primary operating location. The majority of the collateral securing our commercial loan portfolio is located within our geographical footprint with 33 percent concentrated in the Texas market and 23 percent concentrated in the Oklahoma market. The Other category is primarily composed of two states, California and Louisiana, which represent $\$ 268$ million or 3 percent of the commercial loan portfolio and $\$ 167$ million or 2 percent of the commercial loan portfolio, respectively, at June 30, 2016. All other states individually represent one percent or less of total commercial loans.

Table 11 -- Commercial Loans by Collateral Location
(In thousands)

|  | Oklahoma | Texas | New <br> Mexico | Arkansas | Colorado | Arizona | Kansas/M | i®stheri | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Energy | \$761,490 | \$1,247,111 | \$15,745 | \$5,376 | \$334,194 | \$10,591 | \$81,850 | \$362,299 | \$2,818,656 |
| Services | 689,877 | 913,689 | 227,236 | 4,099 | 275,643 | 199,421 | 169,325 | 351,574 | 2,830,864 |
| Healthcare | 266,079 | 348,074 | 124,893 | 88,676 | 152,523 | 107,167 | 223,084 | 740,650 | 2,051,146 |
| Wholesale/retail | 460,662 | 558,962 | 38,509 | 39,744 | 56,332 | 52,391 | 44,907 | 281,450 | 1,532,957 |
| Manufacturing | 134,179 | 184,528 | 254 | 6,620 | 56,376 | 66,578 | 69,026 | 77,842 | 595,403 |
| Other commercial and industrial | 77,544 | 141,690 | 4,489 | 76,388 | 33,140 | 35,311 | 73,823 | 85,026 | 527,411 |
| Total commercial loans | \$2,389,831 | \$3,394,054 | \$411,126 | \$220,903 | \$908,208 | \$471,459 | \$662,015 | \$1,898,841 | \$ 10,356,437 |

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 $\$ 2.8$ billion or 17 percent of total loans at June 30, 2016. Unfunded energy loan commitments decreased by $\$ 161$ million to $\$ 1.9$ billion at June 30, 2016. Approximately $\$ 2.2$ billion of energy loans were to oil and gas producers, down $\$ 233$ million compared to March 31, 2016. The majority of this portfolio is first lien, senior secured, reserve-based lending, which we believe is the lowest risk form of energy lending. The Company has largely avoided higher-risk energy lending areas including second-lien financing, mezzanine debt and subordinated debt. In addition, the Company has no direct exposure to energy company equity or to borrowers with deepwater offshore exposure. Approximately 60 percent of the committed production loans are secured by properties
primarily producing oil and 40 percent of the committed production loans are secured by properties primarily producing natural gas. Loans to borrowers that provide services to the energy industry decreased $\$ 16$ million from the prior quarter to $\$ 262$ million at June 30, 2016. Loans to midstream oil and gas companies totaled $\$ 246$ million at June 30, 2016, an increase of $\$ 44$ million over March 31, 2016. Loans to other energy borrowers, including those engaged in wholesale or retail energy sales, totaled $\$ 73$ million, a $\$ 5.7$ million decrease compared to the prior quarter.

The services sector of the loan portfolio totaled $\$ 2.8$ billion or 17 percent of total loans and consists of a large number of loans to a variety of businesses, including governmental, finance and insurance, educational services, not-for-profit and loans to entities providing services for real estate and construction. Service sector loans increased by $\$ 102$ million compared to March 31, 2016. 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.

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The healthcare sector of the loan portfolio 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 $\$ 20$ million and with three or more non-affiliated banks as participants. At June 30, 2016, the outstanding principal balance of these loans totaled $\$ 3.9$ billion. Substantially all of these loans are to borrowers with local market relationships. We serve as the agent lender in approximately 17 percent of our shared national credits, based on dollars committed. We hold shared 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 generally within our geographical footprint, with larger concentrations in Texas and Oklahoma which represent 30 percent and 13 percent of the total commercial real estate portfolio at June 30, 2016, respectively. 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 $\$ 3.6$ billion or 22 percent of the loan portfolio at June 30, 2016. The outstanding balance of commercial real estate loans increased $\$ 211$ million during the second quarter of 2016. Loans secured by industrial facilities grew by $\$ 81$ million and loans secured by office buildings increased $\$ 74$ million. Loans secured by multifamily residential properties increased $\$ 54$ million. Growth in other commercial real estate loan balances was offset by decreases in loans secured by retail facilities and residential construction and land development loans. The commercial real estate loan balance as a percentage of our total loan portfolio has ranged from 18 percent to 22 percent over the past five years.

The commercial real estate sector of our loan portfolio distributed by collateral location follows in Table 12. The Other category is primarily composed of California and Florida which represent $\$ 157$ million or $15 \%$ and $\$ 117$ million or $11 \%$, respectively. All other states individually represent less than $10 \%$ of the total commercial real estate portfolio.

Table 12 -- Commercial Real Estate Loans by Collateral Location
(In thousands)

|  | Oklahoma Texas |  | New <br> Mexico | Arkansas Colorado |  | Arizona | Kansas/Miss@othier |  | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Retail | \$90,337 | \$286,385 | \$112,725 | \$6,706 | \$54,459 | \$36,359 | \$ 9,092 | \$199,356 | \$795,419 |
| Multifamily | 104,151 | 291,146 | 28,951 | 22,531 | 58,002 | 72,857 | 76,409 | 133,153 | 787,200 |
| Office | 116,249 | 192,364 | 55,863 | 1,615 | 58,228 | 50,321 | 71,225 | 223,247 | 769,112 |
| Industrial | 69,142 | 197,435 | 25,865 | 192 | 5,316 | 15,306 | 35,468 | 296,862 | 645,586 |
| Residential | 18,366 | 40,936 | 20,895 | 5,362 | 30,951 | 3,882 | 5,230 | 31,954 | 157,576 |

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and land development Other real estate $\begin{array}{lllllllll}69,095 & 73,952 & 15,689 & 8,133 & 38,482 & 31,448 & 4,492 & 185,782 & 427,073\end{array}$ Total commercial $\$ 467,340 \$ 1,082,218 \$ 259,988 \$ 44,539 \quad \$ 245,438 \quad \$ 210,173 \quad \$ 201,916 \quad \$ 1,070,354 \$ 3,581,966$ real estate loans

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## 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. Loans may be individually underwritten or credit scored based on size and other criteria. Credit scoring is assessed based on significant credit characteristics including credit history, residential and employment stability.

Residential mortgage loans totaled $\$ 1.9$ billion, a $\$ 12$ million increase over March 31, 2016. In general, we sell the majority of our conforming fixed rate loan originations 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 98 percent of our residential mortgage loan portfolio is located within our geographical footprint.

The majority of our permanent mortgage loan portfolio is 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 percent. Loan-to-value ratios ("LTV") are tiered from 60 percent to 100 percent, 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 June 30, 2016, $\$ 193$ 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 the Company may repurchase 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 on the Consolidated Balance Sheet. Permanent residential mortgage loans guaranteed by U.S. government agencies were largely unchanged compared to March 31, 2016.

Home equity loans totaled $\$ 719$ million at June 30, 2016, a decrease of $\$ 4.4$ million compared to March 31, 2016. Our home equity loan 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 40 percent. 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 a 15 year term of amortizing repayment. 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. A summary of our home equity loan portfolio at June 30, 2016 by lien position and amortizing status follows in Table 13.

Table 13 -- Home Equity Loans
(In thousands)

> Revolving Amortizing Total

First lien $\quad \$ 44,011 \quad \$ 438,396 \quad \$ 482,407$
Junior lien $\quad 92,652 \quad 144,125 \quad 236,777$

Total home equity $\$ 136,663 \$ 582,521 \quad \$ 719,184$

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The distribution of residential mortgage and personal loans at June 30, 2016 is as follows in Table 14. Residential mortgage loans are distributed by collateral location. Personal loans are generally distributed by borrower location.

Table 14 -- Residential Mortgage and Personal Loans by Collateral Location
(In thousands)

| Residential mortgage: | Oklahoma Texas |  | New Mexico | Arkansas Colorado |  | Arizona | Kansas/Misso@tiher |  | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |
| Permanent mortgage | \$ 195,499 | \$399,248 | \$40,372 | \$ 13,331 | \$153,883 | \$95,368 | \$ 46,794 | \$24,512 | \$969,007 |
| Permanent mortgages guaranteed by | 60,101 | 22,342 | 63,872 | 5,251 | 7,168 | 1,303 | 11,287 | 21,408 | 192,732 |
| U.S. government agencies |  |  |  |  |  |  |  |  |  |
| Home equity | 419,677 | 133,503 | 109,894 | 5,395 | 33,339 | 8,861 | 8,081 | 434 | 719,184 |
| Total residential mortgage | \$675,277 | \$555,093 | \$214,138 | \$ 23,977 | \$ 194,390 | \$105,532 | \$ 66,162 | \$46,354 | \$1,880,923 |
| Personal | \$242,819 | \$231,105 | \$ 10,557 | \$7,025 | \$35,731 | \$24,008 | \$ 30,850 | \$5,328 | \$587,423 |

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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 the Bank are centrally managed by the Bank of Oklahoma.

Table 15 -- Loans Managed by Primary Geographical Market (In thousands)

Bank of Oklahoma:
Commercial
Commercial real estate
Residential mortgage
Personal
Total Bank of Oklahoma

| June 30, | March 31, | Dec. 31, | Sept. 30, | June 30, |
| :--- | :--- | :--- | :--- | :--- |
| 2016 | 2016 | 2015 | 2015 | 2015 |

Bank of Texas:
Commercial
Commercial real estate
Residential mortgage
Personal
Total Bank of Texas

| $\$ 3,698,215$ | $\$ 3,656,034$ | $\$ 3,782,687$ | $\$ 3,514,391$ | $\$ 3,529,406$ |
| :--- | :--- | :--- | :--- | :--- |
| 781,458 | 747,689 | 739,829 | 677,372 | 614,995 |
| $1,415,766$ | $1,411,409$ | $1,409,114$ | $1,405,235$ | $1,413,690$ |
| 246,229 | 204,158 | 255,387 | 185,463 | 190,909 |
| $6,141,668$ | $6,019,290$ | $6,187,017$ | $5,782,461$ | $5,749,000$ |

Bank of Albuquerque:
Commercial
Commercial real estate
Residential mortgage
Personal
Total Bank of Albuquerque

| $3,901,632$ | $3,936,809$ | $3,908,425$ | $3,752,193$ | $3,738,742$ |
| :--- | :--- | :--- | :--- | :--- |
| $1,311,408$ | $1,211,978$ | $1,204,202$ | $1,257,741$ | $1,158,056$ |
| 222,548 | 217,539 | 219,126 | 222,395 | 228,683 |
| 233,304 | 210,456 | 203,496 | 194,051 | 156,260 |
| $5,668,892$ | $5,576,782$ | $5,535,249$ | $5,426,380$ | $5,281,741$ |

Bank of Arkansas:

| Commercial | 81,227 | 79,808 | 92,359 | 76,044 | 99,086 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Commercial real estate | 69,235 | 66,674 | 69,320 | 82,225 | 85,997 |
| Residential mortgage | 6,874 | 7,212 | 8,169 | 8,063 | 6,999 |
| Personal | 7,025 | 918 | 819 | 4,921 | 5,189 |
| Total Bank of Arkansas | 164,361 | 154,612 | 170,667 | 171,253 | 197,271 |

Colorado State Bank \& Trust:

| Commercial | $1,076,620$ | $1,030,348$ | 987,076 | $1,029,694$ | $1,019,454$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Commercial real estate | 237,569 | 219,078 | 223,946 | 229,835 | 229,721 |
| Residential mortgage | 59,425 | 52,961 | 53,782 | 50,138 | 54,135 |
| Personal | 35,064 | 24,497 | 23,384 | 30,683 | 30,373 |
| Total Colorado State Bank \& Trust | $1,408,678$ | $1,326,884$ | $1,288,188$ | $1,340,350$ | $1,333,683$ |
|  |  |  |  |  |  |
| Bank of Arizona: | 670,814 | 656,527 | 606,733 | 608,235 | 572,477 |
| Commercial | 639,112 | 605,383 | 507,523 | 482,918 | 472,061 |
| Commercial real estate | 38,998 | 40,338 | 44,047 | 41,722 | 37,493 |
| Residential mortgage | 24,248 | 18,372 | 31,060 | 17,609 | 12,875 |

Total Bank of Arizona
Bank of Kansas City:
Commercial
Commercial real estate
Residential mortgage
Personal
Total Bank of Kansas City
Total BOK Financial loans

1,373,172 1,320,620 1,189,363 1,150,484 1,094,906

| 529,502 | 526,817 | 499,412 | 448,838 | 424,194 |
| :--- | :--- | :--- | :--- | :--- |
| 220,228 | 196,646 | 200,791 | 192,023 | 180,714 |
| 23,086 | 22,195 | 22,148 | 20,210 | 20,352 |
| 30,984 | 25,101 | 26,994 | 22,753 | 22,645 |
| 803,800 | 770,759 | 749,345 | 683,824 | 647,905 |

\$16,406,749 \$ 16,022,566 \$15,941,154 \$15,367,441 \$15,124,136

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## Loan Commitments

We enter into certain off-balance sheet arrangements in the normal course of business. These arrangements included unfunded loan commitments which totaled $\$ 8.5$ billion and standby letters of credit which totaled $\$ 491$ million at June 30, 2016. 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. Approximately $\$ 1.5$ million of the outstanding standby letters of credit were issued on behalf of customers whose loans are nonperforming at June 30, 2016.

Table 16 - Off-Balance Sheet Credit Commitments
(In thousands)

Loan commitments
Standby letters of credit
Mortgage loans sold with recourse

| June 30, | March 31, | Dec. 31, | Sept. 30, | June 30, |
| :--- | :--- | :--- | :--- | :--- |
| 2016 | 2016 | 2015 | 2015 | 2015 |
| $\$ 8,508,606$ | $\$ 8,567,017$ | $\$ 8,455,037$ | $\$ 8,325,540$ | $\$ 8,064,841$ |
| 491,002 | 509,902 | 507,988 | 479,638 | 444,947 |
| 145,403 | 152,843 | 155,489 | 161,897 | 168,581 |

As more fully described in Note 6 to the Consolidated Financial Statements, we have off-balance sheet commitments related to certain residential mortgage loans originated under community development loan programs that were sold to a U.S. government agency with full recourse. These mortgage loans were underwritten to standards approved by the agencies, including full documentation and originated under programs available only for owner-occupied properties. The Company no longer sells residential mortgage loans with recourse. We are obligated to repurchase these loans for the life of these loans in the event of foreclosure for the unpaid principal and interest at the time of foreclosure. Substantially all of these loans are to borrowers in our primary markets including $\$ 94$ million to borrowers in Oklahoma, $\$ 16$ million to borrowers in Arkansas and $\$ 12$ million to borrowers in New Mexico.

We also have an off-balance sheet obligation to repurchase residential mortgage loans sold to government sponsored entities through our mortgage banking activities due to standard representations and warranties made under contractual agreements as described further in Note 6 to the Consolidated Financial Statements. For the period from 2010 through the second quarter of 2016 combined, approximately 21 percent of repurchase requests have currently resulted in actual repurchases or indemnification by the Company. The accrual for credit losses related to potential loan repurchases under representations and warranties totaled $\$ 3.3$ million at June 30, 2016 and $\$ 3.0$ million at March 31, 2016.
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 to minimize market risk due to 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.

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A deterioration of the credit standing of one or more of the customers or counterparties 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 supported the contract or the customer or the 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 June 30, 2016, the net fair values of derivative contracts, before consideration of cash margin, reported as assets under these programs totaled $\$ 877$ million compared to $\$ 800$ million at March 31, 2016. At June 30, 2016, the fair value of our derivative contracts included $\$ 676$ million for foreign exchange contracts, $\$ 116$ million related to to-be-announced residential mortgage-backed securities, $\$ 55$ million for interest rate swaps and $\$ 25$ million for energy contracts. The aggregate net fair value of derivative contracts, before consideration of cash margin, held under these programs reported as liabilities totaled $\$ 872$ million at June 30, 2016 and $\$ 796$ million at March 31, 2016.

At June 30, 2016, total derivative assets were reduced by $\$ 7$ million of cash collateral received from counterparties and total derivative liabilities were reduced by $\$ 153$ 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 June 30, 2016 follows in Table 17.

Table 17 -- Fair Value of Derivative Contracts
(In thousands)
Customers \$508,309
Banks and other financial institutions 354,360
Exchanges and clearing organizations
Fair value of customer risk management program asset derivative contracts, net $\$ 869,915$
At June 30, 2016, our largest derivative exposure was to a customer for an interest rate derivative contract which totaled $\$ 7.2$ million. At June 30, 2016, our aggregate gross exposure to internationally active domestic financial institutions was approximately $\$ 52$ million comprised of $\$ 42$ million of cash and securities positions and $\$ 9.0$ million of gross derivative positions. We have no direct exposure to European sovereign debt and our aggregate gross exposure to European financial institutions totaled $\$ 9.2$ million at June 30, 2016.

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 equivalent to $\$ 27.32$ per barrel of oil would decrease the fair value of derivative assets by $\$ 19$ million. An increase in prices equivalent to $\$ 76.16$ per barrel of oil would increase the fair value of derivative assets by $\$ 146$ million as current prices move further away from the fixed prices embedded in our existing contracts. Liquidity requirements of this program are also affected by our credit rating. A decrease in our credit rating to below investment grade would increase our obligation to post cash margin on existing contracts by approximately $\$ 18$ 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 June 30, 2016, changes in
interest rates would not materially impact regulatory capital or liquidity needed to support this portion of our customer derivative program.

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## Summary of Loan Loss Experience

We maintain an allowance for loan losses and an accrual for off-balance sheet credit risk. At June 30, 2016, the combined allowance for loan losses and off-balance sheet credit losses totaled $\$ 252$ million or 1.54 percent of outstanding loans and 111 percent of nonaccruing loans, excluding loans guaranteed by U.S. government agencies. The allowance for loan losses was $\$ 243$ million and the accrual for off-balance sheet credit losses was $\$ 9.0$ million. At March 31, 2016, the combined allowance for credit losses was $\$ 240$ million or 1.50 percent of outstanding loans and 108 percent of nonaccruing loans, excluding loans guaranteed by U.S. government agencies. The allowance for loan losses was $\$ 233$ million and the accrual for off-balance sheet credit losses was $\$ 6.6$ million at June 30 , 2016. The portion of the combined allowance for credit losses attributed to the energy portfolio totaled 3.58 percent of outstanding energy loans at June 30, 2016, an increase from 3.19 percent of outstanding energy loans at March 31, 2016.

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 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. After evaluating all credit factors, we recorded a $\$ 20.0$ million provision for credit losses during the second quarter of 2016, compared to $\$ 35.0$ million in the first quarter of 2016 and $\$ 4.0$ million in the second quarter of 2015. The lower provision for credit losses compared to previous quarter reflects improvement in credit metric trends over the previous quarter largely driven by energy price stability and decreased rates of newly identified nonaccruing and potential problem loans.

Table 18 -- Summary of Loan Loss Experience (In thousands)

Allowance for loan losses:
Beginning balance
Loans charged off:
Commercial
Commercial real estate
Residential mortgage
Personal
Total
Recoveries of loans previously charged off:
Commercial
Commercial real estate
Residential mortgage
Personal
Total
Net loans recovered (charged off)
Provision for loan losses
Ending balance
Accrual for off-balance sheet credit losses:
Beginning balance
Provision for off-balance sheet credit losses
Ending balance
Total combined provision for credit losses
Allowance for loan losses to loans outstanding at period-end
Net charge-offs (annualized) to average loans
Total provision for credit losses (annualized) to average loans
Recoveries to gross charge-offs
Accrual for off-balance sheet credit losses to off-balance sheet credit commitments
Combined allowance for credit losses to loans outstanding at period-end

| Three Months Ended |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\begin{aligned} & \text { June 30, } \\ & 2016 \end{aligned}$ |  | $\begin{aligned} & \text { March 31, } \\ & 2016 \end{aligned}$ |  | $\begin{aligned} & \text { Dec. 31, } \\ & 2015 \end{aligned}$ |  | $\begin{aligned} & \text { Sept. 30, } \\ & 2015 \end{aligned}$ |  | $\begin{aligned} & \text { June } 30, \\ & 2015 \end{aligned}$ |  |
| \$233,156 |  | \$225,524 |  | \$204,116 |  | \$201,087 |  | \$197,686 |  |
| (7,355 | ) | (22,126 ) |  | (2,182 | ) | (3,497 | ) | (881 | ) |
| - |  | - |  | (900 | ) | - |  | (16 | ) |
| (345 | ) | (474 | ) | (421 | ) | (446 | ) | (714 | ) |
| (1,145 | ) | (1,391 |  | (1,348 | ) | (1,331 | ) | (1,266 | ) |
| (8,845 | , | (23,991 ) |  | (4,851 | ) | (5,274 | ) | (2,877 | ) |
| 223 |  | 488 |  | 928 |  | 759 |  | 685 |  |
| 282 |  | 85 |  | 120 |  | 1,865 |  | 275 |  |
| 200 |  | 163 |  | 137 |  | 205 |  | 481 |  |
| 681 |  | 783 |  | 685 |  | 692 |  | 765 |  |
| 1,386 |  | 1,519 |  | 1,870 |  | 3,521 |  | 2,206 |  |
| (7,459 | ) | (22,472 | ) | (2,981 | ) | (1,753 | ) | (671 | ) |
| 17,562 |  | 30,104 |  | 24,389 |  | 4,782 |  | 4,072 |  |
| \$243,259 |  | \$233,156 |  | \$225,524 |  | \$204,116 |  | \$201,08 | 7 |
| \$6,607 |  | \$1,711 |  | \$3,600 |  | \$882 |  | \$954 |  |
| 2,438 |  | 4,896 |  | (1,889 | ) | 2,718 |  | (72 | ) |
| \$9,045 |  | \$6,607 |  | \$1,711 |  | \$3,600 |  | \$882 |  |
| \$20,000 |  | \$35,000 |  | \$22,500 |  | \$7,500 |  | \$4,000 |  |
| 1.48 | \% | 1.46 | \% | 1.41 | \% | 1.33 | \% | 1.33 | \% |
| 0.18 |  | 0.56 | \% | 0.08 | \% | 0.05 | \% | 0.02 | \% |
| 0.49 | \% | 0.88 | \% | 0.58 | \% | 0.20 | \% | 0.11 | \% |
| 15.67 |  | 6.33 | \% | 38.55 | \% | 66.76 | \% | 76.68 | \% |
| 0.10 |  | 0.07 |  | 0.02 |  | 0.04 | \% | 0.01 | \% |
| 1.54 |  | 1.50 |  | 1.43 |  | 1.35 | \% | 1.34 | \% |

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 contractual terms of the loan agreement. This includes all nonaccruing loans, all loans modified in troubled 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 June 30, 2016, impaired loans totaled $\$ 420$ million, including $\$ 32$ million with specific allowances of $\$ 4.3$ million and $\$ 388$ million with no specific allowances. At March 31, 2016, impaired loans totaled $\$ 420$ million, including $\$ 35$ million of impaired loans with specific allowances of $\$ 2.7$ million and $\$ 385$ million with no specific allowances.

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Risk grading guidelines, recently in the Office of the Comptroller of the Currency ("OCC") Oil and Gas Lending Handbook, heavily weight ability to repay total borrower debt, regardless of collateral position. This change in grading methodology has increased loans especially mentioned, potential problem loans and nonaccrual loans. Because substantially all of our energy portfolio is supported by senior lien positions that, in general, have substantially lower loss exposure, the historical relationship between loan classification and loss exposure may be more difficult to correlate.
We completed an energy loan portfolio redetermination during the second quarter. The redetermination supported that $\$ 136$ million of impaired energy loans required no allowance for credit losses based on the adequacy of collateral, including $\$ 123$ million that are current on all payments due.

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 risk 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 $\$ 212$ million at June 30, 2016, an increase of $\$ 7.2$ million over March 31, 2016, primarily due to a $\$ 3.7$ million increase in the general allowance attributed to the commercial loan segment related to exposure to energy-related loans. In addition, the general allowance for commercial real estate loans increased $\$ 2.3$ 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 $\$ 27$ million at June 30, 2016, compared to $\$ 25$ million at March 31, 2016. The nonspecific allowance includes consideration of the indirect impact that low energy prices might have on the broader economies within our geographical footprint that are highly dependent on the energy industry.

An allocation of the allowance for loan losses by portfolio segment is included in Note 4 to the Consolidated Financial Statements.

Our loan monitoring process also identified loans 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' ability to comply with current repayment terms. These potential problem loans totaled $\$ 501$ million at June 30, 2016, primarily composed of $\$ 421$ million of energy loans, $\$ 27$ million of wholesale/retail sector loans, $\$ 20$ million of manufacturing sector loans, $\$ 9.9$ million of service sector loans, $\$ 8.9$ million of healthcare sector loans and $\$ 6.1$ million of loans secured by multifamily residential properties. Potential problem loans totaled $\$ 460$ million at March 31, 2016 including $\$ 403$ million of potential problem energy loans.

Performing loan totals include loans that management considers to be "other loans especially mentioned" 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. Energy loans classified as other loans especially mentioned totaled $\$ 198$ million or 7 percent of outstanding energy loans at June 30, 2016 and $\$ 269$ million or 9 percent of outstanding energy loans at March 31, 2016.

We updated our energy loan portfolio stress test at quarter end to estimate how the energy portfolio may respond in a prolonged low-price environment. Stress test assumptions include a starting price of $\$ 2.00$ per million BTUs for natural gas and $\$ 37.50$ per barrel of oil, gradually escalating over seven years to a maximum of $\$ 3.00$ and $\$ 55.00$,
respectively. In this scenario, the energy portfolio exhibits greater stress than we have experienced to date and losses would be expected to exceed our 15 year historical loss rate on energy loans of 7 basis points. The results of the stress test are factored into our expectation that the loan loss provision could range from $\$ 71$ million to $\$ 80$ million for 2016. This expectation is based upon current observed conditions.

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## 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 $\$ 7.5$ million in the second quarter of 2016, compared to $\$ 22.5$ million in the first quarter of 2016 and $\$ 671$ thousand in the second quarter of 2015. The ratio of net loans charged off to average loans on an annualized basis was 0.18 percent for the second quarter of 2016, compared with 0.56 percent for the first quarter of 2016 and 0.02 percent for the second quarter of 2015.

Net commercial loans charged off totaled $\$ 7.1$ million in the second quarter of 2016, compared to net loans charged off of $\$ 21.6$ million in the first quarter of 2016. Charge-offs in both the second and first quarter of 2016 resulted primarily from energy loans. Net commercial real estate loan recoveries were $\$ 282$ thousand in the second quarter, compared to net recoveries of $\$ 85$ thousand in the first quarter. Residential mortgage net charge-offs were $\$ 145$ thousand and personal loan net charge-offs were $\$ 464$ thousand for the second quarter. Personal loan net charge-offs include deposit account overdraft losses.

Nonperforming Assets
Table 19 -- Nonperforming Assets
(In thousands)

Nonaccruing loans:
Commercial
Commercial real estate
Residential mortgage
Personal
Total nonaccruing loans
Accruing renegotiated loans guaranteed by U.S. government agencies
Real estate and other repossessed assets
Total nonperforming assets
Total nonperforming assets excluding those guaranteed by U.S. government agencies
June 30, March 31, Dec. 31, Sept. 30, June 30, 20162016201520152015
\$181,989 \$ 174,652 \$76,424 \$33,798 \$24,233

| 7,780 | 9,270 | 9,001 | 10,956 | 20,139 |
| :--- | :--- | :--- | :--- | :--- |


| 57,061 | 57,577 | 61,240 | 44,099 | 45,969 |
| :--- | :--- | :--- | :--- | :--- |


| 354 | 331 | 463 | 494 | 550 |
| :--- | :--- | :--- | :--- | :--- |

$247,184 \quad 241,830 \quad 147,128 \quad 89,347 \quad 90,891$

| 78,806 | 77,597 | 74,049 | 81,598 | 82,368 |
| :--- | :--- | :--- | :--- | :--- |

$\begin{array}{lllll}24,054 & 29,896 & 30,731 & 33,116 & 35,499\end{array}$
\$350,044 \$349,323 \$251,908 \$204,061 \$208,758
\$251,497 \$252,176 \$155,959 \$118,578 \$122,673

Nonaccruing loans by loan portfolio segment and class:
Commercial:
Energy

| $\$ 168,145$ | $\$ 159,553$ | $\$ 61,189$ | $\$ 17,880$ | $\$ 6,841$ |
| :--- | :--- | :--- | :--- | :--- |
| 9,388 | 9,512 | 10,290 | 10,692 | 10,944 |
| 2,772 | 3,685 | 2,919 | 3,058 | 4,166 |
| 293 | 312 | 331 | 352 | 379 |
| 875 | 1,023 | 1,072 | 1,218 | 1,278 |
| 516 | 567 | 623 | 598 | 625 |
| 181,989 | 174,652 | 76,424 | 33,798 | 24,233 |

Commercial real estate:
Residential construction and land development
Retail
Office
Multifamily
Industrial
Other commercial real estate

| 4,261 | 4,789 | 4,409 | 4,748 | 9,367 |
| :--- | :--- | :--- | :--- | :--- |
| 1,265 | 1,302 | 1,319 | 1,648 | 3,826 |
| 606 | 629 | 651 | 684 | 2,360 |
| 65 | 250 | 274 | 185 | 195 |
| 76 | 76 | 76 | 76 | 76 |
| 1,507 | 2,224 | 2,272 | 3,615 | 4,315 |
| 7,780 | 9,270 | 9,001 | 10,956 | 20,139 |

Residential mortgage:
$\begin{array}{llllll}\text { Permanent mortgage } & 27,228 & 27,497 & 28,984 & 30,660 & 32,187\end{array}$
$\begin{array}{lllllll}\text { Permanent mortgage guaranteed by U.S. government agencies } & 19,741 & 19,550 & 21,900 & 3,885 & 3,717\end{array}$
Home equity
$10,092 \quad 10,530 \quad 10,356 \quad 9,554 \quad 10,065$

Total residential mortgage
Personal
Total nonaccruing loans

| 57,061 | 57,577 | 61,240 | 44,099 | 45,969 |
| :--- | :--- | :--- | :--- | :--- |

$\begin{array}{lllll}354 & 331 & 463 & 494 & 550\end{array}$
\$247,184 \$241,830 \$147,128 \$89,347 \$90,891

[^0]| June 30, | March 31, | Dec. 31, | Sept. | June 30, |
| :--- | :--- | :--- | :--- | :--- |
| 2016 | 2016 | 2015 | 20, | 2015 |

Nonaccruing loans as \% of outstanding balance for class:
Commercial:
Energy
Services
Wholesale / retail
Manufacturing
Healthcare
Other commercial and industrial
Total commercial

| 5.97 | $\%$ | 5.27 | $\%$ | 1.98 | $\%$ | 0.63 | $\%$ | 0.24 | $\%$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 0.33 | $\%$ | 0.35 | $\%$ | 0.37 | $\%$ | 0.40 | $\%$ | 0.41 | $\%$ |
| 0.18 | $\%$ | 0.25 | $\%$ | 0.21 | $\%$ | 0.21 | $\%$ | 0.27 | $\%$ |
| 0.05 | $\%$ | 0.05 | $\%$ | 0.06 | $\%$ | 0.06 | $\%$ | 0.07 | $\%$ |
| 0.04 | $\%$ | 0.05 | $\%$ | 0.06 | $\%$ | 0.07 | $\%$ | 0.08 | $\%$ |
| 0.10 | $\%$ | 0.12 | $\%$ | 0.12 | $\%$ | 0.12 | $\%$ | 0.14 | $\%$ |
| 1.76 | $\%$ | 1.70 | $\%$ | 0.75 | $\%$ | 0.34 | $\%$ | 0.25 | $\%$ |

Commercial real estate:
Residential construction and land development
Retail
Office
Multifamily
Industrial
Other commercial real estate
Total commercial real estate

| 2.70 | $\%$ | 2.79 | $\%$ | 2.75 | $\%$ | 3.09 | $\%$ | 6.30 | $\%$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 0.16 | $\%$ | 0.16 | $\%$ | 0.17 | $\%$ | 0.21 | $\%$ | 0.56 | $\%$ |
| 0.08 | $\%$ | 0.09 | $\%$ | 0.10 | $\%$ | 0.11 | $\%$ | 0.42 | $\%$ |
| 0.01 | $\%$ | 0.03 | $\%$ | 0.04 | $\%$ | 0.02 | $\%$ | 0.03 | $\%$ |
| 0.01 | $\%$ | 0.01 | $\%$ | 0.01 | $\%$ | 0.01 | $\%$ | 0.02 | $\%$ |
| 0.35 | $\%$ | 0.56 | $\%$ | 0.65 | $\%$ | 0.99 | $\%$ | 0.99 | $\%$ |
| 0.22 | $\%$ | 0.28 | $\%$ | 0.28 | $\%$ | 0.34 | $\%$ | 0.66 | $\%$ |

Residential mortgage:
Permanent mortgage $\quad 2.81 \quad \% \quad 2.90 \quad \% \quad 3.07 \quad \% \quad 3.27 \quad \% \quad 3.40 \%$
$\begin{array}{lllllllllll}\text { Permanent mortgage guaranteed by U.S. government agencies } & 10.24 & \% & 9.91 & \% & 11.12 & \% & 2.02 & \% & 1.95 & \%\end{array}$
$\begin{array}{lllllllllllllllll}\text { Home equity } & 1.40 & \% & 1.46 & \% & 1.41 & \% & 1.29 & \% & 1.35 & \%\end{array}$
$\begin{array}{lllllllllllllll}\text { Total residential mortgage } & 3.03 & \% & 3.08 & \% & 3.26 & \% & 2.36 & \% & 2.44 & \%\end{array}$
Personal $\quad 0.06 \quad \% \quad 0.07 \quad \% \quad 0.08 \quad \% \quad 0.11 \% \quad 0.13 \%$

Ratios:
Allowance for loan losses to nonaccruing loans ${ }^{1} \quad 106.95 \% 104.89 \% \quad 180.09 \% \quad 238.8 \% \quad 230.6 \%$
$\begin{array}{llllll}\text { Accruing loans } 90 \text { days or more past due }{ }^{1} \quad \$ 2,899 & \$ 8,019 & \$ 1,207 & \$ 101 & \$ 99\end{array}$
${ }^{1}$ Excludes residential mortgages guaranteed by agencies of the U.S. Government.

Nonperforming assets totaled $\$ 350$ million or 2.13 percent of outstanding loans and repossessed assets at June 30, 2016. Nonaccruing loans totaled $\$ 247$ million, accruing renegotiated residential mortgage loans totaled $\$ 79$ million and real estate and other repossessed assets totaled $\$ 24$ million. All accruing renegotiated residential mortgage loans and $\$ 20$ million of nonaccruing loans are guaranteed by U.S. government agencies. Excluding assets guaranteed by U.S. government agencies, nonperforming assets decreased $\$ 679$ thousand during the second quarter. 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 troubled debt restructurings. 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 for residential mortgage loans guaranteed by U.S. government agencies, are classified as nonaccruing. We may also 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. All nonaccruing loans generally remain on nonaccrual 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.

At June 30, 2016, renegotiated loans consist solely of accruing residential mortgage loans guaranteed by U.S. government agencies 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 three and six months ended June 30, 2016 follows in Table 20.
Table 20 -- Rollforward of Nonperforming Assets
(In thousands)

Balance, March 31, 2016
Additions
Payments
Charge-offs
Net gains and write-downs
Foreclosure of nonperforming loans
Foreclosure of loans guaranteed by U.S. government agencies
Proceeds from sales
Net transfers to nonaccruing loans
Other, net
Balance, June 30, 2016
Three Months Ended
June 30, 2016


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Balance, Dec. 31, 2015
Additions
Payments
Charge-offs
Net gains and write-downs
Foreclosure of nonperforming loans
Foreclosure of loans guaranteed by U.S. government agencies
Proceeds from sales
Net transfers to nonaccruing loans
Return to accrual status
Other, net
Balance, June 30, 2016

Six Months Ended
June 30, 2016


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 minimal. These properties will be conveyed to the agencies once applicable criteria have been met.
Commercial
Nonaccruing commercial loans totaled \$182 million or 1.76 percent of total commercial loans at June 30, 2016 and $\$ 175$ million or 1.70 percent of commercial loans at March 31, 2016. There were $\$ 23$ million in newly identified nonaccruing commercial loans during the quarter, offset by $\$ 7.9$ million in payments and $\$ 7.4$ million of charge-offs. Newly identified nonaccruing commercial loans were primarily energy loans.

Nonaccruing commercial loans at June 30, 2016 were primarily composed of $\$ 168$ million or 5.97 percent of total energy loans, and $\$ 9.4$ million or 0.33 percent of total services sector loans.
Commercial Real Estate
Nonaccruing commercial real estate loans totaled $\$ 7.8$ million or 0.22 percent of outstanding commercial real estate loans at June 30, 2016, compared to $\$ 9.3$ million or 0.28 percent of outstanding commercial real estate loans at March 31, 2016. Newly identified nonaccruing commercial real estate loans of $\$ 420$ thousand were offset by $\$ 1.9$ million of cash payments received. There were no charge-offs or foreclosures of nonaccruing commercial real estate loans during the second quarter.

Nonaccruing commercial real estate loans were primarily composed of $\$ 4.3$ million or 2.70 percent of residential construction and land development loans.

Residential Mortgage and Personal
Nonaccruing residential mortgage loans totaled $\$ 57$ million or 3.03 percent of outstanding residential mortgage loans at June 30, 2016, compared to $\$ 58$ million or 3.08 percent of outstanding residential mortgage loans at March 31, 2016. Newly identified nonaccruing residential mortgage loans totaled $\$ 8.0$ million, offset by $\$ 2.0$ million of
payments, $\$ 7.6$ million of foreclosures and $\$ 345$ thousand of loans charged off during the quarter.
Nonaccruing residential mortgage loans primarily consist of non-guaranteed permanent residential mortgage loans which totaled $\$ 27$ million or 2.81 percent of outstanding non-guaranteed permanent residential mortgage loans at June 30, 2016. Nonaccruing home equity loans totaled $\$ 10$ million or 1.40 percent of total home equity loans.

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Payments of 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 21. Substantially all non-guaranteed residential loans past due 90 days or more are nonaccruing. Residential mortgage loans 30 to 89 days past due increased $\$ 3.8$ million in the second quarter to $\$ 8.0$ million at June 30, 2016. Personal loans past due 30 to 89 days also increased by $\$ 187$ thousand over March 31, 2016.

Table 21 -- Residential Mortgage and Personal Loans Past Due
(In thousands)

| June 30, | March 31, |
| :--- | :--- |
| 2016 | 2016 |
| $90 ~ 30$ to | 9030 to |
| Days 89 | Days |
| or 89 |  |
| More Days | More <br> Mays |

Residential mortgage:
Permanent mortgage ${ }^{1} \quad \$-\$ 5,922 \$-\$ 1,943$
Home equity $\quad 20 \quad 2,048 \quad-2,200$
Total residential mortgage $\$ 20 \$ 7,970-\$ 4,143$
Personal \$- \$458 \$1 \$271
${ }^{1}$ 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 the date of foreclosure or current fair value, less estimated selling costs.

Real estate and other repossessed assets totaled $\$ 24$ million at June 30, 2016, a decrease of $\$ 5.8$ million compared to March 31, 2016. The distribution of real estate and other repossessed assets attributed by geographical market is included in Table 22 following.

Table 22 -- Real Estate and Other Repossessed Assets by Collateral Location (In thousands)

|  | OklahomaTexas |  | Colorado Arkansas |  | New <br> ${ }^{\text {S }}$ Mexico | Arizona | Kansas/ <br> Missouri | Other | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1-4 family residential properties | \$ 5,066 | \$487 | \$- | \$ 805 | \$ 1,491 | \$ 2,539 | \$ 986 | \$69 | \$ 11,443 |
| Developed commercial real estate properties | 64 | 882 | 2,745 | - | 702 | 221 | 2,790 | 1,734 | 9,138 |
| Undeveloped land | 265 | 1,309 | - | - | - | 306 | - | - | 1,880 |
| Residential land development properties | 50 | - | 322 | - | - | 852 | 2 | - | 1,226 |
| Other | 40 | - | - | - | 3 | 324 | - | - | 367 |
| Total real estate and other repossessed assets | \$ 5,485 | \$2,678 | \$ 3,067 | \$ 805 | \$2,196 | \$4,242 | \$ 3,778 | \$1,803 | \$24,054 |

Undeveloped land is primarily zoned for commercial development. Developed commercial real estate properties are primarily completed with no additional construction necessary for sale.

Liquidity and Capital

## Subsidiary Bank

Deposits and borrowed funds are the primary sources of liquidity for BOKF, NA, the wholly owned subsidiary bank of BOK Financial. Based on the average balances for the second quarter of 2016, approximately 64 percent of our funding was provided by deposit accounts, 21 percent from borrowed funds, and 10 percent from equity. Our funding sources, which primarily include deposits and borrowings from the Federal Home Loan Banks and other banks, provide adequate liquidity to meet our operating needs.

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 our Perfect Banking sales and customer service program, free checking, online bill paying services, mobile banking services, an extensive network of branch locations and ATMs and a 24-hour Express Bank 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 23 - Average Deposits by Line of Business
(In thousands)

|  | Three Months Ended <br>  <br> June 30, |  |  |  |  |  | March 31, | Dec. 31, | Sept. 30, | June 30, |
| :--- | :--- | :--- | :--- | :--- | :--- | :---: | :---: | :---: | :---: | :---: |
|  | 2016 | 2016 | 2015 | 2015 | 2015 |  |  |  |  |  |
|  | $\$ 8,403,408$ | $\$ 8,457,750$ | $\$ 8,549,240$ | $\$ 8,627,281$ | $\$ 8,928,997$ |  |  |  |  |  |
| Commercial Banking | $6,634,362$ | $6,575,893$ | $6,652,104$ | $6,675,990$ | $6,724,188$ |  |  |  |  |  |
| Consumer Banking | $4,521,031$ | $4,696,013$ | $4,583,474$ | $4,490,082$ | $4,522,197$ |  |  |  |  |  |
| Wealth Management | $19,558,801$ | $19,729,656$ | $19,784,818$ | $19,793,353$ | $20,175,382$ |  |  |  |  |  |
| Subtotal | $\$ 98,931$ | 896,965 | 920,632 | 899,795 | 918,577 |  |  |  |  |  |
| Funds Management and other | $908,467,732$ | $\$ 20,626,621$ | $\$ 20,705,450$ | $\$ 20,693,148$ | $\$ 21,093,959$ |  |  |  |  |  |
| Total | $\$ 20,467,73$ |  |  |  |  |  |  |  |  |  |

Average deposits for the second quarter of 2016 totaled $\$ 20.5$ billion and represented approximately 64 percent of total liabilities and capital, compared with $\$ 20.6$ billion and 65 percent of total liabilities and capital for the first quarter of 2016. Average deposits decreased $\$ 159$ million from the first quarter of 2016. Average interest-bearing transaction accounts decreased by $\$ 166$ million and average time deposit balances decreased $\$ 69$ million, partially offset by a $\$ 56$ million increase in average demand deposits.

Average Commercial Banking deposit balances decreased $\$ 54$ million compared to the first quarter of 2016, primarily due to $\$ 162$ million decrease in other commercial and industrial balances and a $\$ 46$ million decrease in treasury services customer balances, partially offset by a $\$ 126$ million increase in energy customer balances. Commercial customers continue to retain large cash reserves primarily due to low yields available on other high quality investment alternatives and to minimize deposit service 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. If economic activity were to improve significantly or if short-term interest rates were to increase, deposits may decline as customers deploy funds into projects or shift demand deposits into money market instruments.

Average Consumer Banking deposit balances increased $\$ 58$ million. Demand deposit balances increased by $\$ 93$ million, interest-bearing transaction deposits increased by $\$ 37$ million, partially offset by a $\$ 90$ million decrease in time deposit balances. Average Wealth Management deposits decreased $\$ 175$ million compared to the first quarter of 2016 primarily due to a $\$ 139$ million decrease in interest-bearing transaction account balances and a $\$ 57$ million decrease in demand deposits, partially offset by a $\$ 20$ million increase in time deposit balances.

Average time deposits for the second quarter of 2016 included $\$ 424$ million of brokered deposits, an increase of $\$ 62$ million over the first quarter of 2016. Average interest-bearing transaction accounts for the second quarter included $\$ 562$ million of brokered deposits, an increase of $\$ 9.4$ million over the first quarter of 2016. Changes in average brokered deposits largely affect Funds Management and Other.

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The distribution of our period end deposit account balances among principal markets follows in Table 24.
Table 24 -- Period End Deposits by Principal Market Area (In thousands)

Bank of Oklahoma:
Demand
Interest-bearing:
Transaction
Savings
Time
Total interest-bearing
Total Bank of Oklahoma

| June 30, | Mar. 31, | Dec. 31, | Sept. 30, | June 30, |
| :--- | :--- | :--- | :--- | :--- |
| 2016 | 2016 | 2015 | 2015 | 2015 |

Bank of Texas:
Demand
Interest-bearing:
Transaction
Savings
Time
Total interest-bearing
Total Bank of Texas

| $2,677,253$ | $2,571,883$ | $2,627,764$ | $2,689,493$ | $2,565,234$ |
| :--- | :--- | :--- | :--- | :--- |
|  |  |  |  |  |
| $2,035,634$ | $2,106,905$ | $2,132,099$ | $1,996,223$ | $2,020,817$ |
| 83,862 | 83,263 | 77,902 | 74,674 | 74,373 |
| 516,231 | 530,657 | 549,740 | 554,106 | 536,844 |
| $2,635,727$ | $2,720,825$ | $2,759,741$ | $2,625,003$ | $2,632,034$ |
| $5,312,980$ | $5,292,708$ | $5,387,505$ | $5,314,496$ | $5,197,268$ |

Bank of Albuquerque:
Demand

| 530,853 | 557,200 | 487,286 | 520,785 | 508,224 |
| :--- | :--- | :--- | :--- | :--- |
| 573,690 | 560,684 | 563,723 | 529,862 | 537,156 |
| 49,200 | 47,187 | 43,672 | 41,380 | 41,802 |
| 250,068 | 259,630 | 267,821 | 281,426 | 285,890 |
| 872,958 | 867,501 | 875,216 | 852,668 | 864,848 |
| $1,403,811$ | $1,424,701$ | $1,362,502$ | $1,373,453$ | $1,373,072$ |

Bank of Arkansas:
Demand
$\begin{array}{lllll}30,607 & 31,318 & 27,252 & 25,397 & 19,731\end{array}$
Interest-bearing:
Transaction
Savings
Time
Total interest-bearing
Total Bank of Arkansas
Colorado State Bank \& Trust:
Demand
Interest-bearing:
Transaction
Savings
Time
Total interest-bearing

| 278,335 | 265,803 | 202,857 | 290,728 | 284,349 |
| :--- | :--- | :--- | :--- | :--- |
| 1,853 | 1,929 | 1,747 | 1,573 | 1,712 |
| 18,911 | 21,035 | 24,983 | 26,203 | 28,220 |
| 299,099 | 288,767 | 229,587 | 318,504 | 314,281 |
| 329,706 | 320,085 | 256,839 | 343,901 | 334,012 |
|  |  |  |  |  |
| 528,124 | 413,506 | 497,318 | 430,675 | 403,491 |
|  |  |  |  |  |
| 625,240 | 610,077 | 616,697 | 655,206 | 601,741 |
| 31,509 | 33,108 | 31,927 | 31,398 | 31,285 |
| 254,164 | 271,475 | 296,224 | 320,279 | 322,432 |
| 910,913 | 914,660 | 944,848 | $1,006,883$ | 955,458 |

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|  | $\begin{aligned} & \text { June } 30 \text {, } \\ & 2016 \end{aligned}$ | $\begin{aligned} & \text { Mar. 31, } \\ & 2016 \end{aligned}$ | $\begin{aligned} & \text { Dec. 31, } \\ & 2015 \end{aligned}$ | $\begin{aligned} & \text { Sept. 30, } \\ & 2015 \end{aligned}$ | $\begin{aligned} & \text { June 30, } \\ & 2015 \end{aligned}$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Bank of Arizona: |  |  |  |  |  |
| Demand | 396,837 | 341,828 | 326,324 | 306,425 | 352,024 |
| Interest-bearing: |  |  |  |  |  |
| Transaction | 302,297 | 313,825 | 358,556 | 293,319 | 298,073 |
| Savings | 3,198 | 3,277 | 2,893 | 4,121 | 2,726 |
| Time | 28,681 | 29,053 | 29,498 | 26,750 | 28,165 |
| Total interest-bearing | 334,176 | 346,155 | 390,947 | 324,190 | 328,964 |
| Total Bank of Arizona | 731,013 | 687,983 | 717,271 | 630,615 | 680,988 |
| Bank of Kansas City: |  |  |  |  |  |
| Demand | 240,754 | 221,812 | 197,424 | 234,847 | 239,609 |
| Interest-bearing: |  |  |  |  |  |
| Transaction | 112,371 | 146,405 | 153,203 | 150,253 | 139,260 |
| Savings | 1,656 | 1,619 | 1,378 | 1,570 | 1,580 |
| Time | 11,735 | 31,502 | 35,524 | 36,630 | 42,262 |
| Total interest-bearing | 125,762 | 179,526 | 190,105 | 188,453 | 183,102 |
| Total Bank of Kansas City | 366,516 | 401,338 | 387,529 | 423,300 | 422,711 |
| Total BOK Financial deposits | \$20,759,801 | \$20,418,320 | \$21,088,158 | \$ 20,619,443 | \$21,059,729 |

In addition to deposits, subsidiary bank liquidity 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. There were no wholesale federal funds purchased outstanding at June 30, 2016. 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 agency 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 $\$ 6.0$ billion during the quarter, compared to $\$ 5.5$ billion in the first quarter of 2016.

At June 30, 2016, the estimated unused credit available to the subsidiary bank from collateralized sources was approximately $\$ 4.5$ billion.

A summary of other borrowings follows in Table 25.

[^2]Table 25 -- Borrowed Funds (In thousands)

|  |  | Three Months Ended June 30, 2016 |  |  |  | Three Months Ended March 31, 2016 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{aligned} & \text { June } 30 \text {, } \\ & 2016 \end{aligned}$ | Average <br> Balance <br> During the Quarter | Rate | Maximum <br> Outstanding <br> At Any <br> Month <br> End <br> During <br> the Quarter | $\begin{aligned} & \text { March 31, } \\ & 2016 \end{aligned}$ | Average <br> Balance <br> During the Quarter | Rate | Maximum <br> Outstanding <br> At Any <br> Month <br> End During the Quarter |
| Funds purchased | \$56,780 | \$70,682 | 0.19\% | \$ 70,264 | \$62,755 | \$ 112,211 | 0.27\% | \$ 567,103 |
| Repurchase agreements Other borrowings: | 472,683 | 611,264 | 0.05\% | 663,538 | 630,101 | 662,640 | 0.05\% | 649,579 |
| Federal Home Loan Bank advances | 5,800,000 | 6,046,154 | 0.55\% | 6,400,000 | 5,600,000 | 5,547,803 | 0.53\% | 5,600,000 |
| GNMA repurchase liability | 12,769 | 12,210 | 4.81\% | 12,769 | 15,491 | 17,594 | 4.91\% | 19,520 |
| Other | 17,967 | 17,664 | 2.44\% | 17,967 | 18,371 | 18,520 | 2.45\% | 18,747 |
| Total other borrowings | 5,830,736 | 6,076,028 | 0.57\% |  | 5,633,862 | 5,583,917 | 0.56\% |  |
| Subordinated debentures | 371,812 | 232,795 | 1.52\% | 371,812 | 226,385 | 226,368 | 1.26\% | 226,385 |
| Total Borrowed Funds | \$6,732,011 | \$6,990,769 | 0.55\% |  | \$6,553,103 | \$6,585,136 | 0.53\% |  |

In 2007, the subsidiary bank issued $\$ 250$ million of subordinated debt due May 15, 2017 to fund the Worth National Bank and First United Bank acquisitions and fund continued asset growth. Interest on this debt was based on a fixed rate of 5.75 percent through May 14,2012 which then converted to a floating rate of three-month LIBOR plus 0.69 percent. At June 30, 2016, $\$ 227$ million of this subordinated debt remains outstanding.
The subsidiary bank 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

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

At June 30, 2016, cash and interest-bearing cash and cash equivalents held by the parent company totaled $\$ 373$ million. The primary sources of liquidity for BOK Financial are cash on hand and dividends from the subsidiary bank. Dividends from the subsidiary bank 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 June 30, 2016, based upon the most restrictive limitations as well as management's internal capital policy, the subsidiary bank could declare up to $\$ 113$ 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 at the subsidiary bank could affect its ability to pay dividends to the parent company.

Our equity capital at June 30, 2016 was $\$ 3.4$ billion, an increase of $\$ 46$ million over March 31, 2016. Net income less cash dividends paid increased equity $\$ 37$ million during the second quarter of 2016. Accumulated other comprehensive income increased $\$ 25$ million primarily related to the change in unrealized gains on available for sale securities due to changes in interest rates. 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 October 27, 2015, the board of directors authorized the Company to purchase up to five million common shares, subject to market conditions, securities law and other regulatory compliance limitations. As of June 30, 2016, a cumulative total of $2,179,243$ shares have been repurchased under this authorization. The Company repurchased 305,169 shares under this plan in the second quarter of 2016 at an average price of $\$ 58.23$ per share.

BOK Financial and the subsidiary bank are subject to various capital requirements administered by federal agencies. Failure to meet minimum capital requirements can result in certain mandatory and possibly additional discretionary actions by regulators that could have a material impact on operations. 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.
Effective January 1, 2015 for BOK Financial, regulatory capital rules establish a 7 percent threshold for the common equity Tier 1 ratio consisting of a minimum level plus capital conservation buffer. The Company has elected to exclude unrealized gains and losses from available for sale securities from its calculation of Tier 1 capital, consistent with the treatment under previous capital rules.

A summary of minimum capital requirements, including capital conservation buffer follows in Table 26. A bank which falls below these levels, 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.

The capital ratios for BOK Financial on a consolidated basis are presented in Table 26.
Table 26 -- Capital Ratios

|  | Minimum <br> Capital <br> Requirement ${ }^{1}$ | Capital <br> Conservation <br> Buffer ${ }^{2}$ | Minimum <br> Capital <br> Requirement <br> Including <br> Capital <br> Conservation <br> Buffer | $\begin{aligned} & \text { June 30, March 31, June 30, } \\ & 2016 \quad 2016 \quad 2015 \end{aligned}$ |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |
| Risk-based capital: |  |  |  |  |  |  |
| Common equity Tier 1 | 4.50 \% | 2.50 \% | 7.00 \% | 11.86\% | 12.00 \% | 13.01\% |
| Tier 1 capital | 6.00 \% | 2.50 \% | 8.50 \% | 11.86\% | 12.00 \% | 13.01\% |
| Total capital | 8.00 \% | 2.50 \% | 10.50 \% | 13.51\% | 13.21 \% | 14.11\% |
| Tier 1 Leverage | 4.00 \% | N/A | 4.00 \% | 9.06 \% | 9.12 \% | 9.75 \% |
| Average total equity to average assets |  |  |  | 10.46\% | 10.55 \% | 11.10\% |
| Tangible common equity ratio |  |  |  | 9.33 \% | 9.34 \% | 9.72 \% |
| ${ }^{1}$ Effective January 1, 2015 |  |  |  |  |  |  |
| ${ }^{2}$ Effective January 1, 2016 |  |  |  |  |  |  |

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") 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 27 provides a reconciliation of the non-GAAP measures with financial measures defined by GAAP.
Table 27 -- Non-GAAP Measure
(Dollars in thousands)
June 30, $2016 \begin{aligned} & \text { March 31, } \\ & 2016\end{aligned} \quad$ Dec. 31, 2015 Sept. 30, 2015 June 30, 2015

| Tangible common equity ratio: |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Total shareholders' equity | $\$ 3,368,833$ | $\$ 3,321,555$ | $\$ 3,230,556$ | $\$ 3,377,226$ | $\$ 3,375,632$ |  |
| Less: Goodwill and intangible assets, | 426,111 | 428,733 | 429,370 | 430,460 | 431,515 |  |
| net | $2,942,722$ | $2,892,822$ | $2,801,186$ | $2,946,766$ | $2,944,117$ |  |
| Tangible common equity | $31,970,450$ | $31,413,945$ | $31,476,128$ | $30,566,905$ | $30,725,563$ |  |
| Total assets | 426,111 | 428,733 | 429,370 | 430,460 | 431,515 |  |
| Less: Goodwill and intangible assets, | 431,544,339 | $\$ 30,985,212$ | $\$ 31,046,758$ | $\$ 30,136,445$ | $\$ 30,294,048$ |  |
| net | $\% 9.34$ | $\%$ | 9.0 | $\%$ | 9.78 | $\%$ |
| Tangible assets | 9.33 | $\%$ |  |  | $\%$ |  |

## Off-Balance Sheet Arrangements

See Note 7 to the Consolidated Financial Statements for a discussion of the Company's significant off-balance sheet commitments.
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 the 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 guidelines 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. The internal policy limit for net interest revenue variation is a maximum decline of 5 percent to an up or down 200 basis point change over twelve months. These guidelines also set maximum levels for short-term borrowings, short-term assets, public funds and brokered deposits and establish minimum levels for unpledged assets, among other things. Compliance with these internal guidelines is reviewed monthly. The Asset/Liabilty Committee is also responsible for monitoring market risk limits for mortgage banking production and mortgage servicing assets inclusive of economic hedge benefits. Each of these desks must limit projected exposure from a 50 basis point change in interest rates.

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, net income and economic value of equity. A simulation model is used to estimate the effect of changes in interest rates on the Company's performance across multiple interest rate scenarios. While the current internal policy limit for net interest revenue variation is a maximum decline of 5 percent due to a 200 basis point change over twelve months, the results of a 200 basis point decrease in interest rates in the current low-rate environment are not meaningful. We report the effect of a 50 basis point decrease in the interim.

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 DDA 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. The effects of changes in interest rates on the value of mortgage servicing rights are excluded from Table 28 due to the extreme volatility over such a large rate range and our active risk management approach for that asset. The effects of interest rate changes on the value of mortgage servicing rights are presented in Note 6 to the Consolidated Financial Statements.

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 re-pricing characteristics, future cash flows and customer behavior. These assumptions are inherently uncertain and, as a result, the model cannot precisely estimate net interest revenue, net income or economic value of equity or precisely predict the impact of higher or lower interest rates on net interest revenue, net income or economic value of equity. 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.

Table 28 -- Interest Rate Sensitivity
(Dollars in thousands)

|  | $\begin{aligned} & 200 \mathrm{bp} \text { Increase } \\ & \text { June } 30 \text {, } \\ & 2016 \quad 2015 \end{aligned}$ |  | 50 bp Decrease <br> June 30, |  |
| :---: | :---: | :---: | :---: | :---: |
| Anticipated impact over the next twelve months on net interest revenue | \$(483) | \$ $(6,605)$ | \$ $(24,425)$ |  |
|  | (0.06 ) | (0.88 | (3.18 | (2.4 |

## Trading Activities

BOK Financial enters into trading activities both as an intermediary for customers and for its own account. As an intermediary, BOK Financial will 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, BOK Financial may also take trading positions in U.S. Treasury securities, residential mortgage-backed securities and municipal bonds to enhance returns on its securities portfolios. Both of these activities involve interest rate 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 manage 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, over the counter derivatives or cash markets may be used to reduce the risk associated with some trading programs.

Management uses a Value at Risk ("VaR") methodology to measure market risk due to changes in interest rates inherent in its trading activities. VaR is calculated based upon historical simulations over the past five years using a variance/covariance matrix of interest rate changes, a 10 business day holding period and a 99 percent confidence interval. It represents an amount of market loss that is likely to be exceeded in only one out of every 100 two-week periods. Trading positions are managed within guidelines approved by the Board of Directors. These guidelines limit the VaR to $\$ 7.3$ million. There were no instances of VaR being exceeded during the six months ended June 30, 2016 and 2015. At June 30, 2016, there were no trading positions for the purposes of enhancing returns on the Company's securities portfolio.

The average, high and low VaR amounts for the three and six months ended June 30, 2016 and June 30, 2015 are as follows in Table 29.

Table 29 -- Trading Value at Risk (VaR)
(In thousands)
Three Months Six Months
Ended Ended
June 30, June 30,
$2016 \quad 2015 \quad 2016 \quad 2015$
Average 2 ,443 \$1,623 \$2,134 \$1,551
High $\quad 3,009 \quad 2,629 \quad 4,130 \quad 2,629$
Low 1,544 1,041 774782
The Company also bears interest rate risk by originating residential mortgages held for sale (RMHFS). A variety of methods are used to manage the interest rate 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.

Interest rate risk from RMHFS is mitigated through forward sale contracts.
Management uses a pre-tax income sensitivity methodology to measure market risk from RMHFS. Pre-tax income sensitivity is calculated using $\mathrm{a}+/-50$ basis point change in interest rates, a 30 day average fall out rate, and a projected fall out-rate that is statistically modeled and recalibrated using such factors as loan product type, seasonality, region, originator, channel, rate lock terms, rate change scenario, various borrower characteristics. The Company monitors the effectiveness of this model through back-testing, updating the data and regular validations. Trading positions are managed within guidelines approved by the Board of Directors. These guidelines limit the pre-tax income sensitivity to $\$ 7$ million. There were no instances of pre-tax income sensitivity exceeding the $\$ 7$ million limit during the three and six months ended June 30, 2016 and 2015.

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The average, high and low pre-tax income sensitivity amounts for the three and six months ended June 30, 2016 and June 30, 2015 are as follows.

Table 30 -- RMHFS VaR
(In thousands)

| Three Months | Six Months |
| :--- | :--- |
| Ended | Ended |
| June 30, | June 30, |
| $2016 \quad 2015$ | $2016 \quad 2015$ |

Average \$3,890 \$3,572 \$3,945 \$3,043
$\begin{array}{lllll}\text { High } & 6,858 & 6,590 & 6,858 & 6,590\end{array}$
$\begin{array}{lllll}\text { Low } & 288 & 1,315 & 288 & 1,315\end{array}$
Controls and Procedures

As required by Rule 13a-15(b), BOK Financial's management, including the Chief Executive Officer and Chief Financial Officer, conducted an evaluation as of the end of the period covered by their report, of the effectiveness of the Company's disclosure controls and procedures as defined in Exchange Act Rule 13a-15(e). Based on that evaluation, the Chief Executive Officer and Chief Financial Officer concluded that the disclosure controls and procedures were effective as of the end of the period covered by this report. As required by Rule 13a-15(d), BOK Financial's management, including the Chief Executive Officer and Chief Financial Officer, also conducted an evaluation of the Company's internal controls over financial reporting to determine whether any changes occurred during the quarter covered by this report that have materially affected, or are reasonably likely to materially affect, the Company's internal controls over financial reporting. Based on that evaluation, there has been no such change during the quarter covered by this report.
Forward-Looking Statements
This report 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 in general. Words such as "anticipates," "believes," "estimates," "expects," "forecasts," "plans," "projects," "will," "intends," var 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 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 that BOK Financial has not independently verified. These statements are not guarantees of future performance and involve certain risks, uncertainties and assumptions that 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 expressed, 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, 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.

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Consolidated Statements of Earnings (Unaudited) (In thousands, except share and per share data)

Interest revenue
Loans
Residential mortgage loans held for sale
Trading securities
Taxable securities
Tax-exempt securities
Total investment securities
Taxable securities
Tax-exempt securities
Total available for sale securities
Fair value option securities
Restricted equity securities
Interest-bearing cash and cash equivalents
Total interest revenue
Interest expense
Deposits
Borrowed funds
Subordinated debentures
Total interest expense
Net interest revenue
Provision for credit losses
Net interest revenue after provision for credit losses
Other operating revenue
Brokerage and trading revenue
Transaction card revenue
Fiduciary and asset management revenue
Deposit service charges and fees
Mortgage banking revenue
Other revenue
Total fees and commissions
Other gains, net
Gain (loss) on derivatives, net
Gain (loss) on fair value option securities, net
Change in fair value of mortgage servicing rights
Gain on available for sale securities, net
Total other-than-temporary impairment losses
Portion of loss recognized in other comprehensive income
Net impairment losses recognized in earnings
Total other operating revenue
Other operating expense
Personnel
Business promotion
Professional fees and services
Net occupancy and equipment
Insurance

| Three Months Ended |  | Six Months Ended |  |
| :---: | :---: | :---: | :---: |
| June 30, |  | June 30, |  |
| 2016 | 2015 | 2016 | 2015 |
| \$ 141,560 | \$ 133,197 | \$280,672 | 2 \$259,893 |
| 3,508 | 3,892 | 6,208 | 6,841 |
| 616 | 442 | 1,140 | 949 |
| 3,069 | 3,251 | 6,244 | 6,577 |
| 1,148 | 1,315 | 2,360 | 2,659 |
| 4,217 | 4,566 | 8,604 | 9,236 |
| 43,345 | 42,355 | 88,277 | 85,460 |
| 527 | 563 | 1,062 | 1,183 |
| 43,872 | 42,918 | 89,339 | 86,643 |
| 2,062 | 2,320 | 4,651 | 4,323 |
| 3,863 | 3,228 | 8,174 | 5,825 |
| 2,569 | 1,250 | 5,275 | 2,672 |
| 202,267 | 191,813 | 404,063 | 376,382 |
| 9,997 | 11,266 | 20,539 | 23,371 |
| 8,780 | 3,121 | 16,752 | 5,694 |
| 878 | 1,695 | 1,588 | 3,860 |
| 19,655 | 16,082 | 38,879 | 32,925 |
| 182,612 | 175,731 | 365,184 | 343,457 |
| 20,000 | 4,000 | 55,000 | 4,000 |
| 162,612 | 171,731 | 310,184 | 339,457 |
| 39,530 | 36,012 | 71,871 | 67,719 |
| 34,950 | 32,778 | 67,304 | 63,788 |
| 34,813 | 32,712 | 66,869 | 64,181 |
| 22,618 | 22,328 | 45,160 | 44,012 |
| 38,224 | 36,846 | 72,654 | 76,166 |
| 13,352 | 11,871 | 25,256 | 22,672 |
| 183,487 | 172,547 | 349,114 | 338,538 |
| 1,307 | 1,457 | 2,867 | 2,212 |
| 10,766 | (1,032 | ) 17,904 | (121 |
| 4,279 | (8,130 | ) 13,722 | (5,483 |
| (16,283 | ) 8,010 | (44,271 | ) $(512$ |
| 5,326 | 3,433 | 9,290 | 7,760 |
| - | - | - | (781 |
| - | - | - | 689 |
|  | - | - | (92 |
| 188,882 | 176,285 | 348,626 | 342,302 |
| 142,490 | 132,695 | 278,333 | 261,243 |
| 6,703 | 7,765 | 12,399 | 13,513 |
| 14,158 | 9,560 | 25,917 | 19,619 |
| 19,677 | 18,927 | 38,443 | 37,971 |
| 7,129 | 5,116 | 14,394 | 10,096 |


| Data processing and communications | 32,802 | 30,655 | 64,819 | 60,427 |
| :--- | :--- | :--- | :--- | :--- |
| Printing, postage and supplies | 3,889 | 3,553 | 7,796 | 7,014 |
| Net losses and operating expenses of repossessed assets | 1,588 | 223 | 2,658 | 836 |
| Amortization of intangible assets | 2,624 | 1,090 | 3,783 | 2,180 |
| Mortgage banking costs | 15,809 | 8,227 | 28,188 | 18,394 |
| Other expense | 7,856 | 9,302 | 22,895 | 16,085 |
| Total other operating expense | 254,725 | 227,113 | 499,625 | 447,378 |
| Net income before taxes | 96,769 | 120,903 | 159,185 | 234,381 |
| Federal and state income taxes | 30,497 | 40,630 | 51,925 | 79,014 |
| Net income | 66,272 | 80,273 | 107,260 | 155,367 |
| Net income (loss) attributable to non-controlling interests | 471 | 1,043 | $(1,105$ | 1,294 |
| Net income attributable to BOK Financial Corporation shareholders | $\$ 65,801$ | $\$ 79,230$ | $\$ 108,365$ | $\$ 154,073$ |
| Earnings per share: |  |  |  |  |
| Basic | $\$ 1.00$ | $\$ 1.15$ | $\$ 1.64$ | $\$ 2.23$ |
| Diluted | $\$ 1.00$ | $\$ 1.15$ | $\$ 1.64$ | $\$ 2.23$ |
| Average shares used in computation: |  |  |  |  |
| Basic | $65,245,88768,096,341$ | $65,271,21468,175,327$ |  |  |
| Diluted | $65,302,926$ | $68,210,353$ | $65,317,177$ | $68,277,386$ |
| Dividends declared per share | $\$ 0.43$ | $\$ 0.42$ | $\$ 0.86$ | $\$ 0.84$ |

See accompanying notes to consolidated financial statements.

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Consolidated Statements of Comprehensive Income (Unaudited)
(In thousands, except share and per share data)

|  | Three Months Ended |  | Six Months Ended |  |
| :---: | :---: | :---: | :---: | :---: |
|  | June 30, |  | June 30, |  |
|  | 2016 | 2015 | 2016 | 2015 |
| Net income | \$66,272 | \$80,273 | \$ 107,260 | \$155,367 |
| Other comprehensive income (loss) before income taxes: |  |  |  |  |
| Net change in unrealized gain (loss) | 45,475 | (59,516 ) | 166,566 | (129 |
| Reclassification adjustments included in earnings: |  |  |  |  |
| Interest revenue, Investments securities, Taxable securities | (43 ) | ) (134 | (112 | ) (313 |
| Interest expense, Subordinated debentures | - | 56 | - | 121 |
| Net impairment losses recognized in earnings | - | - | - | 92 |
| Gain on available for sale securities, net | (5,326 ) | ) (3,433 ) | (9,290 | ) $(7,760$ |
| Other comprehensive income (loss) before income taxes | 40,106 | $(63,027)$ | 157,164 | (7,989 |
| Federal and state income taxes | 15,583 | $(24,516)$ | 61,119 | (3,108 |
| Other comprehensive income (loss), net of income taxes | 24,523 | $(38,511)$ | 96,045 | (4,881 |
| Comprehensive income | 90,795 | 41,762 | 203,305 | 150,486 |
| Comprehensive income (loss) attributable to non-controlling interests | 471 | 1,043 | (1,105 | ) 1,294 |
| Comprehensive income attributable to BOK Financial Corp. shareholders | \$90,324 | \$40,719 | \$204,410 | \$149,192 |

See accompanying notes to consolidated financial statements.

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Consolidated Balance Sheets
(In thousands, except share data)

Assets
Cash and due from banks
Interest-bearing cash and cash equivalents
Trading securities

| June 30, 2016Dec. 31, <br> 2015 | June 30, 2015 |  |
| :--- | :--- | :--- |
| (Unaudited) | (Footnote 1) | (Unaudited) |

Investment securities (fair value: June 30, 2016-\$599,062; December 31
2015 - \$629,159 ; June 30, 2015 - \$642,042)
Available for sale securities
\$498,713 \$573,699 \$443,577

Fair value option securities
1,907,838 2,069,900 2,119,072
211,622 122,404 158,209

Restricted equity securities
$560,711 \quad 597,836 \quad 625,664$

Residential mortgage loans held for sale
Loans
Allowance for loan losses
Loans, net of allowance
Premises and equipment, net
Receivables
Goodwill
Intangible assets, net
Mortgage servicing rights
8,830,689 9,042,733 9,000,117
263,265 444,217 436,324
319,639 273,684 231,520
430,728 308,439 502,571
16,406,749 15,941,154 15,124,136
$(243,259)(225,524)(201,087)$
16,163,490 15,715,630 14,923,049
315,199 $306,490 \quad 284,238$
173,638 163,480 149,629
382,739 385,461 385,454
43,372 43,909 46,061
190,747 218,605 198,694
Real estate and other repossessed assets, net of allowance (June 30, 2016
\$9,448; December 31, 2015 - \$12,622; June 30, 2015 - \$17,296)
Derivative contracts, net
Cash surrender value of bank-owned life insurance
Receivable on unsettled securities sales
Other assets
Total assets
24,05
30,731 35,499
883,673 586,270 630,435
307,860 303,335 298,606
142,820 40,193 8,693
319,653 249,112 248,151
\$31,970,450 \$31,476,128 \$30,725,563
Liabilities and Equity
Liabilities:
Noninterest-bearing demand deposits
Interest-bearing deposits:
Transaction
Savings
Time
Total deposits
Funds purchased
Repurchase agreements
Other borrowings
Subordinated debentures
Accrued interest, taxes and expense
Derivative contracts, net
Due on unsettled securities purchases
Other liabilities
Total liabilities

| $\$ 8,424,609$ | $\$ 8,296,888$ | $\$ 8,156,401$ |
| :--- | :--- | :--- |
|  |  |  |
| $9,668,869$ | $9,998,954$ | $9,899,777$ |
| 419,262 | 386,252 | 379,172 |
| $2,247,061$ | $2,406,064$ | $2,624,379$ |
| $20,759,801$ | $21,088,158$ | $21,059,729$ |
| 56,780 | 491,192 | 64,677 |
| 472,683 | 722,444 | 712,033 |
| $5,830,736$ | $4,837,879$ | $4,332,162$ |
| 371,812 | 226,350 | 226,278 |
| 197,742 | 119,584 | 124,568 |
| 719,159 | 581,701 | 620,277 |
| 11,757 | 16,897 | 37,571 |
| 147,242 | 124,284 | 135,435 |
| $28,567,712$ | $28,208,489$ | $27,312,730$ |

Shareholders' equity:

Common stock ( $\$ .00006$ par value; $2,500,000,000$ shares authorized;
shares issued and outstanding: June 30, 2016-74,817,155; December 31, 4 4 4 2015 - 74,530,364; June 30, 2015 - 74,428,730)

| Capital surplus | 990,106 | 982,009 | 970,054 |
| :--- | :--- | :--- | :--- |
| Retained earnings | $2,755,766$ | $2,704,121$ | $2,627,250$ |
| Treasury stock (shares at cost: June 30, 2016 - 8,950,838 ; December 31, | $(494,675$ | $)(477,165$ | $)(273,468$ |
| 2015-8,636,332; June 30, 2015 - 5,483,591) |  |  |  |
| Accumulated other comprehensive income | 117,632 | 21,587 | 51,792 |
| Total shareholders' equity | $3,368,833$ | $3,230,556$ | $3,375,632$ |
| Non-controlling interests | 33,905 | 37,083 | 37,201 |
| Total equity | $3,402,738$ | $3,267,639$ | $3,412,833$ |
| Total liabilities and equity | $\$ 31,970,450$ | $\$ 31,476,128$ | $\$ 30,725,563$ |

See accompanying notes to consolidated financial statements.

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Consolidated Statements of Changes in Equity (Unaudited)
(In thousands)


stock
Sale of

interest
Capital calls
$\left.\begin{array}{llllllllll}\text { and } & - & - & - & - & - & - & (3,620 & ) & (3,620\end{array}\right)$
net

Balance, June
30, 2015
$74,429 \$ 4 \$ 970,054 \$ 2,627,250 \quad 5,483 \$(273,468) \$ 51,792 \quad \$ 3,375,632 \quad \$ 37,201 \quad \$ 3,412,833$

| Balance, Dec. <br> 31,2015 | 74,530 | $\$ 4$ | $\$ 982,009$ | $\$ 2,704,121$ | 8,636 | $\$(477,165)$ | $\$ 21,587$ | $\$ 3,230,556$ | $\$ 37,083$ | $\$ 3,267,639$ |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Net income <br> (loss) | - | - | - | 108,365 | - | - | - | 108,365 | $(1,105$ | $)$ | 107,260 |
| Other <br> comprehensive <br> income | - | - | - | - | - | - | 96,045 | 96,045 | - | 96,045 |  |
| Repurchase of <br> common stock | - | - | - | - | 305 | $(17,770$ | $)$ | - | $(17,770$ | $)$ | - |
|  | 287 | $-2,016$ | - | 10 | 260 | - | 2,276 | - | 2,276 |  |  |

Issuance of
shares for
equity
compensation
Tax effect from

| equity <br> compensation, <br> net | - | - 351 | - | - | - | - | 351 | - | 351 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Share-based compensation |  | - 5,730 | - | - | - | - | 5,730 | - | 5,730 |

Cash dividends

stock
Capital calls
and
distributions,
net
Balance, June
30, 2016
$74,817 \$ 4 \$ 990,106 \$ 2,755,766 \quad 8,951 \$(494,675) \$ 117,632 \quad \$ 3,368,833 \quad \$ 33,905 \quad \$ 3,402,738$

See accompanying notes to consolidated financial statements.

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| Consolidated Statements of Cash Flows (Unaudited) (in thousands) |  |  |
| :---: | :---: | :---: |
|  | Six Months Ended |  |
|  | June 30, |  |
|  | 2016 | 2015 |
| Cash Flows From Operating Activities: |  |  |
| Net income | \$ 107,260 | \$ 155,367 |
| Adjustments to reconcile net income to net cash provided by (used in) operating activities: |  |  |
| Provision for credit losses | 55,000 | 4,000 |
| Change in fair value of mortgage servicing rights | 44,271 | 512 |
| Net unrealized gains from derivative contracts | (15,459 | ) (982 |
| Tax effect from equity compensation, net | (351 | ) (744 |
| Change in bank-owned life insurance | (4,515 | ) $(4,596$ |
| Share-based compensation | 5,730 | 4,922 |
| Depreciation and amortization | 41,474 | 33,753 |
| Net amortization of securities discounts and premiums | 21,814 | 29,341 |
| Net realized gains on financial instruments and other net gains | (9,787 | ) $(12,483$ |
| Net gain on mortgage loans held for sale | (37,151 | ) $(39,192$ |
| Mortgage loans originated for sale | (3,062,859 | ) (3,393,246) |
| Proceeds from sale of mortgage loans held for sale | 2,981,973 | 3,244,010 |
| Capitalized mortgage servicing rights | (34,355 | ) (42,382 ) |
| Change in trading and fair value option securities | 90,484 | (95,757 |
| Change in receivables | (9,698 | ) 11,610 |
| Change in other assets | (225 | ) $(7,749$ |
| Change in accrued interest, taxes and expense | 20,299 | 2,644 |
| Change in other liabilities | (8,854 | ) 21,943 |
| Net cash provided by (used in) operating activities | 185,051 | (89,029 |
| Cash Flows From Investing Activities: |  |  |
| Proceeds from maturities or redemptions of investment securities | 52,463 | 32,786 |
| Proceeds from maturities or redemptions of available for sale securities | 721,432 | 954,893 |
| Purchases of investment securities | (18,599 | ) $(9,584 \quad)$ |
| Purchases of available for sale securities | (1,155,261 | ) (1,711,619) |
| Proceeds from sales of available for sale securities | 795,140 | 713,660 |
| Change in amount receivable on unsettled securities transactions | (102,627 | ) 65,566 |
| Loans originated, net of principal collected | (481,085 | ) (890,180 ) |
| Net payments on derivative asset contracts | (204,041 | ) (174,475 ) |
| Acquisitions, net of cash acquired | (7,700 | ) (18,064 ) |
| Proceeds from disposition of assets | 78,629 | 102,736 |
| Purchases of assets | (107,241 | ) $(144,454)$ |
| Net cash used in investing activities | (428,890 | ) (1,078,735) |
| Cash Flows From Financing Activities: |  |  |
| Net change in demand deposits, transaction deposits and savings accounts | (169,354 | ) $(96,793$ |
| Net change in time deposits | (159,003 | ) 15,663 |
| Net change in other borrowed funds | 259,359 | 1,675,859 |
| Repayment of subordinated debentures | - | (121,810 |
| Issuance of subordinated debentures | 145,390 | - |
| Net proceeds on derivative liability contracts | 196,225 | 157,498 |
| Net change in derivative margin accounts | (188,823 | ) $(47,716$ |
| Change in amount due on unsettled security transactions | (5,140 | ) $(252,969$ |

$\left.\begin{array}{lll}\text { Issuance of common and treasury stock, net } & 2,276 & 5,739 \\ \text { Tax effect from equity compensation, net } & 351 & 744 \\ \text { Sale of non-controlling interests } & - & 5,500 \\ \text { Repurchase of common stock } & (17,770 & )(29,484 \\ \text { Dividends paid } & (56,720 & )(57,660\end{array}\right)$

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| Consolidated Statements of Cash Flows (Unaudited) (in thousands) |  |
| :---: | :---: |
| Supplemental Cash Flow Information: |  |
| Cash paid for interest | \$40,213 \$34,116 |
| Cash paid for taxes | \$14,671 \$51,699 |
| Net loans and bank premises transferred to repossessed real estate and other assets | \$5,372 \$4,262 |
| Residential mortgage loans guaranteed by U.S. government agencies that became eligible for repurchase during the period | \$49,325 \$52,569 |
| Conveyance of other real estate owned guaranteed by U.S. government agencies | \$29,512 \$80,048 |
| See accompanying notes to consolidated financial statements. |  |

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Notes to Consolidated Financial Statements (Unaudited)
(1) Significant Accounting Policies

Basis of Presentation
The accompanying unaudited condensed consolidated financial statements of BOK Financial Corporation ("BOK Financial" or "the Company") have been prepared in accordance with accounting principles for interim financial information generally accepted in the United States and with the instructions to Form 10-Q and Article 10 of Regulation S-X. Accordingly, they do not include all of the information and footnotes required by generally accepted accounting principles for complete financial statements. In the opinion of management, all adjustments (consisting of normal recurring accruals) considered necessary for a fair presentation have been included.

The unaudited consolidated financial statements include accounts of BOK Financial and its subsidiaries, principally BOKF, NA ("the Bank"), BOK Financial Securities, Inc., The Milestone Group, Inc. and Cavanal Hill Investment Management Inc. Operating divisions of the Bank include Bank of Albuquerque, Bank of Arizona, Bank of Arkansas, Bank of Oklahoma, Bank of Texas, Colorado State Bank and Trust, Bank of Kansas City, BOK Financial Mortgage and the TransFund electronic funds network.

Certain reclassifications have been made to conform to the current period presentation.
The financial information should be read in conjunction with BOK Financial's 2015 Form 10-K filed with the Securities and Exchange Commission, which contains audited financial statements. Amounts presented as of December 31, 2015 have been derived from the audited financial statements included in BOK Financial's 2015 Form $10-\mathrm{K}$ but does not include all of the information and footnotes required by generally accepted accounting principles for complete financial statements. Operating results for the six-month period ended June 30, 2016 are not necessarily indicative of the results that may be expected for the year ending December 31, 2016.

Newly Adopted and Pending Accounting Policies
Financial Accounting Standards Board ("FASB")
FASB Accounting Standards Update No. 2014-09, Revenue from Contracts with Customers ("ASU 2014-09")
On May 28, 2014, the FASB issued ASU 2014-09 to clarify the principles for recognizing revenue by providing a more robust framework that will give greater consistency and comparability in revenue recognition practices. In the new framework, an entity recognizes revenue in an amount that reflects the consideration to which the entity expects to be entitled in exchange for goods or services. The new model requires the identification of performance obligations included in contracts with customers, a determination of the transaction price and an allocation of the price to those performance obligations. The entity recognizes revenue when performance obligations are satisfied. ASU 2014-09 is effective for the Company for annual reporting periods beginning after December 15, 2017, including interim periods within that reporting period. The Company is evaluating the impact the adoption of ASU 2014-09 will have on the Company's financial statements.

FASB Accounting Standards Update No. 2016-08, Revenue from Contracts with Customers (Topic 606): Principal versus Agent Considerations (Reporting Revenue Gross versus Net) ("ASU 2016-08")

On March 17, 2016, the FASB Issued ASU 2016-08 to amend the principal versus agent implementation guidance in ASU 2014-09. The ASU clarifies that an entity should evaluate whether it is the principal or the agent for each
specified good or service promised in a contract with a customer. ASU 2016-08 is effective for the Company for annual reporting periods beginning after December 15, 2017, including interim periods within that reporting period. The Company is evaluating the impact the adoption of ASU 2016-08 will have on the Company's financial statements along with ASU 2014-09.

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FASB Accounting Standards Update No. 2016-10, Revenue from Contracts with Customers (Topic 606): Identifying Performance Obligations and Licensing ("ASU 2016-10")

On April 14, 2016, the FASB issued ASU 2016-10 which amends certain sections of ASU 2014-09 related to identifying performance obligations and licensing implementation. ASU 2016-10 is effective for the Company for annual reporting periods beginning after December 15, 2017, including interim periods within that reporting period. The Company is evaluating the impact the adoption of ASU 2016-10 will have on the Company's financial statements along with ASU 2014-09.

FASB Accounting Standards Update No. 2016-12, Revenue from Contracts with Customers (Topic 606): Narrow-Scope Improvements and Practical Expedients ("ASU 2016-12")

On May 9, 2016, the FASB issued ASU 2016-12, which amends certain aspects of the Board's new revenue standard, ASU 2014-09. The amendments clarify information regarding collectibility, presentation of sales tax and other similar taxes collected from customers, noncash consideration, contract modifications and completed contracts at transition, and transition disclosures. ASU 2016-12 is effective for the Company for annual reporting periods beginning after December 15, 2017, including interim periods within that reporting period. The Company is evaluating the impact the adoption of ASU 2016-12 will have on the Company's financial statements along with ASU 2014-09.

FASB Accounting Standards Update No. 2014-16, Derivatives and Hedging (Topic 815): Determining Whether the Host Contract in a Hybrid Financial Instrument Issued in the Form of a Share is More Akin to Debt or to Equity ("ASU 2014-16")

On November 3, 2014, the FASB issued ASU 2014-16 to eliminate the use of different methods and reduce diversity under GAAP in the accounting for hybrid financial instruments issued in the form of a share. For hybrid financial instruments issued in the form of a share, an entity should determine the nature of the host contract by considering all stated and implied substantive terms and features of the hybrid financial instrument. The entity should determine the nature of the host contract by considering the economic characteristics and risks of the entire hybrid financial instrument, including the embedded derivative feature that is being evaluated for separate accounting from the host contract. For public business entities, the ASU was effective for annual periods beginning after December 15, 2015, and interim periods within those annual periods. Adoption of ASU 2014-16 did not have a material impact on the Company's consolidated financial statements.

FASB Accounting Standards Update No. 2015-02, Consolidation (Topic 810): Amendments to the Consolidation Analysis ("ASU 2015-02")

On February 18, 2015, the FASB issued ASU 2015-02 to address concerns that current U.S. GAAP may require a reporting entity to consolidate another legal entity where the reporting entity's contractual rights do not give it the ability to act primarily on its own behalf, the reporting entity does not hold a majority of the legal entity's voting rights, or the reporting entity is not exposed to a majority of the legal entity's economic benefits or obligations. The amendments affect limited partnerships and similar legal entities, the evaluation of fees paid to a decision maker or a service provider as a variable interest, the effect of fee arrangements and related parties on the primary beneficiary determination, and certain investment funds. The ASU was effective for periods beginning after December 15, 2015 for public companies. Adoption of ASU 2015-02 did not have a material impact on the Company's consolidated financial statements.

FASB Accounting Standards Update No. 2015-07, Fair Value Measurements (Topic 820): Disclosures for Investments in Certain Entities That Calculate Net Asset Value per Share (or Its Equivalent) ("ASU 2015-07")

On May 1, 2015, the FASB issued ASU 2015-07 to gain consistency within the categorization of the fair value hierarchy. The update removes the requirement to categorize within the fair value hierarchy all investments for which fair value is measured using the net asset value per share practical expedient. It also removes the requirement to make certain disclosures for all investments that are eligible to be measured at fair value using the net asset value per share practical expedient. The ASU was effective for the Company for interim and annual periods beginning after December 15, 2015 and should be applied retrospectively to all periods presented. Adoption of ASU 2015-07 did not have a material impact on the Company's consolidated financial statements.

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FASB Accounting Standards Update No. 2016-01, Financial Instruments - Overall (Subtopic 825-10): Recognition and Measurement of Financial Assets and Financial Liabilities ("ASU 2016-01")

On January 5, 2016, the FASB issued ASU 2016-01 over the recognition and measurement of financial assets and liabilities. The update requires equity investments, in general, to be measured at fair value with changes in fair value recognized in earnings. It also eliminates the requirement to disclose the methods and significant assumptions used to estimate the fair value for financial instruments measured at amortized cost, requires entities to use the exit price notion when measuring fair value, requires an entity to present separately in other comprehensive income the portion of the total change in fair value of a liability resulting from a change in the instrument-specific credit risk when the fair value option has been elected, requires separate presentation of financial assets and liabilities by measurement category and form on the balance sheet or accompanying notes, clarifies that an entity should evaluate the need for a valuation allowance on a deferred tax asset related to available-for-sale securities in combination with the entity's other deferred tax assets, and simplifies the impairment assessment of equity investments without readily determinable fair values. The ASU is effective for the Company for interim and annual periods beginning after December 15, 2017. Upon adoption, unrealized gains and losses from equity securities will be reclassified from other comprehensive income to retained earnings. At June 30, 2016, the Company had $\$ 2.4$ million of unrealized gains included in accumulated other comprehensive income.

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 and disclosing key information about leasing arrangements. The final guidance requires lessees to put most leases on their balance sheets and may affect the presentation and timing of expense recognition, eliminates the current real estate-specific provisions, modifies the classification criteria and the accounting for sales-type and direct financing leases for lessors. The ASU is effective for the Company for fiscal years beginning after December 15, 2018, and interim periods within those fiscal years. Early application of the amendments is permitted. The Company is evaluating the impact the adoption of ASU 2016-02 will have on the Company's financial statements.

FASB Accounting Standards Update No. 2016-05, Derivatives and Hedging (Topic 815): Effect of Derivative Contract Novations on Existing Hedge Accounting Relationships ("ASU 2016-05")

On March 10, 2016, the FASB issued ASU 2016-05 which clarifies that "a change in the counterparty to a derivative instrument that has been designated as the hedging instrument in an existing hedging relationship would not, in and of itself, be considered a termination of the derivative instrument" or "a change in a critical term of the hedging relationship." If all other hedge accounting criteria in ASC 815 are met, a hedging relationship where the hedging derivative instrument is novated would not be discontinued or need to be redesignated. The ASU is effective for fiscal years beginning after December 15, 2016, including interim periods within those fiscal years. An entity would apply the guidance prospectively unless modified retrospective transition is elected. Early adoption is permitted. Adoption of ASU 2016-05 is not expected to have a material impact on the Company's financial statements.

FASB Accounting Standards Update No. 2016-07, Investments - Equity Method and Joint Ventures ("ASU 2016-07")
On March 15, 2016, the FASB issued ASU 2016-07 to simplify the equity method of accounting by eliminating the requirement to retrospectively apply the equity method to an investment that subsequently qualifies for such accounting as result of an increase in the level of ownership interest or degree of influence. The ASU also requires that unrealized holding gains or losses in accumulated other comprehensive income related to an available for sale security that becomes eligible for the equity method be recognized in earnings as of the date the investment qualifies for the equity method. The ASU is effective for all entities for fiscal years beginning after December 15, 2016,
including interim periods within those fiscal years. Early adoption is permitted. Adoption of ASU 2016-07 is not expected to have a material impact on the Company's financial statements.

FASB Accounting Standards Update No. 2016-09, Compensation - Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting ("ASU 2016-09")

On March 30, 2016, the FASB issued ASU 2016-09 to simplify multiple aspects of accounting for employee share-based payment transactions including accounting income taxes, forfeitures, and statutory tax withholding requirements. The ASU is effective for annual reporting periods beginning after December 15, 2016, including interim periods within those annual reporting periods. Implementation of ASU 2016-09 will add volatility to tax expense as stock prices change; however, we expect the impact to be insignificant.

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 in order to provide more timely recording of credit losses on loans and other financial instruments. The ASU adds an impairment model (known as the current expected credit loss ("CECL") model) that is based on expected credit losses rather than incurred credit losses. It requires an organization to measure all expected credit losses for financial assets carried at amortized cost at the reporting date based on historical experience, current conditions, and reasonable and supportable forecasts. ASU 2016-13 is effective for the Company for annual reporting periods beginning after December 15, 2019, including interim periods within those fiscal years. Early adoption is permitted for annual reporting periods beginning after December 15, 2018. ASU 2016-13 will be applied through a cumulative-effect adjustment to retained earnings as of the beginning of the first reporting period in which the guidance is effective. The Company is evaluating the impact the adoption of ASU 2016-13 will have on the Company's financial statements. 53 -
(2) Securities

Trading Securities
The fair value and net unrealized gain (loss) included in trading securities is as follows (in thousands):
U.S. government agency debentures
U.S. government agency residential mortgage-backed securities
Municipal and other tax-exempt securities
Other trading securities
Total trading securities


Investment Securities

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

|  | June 30, 2016 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | AmortizedCarrying |  | Fair | Gross |  |
|  | Cost | Value | Value | Gain | Loss |
| Municipal and other tax-exempt | \$334,551 | \$334,551 | \$340,700 | \$6,234 | \$(85) |
| U.S. government agency residential mortgage-backed securities Other | 23,750 | 23,750 | 25,233 | 1,483 | - |
| Other debt securities | 202,410 | 202,410 | 233,129 | 30,723 | (4) |
| Total investment securities | \$560,711 | \$560,711 | \$599,062 | \$38,440 | \$(89) |

1 Gross unrealized gains and losses are not recognized in Accumulated Other Comprehensive Income "AOCI" in the Consolidated Balance Sheets.

Municipal and other tax-exempt
U.S. government agency residential mortgage-backed securities -

Other
Other debt securities $\quad 205,745 \quad 205,745 \quad 232,375 \quad 26,689 \quad(59)$
Total investment securities
${ }^{1}$ Gross unrealized gains and losses are not recognized in AOCI in the Consolidated Balance Sheets.

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Municipal and other tax-exempt
U.S. government agency residential mortgage-backed securities Other
Other debt securities $\quad 204,973 \quad 204,973 \quad 217,542 \quad 14,017 \quad(1,448)$
Total investment securities
${ }^{1}$ Gross unrealized gains and losses are not recognized in AOCI in the Consolidated Balance Sheets.
The amortized cost and fair values of investment securities at June 30, 2016, by contractual maturity, are as shown in the following table (dollars in thousands):

Municipal and other tax-exempt:
Carrying value
Fair value
Nominal yield ${ }^{1}$
Other debt securities:
Carrying value
Fair value
Nominal yield
Total fixed maturity securities:
Carrying value
Fair value
Nominal yield
Residential mortgage-backed securities:
Carrying value $\$ 23,750{ }^{3}$
Fair value
Nominal yield ${ }^{4}$

$\begin{array}{llllll}\$ 87,079 & \$ 260,540 & \$ 135,127 & \$ 54,215 & \$ 536,961 & 4.48\end{array}$
$\begin{array}{lllll}87,383 & 266,568 & 159,667 & 60,211 & 573,829\end{array}$
1.84 \% 2.43 \% $5.70 \quad \% 5.38 \quad \% 3.44$ \%

Total investment securities:
Carrying value \$560,711
Fair value
599,062
Nominal yield
3.41 \%
${ }^{1}$ Calculated on a taxable equivalent basis using a 39 percent effective tax rate.
${ }_{2}$ Expected maturities may differ from contractual maturities, because borrowers may have the right to call or prepay obligations with or without penalty.
${ }_{3}$ The average expected lives of residential mortgage-backed securities were 3.9 years based upon current prepayment assumptions.
The nominal yield on residential mortgage-backed securities is based upon prepayment assumptions at the purchase
${ }^{4}$ date. Actual yields earned may differ significantly based upon actual prepayments. See Quarterly Financial
Summary - Unaudited for current yields on the investment securities portfolio.

Available for Sale Securities
The amortized cost and fair value of available for sale securities are as follows (in thousands):
June 30, 2016

| Amortized | Fair | Gross Unrealized $^{1}$ |  |  |
| :--- | :--- | :--- | :--- | :--- |
| Cost | Value | Gain | Loss | OTTI $^{2}$ |
| $\$ 1,000$ | $\$ 1,004$ | $\$ 4$ | $\$-$ | $\$-$ |
| 50,170 | 50,262 | 805 | $(713$ | $)-$ |

Municipal and other tax-exempt
50,170 $50,262 \quad 805 \quad(713)-$
Residential mortgage-backed securities:
U. S. government agencies:

FNMA

| $2,908,698$ | $2,988,974$ | 80,549 | $(273$ | $)-$ |
| :--- | :--- | :--- | :--- | :--- |
| $1,746,661$ | $1,785,332$ | 38,869 | $(198$ | $)-$ |
| 921,928 | 925,962 | 4,646 | $(612$ | $)-$ |
| - | - | - | - | - |
| $5,577,287$ | $5,700,268$ | 124,064 | $(1,083$ | $)-$ |

Private issue:
Alt-A loans $\quad 49,522 \quad 54,536 \quad 5,461 \quad-\quad$ (447 )
Jumbo-A loans $\quad \begin{array}{ccccc}\text { (35,787 } & 71,777 & 6,355 & (36 & \text { (329 ) }\end{array}$
Total private issue
Total residential mortgage-backed securities
$115,309 \quad 126,313 \quad 11,816 \quad(36 \quad)(776)$

Commercial mortgage-backed securities guaranteed by U.S.
government agencies
Other debt securities
Perpetual preferred stock
Equity securities and mutual funds

| $5,692,596$ | $5,826,581$ | 135,880 | $(1,119$ | $)(776)$ |
| :--- | :--- | :--- | :--- | :--- |
| $2,854,306$ | $2,911,946$ | 57,762 | $(122$ | $)-$ |
| 4,400 | 4,151 | - | $(249$ | $)-$ |
| 15,562 | 17,931 | 2,369 | - | - |
| 17,270 | 18,814 | 1,558 | $(14$ | $)-$ |
| $\$ 8,635,304$ | $\$ 8,830,689$ | $\$ 198,378$ | $\$(2,217)$ | $\$(776)$ |

Total available for sale securities
\$8,635,304 \$8,830,689 \$198,378 \$(2,217) \$(776)
${ }^{1}$ Gross unrealized gain/loss recognized in AOCI in the consolidated balance sheet.
${ }^{2}$ Amounts represent unrealized loss that remains in AOCI after an other-than-temporary credit loss has been recognized in income.

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U.S. Treasury

Municipal and other tax-exempt
Residential mortgage-backed securities:
U. S. government agencies:

FNMA
FHLMC
GNMA
Other
Total U.S. government agencies
Private issue:
Alt-A loans
Jumbo-A loans
Total private issue
Total residential mortgage-backed securities
Commercial mortgage-backed securities guaranteed by U.S.
government agencies
Other debt securities
Perpetual preferred stock
Equity securities and mutual funds
Total available for sale securities
${ }^{1}$ Gross unrealized gain/loss recognized in AOCI in the consolidated balance sheet.
${ }^{2}$ Amounts represent unrealized loss that remains in AOCI after an other-than-temporary credit loss has been recognized in income.

## U.S. Treasury

Municipal and other tax-exempt
Residential mortgage-backed securities:
U. S. government agencies:

FNMA
FHLMC
GNMA
Other
Total U.S. government agencies
Private issue:
Alt-A loans
Jumbo-A loans
Total private issue
Total residential mortgage-backed securities
Commercial mortgage-backed securities guaranteed by U.S. government agencies
Other debt securities
Perpetual preferred stock
Equity securities and mutual funds
June 30, 2015

| Amortized | Fair | Gross Unrealized $^{1}$ |  |  |
| :--- | :--- | :--- | :--- | :--- |
| Cost | Value | Gain | Loss | OTTI $^{2}$ |
| $\$ 1,000$ | $\$ 1,000$ | $\$-$ | $\$-$ | $\$-$ |
| 61,341 | 61,624 | 1,028 | $(745$ | $)-$ |

$\left.\begin{array}{lllll}3,558,224 & 3,609,273 & 57,269 & (6,220 & )- \\ 1,929,685 & 1,954,917 & 27,594 & (2,362 & )- \\ 768,342 & 770,739 & 4,928 & (2,531 & )- \\ 4,224 & 4,520 & 296 & - & - \\ 6,260,475 & 6,339,449 & 90,087 & (11,113 & )- \\ & & & & \\ 61,486 & 67,711 & 6,692 & - & (467 \\ 80,968 & 86,439 & 5,843 & - & (372) \\ 142,454 & 154,150 & 12,535 & - & (839) \\ 6,402,929 & 6,493,599 & 102,622 & (11,113 & )(839\end{array}\right)$

Total available for sale securities
\$8,910,959 \$9,000,117 \$114,955 \$(24,958) \$(839)
${ }^{1}$ Gross unrealized gain/loss recognized in AOCI in the consolidated balance sheet.
${ }_{2}$ Amounts represent unrealized loss that remains in AOCI after an other-than-temporary credit loss has been recognized in income.

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The amortized cost and fair values of available for sale securities at June 30, 2016, by contractual maturity, are as shown in the following table (dollars in thousands):

${ }^{1}$ Calculated on a taxable equivalent basis using a 39 percent effective tax rate.
${ }_{2}$ The average expected lives of mortgage-backed securities were 3.3 years years based upon current prepayment assumptions.
${ }^{3}$ Primarily common stock and preferred stock of corporate issuers with no stated maturity.
The nominal yield on mortgage-backed securities is based upon prepayment assumptions at the purchase date. Actual yields earned may differ significantly based upon actual prepayments. See Quarterly Financial Summary - Unaudited following for current yields on available for sale securities portfolio.
${ }_{5}$ Expected maturities may differ from contractual maturities because borrowers may have the right to call or prepay obligations with or without penalty.
${ }_{6}$ Nominal yield on municipal and other tax-exempt securities and other debt securities with contractual maturity dates over ten years are based on variable rates which generally are reset within 35 days.

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

|  | Three Months Ended <br> June 30, | Six Months Ended |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
|  | 2016 | 2015 | 2016 | 2015 |
| June 30, |  |  |  |  |

A summary of investment and available for sale securities that have been pledged as collateral for repurchase agreements, public trust funds on deposit and for other purposes, as required by law was as follows (in thousands):

```
June 30, Dec. 31, June 30,
2016 2015 2015
```

Investment:
Carrying value $\$ 287,166$ \$231,033 \$58,875
$\begin{array}{llll}\text { Fair value } & 293,625 & 234,382 & 60,645\end{array}$
Available for sale:
Amortized cost $7,502,3616,831,7436,035,423$
Fair value $\quad 7,657,9166,849,5246,089,438$
The secured parties do not have the right to sell or re-pledge these securities.

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Temporarily Impaired Securities as of June 30, 2016 (in thousands):

Investment:
Municipal and other tax-exempt

U.S. government agency residential mortgage-backed

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$\begin{array}{lllllll}\$ 11,915 & \$ 20 & \$ 4,378 & \$ 55\end{array}$ \$16,293 \$ 85
securities - Other

$\begin{array}{llllllllllll}\text { Total investment securities } & 20 & \$ 11,915 & \$ & 20 & \$ 5,236 & \$ & 69 & \$ 17,151 & \$ & 89\end{array}$

Available for sale:
$\begin{array}{lllllllll}\text { Municipal and other tax-exempt } & 17 & \$ 375 & \$- & \$ 10,289 & \$ 713 & \$ 10,664 & \$ 713\end{array}$
Residential mortgage-backed securities:
U. S. government agencies:

| FNMA | 4 | 97,910 | 267 | 15,401 | 6 | 113,311 | 273 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| FHLMC | 1 | - | - | 22,338 | 198 | 22,338 | 198 |
| GNMA | 11 | 349,631 | 612 | - | - | 349,631 | 612 |
| Total U.S. government agencies | 16 | 447,541 | 879 | 37,739 | 204 | 485,280 | 1,083 |
| Private issue ${ }^{1}:$ |  |  |  |  |  |  |  |
| Alt-A loans | 5 | 8,513 | 241 | 8,291 | 206 | 16,804 | 447 |
| Jumbo-A loans | 9 | 7,076 | 36 | 7,877 | 329 | 14,953 | 365 |
| Total private issue | 14 | 15,589 | 277 | 16,168 | 535 | 31,757 | 812 |
| Total residential mortgage-backed securities | 30 | 463,130 | 1,156 | 53,907 | 739 | 517,037 | 1,895 |
| Commercial mortgage-backed securities | 11 | 103,955 | 37 | 65,857 | 85 | 169,812 | 122 |
| guaranteed by U.S. government agencies | 2 | - | - | 4,151 | 249 | 4,151 | 249 |
| Other debt securities | - | - | - | - | - | - | - |
| Perpetual preferred stocks | - | - | 889 | 14 | 889 | 14 |  |
| Equity securities and mutual funds | 30 | - | $\$ 567,460 \$ 1,193$ | $\$ 135,093$ | $\$ 1,800$ | $\$ 702,553$ | $\$ 2,993$ |
| Total available for sale securities | 90 |  |  |  |  |  |  |

${ }_{1}$ Includes securities for which an unrealized loss remains in AOCI after an other-than-temporary credit loss has been recognized in income.

[^3]Temporarily Impaired Securities as of December 31, 2015
(In thousands)

|  | Number of Securiti | Less Than 12 Months |  | 12 Months or Longer |  | Total | Unrealized |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Fair | Unreal | dFair | Unre | eHair |  |
|  |  | Value | Loss | Value | Loss | Value | Loss |
| Investment: |  |  |  |  |  |  |  |
| Municipal and other tax-exempt | 73 | \$127,319 | \$ 207 | \$13,380 | \$ 77 | \$140,699 | \$ 284 |
| U.S. government agency residential mortgage-backed securities - Other | 1 | 5,533 | 22 | - | - | 5,533 | 22 |
| Other debt securities | 11 | 1,082 | 41 | 1,715 | 18 | 2,797 | 59 |
| Total investment securities | 85 | \$133,934 | \$ 270 | \$15,095 | \$ 95 | \$149,029 | \$ 365 |


|  | Number Less Than 12 Months |  |  | 12 Months or Longer |  | Total |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Fair | Unrealized | Fair | Unrealize | Fair | Unrealized |
|  | ecuriti | Value | Loss | Value | Loss | Value | Loss |
| Available for sale: |  |  |  |  |  |  |  |
| U.S. Treasury | 1 | \$995 | \$ 5 | \$- | \$- | \$995 | \$ 5 |
| Municipal and other tax-exempt | 20 | \$9,909 | \$ 27 | \$11,664 | \$ 710 | \$21,573 | \$ 737 |
| Residential mortgage-backed securities: |  |  |  |  |  |  |  |
| U. S. government agencies: |  |  |  |  |  |  |  |
| FNMA | 55 | 1,188,022 | 10,262 | 18,236 | 239 | 1,206,258 | 10,501 |
| FHLMC | 40 | 726,713 | 4,827 | 77,545 | 1,480 | 804,258 | 6,307 |
| GNMA | 15 | 364,919 | 1,951 | 102,109 | 2,600 | 467,028 | 4,551 |
| Total U.S. government agencies | 110 | 2,279,654 | 17,040 | 197,890 | 4,319 | 2,477,544 | 21,359 |
| Private issue ${ }^{1}$ : |  |  |  |  |  |  |  |
| Alt-A loans | 4 | - | - | 9,264 | 387 | 9,264 | 387 |
| Jumbo-A loans | 8 | - | - | 8,482 | 440 | 8,482 | 440 |
| Total private issue | 12 | - | - | 17,746 | 827 | 17,746 | 827 |
| Total residential mortgage-backed securities | 122 | 2,279,654 | 17,040 | 215,636 | 5,146 | 2,495,290 | 22,186 |
| Commercial mortgage-backed securities guaranteed by U.S. government agencies | 213 | 1,582,469 | 11,419 | 484,258 | 7,225 | 2,066,727 | 18,644 |
| Other debt securities | 2 | - | - | 4,151 | 249 | 4,151 | 249 |
| Perpetual preferred stocks | - | - | - | - | - | - | - |
| Equity securities and mutual funds | 61 | 782 | 5 | 991 | 35 | 1,773 | 40 |
| Total available for sale securities | 419 | \$3,873,809 | \$ 28,496 | \$716,700 | \$ 13,365 | \$4,590,509 | \$ 41,861 |
| Includes securities for which an unrealized loss remains in AOCI after an other-than-temporary credit loss has been recognized in income. |  |  |  |  |  |  |  |

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Temporarily Impaired Securities as of June 30, 2015
(In thousands)

|  | Number of Securitie | Less Than 12 <br> Months |  | 12 Months or Longer |  | Total | Unrealized |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Fair | Unreali | dFair | Unreal | Fair |  |
|  |  | Value | Loss | Value | Loss | Value | Loss |
| Investment: |  |  |  |  |  |  |  |
| Municipal and other tax-exempt | 79 | \$ 102,223 | \$ 351 | \$50,991 | \$ 264 | \$153,214 | \$ 615 |
| U.S. government agency residential mortgage-backed securities - Other | 1 , | 6,491 | 10 | - | - | 6,491 | 10 |
| Other debt securities | 110 | 31,875 | 1,407 | 2,458 | 41 | 34,333 | 1,448 |
| Total investment securities | 190 | \$ 140,589 | \$ 1,768 | \$53,449 | \$ 305 | \$ 194,038 | \$ 2,073 |

Available for sale:
$\begin{array}{llllllll}\text { Municipal and other tax-exempt }{ }^{1} & 20 & \$ 9,855 & \$ 41 & \$ 11,688 & \$ 704 & \$ 21,543 & \$ 745\end{array}$
Residential mortgage-backed securities:
U. S. government agencies:

| FNMA | 29 | 601,863 | 4,327 | 118,269 | 1,893 | 720,132 | 6,220 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| FHLMC | 13 | 121,217 | 795 | 117,408 | 1,567 | 238,625 | 2,362 |
| GNMA | 6 | 66,131 | 50 | 115,103 | 2,481 | 181,234 | 2,531 |
| Total U.S. government agencies | 48 | 789,211 | 5,172 | 350,780 | 5,941 | 1,139,991 | 11,113 |
| Private issue ${ }^{1}$ : |  |  |  |  |  |  |  |
| Alt-A loans | 4 | 10,244 | 467 | - | - | 10,244 | 467 |
| Jumbo-A loans | 11 | 7,542 | 18 | 9,310 | 354 | 16,852 | 372 |
| Total private issue | 15 | 17,786 | 485 | 9,310 | 354 | 27,096 | 839 |
| Total residential mortgage-backed securities | 63 | 806,997 | 5,657 | 360,090 | 6,295 | 1,167,087 | 11,952 |
| Commercial mortgage-backed securities guaranteed by U.S. government agencies | 128 | 712,973 | 3,848 | 791,108 | 8,256 | 1,504,081 | 12,104 |
| Other debt securities | 2 | - | - | 4,149 | 250 | 4,149 | 250 |
| Perpetual preferred stocks | - | - | - | - | - | - | - |
| Equity securities and mutual funds | 51 | 4,706 | 714 | 994 | 32 | 5,700 | 746 |

Total available for sale securities $\quad 264 \quad \$ 1,534,531 \$ 10,260 \quad \$ 1,168,029 \$ 15,537 \quad \$ 2,702,560 \$ 25,797$
${ }_{1}$ Includes securities for which an unrealized loss remains in AOCI after an other-than-temporary credit loss has been recognized in income.

On a quarterly basis, the Company performs separate evaluations of impaired debt and equity investments and available for sale securities to determine if the unrealized losses are temporary.

For debt securities, 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, regulatory and capital requirements and securities portfolio management. Based on this evaluation as of June 30, 2016, 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.

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Impairment of debt securities rated investment grade by all nationally-recognized rating agencies is considered temporary unless specific contrary information is identified. None of the debt securities rated investment grade were considered to be other-than-temporarily impaired at June 30, 2016.

At June 30, 2016, the composition of the Company's investment and available for sale securities portfolios by the lowest current credit rating assigned by any of the three nationally-recognized rating agencies is as follows (in thousands):


Equity securities and mutual funds Total available for sale securities \$32,245 \$33,047 \$14,417 \$14,568 \$126,075 \$138,701 \$8,462,567 \$8,644,373 \$8,635,304 \$8,830,689
${ }_{1}$ U.S. government and government sponsored enterprises are not rated by the nationally-recognized rating agencies as these securities are guaranteed by agencies of the U.S. government or government-sponsored enterprises.

At June 30, 2016, the entire portfolio of privately issued residential mortgage-backed securities was rated below investment grade by the nationally-recognized rating agencies. The gross unrealized loss on these securities totaled $\$ 812$ thousand. Impairment of securities rated below investment grade was evaluated based on projections of estimated cash flows from individual loans underlying each security using current and anticipated unemployment and default rates, changes in housing prices and estimated liquidation costs at foreclosure. Each factor is considered in the evaluation.

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The primary assumptions used in this evaluation were:
June 30, 2016

Moving down to 4.7 percent

Unemployment rate

Housing price appreciation/depreciation over the next 12 months and remain at 4.7 percent thereafter.
Starting with current depreciated housing prices based on information derived from the FHFA ${ }^{1}$, appreciating 3.5 percent over the next 12 months, then flat for the following 12 months and then appreciating at 2 percent per year thereafter. Reflect actual historical liquidations costs observed on Jumbo and Alt-A residential mortgage loans in securities owned by the Company. Estimated cash flows were discounted at rates that range
Discount rates
from 2.00 percent to 6.25 percent based on our current expected yields.

Dec. 31, 2015
Decreasing to 4.8 percent over the next 12 months and remain at 4.8 percent thereafter.
Starting with current depreciated housing prices based on information derived from the FHFA ${ }^{1}$, appreciating 3.5 percent over the next 12 months, then flat for the following 12 months and then appreciating at 2 percent per year thereafter. Reflect actual historical liquidations costs observed on Jumbo and Alt-A residential mortgage loans in securities owned by the Company.
Estimated cash flows were discounted at rates that range from 2.00 percent to 6.25 percent based on our current expected yields.

June 30, 2015
Held constant at 5.6 percent over the next 12 months and remain at 5.6 percent thereafter.
Starting with current depreciated housing prices based on information derived from the FHFA ${ }^{1}$, appreciating 3.2 percent over the next 12 months, then flat for the following 12 months and then appreciating at 2 percent per year thereafter. Reflect actual historical liquidations costs observed on Jumbo and Alt-A residential mortgage loans in securities owned by the Company. Estimated cash flows were discounted at rates that range from 2.00 percent to 6.25 percent based on our current expected yields.
${ }^{1}$ Federal Housing Finance Agency
Credit loss impairment is recorded as a charge to earnings. Additional impairment based on the difference between the total unrealized loss and the estimated credit loss on these securities is charged against other comprehensive income, net of deferred taxes. No credit loss impairments were recognized in earnings on privately issued residential mortgage-backed securities during the three months ended June 30, 2016.

A distribution of the amortized cost (after recognition of the other-than-temporary impairment), fair value and credit loss impairments recognized on our privately issued residential mortgage-backed securities is as follows (in thousands, except for number of securities):

Credit Losses
Recognized
Three
months
ended
June 30,
2016


| Jumbo-A | 30 | 65,787 | 71,777 | - | 29 | 18,220 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Total | 44 | $\$ 115,309$ | $\$ 126,313$ | $\$$ | -43 | $\$ 54,504$ |

Impaired equity securities, including perpetual preferred stocks, are evaluated based on management's ability and intent to hold the securities until fair value recovers over periods not to exceed three years. The assessment of the ability and intent to hold these securities focuses on the liquidity needs, asset/liability management objectives and securities portfolio objectives. Factors considered when assessing recovery include forecasts of general economic conditions and specific performance of the issuer, analyst ratings and credit spreads for preferred stocks which have debt-like characteristics. The Company has evaluated the near-term prospects of the investments in relation to the severity and duration of the impairment and based on that evaluation has the ability and intent to hold these investments until a recovery in fair value. Accordingly, all impairment of equity securities was considered temporary at June 30, 2016.

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The following is a tabular roll forward of the amount of credit-related OTTI recognized on available for sale debt securities in earnings (in thousands):

| Three Months | Six Months |
| :--- | :--- |
| Ended | Ended |
| June 30, | June 30, |
| $2016 \quad 2015$ | $2016 \quad 2015$ |

Balance of credit-related OTTI recognized on available for sale debt securities, beginning of period
Additions for credit-related OTTI not previously recognized
Additions for increases in credit-related OTTI previously recognized when there is no intent to sell and no requirement to sell before recovery of amortized cost Reductions for change in intent to hold before recovery Sales
Balance of credit-related OTTI recognized on available for sale debt securities, end of period
\$54,504 \$54,439 \$54,504 \$54,347

| - | - | - | - |
| :--- | :--- | :--- | :--- |
| - | - | - | 92 |
| - | - | - | - |
| - | - | - | - |

\$54,504 \$54,439 \$54,504 \$54,439

Additions above exclude other-than-temporary impairment recorded due to change in intent to hold before recovery. 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. Changes in the fair value are recognized in earnings as they occur. Certain U.S. Treasury securities, 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):

| June 30, 2016 |  | Dec. 31, 2015 |  | June 30, 2015 |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Net |  | Net |  | Net |
| Fair | Unrealized | Fair | Unrealized | Fair | Unrealized |
| Value | $\begin{aligned} & \text { Gain } \\ & \text { (Loss) } \end{aligned}$ | Value | $\begin{aligned} & \text { Gain } \\ & \text { (Loss) } \end{aligned}$ | Value | $\begin{aligned} & \text { Gain } \\ & \text { (Loss) } \end{aligned}$ |
| \$237,959 | \$ 4,476 | \$444,217 | \$ (2,060 ) | \$436,324 | \$ (3,859 ) |
| 25,306 | (43 | - | - | - | - |
| \$263,265 | \$ 4,433 | \$444,217 | \$ (2,060 ) | \$436,324 | \$ (3,859 |

## Restricted Equity Securities

Restricted equity securities primarily include stock we are required to hold as members of the Federal Reserve system and the 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 are restricted and lacks a market. A summary of restricted equity securities follows (in thousands):

|  | June 30, | Dec. 31, | June 30, |
| :--- | :--- | :--- | :--- |
|  | 2016 | 2015 | 2015 |
| Federal Reserve stock | $\$ 36,283$ | $\$ 36,148$ | $\$ 35,148$ |
| Federal Home Loan Bank stock | 283,155 | 237,365 | 196,201 |
| Other | 201 | 171 | 171 |
| Total | $\$ 319,639$ | $\$ 273,684$ | $\$ 231,520$ |

## (3) Derivatives

Derivative instruments may be used by the Company as part of its interest rate risk management programs or may be offered to customers. All derivative instruments are carried at fair value and changes in fair value are reported in earnings as they occur. Credit risk is also considered in determining fair value.

When bilateral netting agreements or similar arrangements 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 type by counterparty basis.

Derivative contracts may 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. As of June 30, 2016, a decrease in BOK Financial's credit rating to below investment grade would increase our obligation to post cash margin on existing contracts by approximately $\$ 18$ million.

None of these derivative contracts have been designated as hedging instruments.

## Customer Risk Management Programs

BOK Financial offers programs to permit its customers to manage various risks, including fluctuations in energy, cattle and other agricultural products, and foreign exchange rates, or to take positions in derivative contracts. Customers may also manage interest rate risk through interest rate swaps used by borrowers to modify interest rate terms of their loans or to-be-announced securities used by 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 the risk of 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.

## Interest Rate Risk Management Programs

BOK Financial may use derivative contracts in managing its interest rate sensitivity and as part of its economic hedge of the change in the fair value of mortgage servicing rights. As of June 30, 2016, derivative contracts under the interest rate risk management program were primarily used as part of the economic hedge of the change in the fair value of the mortgage servicing rights.

As discussed in Note 6, 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 6 for additional discussion of notional, fair value and impact on earnings of these contracts.

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The following table summarizes the fair values of derivative contracts recorded as "derivative contracts" assets and liabilities in the balance sheet at June 30, 2016 (in thousands):

Assets

|  | Notional ${ }^{1}$ | Gross <br> Fair <br> Value | Netting Adjustments | Net Fair <br> Value <br> Before <br> Cash <br> Collateral | Cash <br> Collateral | Fair <br> Value Net <br> of Cash <br> Collateral |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Customer risk management programs: Interest rate contracts |  |  |  |  |  |  |
| To-be-announced residential mortgage-backed securities | \$18,774,134 | \$183,118 | \$ (67,383 | \$ 115,735 | \$- | \$ 115,735 |
| Interest rate swaps | 1,299,985 | 54,978 | - | 54,978 | (1,100 | ) 53,878 |
| Energy contracts | 757,669 | 59,103 | (33,996 ) | ) 25,107 | (155 | ) 24,952 |
| Agricultural contracts | 50,848 | 2,488 | (1,609 ) | ) 879 | (37 | ) 842 |
| Foreign exchange contracts | 701,436 | 675,804 | - | 675,804 | (5,054 | ) 670,750 |
| Equity option contracts | 116,901 | 4,236 | - | 4,236 | (478 | ) 3,758 |
| Total customer risk management programs | 21,700,973 | 979,727 | (102,988 | 876,739 | (6,824 | ) 869,915 |
| Interest rate risk management programs | 1,337,000 | 13,758 | - | 13,758 | - | 13,758 |
| Total derivative contracts | \$23,037,973 | \$993,485 | \$(102,988 ) | ) \$890,497 | \$ 6,824 | ) $\$ 883,673$ |
|  | Liabilities |  |  |  |  |  |
|  | Notional ${ }^{1}$ | Gross <br> Fair <br> Value | Netting <br> Adjustments | Net Fair <br> Value <br> Before <br> Cash <br> Collateral | Cash <br> Collateral | Fair <br> Value Net <br> of Cash <br> Collateral |
| Customer risk management programs: Interest rate contracts |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
| To-be-announced residential mortgage-backed securities | \$ 18,662,334 | \$179,443 | \$ (67,383 ) | ) \$ 112,060 | \$(103,724) | ) \$8,336 |
| Interest rate swaps | 1,299,985 | 55,404 | - | 55,404 | (32,597 | ) 22,807 |
| Energy contracts | 734,538 | 58,033 | (33,996 ) | ) 24,037 | (11,784 | ) 12,253 |
| Agricultural contracts | 50,843 | 2,476 | (1,609 ) | ) 867 |  | 867 |
| Foreign exchange contracts | 701,219 | 675,383 | - | 675,383 | (4,723 | ) 670,660 |
| Equity option contracts | 116,901 | 4,236 | - | 4,236 | - | 4,236 |
| Total customer risk management programs | 21,565,820 | 974,975 | (102,988 ) | ) 871,987 | (152,828 | ) 719,159 |
| Interest rate risk management programs | - | - | - | - | - | - |
| Total derivative contracts <br> ${ }_{1}$ Notional amounts for commodity contrac the inception of the contract. | $\$ 21,565,820$ <br> are converted | $\begin{gathered} \$ 974,975 \\ \text { d into dolla } \end{gathered}$ | $\begin{gathered} \$(102,988) \\ \text { r-equivalent a } \end{gathered}$ | \$ 871,987 <br> amounts bas | $\$(152,828)$ <br> ed on dollar | $\$ 719,159$ <br> r 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, 2015 (in thousands):

Assets

| Notional ${ }^{1}$ |  | Netting <br> Adjustments | Net Fair |  | Fair <br> Value Net |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Value Before | Cash |  |
|  |  |  | Cash | Collateral | of Cash |
|  |  |  | Collateral |  | Coll |

Customer risk management programs:
Interest rate contracts
To-be-announced residential mortgage-backed securities
Interest rate swaps
Energy contracts
Agricultural contracts
Foreign exchange contracts
Equity option contracts
Total customer risk management programs
Interest rate risk management programs
Total derivative contracts

| $\$ 14,583,052$ | $\$ 43,270$ | $\$(28,305$ | $)$ | $\$ 14,965$ | $\$-$ | $\$ 14,965$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $1,332,044$ | 31,744 | - | 31,744 | $(1,424$ | $)$ | 30,320 |
| 470,613 | 83,045 | $(22,970$ | $)$ | 60,075 | $(18,606$ | $)$ |
| 61,469 |  |  |  |  |  |  |
| 61,662 | 2,591 | $(1,158$ | $)$ | 1,433 | - | 1,433 |
| 546,572 | 498,830 | - | 498,830 | $(4,140$ | $)$ | 494,690 |
| 137,278 | 3,780 | - | 3,780 | $(470$ | $)$ | 3,310 |
| $17,131,221$ | 663,260 | $(52,433$ | $)$ | 610,827 | $(24,640$ | $)$ |
| 586,187 |  |  |  |  |  |  |
| 22,000 | 83 | - | 83 | - | 83 |  |
| $\$ 17,153,221$ | $\$ 663,343$ | $\$(52,433$ | $)$ | $\$ 610,910$ | $\$(24,640)$ | $\$ 586,270$ |

Liabilities

|  |  |  | Net Fair | Fair |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
|  | Gross | Netting | Value | Cash | Value Net |
|  | Before | Collateral of Cash |  |  |  |
|  | Falue | Adjustments | Cash | Collateral | Collateral |

Customer risk management programs:
Interest rate contracts
To-be-announced residential
mortgage-backed securities
Interest rate swaps
Energy contracts
Agricultural contracts
Foreign exchange contracts
Equity option contracts
Total customer risk management programs
Interest rate risk management programs
Total derivative contracts

| $\$ 14,168,927$ | $\$ 40,141$ | $\$(28,305$ | $)$ | $\$ 11,836$ | $\$(1,308$ | $)$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $1,332,044$ | 31,928 | - | 31,928 | $(20,530$ | $)$ | 11,398 |
| 463,703 | 81,869 | $(22,970$ | $)$ | 58,899 | - | 58,899 |
| 61,657 | 2,579 | $(1,158$ | $)$ | 1,421 | $(1,248$ | $)$ |
| 546,405 | 498,574 | - | 498,574 | $(1,951$ | $)$ | 496,623 |
| 137,278 | 3,780 | - | 3,780 | - | 3,780 |  |
| $16,710,014$ | 658,871 | $(52,433$ | $)$ | 606,438 | $(25,037$ | $)$ |
| 751,401 |  |  |  |  |  |  |
| 75,000 | 300 | - | 300 | - | 300 |  |
| $\$ 16,785,014$ | $\$ 659,171$ | $\$(52,433$ | $)$ | $\$ 606,738$ | $\$(25,037)$ | $\$ 581,701$ |

${ }_{1}$ Notional amounts for commodity contracts are converted into dollar-equivalent amounts based on dollar prices at the inception of the contract.

[^4]The following table summarizes the fair values of derivative contracts recorded as "derivative contracts" assets and liabilities in the balance sheet at June 30, 2015 (in thousands):

Assets

| Notional ${ }^{1}$ |  | Netting <br> Adjustments | Net Fair <br> Value |  | Fair |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |
|  |  |  | Before | Collateral | of Cash |
|  |  |  | Collateral |  | Collater |

Customer risk management programs:
Interest rate contracts
To-be-announced residential
mortgage-backed securities
Interest rate swaps
Energy contracts
Agricultural contracts
Foreign exchange contracts
Equity option contracts
Total customer risk management programs Interest rate risk management programs
Total derivative contracts

| $\$ 17,412,925$ | $\$ 116,138$ | $\$(42,003$ | $)$ | $\$ 74,135$ | $\$-$ | $\$ 74,135$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $1,282,503$ | 33,311 | - | 33,311 | $(70$ | $)$ | 33,241 |
| 711,123 | 82,871 | $(42,115$ | $)$ | 40,756 | $(20,122$ | $)$ |
| 20,634 |  |  |  |  |  |  |
| 66,430 | 1,367 | $(724$ | $)$ | 643 | - | 643 |
| 574,049 | 495,952 | - | 495,952 | $(1,100$ | $)$ | 494,852 |
| 168,122 | 6,993 | - | 6,993 | $(63$ | $)$ | 6,930 |
| $20,215,152$ | 736,632 | $(84,842$ | $)$ | 651,790 | $(21,355$ | $)$ |
| - | - | - | - | - | - |  |
| $\$ 20,215,152$ | $\$ 736,632$ | $\$(84,842$ | $)$ | $\$ 651,790$ | $\$(21,355)$ | $\$ 630,435$ |

## Liabilities

|  |  |  | Net Fair | Fair |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Notional $^{1}$ | Gross | Fair | Netting | Value | Cash | | Value Net |
| :--- |
|  |
|  |
|  |
| Value |$\quad$ Adjustments | Before | Collateral of Cash |  |  |
| :--- | :--- | :--- | :--- |
|  |  |  | Collateral |

Customer risk management programs:
Interest rate contracts
To-be-announced residential
mortgage-backed securities
Interest rate swaps
$\left.\begin{array}{llllll}\$ 17,863,884 & \$ 112,166 & \$(42,003 & ) & \$ 70,163 & \$- \\ 1,282,503 & 33,471 & - & 33,471 & (17,889 & ) \\ 676,214 & 78,044 & (42,115 & ) & 15,582 \\ 66,433 & 1,355 & (724 & ) & 631 & (475 \\ 573,403 & 495,320 & - & 495,320 & (4,826 & ) \\ \hline 156 \\ 168,122 & 6,993 & - & 6,993 & - & 6,494 \\ 20,630,559 & 727,349 & (84,842 & ) & 642,507 & (23,190\end{array}\right) 619,317$

Energy contracts
Agricultural contracts
Foreign exchange contracts
Equity option contracts
Total customer risk management programs
Interest rate risk management programs
\$20,682,559 \$728,309 \$ (84,842 ) \$643,467 \$(23,190) \$620,277
Total derivative 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 income statement (in thousands):

Customer risk management programs:
Interest rate contracts
To-be-announced residential mortgage-backed securities $\$ 9,862 \quad \$-\quad \$ 9,778 \quad \$-$
Interest rate swaps
$\left.\begin{array}{llll}\$ 9,862 & \$- & & \$ 9,778 \\ 723 & - & 611 & - \\ 2,749 & - & 1,026 & - \\ 32 & - & 30 & - \\ 134 & - & 221 & - \\ -13,500 & - & - & 11,666\end{array}\right)-$

Total customer risk management programs
Interest rate risk management programs
Total derivative contracts
(9 ) 10,766 - (1,032 ) \$13,491 \$ 10,766 \$11,666 \$ (1,032 )
Six Months Ended
June 30, $2016 \quad$ June 30, 2015
BrokerageGain (Loss) BrokeragGain (Loss)
and on and on
Trading Derivatives, Trading Derivatives,
Revenue Net Revenue Net
Customer risk management programs:
Interest rate contracts
To-be-announced residential mortgage-backed securities $\$ 17,302 \quad \$-\quad \$ 18,028 \$-$
Interest rate swaps
1,048 - 1,084 -

Energy contracts
Agricultural contracts
Foreign exchange contracts
Equity option contracts
Total customer risk management programs
3,445 - $\quad 2,367 \quad-$

Interest rate risk management programs
Total derivative contracts
61 - 42 -

Net interest revenue was not significantly impacted by the settlement of amounts receivable or payable on interest rate swaps for the six months ended June 30, 2016 and 2015, respectively.

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(4) Loans and Allowances for Credit Losses

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 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 principal amount outstanding. 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 more than 90 days 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 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.

Loans to borrowers experiencing financial difficulties may be modified in troubled debt restructurings ("TDRs"). All TDRs are 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 current collateral value, debt service ratio and other underwriting standards. Nonaccruing loans may be renewed and will remain classified as nonaccruing.

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 a quarterly evaluation of available cash resources and collateral value and charge-offs are taken in the quarter in which the loss is identified. Non-risk graded loans that are past due between 60 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.

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 may have 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 impaired because we do not expect to receive all principal and interest based on the loan's contractual terms. 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 the 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 based on 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 a further disaggregation of portfolio segments based on the risk characteristics of the loans and the Company's method for monitoring and assessing credit risk.

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


June 30, 2015

| Fixed | Variable | Non-accrual Total |
| :--- | :--- | :--- |
| Rate | Rate |  |

Commercial $\quad \$ 1,730,675 \$ 8,020,813 \quad \$ 24,233 \quad \$ 9,775,721$
$\begin{array}{lllll}\text { Commercial real estate } & 715,062 & 2,298,296 & 20,139 & 3,033,497\end{array}$
Residential mortgage $\quad 1,639,773 \quad 198,986 \quad 45,969 \quad 1,884,728$
Personal
Total
100,028 329,612 $550 \quad 430,190$
\$4,185,538 \$ 10,847,707 \$ 90,891 \$ 15,124,136
Accruing loans past due (90 days) ${ }^{1} \quad \$ 99$
${ }^{1}$ Excludes residential mortgage loans guaranteed by agencies of the U.S. government
At June 30, 2016, $\$ 5.3$ billion or 32 percent of our total loan portfolio is to businesses and individuals attributed to the Texas market and $\$ 3.8$ billion or 23 percent of the total loan portfolio is to businesses and individuals attributed to the Oklahoma market. These geographic concentrations subject the loan portfolio to the general economic conditions within these areas.

## 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 June 30, 2016, commercial loans attributed to the Texas market totaled $\$ 3.4$ billion or 33 percent of the commercial loan portfolio segment and commercial loans attributed to the Oklahoma market totaled $\$ 2.4$ billion or 23 percent of the commercial loan portfolio segment.

The commercial loan portfolio segment is further divided into loan classes. The energy loan class totaled $\$ 2.8$ billion or 17 percent of total loans at June 30,2016 , including $\$ 2.2$ billion of outstanding loans to energy producers.
Approximately 60 percent of committed production loans are secured by properties primarily producing oil and 40
percent are secured by properties producing natural gas. The services loan class totaled $\$ 2.8$ billion or 17 percent of total loans at June 30, 2016. Approximately $\$ 1.3$ billion of loans in the services category consist of loans with individual balances of less than $\$ 10$ million. Businesses included in the services class include governmental, finance and insurance, not-for-profit, educational services and loans to entities providing services for real estate and construction. The healthcare loan class totaled $\$ 2.1$ billion or 13 percent of total loans at June 30, 2016. 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 skill nursing. Healthcare also includes loans to hospitals and other medical service providers.

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## 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 June 30, 2016, 30 percent of commercial real estate loans are secured by properties primarily located in the Dallas and Houston areas of Texas. An additional 13 percent of commercial real estate loans are secured by properties located primarily in the Tulsa and Oklahoma City metropolitan areas of 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 unsecured loans. Residential mortgage and personal loans are made in accordance with underwriting policies we believe to be conservative and are fully documented. Loans may be individually underwritten or credit scored based on size and other criteria. 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 percent. Loan-to-value ("LTV") ratios are tiered from 60 percent to 100 percent, 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 three to ten years, then adjust annually thereafter.

At June 30, 2016, residential mortgage loans included $\$ 193$ million 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 $\$ 719$ million at June 30, 2016. Approximately, 67 percent of the home equity loan portfolio is comprised of first lien loans and 33 percent of the home equity portfolio is comprised of junior lien loans. Junior lien loans are distributed 61 percent to amortizing term loans and 39 percent to revolving lines of credit. Home equity loans generally require a minimum FICO score of 700 and a maximum DTI of 40 percent. 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 a 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.

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 June 30, 2016, outstanding commitments totaled $\$ 8.5$ 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.

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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 June 30, 2016, outstanding standby letters of credit totaled $\$ 491$ million. Commercial letters of credit are used to facilitate customer trade transactions with the drafts being drawn when the underlying transaction is consummated. At June 30, 2016, outstanding commercial letters of credit totaled $\$ 6.7$ 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 6, the Company also has separate accruals for 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 appropriateness of the allowance for loan losses and accrual for off-balance sheet credit losses (collectively "allowance for credit losses") is assessed by management based on an on-going quarterly evaluation of the probable estimated losses inherent in the portfolio, including probable losses on both outstanding loans and unused commitments.

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, risk concentration and related factors. There have been no material changes in the approach or techniques utilized in developing the allowance for loan losses and the accrual for off-balance sheet credit losses for the three and six months ended June 30, 2016.

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 consumer loans are risk graded based on evaluation of the borrowers' ability to repay. Certain commercial loans and most residential mortgage and consumer 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 or modified in a TDR 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 loans' 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 are generally not adjusted by the Company. Updated appraisals are obtained at least annually or more frequently if market conditions indicate collateral values have declined. Collateral value of mineral rights is generally determined by our internal staff of engineers based on projected 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 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 gross loss rate for each loan class is determined by the greater of the current gross loss rate based on the most recent twelve months or a ten-year gross loss rate. Recoveries are not directly considered in the estimation of 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, 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 average risk grade. This comparison determines whether credit risk in each loan class is increasing or decreasing. 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 specific loan classes which have not yet been represented in the 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 loan or loan class. These factors include trends in the economy of our primary lending areas, concentrations in large balance loans and other relevant factors.

An accrual for off-balance sheet credit losses is included in Other liabilities in the Consolidated Balance Sheets. The appropriateness of this 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.

The activity in the allowance for loan losses and the allowance for off-balance sheet credit losses related to loan commitments and standby letters of credit for the three months ended June 30, 2016 is summarized as follows (in thousands):

Allowance for loan losses:
Beginning balance
Provision for loan losses
Loans charged off
Recoveries
Ending balance

| Commercial | Commercial Residential <br> Real Estate |  | Mortgage |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
|  |  |  |  |  |  |
| Nonspecific |  |  |  |  |  |
| Allowance |  |  |  |  |  | Total

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The activity in the allowance for loan losses and the allowance for off-balance sheet credit losses related to loan commitments and standby letters of credit for the six months ended June 30, 2016 is summarized as follows (in thousands):

Allowance for loan losses:

| Beginning balance | \$ 130,334 | \$ 41,391 | \$ 19,509 | \$4,164 | \$ 30,126 | \$225,524 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Provision for loan losses | 43,575 | 4,987 | (363 | ) 2,909 | (3,442 | ) 47,666 |
| Loans charged off | (29,481 | ) - | (819 | ) $(2,536)$ | - | (32,836 |
| Recoveries | 711 | 367 | 363 | 1,464 | - | 2,905 |
| Ending balance | \$ 145,139 | \$ 46,745 | \$ 18,690 | \$6,001 | \$ 26,684 | \$243,259 |
| Allowance for off-balance sheet credit losses: |  |  |  |  |  |  |
| Beginning balance | \$ 1,506 | \$ 153 | \$ 30 | \$22 | \$ | \$ 1,711 |
| Provision for off-balance sheet credit losses | 7,246 | 50 | 32 | 6 | - | 7,334 |
| Ending balance | \$8,752 | \$ 203 | \$ 62 | \$28 | \$ | \$9,045 |
| Total provision for credit losses | \$ 50,821 | \$ 5,037 | \$ (331 | ) $\$ 2,915$ | \$ (3,442 | ) $\$ 55,000$ |

The activity in the allowance for loan losses and the allowance for off-balance sheet credit losses related to loan commitments and standby letters of credit for the three months ended June 30, 2015 is summarized as follows (in thousands):

Allowance for loan losses:
Beginning balance
Provision for loan losses
Loans charged off
Recoveries
Ending balance

Commercial Commercial Residential Personal | Nonspecific |
| :--- |
| Allowance | Total

Allowance for off-balance sheet credit losses:
$\left.\begin{array}{lllllll}\text { Beginning balance } & \$ 577 & \$ 333 & \$ 24 & \$ 20 & \$- & \$ 954 \\ \text { Provision for off-balance sheet credit losses } & 18 & (91 & ) & 2 & (1 & ) \\ \text { Ending balance } & \$ 595 & \$ 242 & \$ 26 & \$ 19 & \$- & (72 \\ & & & & & \$ 882\end{array}\right)$

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The activity in the allowance for loan losses and the allowance for off-balance sheet credit losses related to loan commitments and standby letters of credit for the six months ended June 30, 2015 is summarized as follows (in thousands):

Allowance for loan losses:

| Beginning balance | \$ 90,875 | \$ 42,445 | \$ 23,458 | \$4,233 | \$ 28,045 | \$189,056 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Provision for loan losses | 16,175 | (11,751 | ) $(1,589$ | ) 656 | 857 | 4,348 |
| Loans charged off | (1,055 | ) (44 | ) $(1,338$ | ) (2,609 ) | ) | (5,046 |
| Recoveries | 1,042 | 9,094 | 918 | 1,675 | - | 12,729 |
| Ending balance | \$ 107,037 | \$ 39,744 | \$ 21,449 | \$3,955 | \$ 28,902 | \$201,087 |
| Allowance for off-balance sheet credit losses: |  |  |  |  |  |  |
| Beginning balance | \$ 475 | \$ 707 | \$28 | \$20 | \$ - | \$ 1,230 |
| Provision for off-balance sheet credit losses | 120 | (465 | ) (2 | ) (1 | ) - | (348 |
| Ending balance | \$ 595 | \$ 242 | \$ 26 | \$ 19 | \$ - | \$882 |
| Total provision for credit losses | \$ 16,295 | \$ (12,216 | ) \$ (1,591 | ) \$655 | \$ 857 | \$4,000 |

The allowance for loan losses and recorded investment of the related loans by portfolio segment for each impairment measurement method at June 30, 2016 is as follows (in thousands):


The allowance for loan losses and recorded investment of the related loans by portfolio segment for each impairment measurement method at December 31, 2015 is as follows (in thousands):

|  | Collectively Measured <br> for Impairment |  |  |  |  |  |  | Individually <br> Measured <br> for Impairment | Total |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :---: | :---: | :---: | :---: |
|  | Recorded | Related | Recorded Related | Recorded | Related |  |  |  |  |  |
|  | Investment | Allowance | InvestmentAllowance | Investment | Allowance |  |  |  |  |  |
| Commercial | $\$ 10,176,107$ | $\$ 114,027$ | $\$ 76,424$ | $\$ 16,307$ | $\$ 10,252,531$ | $\$ 130,334$ |  |  |  |  |
| Commercial real estate | $3,250,032$ | 41,373 | 9,001 | 18 | $3,259,033$ | 41,391 |  |  |  |  |
| Residential mortgage | $1,815,653$ | 19,441 | 61,240 | 68 | $1,876,893$ | 19,509 |  |  |  |  |
| Personal | 552,234 | 4,164 | 463 | - | 552,697 | 4,164 |  |  |  |  |
| Total | $15,794,026$ | 179,005 | 147,128 | 16,393 | $15,941,154$ | 195,398 |  |  |  |  |

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| Nonspecific allowance | - | - | - | - | - |
| :--- | :--- | :--- | :--- | :--- | :--- |

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The allowance for loan losses and recorded investment of the related loans by portfolio segment for each impairment measurement method at June 30, 2015 is as follows (in thousands):

|  | Collectively Measured for Impairment |  | Individually Measured for Impairment | Total |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Recorded <br> Investment | Related Allowance | RecordedRelated Investmentllowance | Recorded <br> Investment | Related Allowance |
| Commercial | \$9,751,488 | \$ 106,690 | \$24,233 \$ 347 | \$9,775,721 | \$ 107,037 |
| Commercial real estate | 3,013,358 | 39,726 | 20,139 18 | 3,033,497 | 39,744 |
| Residential mortgage | 1,838,759 | 21,349 | 45,969 100 | 1,884,728 | 21,449 |
| Personal | 429,640 | 3,955 | 550 | 430,190 | 3,955 |
| Total | 15,033,245 | 171,720 | 90,891 465 | 15,124,136 | 172,185 |
| Nonspecific allowance | - | - | - - | - | 28,902 |
| Total | \$15,033,245 | \$ 171,720 | \$90,891 \$ 465 | \$15,124,136 | \$ 201,087 |

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 consumer 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 consumer 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 June 30, 2016 is as follows (in thousands):

|  | Internally Risk Graded |  | Non-Graded |  | Total |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Recorded | Related | Recorded | Related | Recorded | Related |
|  | Investment | Allowance | Investment | Allowance | Investment | Allowance |
| Commercial | \$ 10,331,701 | \$ 144,217 | \$24,736 | \$ 922 | \$10,356,437 | \$ 145,139 |
| Commercial real estate | 3,581,966 | 46,745 | - | - | 3,581,966 | 46,745 |
| Residential mortgage | 202,520 | 2,995 | 1,678,403 | 15,695 | 1,880,923 | 18,690 |
| Personal | 500,240 | 3,624 | 87,183 | 2,377 | 587,423 | 6,001 |
| Total | 14,616,427 | 197,581 | 1,790,322 | 18,994 | 16,406,749 | 216,575 |
| Nonspecific allowance | - | - | - | - | - | 26,684 |
| Total | \$ 14,616,427 | \$ 197,581 | \$1,790,322 | \$ 18,994 | \$16,406,749 | \$243,259 |

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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, 2015 is as follows (in thousands):

|  | Internally Risk Graded |  | Non-Graded |  | Total |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Recorded | Related | Recorded | Related | Recorded | Related |
|  | Investment | Allowance | Investment | Allowance | Investment | Allowance |
| Commercial | \$ 10,227,303 | \$ 129,426 | \$25,228 | \$ 908 | \$10,252,531 | \$ 130,334 |
| Commercial real estate | 3,259,033 | 41,391 | - | - | 3,259,033 | 41,391 |
| Residential mortgage | 196,701 | 2,883 | 1,680,192 | 16,626 | 1,876,893 | 19,509 |
| Personal | 467,955 | 1,390 | 84,742 | 2,774 | 552,697 | 4,164 |
| Total | 14,150,992 | 175,090 | 1,790,162 | 20,308 | 15,941,154 | 195,398 |
| Nonspecific allowance | - | - | - | - | - | 30,126 |
| Total | \$ 14,150,992 | \$ 175,090 | \$1,790,162 | \$ 20,308 | \$15,941,154 | \$ 225,524 |

The allowance for loan losses and recorded investment of the related loans by portfolio segment for risk graded and non-risk graded loans at June 30, 2015 is as follows (in thousands):

|  | Internally Risk Graded |  | Non-Graded |  | Total |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Recorded | Related | Recorded | Related | Recorded | Related |
|  | Investment | Allowance | Investment | Allowance | Investment | Allowance |
| Commercial | \$9,752,301 | \$ 106,162 | \$23,420 | \$ 875 | \$9,775,721 | \$ 107,037 |
| Commercial real estate | 3,033,497 | 39,744 | - | - | 3,033,497 | 39,744 |
| Residential mortgage | 190,744 | 2,922 | 1,693,984 | 18,527 | 1,884,728 | 21,449 |
| Personal | 343,114 | 1,549 | 87,076 | 2,406 | 430,190 | 3,955 |
| Total | 13,319,656 | 150,377 | 1,804,480 | 21,808 | 15,124,136 | 172,185 |
| Nonspecific allowance | - | - | - | - | - | 28,902 |
| Total | \$13,319,656 | \$ 150,377 | \$1,804,480 | \$ 21,808 | \$15,124,136 | \$ 201,087 |

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. 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. Performing loans also include past due residential mortgages that are guaranteed by agencies of the U.S. government.

The risk grading process identified certain criticized loans as potential problem loans. These loans 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. Known information does, however, cause concern as to the borrowers' continued compliance with current repayment terms. Nonaccruing loans represent loans for which full collection of principal and interest 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 June 30, 2016 by the risk grade categories (in thousands):

|  | Internally Risk Graded |  |  | Non-Graded |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  | Performing | Potential |  |  |
| Problem |  |  |  |  | Nonaccrual Performing Nonaccrual Total

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The following table summarizes the Company's loan portfolio at December 31, 2015 by the risk grade categories (in thousands):

|  | Internally Risk Graded |  | Non-GradedNonaccrual Performing Nonaccrual Total |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Performing | Potential Problem |  |  |  |  |
| Commercial: |  |  |  |  |  |  |
| Energy | \$2,906,357 | \$ 129,782 | \$ 61,189 | \$- | \$- | \$3,097,328 |
| Services | 2,767,225 | 6,761 | 10,290 | - | - | 2,784,276 |
| Wholesale/retail | 1,412,780 | 6,365 | 2,919 | - | - | 1,422,064 |
| Manufacturing | 554,526 | 1,872 | 331 | - | - | 556,729 |
| Healthcare | 1,882,308 | - | 1,072 | - | - | 1,883,380 |
| Other commercial and industrial | 483,030 | - | 496 | 25,101 | 127 | 508,754 |
| Total commercial | 10,006,226 | 144,780 | 76,297 | 25,101 | 127 | 10,252,531 |
| Commercial real estate: |  |  |  |  |  |  |
| Residential construction and land development | 155,724 | 293 | 4,409 | - | - | 160,426 |
| Retail | 794,754 | 426 | 1,319 | - | - | 796,499 |
| Office | 636,501 | 555 | 651 | - | - | 637,707 |
| Multifamily | 744,299 | 6,512 | 274 | - | - | 751,085 |
| Industrial | 563,093 | - | 76 | - | - | 563,169 |
| Other commercial real estate | 347,864 | 11 | 2,272 | - | - | 350,147 |
| Total commercial real estate | 3,242,235 | 7,797 | 9,001 | - | - | 3,259,033 |
| Residential mortgage: |  |  |  |  |  |  |
| Permanent mortgage | 192,456 | 1,932 | 2,313 | 721,964 | 26,671 | 945,336 |
| Permanent mortgages guaranteed by U.S. government agencies | - | - | - | 175,037 | 21,900 | 196,937 |
| Home equity | - | - | - | 724,264 | 10,356 | 734,620 |
| Total residential mortgage | 192,456 | 1,932 | 2,313 | 1,621,265 | 58,927 | 1,876,893 |
| Personal | 467,811 | 14 | 130 | 84,409 | 333 | 552,697 |
| Total | \$13,908,728 | \$ 154,523 | \$ 87,741 | \$1,730,775 | \$ 59,387 | \$15,941,15 |

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The following table summarizes the Company's loan portfolio at June 30, 2015 by the risk grade categories (in thousands):

|  | Internally Risk Graded |  | Non-Graded |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Performing | Potential Problem | Nonaccru | Performing | Nonaccru | Total |
| Commercial: |  |  |  |  |  |  |
| Energy | \$2,771,248 | \$ 124,054 | \$ 6,841 | \$- | \$ - | \$2,902,143 |
| Services | 2,662,028 | 8,154 | 10,944 | - | - | 2,681,126 |
| Wholesale/retail | 1,506,059 | 23,505 | 4,166 | - | - | 1,533,730 |
| Manufacturing | 567,752 | 11,418 | 379 | - | - | 579,549 |
| Healthcare | 1,644,747 | - | 1,278 | - | - | 1,646,025 |
| Other commercial and industrial | 406,799 | 2,385 | 544 | 23,339 | 81 | 433,148 |
| Total commercial | 9,558,633 | 169,516 | 24,152 | 23,339 | 81 | 9,775,721 |
| Commercial real estate: |  |  |  |  |  |  |
| Residential construction and land development | 138,721 | 486 | 9,367 | - | - | 148,574 |
| Retail | 684,182 | 439 | 3,826 | - | - | 688,447 |
| Office | 560,159 | 566 | 2,360 | - | - | 563,085 |
| Multifamily | 703,449 | 7,689 | 195 | - | - | 711,333 |
| Industrial | 487,978 | - | 76 | - | - | 488,054 |
| Other commercial real estate | 429,544 | 145 | 4,315 | - | - | 434,004 |
| Total commercial real estate | 3,004,033 | 9,325 | 20,139 | - | - | 3,033,497 |
| Residential mortgage: |  |  |  |  |  |  |
| Permanent mortgage | 186,568 | 1,690 | 2,486 | 725,879 | 29,701 | 946,324 |
| Permanent mortgages guaranteed by U.S. government agencies | - | - | - | 187,122 | 3,717 | 190,839 |
| Home equity | - | - | - | 737,500 | 10,065 | 747,565 |
| Total residential mortgage | 186,568 | 1,690 | 2,486 | 1,650,501 | 43,483 | 1,884,728 |
| Personal | 342,949 | 16 | 149 | 86,675 | 401 | 430,190 |
| Total | \$ 13,092,183 | \$ 180,547 | \$ 46,926 | \$ 1,760,515 | \$ 43,965 | \$ 15,124,136 |

[^5]
## 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 TDR and all loans repurchased from GNMA pools.

A summary of impaired loans follows (in thousands):


| Commercial: |  |  |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Energy | $\$ 202,369$ | $\$ 168,145$ | $\$ 136,264$ | $\$ 31,881$ | $\$ 4,228$ | $\$ 163,849$ | $\$-$ | $\$ 97,923$ | $\$-$ |
| Services | 12,780 | 9,388 | 9,388 | - | - | 9,450 | - | 9,839 | - |
| Wholesale/retail | 8,697 | 2,772 | 2,772 | - | - | 3,229 | - | 2,846 | - |
| Manufacturing | 650 | 293 | 293 | - | - | 303 | - | 312 | - |
| Healthcare | 1,175 | 875 | 875 | - | - | 949 | - | 973 | - |
| Other commercial and | 8,186 | 516 | 516 | - | - | 542 | - | 569 | - |
| industrial |  |  |  |  |  |  |  |  |  |
| Total commercial | 233,857 | 181,989 | 150,108 | 31,881 | 4,228 | 178,322 | - | 112,462 | - |

Commercial real
estate:
Residential

| construction and land | 7,177 | 4,261 | 4,261 | - | - | 4,525 | - | 4,335 | - |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| development |  |  |  |  |  |  |  |  |  |
| Retail | 1,914 | 1,265 | 1,265 | - | - | 1,283 | - | 1,292 | - |
| Office | 907 | 606 | 606 | - | - | 618 | - | 628 | - |
| Multifamily | 1,000 | 65 | 65 | - | - | 157 | - | 169 | - |
| Industrial | 76 | 76 | 76 | - | - | 76 | - | 76 | - |
| Other real estate loans | 7,445 | 1,507 | 1,355 | 152 | 18 | 1,865 | - | 1,890 | - |
| Total commercial real | 18,519 | 7,780 | 7,628 | 152 | 18 | 8,524 | - | 8,390 | - |
| estate |  |  |  |  |  |  |  |  |  |

Residential mortgage:

| Permanent mortgage | 33,793 | 27,228 | 27,117 | 111 | 64 | 27,362 | 304 | 28,106 | 631 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Permanent mortgage <br> guaranteed by U.S. | 198,534 | 192,732 | 192,732 | - | - | 191,430 | 2,023 | 195,563 | 3,795 |
| government agencies |  |  |  |  |  |  |  |  |  |
| Home equity | 10,964 | 10,092 | 10,092 | - | - | 10,311 | - | 10,224 | - |
| Total residential <br> mortgage | 243,291 | 230,052 | 229,941 | 111 | 64 | 229,103 | 2,327 | 233,893 | 4,426 |
| Personal | 1,174 | 354 | 354 | - | - | 342 | - | 409 | - |

$\begin{array}{lllllll}\text { Total } & \$ 496,841 & \$ 420,175 & \$ 388,031 & \$ 32,144 & \$ 4,310 & \$ 416,291\end{array} \$ 2,327 \quad \$ 355,154 \$ 4,426$

All permanent mortgage loans guaranteed by U.S. government agencies are considered impaired as we do not ${ }^{1}$ expect full collection of contractual principal and interest. At June 30, 2016, $\$ 20$ million of these loans were nonaccruing and $\$ 173$ million were 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, are recovered.

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A summary of impaired loans at December 31, 2015 follows (in thousands):
Recorded Investment

|  | Unpaid <br> Principal <br> Balance |  | Total |
| :--- | :--- | :--- | :--- | :--- | :--- | | With No |
| :--- |
| Allowance | | With |
| :--- |
| Allowance | | Related |
| :--- |
| Allowance |

All permanent mortgage loans guaranteed by U.S. government agencies are considered impaired as we do not
${ }^{1}$ expect full collection of contractual principal and interest. At December 31, 2015, $\$ 22$ million of these loans were nonaccruing and $\$ 175$ million were accruing based on the guarantee by U.S. government agencies.

A summary of impaired loans at June 30, 2015 follows (in thousands):

|  | As of June 30, 2015 |  |  |  |  | For the <br> Three Months <br> Ended <br> June 30, 2015 |  | For the <br> Six Months Ended |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Recorded Investment |  |  |  |  |  |  | June 30, | 2015 |
|  | Unpaid |  | With No | With | Related | Average | Interest | Average | Interest |
|  | Principal <br> Balance | Total | Allowance | Allowan | Allowan | Recorded Investmen | Income ntRecogniz | Recorde ednvestm | Income ntRecognized |
| Commercial: |  |  |  |  |  |  |  |  |  |
| Energy | \$7,476 | \$6,841 | \$6,324 | \$ 517 | \$ 151 | \$4,358 | \$ - | \$4,129 | \$ - |
| Services | 13,815 | 10,944 | 10,270 | 674 | 152 | 7,844 | - | 8,072 | - |
| Wholesale/retail | 9,781 | 4,166 | 4,134 | 32 | 9 | 4,283 | - | 4,157 | - |
| Manufacturing | 690 | 379 | 379 | - | - | 398 | - | 414 | - |
| Healthcare | 1,646 | 1,278 | 1,088 | 190 | 35 | 1,418 | - | 1,329 | - |
| Other commercial and industrial | 8,302 | 625 | 625 | - | - | 755 | - | 778 | - |
| Total commercial | 41,710 | 24,233 | 22,820 | 1,413 | 347 | 19,056 | - | 18,879 | - |
| Commercial real estate: |  |  |  |  |  |  |  |  |  |
| Residential construction and land development | 14,143 | 9,367 | 9,367 | - | - | 9,483 | - | 7,333 | - |
| Retail | 5,369 | 3,826 | 3,826 | - | - | 3,842 | - | 3,876 | - |
| Office | 4,439 | 2,360 | 2,360 | - | - | 2,385 | - | 2,890 | - |
| Multifamily | 195 | 195 | 195 | - | - | 98 | - | 98 | - |
| Industrial | 76 | 76 | 76 | - | - | 76 | - | 38 | - |
| Other real estate loans | 10,411 | 4,315 | 4,149 | 166 | 18 | 4,138 | - | 5,113 | - |
| Total commercial real estate | 34,633 | 20,139 | 19,973 | 166 | 18 | 20,022 | - | 19,348 | - |
| Residential mortgage: |  |  |  |  |  |  |  |  |  |
| Permanent mortgage | 41,092 | 32,187 | 32,029 | 158 | 100 | 32,776 | 330 | 33,516 | 645 |
| Permanent mortgage guaranteed by U.S. government agencies ${ }^{1}$ | 197,090 | 190,839 | 190,839 | - | - | 194,138 | 2,047 | 200,929 | 4,303 |
| Home equity | 10,510 | 10,065 | 10,065 | - | - | 9,966 | - | 9,815 | - |
| Total residential mortgage | 248,692 | 233,091 | 232,933 | 158 | 100 | 236,880 | 2,377 | 244,260 | 4,948 |
| Personal | 570 | 550 | 550 | - | - | 506 | - | 558 | - |
| Total | \$325,605 \$278,013 \$276,276 \$ 1,737 |  |  |  | \$ 465 | \$276,464 | \$ 2,377 | \$283,04 | \$ 4,948 |
| All permanent mortgage loans guaranteed by U.S. government agencies are considered impaired as we do not ${ }^{1}$ expect full collection of contractual principal and interest. At June 30, 2015, $\$ 3.7$ million of these loans were nonaccruing and $\$ 187$ million were accruing based on the guarantee by U.S. government agencies. |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |

[^6]Troubled Debt Restructurings
A summary of troubled debt restructurings ("TDRs") by accruing status as of June 30, 2016 is as follows (in thousands):

| As of June 30, 2016 |  | Amounts <br> Charged Off |
| :--- | :--- | :--- |
| During: |  |  |

Nonaccruing TDRs:
Commercial:

| Energy | $\$ 2,246$ | $\$-$ | $\$ 2,246$ | $\$-$ | $\$ 500$ | $\$ 500$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Services | 8,610 | 7,853 | 757 | - | - | - |
| Wholesale/retail | 2,467 | 2,427 | 40 | - | - | - |
| Manufacturing | 253 | 253 | - | - | - | - |
| Healthcare | 640 | 640 | - | - | - | - |
| Other commercial and industrial | 516 | 63 | 453 | - | - | 57 |
| Total commercial | 14,732 | 11,236 | 3,496 | - | 500 | 557 |

Commercial real estate:

| Residential construction and land development | 1,601 | 1,079 | 522 | - | - | - |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Retail | 1,264 | 907 | 357 | - | - | - |
| Office | 152 | 152 | - | - | - | - |
| Multifamily | - | - | - | - | - | - |
| Industrial | - | - | - | - | - | - |
| Other real estate loans | 793 | 372 | 421 | - | - | - |
| Total commercial real estate |  |  |  |  |  | - |
| Residential mortgage: | 17,367 | 12,462 | 4,905 | 64 | 37 | 52 |
| Permanent mortgage <br> Permanent mortgage guaranteed by U.S. government <br> agencies | 9,709 | 2,024 | 7,685 | - | - | - |
| Home equity <br> Total residential mortgage | 4,763 | 4,139 | 624 | - | 60 | 126 |
| Personal | 31,839 | 18,625 | 13,214 | 64 | 97 | 178 |
| Total nonaccruing TDRs | 298 | 276 | 22 | - | 3 | 9 |

Accruing TDRs:
Permanent mortgages guaranteed by U.S. government agencies

78,806 27,999
50,807

A summary of troubled debt restructurings by accruing status as of December 31, 2015 is as follows (in thousands):
As of
December 31, 2015

|  | Not |  |
| :---: | :---: | :---: |
| Performing | Performing |  |
| Recorded in Accordance | in | Specific |
| InvestmentWith Modified | With | Allowance |
| Terms | Modified |  |
|  | Terms |  |

Nonaccruing TDRs:
Commercial:

| Energy | $\$ 2,304$ | $\$ 2,304$ | $\$-$ | $\$-$ |
| :--- | :--- | :--- | :--- | :--- |
| Services | 9,027 | 8,210 | 817 | 148 |
| Wholesale/retail | 2,758 | 2,706 | 52 | 9 |
| Manufacturing | 282 | 282 | - | - |
| Healthcare | 673 | 673 | - | - |
| Other commercial and industrial | 621 | 89 | 532 | - |
| Total commercial | 15,665 | 14,264 | 1,401 | 157 |

Commercial real estate:

| Residential construction and land development | 2,328 | 1,556 | 772 | - |
| :--- | :--- | :--- | :--- | :--- |
| Retail | 1,319 | 942 | 377 | - |
| Office | 165 | 165 | - | - |
| Multifamily | - | - | - | - |
| Industrial | - | - | - | - |
| Other real estate loans | 920 | 478 | 442 | - |
| Total commercial real estate | 4,732 | 3,141 | 1,591 | - |
|  |  |  |  |  |
| Residential mortgage: | 16,618 | 9,043 | 7,575 | 68 |
| Permanent mortgage <br> Permanent mortgage guaranteed by U.S. government agencies | 11,136 | 139 | 10,997 | - |
| Home equity <br> Total residential mortgage <br> Personal | 5,159 | 4,218 | 941 | - |
| Total nonaccuring TDRs | 32,913 | 13,400 | 19,513 | 68 |
| Accruing TDRs: | 324 | 297 | 27 | - |
| Permanent mortgages guaranteed by U.S. government agencies | 74,050 | 23,029 | 51,021 | - |
| Total TDRs | $\$ 53,634$ | $\$ 31,102$ | $\$ 22,532$ | $\$ 225$ |

[^7]A summary of troubled debt restructurings by accruing status as of June 30, 2015 is as follows (in thousands):

| As of June 30, 2015 |  | Amounts <br> Charged Off |
| :--- | :--- | :--- |
| During |  |  |

Nonaccruing TDRs:
Commercial:
Energy
Services
Wholesale/retail
Manufacturing
Healthcare
Other commercial and industrial
Total commercial

| $\$ 1,176$ | $\$ 1,176$ | $\$-$ | $\$-$ | $\$-\$-$ |
| :--- | :--- | :--- | :--- | :--- |
| 9,541 | 8,641 | 900 | 148 | $-\quad-$ |
| 3,064 | 2,984 | 80 | 9 | $-\quad-$ |
| 311 | 311 | - | - | $-\quad-$ |
| 706 | 706 | - | - | - |
| 613 | 81 | 532 | - | - |
| 15,411 | 13,899 | 1,512 | 157 | - |

Commercial real estate:

| Residential construction and land development | 7,027 | 4,790 | 2,237 | - | - | - |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Retail | 3,524 | 977 | 2,547 | - | - | - |
| Office | 1,360 | - | 1,360 | - | - | - |
| Multifamily | - | - | - | - | - | - |
| Industrial | 1,376 | 1,376 | - | - | - | - |
| Other real estate loans | 13,287 | 7,143 | 6,144 | - | - | - |
| Total commercial real estate |  |  |  |  |  | - |
| Residential mortgage: | 15,671 | 10,326 | 5,345 | 100 | 2 | 3 |
| Permanent mortgage <br> Permanent mortgage guaranteed by U.S. government <br> agencies | 2,058 | 141 | 1,917 | - | - | - |
| Home equity <br> Total residential mortgage <br> Personal | 5,318 | 4,549 | 769 | - | 48 | 58 |
| Total nonaccruing TDRs | 23,047 | 15,016 | 8,031 | 100 | 50 | 61 |
| Accruing TDRs: | 420 | 266 | 154 | - | 2 | 2 |

Troubled debt restructurings generally consist of interest rate concessions, payment stream concessions or a combination of concessions to distressed borrowers. The following tables detail the recorded balance of loans at June 30, 2016 by class that were restructured during the three months ended June 30, 2016 by primary type of concession (in thousands):

Commercial:

| Energy | $\$-$ | $\$-$ | $\$-$ | $\$-$ | $\$-$ | $\$-$ | $\$-$ |
| :--- | :---: | :--- | :--- | :--- | :--- | :--- | :--- |
| Services | - | - | - | - | - | - | - |
| Wholesale/retail | - | - | - | - | - | - | - |
| Manufacturing | - | - | - | - | - | - | - |
| Healthcare | - | - | - | - | - | - | - |
| Other commercial and industrial | - | - | - | - | - | - | - |
| Total commercial | - | - | - | - | - | - | - |

Commercial real estate:

| Residential construction and land development | - | - | - | - | - | - | - |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Retail | - | - | - | - | - | - | - |
| Office | - | - | - | - | - | - | - |
| Multifamily | - | - | - | - | - | - | - |
| Industrial | - | - | - | - | - | - | - |
| Other real estate loans | - | - | - | - | - | - | - |
| Total commercial real estate | - | - | - | - | - | - | - |

Residential mortgage:

| Permanent mortgage | - | - | - | 684 | 1,183 | 1,867 | 1,867 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Permanent mortgage guaranteed by U.S. | 2,783 | 4,455 | 7,238 | - | 625 | 625 | 7,863 |
| government agencies | - | - | - | 48 | 329 | 377 | 377 |
| Home equity <br> Total residential mortgage | 2,783 | 4,455 | 7,238 | 732 | 2,137 | 2,869 | 10,107 |
| Personal | - | - | - | - | 65 | 65 | 65 |
| Total | $\$ 2,783$ | $\$ 4,455$ | $\$ 7,238$ | $\$ 732$ | $\$ 2,202$ | $\$ 2,934$ | $\$ 10,172$ |

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Troubled debt restructurings generally consist of interest rate concessions, payment stream concessions or a combination of concessions to distressed borrowers. The following tables detail the recorded balance of loans at June 30, 2016 by class that were restructured during the six months ended June 30, 2016 by primary type of concession (in thousands):

|  | Six Months Ended June 30, 2016 |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Accruing <br> Payment Combination Total <br> Stream \& Other |  |  | Nonaccrual <br> PaymenCombination <br> Stream \& Other |  |  | Total |
|  |  |  |  |  |  |  |  |
| Commercial: |  |  |  |  |  |  |  |
| Energy | \$- | \$ - | \$- | \$501 | \$ - | \$501 | \$501 |
| Services | - | - | - | - | - | - | - |
| Wholesale/retail | - | - | - | - | - | - | - |
| Manufacturing | - | - | - | - | - | - | - |
| Healthcare | - | - | - | - | - | - | - |
| Other commercial and industrial | - | - | - | - | - | - | - |
| Total commercial | - | - | - | 501 | - | 501 | 501 |
| Commercial real estate: |  |  |  |  |  |  |  |
| Residential construction and land development | - | - | - | - | - | - | - |
| Retail | - | - | - | - | - | - | - |
| Office | - | - | - | - | - | - | - |
| Multifamily | - | - | - | - | - | - | - |
| Industrial | - | - | - | - | - | - | - |
| Other real estate loans | - | - | - | - | - | - | - |
| Total commercial real estate | - | - | - | - | - | - | - |
| Residential mortgage: |  |  |  |  |  |  |  |
| Permanent mortgage | - | - | - | 1,046 | 1,244 | 2,290 | 2,290 |
| Permanent mortgage guaranteed by U.S. government agencies | 6,625 | 7,818 | 14,443 | - | 625 | 625 | 15,068 |
| Home equity | - | - | - | 48 | 791 | 839 | 839 |
| Total residential mortgage | 6,625 | 7,818 | 14,443 | 1,094 | 2,660 | 3,754 | 18,197 |
| Personal | - | - | - | - | 72 | 72 | 72 |
| Total | \$6,625 | \$ 7,8 | \$ 14,443 | \$1,595 | \$ 2,7 | \$4,32 | \$18,770 |

[^8]Troubled debt restructurings generally consist of interest rate concessions, payment stream concessions or a combination of concessions to distressed borrowers. The following tables detail the recorded balance of loans by class that were restructured during three months ended June 30, 2015 by primary type of concession (in thousands):


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Troubled debt restructurings generally consist of interest rate concessions, payment stream concessions or a combination of concessions to distressed borrowers. The following tables detail the recorded balance of loans by class that were restructured during six months ended June 30, 2015 by primary type of concession (in thousands):

## Six Months Ended

June 30, 2015

| Accruing | Nonaccrual |  |
| :--- | :--- | :--- |
| Payment Combination | InteresPayment Combination Total | Total |
| Stream \& Other | Rate Stream \& Other |  |

Commercial:

| Energy | $\$-$ | $\$-$ | $\$-$ | $\$-$ | $\$ 1,176$ | $\$-$ | $\$ 1,176$ | $\$ 1,176$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Services | - | - | - | - | - | 7,972 | 7,972 | 7,972 |
| Wholesale/retail | - | - | - | - | - | - | - | - |
| Manufacturing | - | - | - | - | - | - | - | - |
| Healthcare | - | - | - | 706 | - | - | 706 | 706 |
| Other commercial and industrial | - | - | - | - | - | - | - | - |
| Total commercial | - | - | - | 706 | 1,176 | 7,972 | 9,854 | 9,854 |

Commercial real estate:

| Residential construction and land | - | - | - | - | 4,581 | - | 4,581 | 4,581 |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| development | - | - | - | - | - | - | - | - |
| Retail | - | - | - | - | - | - | - | - |
| Office | - | - | - | - | - | - | - | - |
| Multifamily | - | - | - | - | - | - | - | - |
| Industrial | - | - | - | - | - | - | - | - |
| Other real estate loans |  |  |  |  |  |  |  |  |
| Total commercial real estate | - | - | - | - | 4,581 | - | 4,581 | 4,581 |
| Residential mortgage: <br> Permanent mortgage | - | - | - | - | 707 | 1,091 | 1,798 | 1,798 |
| Permanent mortgage guaranteed by <br> government agencies | 11,904 | 11,215 | 23,119 | - | - | 843 | 843 | 23,962 |
| Home equity |  |  |  |  |  |  |  |  |
| Total residential mortgage | - | - | - | 61 | 149 | 1,182 | 1,392 | 1,392 |
| Personal | 11,904 | 11,215 | 23,119 | 61 | 856 | 3,116 | 4,033 | 27,152 |
| Total | - | - | - | - | - | 121 | 121 | 121 |

The following table summarizes, by loan class, the recorded investment at June 30, 2016 and 2015, respectively, of loans modified as TDRs within the previous 12 months and for which there was a payment default during the three months ended June 30, 2016 and 2015, respectively (in thousands):

|  | Three Months Ended <br> June 30, 2016 |  | Six Months Ended <br> June 30, 2016 |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
|  | AccruingNonaccrual Total |  |  |  | | AccruingNonaccrual Total |
| :--- |

A payment default is defined as being 30 days or more past due. The table above includes loans that experienced a payment default during the period, but may be performing in accordance with the modified terms as of the balance sheet date.

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Commercial:
Energy
Services
Wholesale/retail
Manufacturing
Healthcare
Other commercial and industrial
Total commercial
Commercial real estate:
Residential construction and land development
Retail
Office
Multifamily
Industrial
Other real estate loans
Total commercial real estate
Residential mortgage:
Permanent mortgage
Permanent mortgage guaranteed by U.S. government agencies
Home equity
Total residential mortgage
Personal
Total

Three Months Ended
June 30, 2015
AccruingNonaccrual Total

| $\$-$ | $\$-$ | $\$-$ | $\$-$ | $\$-$ | $\$-$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
| - | - | - | - | - | - |
| - | - | - | - | - | - |
| - | - | - | - | - | - |
| - | - | - | - | - | - |
| - | - | - | - | - | - |


| - | - | - | - | 337 | 337 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| - | - | - | - | - | - |
| - | - | - | - | - | - |
| - | - | - | - | - | - |
| - | - | - | - | - | - |
| - | - | - | - | - | - |
|  | - | - | - | 337 | 337 |


| - | 1,341 | 1,341 | - | 1,796 | 1,796 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 29,741 | 1,112 | 30,853 | 31,715 | 1,252 | 32,967 |
| - | 479 | 479 | - | 503 | 503 |
| 29,741 | 2,932 | 32,673 | 31,715 | 3,551 | 35,266 |
| - | 30 | 30 | - | 30 | 30 |

\$29,741 \$ 2,962 \$32,703 \$31,715 \$ 3,918 \$35,633

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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 June 30, 2016 is as follows (in thousands):

|  | Current | Past Du 30 to 89 Days | 90 Days or More | Nonaccrual Total |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Commercial: |  |  |  |  |  |
| Energy | \$2,647,678 | \$- | \$2,833 | \$ 168,145 | \$2,818,656 |
| Services | 2,817,217 | 4,259 | - | 9,388 | 2,830,864 |
| Wholesale/retail | 1,530,110 | 75 | - | 2,772 | 1,532,957 |
| Manufacturing | 595,110 | - | - | 293 | 595,403 |
| Healthcare | 2,050,271 | - | - | 875 | 2,051,146 |
| Other commercial and industrial | 526,691 | 158 | 46 | 516 | 527,411 |
| Total commercial | 10,167,077 | 4,492 | 2,879 | 181,989 | 10,356,437 |
| Commercial real estate: |  |  |  |  |  |
| Residential construction and land development | 153,315 | - | - | 4,261 | 157,576 |
| Retail | 794,154 | - | - | 1,265 | 795,419 |
| Office | 768,506 | - | - | 606 | 769,112 |
| Multifamily | 784,826 | 2,309 | - | 65 | 787,200 |
| Industrial | 645,510 | - | - | 76 | 645,586 |
| Other real estate loans | 425,566 | - | - | 1,507 | 427,073 |
| Total commercial real estate | 3,571,877 | 2,309 | - | 7,780 | 3,581,966 |
| Residential mortgage: |  |  |  |  |  |
| Permanent mortgage | 935,857 | 5,922 | - | 27,228 | 969,007 |
| Permanent mortgages guaranteed by U.S. government agencies | 42,019 | 27,218 | 103,754 | 19,741 | 192,732 |
| Home equity | 707,024 | 2,048 | 20 | 10,092 | 719,184 |
| Total residential mortgage | 1,684,900 | 35,188 | 103,774 | 57,061 | 1,880,923 |
| Personal | 586,611 | 458 | - | 354 | 587,423 |
| Total | \$ 16,010,465 | \$42,447 | \$ 106,653 | \$ 247,184 | \$16,406,749 |

A summary of loans currently performing, loans past due and accruing and nonaccrual loans as of December 31, 2015 is as follows (in thousands):

|  | Past Due |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
|  | Current | 30 to 89 <br> Days | 90 Days <br> or More | Nonaccrual Total |  |

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A summary of loans currently performing, loans past due and accruing and nonaccrual loans as of June 30, 2015 is as follows (in thousands):

|  | Current | Past Due 30 to 89 Days | 90 Days or More | Nonaccrual Total |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Commercial: |  |  |  |  |  |
| Energy | \$2,895,302 | \$- | \$- | \$ 6,841 | \$2,902,143 |
| Services | 2,665,133 | 5,049 | - | 10,944 | 2,681,126 |
| Wholesale/retail | 1,529,477 | 87 | - | 4,166 | 1,533,730 |
| Manufacturing | 579,170 | - | - | 379 | 579,549 |
| Healthcare | 1,644,747 | - | - | 1,278 | 1,646,025 |
| Other commercial and industrial | 432,159 | 364 | - | 625 | 433,148 |
| Total commercial | 9,745,988 | 5,500 | - | 24,233 | 9,775,721 |
| Commercial real estate: |  |  |  |  |  |
| Residential construction and land development | 139,207 | - | - | 9,367 | 148,574 |
| Retail | 684,621 | - | - | 3,826 | 688,447 |
| Office | 560,725 | - | - | 2,360 | 563,085 |
| Multifamily | 710,486 | 652 | - | 195 | 711,333 |
| Industrial | 487,978 | - | - | 76 | 488,054 |
| Other real estate loans | 429,689 | - | - | 4,315 | 434,004 |
| Total commercial real estate | 3,012,706 | 652 | - | 20,139 | 3,033,497 |
| Residential mortgage: |  |  |  |  |  |
| Permanent mortgage | 907,860 | 6,277 | - | 32,187 | 946,324 |
| Permanent mortgages guaranteed by U.S. government agencies | 38,524 | 24,660 | 123,938 | 3,717 | 190,839 |
| Home equity | 734,837 | 2,564 | 99 | 10,065 | 747,565 |
| Total residential mortgage | 1,681,221 | 33,501 | 124,037 | 45,969 | 1,884,728 |
| Personal | 429,214 | 426 | - | 550 | 430,190 |
| Total | \$ 14,869,129 | \$40,079 | \$ 124,037 | \$ 90,891 | \$ 15,124,136 |

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On December 8, 2015, the Company announced the signing of a definitive purchase agreement with MBT Bancshares ("MBT"). MBT is headquartered in Kansas City, Mo. and is the parent company of Missouri Bank and Trust of Kansas City ("mobank"). mobank operates four banking branches in the Kansas City, Mo. area. Under terms of the definitive agreement, BOK Financial will pay $\$ 102.5$ million in an all-cash deal for all outstanding shares of MBT stock, subject to certain conditions and potential adjustments. The transaction has been approved by the boards of directors of both companies and is expected to close by the end of 2016, subject to customary closing conditions, including regulatory approval.

In the first quarter of 2016, the Company acquired Weaver and Tidwell Financial Advisors LTD d/b/a Weaver Wealth Management, a registered investment advisor and E-Spectrum Advisors, an energy investment banking firm in Texas. The cash purchase price for these acquisitions was $\$ 7.7$ million. The purchase price allocation included $\$ 5.3$ million of identifiable intangible assets and $\$ 3.3$ million of goodwill.

On May 4, 2015, the Company acquired a majority voting interest in Heartland Food Products, LLC, a Kansas-based food product and restaurant equipment company. The cash purchase price for this acquisition was $\$ 18$ million. The final purchase price allocation included $\$ 11$ million of identifiable intangible assets and $\$ 2.7$ million of goodwill.

The pro-forma impact of these transactions was not material to the Company's consolidated financial statements. (6) 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 retained for investment. Residential mortgage loans originated for sale by the Company are carried at fair value based on sales commitments and market quotes. Changes in the fair value of mortgage loans held for sale are included in Other operating revenue - Mortgage banking revenue. Residential mortgage loans held for sale also includes the fair value of residential mortgage loan commitments and forward sale commitments which are considered derivative contracts that have not been designated as hedging instruments. 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):

| June 30, 2016 | Dec. 31, 2015 | June 30, 2015 |
| :--- | :--- | :--- |
| Unpaid Fair Value | Unpaid Fair | Unpaid Fair |
| Principal | Principal Value | Principal Value |
| Balance/ | Balance/ | Balance/ |


|  | Notional |  | Notional |  | Notional |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Residential mortgage loans held for sale | $\$ 404,507$ | $\$ 417,542$ | $\$ 293,637$ | $\$ 299,505$ | $\$ 481,880$ | $\$ 486,640$ |
| Residential mortgage loan commitments | 965,631 | 25,499 | 601,147 | 8,134 | 849,619 | 8,323 |
| Forward sales contracts | $1,216,966(12,313$ | $)$ | 884,710 | 800 | $1,201,018$ | 7,608 |
|  | $\$ 430,728$ |  |  |  |  | $\$ 308,439$ |

No residential mortgage loans held for sale were 90 days or more past due or considered impaired as of June 30, 2016, December 31, 2015 or June 30, 2015. No credit losses were recognized on residential mortgage loans held for sale for the six month periods ended June 30, 2016 and 2015.

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Mortgage banking revenue was as follows (in thousands):

Production revenue:
Net realized gains on sale of mortgage loans
Net change in unrealized gain on mortgage loans held for sale
Net change in the fair value of mortgage loan commitments
Net change in the fair value of forward sales contracts
Total production revenue
Servicing revenue
Total mortgage banking revenue

| Three Months <br> Ended <br> June 30, <br> 2016 | 2015 | 2016 | Six Months Ended <br> June 30, |  |
| :--- | :--- | :--- | :--- | :---: |
|  |  |  | 2015 |  |

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

Mortgage servicing rights may be originated or purchased. Both originated and purchased mortgage servicing rights are initially recognized at fair value. The Company has elected to carry all mortgage servicing rights at fair value. Changes in the fair value are recognized in earnings as they occur. 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):

|  | June 30, | Dec. 31, | June 30, |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
|  | 2016 | 2015 | 2015 |  |  |
| Number of residential mortgage loans serviced for others | 137,210 | 131,859 | 124,825 |  |  |
| Outstanding principal balance of residential mortgage loans serviced | $\$ 21,178,387$ | $\$ 19,678,226$ | $\$ 17,979,623$ |  |  |
| for others | 4.06 | $\%$ | 4.12 | $\%$ | 4.18 |
| Weighted average interest rate | 301 | 300 | $\%$ |  |  |
| Remaining term (in months) |  |  |  |  |  |

Activity in capitalized mortgage servicing rights during the three months ended June 30, 2016 was as follows (in thousands):

Balance, March 31, 2016
Additions, net
Purchased Originated Total
$-\quad$ - 20,773 20,773
Change in fair value due to loan runoff (730 ) (9,068 ) (9,798 )
Change in fair value due to market changes (1,152 ) (15,131 ) (16,283 )
Balance, June 30, $2016 \quad \$ 4,067 \quad \$ 186,680 \quad \$ 190,747$
Activity in capitalized mortgage servicing rights during the six months ended June 30, 2016 was as follows (in thousands):

Balance, Dec. 31, 2015
Additions, net
Change in fair value due to loan runoff

| Purchased | Originated Total |  |
| :--- | :--- | :--- |
| $\$ 9,911$ | $\$ 208,694$ | $\$ 218,605$ |
| - | 34,355 | 34,355 |
| $(1,356$ | $(16,586$ | $)$ |

Change in fair value due to market changes (4,488 ) (39,783 ) (44,271 )
Balance, June 30, 2016
\$4,067 \$186,680 \$190,747

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Activity in capitalized mortgage servicing rights during the three months ended June 30, 2015 was as follows (in thousands):

Balance, March 31, 2015
Purchased Originated Total
\$9,593 \$165,458 \$175,051
Additions, net
Change in fair value due to loan runoff
Change in fair value due to market changes
Balance, June 30, 2015

- 23,232 23,232
(729 ) (6,870 ) (7,599 )
1,866 6,144 8,010
\$ 10,730 \$ 187,964 \$ 198,694
Activity in capitalized mortgage servicing rights during the six months ended June 30, 2015 was as follows (in thousands):

| Purchased | Originated | Total |  |
| :--- | :--- | :--- | :--- |
| $\$ 11,114$ | $\$ 160,862$ | $\$ 171,976$ |  |
| - | 42,382 | 42,382 |  |
| $(1,510$ | $(13,642$ | $)$ | $(15,152)$ |
| 1,126 | $(1,638$ | $)$ | $(512)$ |
| $\$ 10,730$ | $\$ 187,964$ | $\$ 198,694$ |  |

Changes in the fair value of mortgage servicing rights 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. Changes in fair value due to market changes are reported separately. Changes in fair value due to market changes during the period relate to assets held at the reporting date.

There is no active market for trading in mortgage servicing rights after origination. Fair value is determined by discounting the projected net cash flows. Significant assumptions used to determine fair value based on significant unobservable inputs were as follows:

Discount rate - risk-free rate plus a market premium
Loan servicing costs - annually per loan based upon loan type:
Performing loans
Delinquent loans
Loans in foreclosure
Escrow earnings rate - indexed to rates paid on deposit accounts with comparable average life
Primary/secondary mortgage rate spread

| June 30, | Dec. 31, | June 30, |
| :--- | :--- | :--- |
| 2016 | 2015 | 2015 |
| $10.09 \%$ | $10.11 \%$ | $10.13 \%$ |
|  |  |  |
| $\$ 63-\$ 120$ | $\$ 63-\$ 105$ | $\$ 63-\$ 105$ |
| $\$ 150-\$ 500$ | $\$ 150-\$ 500$ | $\$ 175-\$ 550$ |
| $\$ 650-$ | $\$ 650-$ | $\$ 1000-$ |
| $\$ 4,250$ | $\$ 4,250$ | $\$ 4,000$ |
| $0.99 \%$ | $1.73 \%$ | $1.77 \%$ |
| 115 bps | 130 bps | 129 bps |

The Company is exposed to interest rate risk as benchmark residential mortgage interest rates directly affect the prepayment speeds used in valuing our mortgage servicing rights, which is partially managed through forward sales of residential mortgage-backed securities and forward sales contracts. 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.

Stratification of the residential mortgage loan servicing portfolio and outstanding principal of loans serviced for others by interest rate at June 30, 2016 follows (in thousands):

$$
\begin{array}{llll}
<4.00 \% & 4.00 \%- & 5.00 \%- \\
4.99 \% & 5.99 \%
\end{array} \quad>5.99 \% \quad \text { Total }
$$

| Fair value | \$ 106,779 | \$75,899 | \$5,632 | \$2,437 |  | \$ 190,747 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Outstanding principal of loans serviced for others | \$11,038,292 | \$8,016,480 | \$1,306,095 | \$817,520 |  | \$21,178,387 |
| Weighted average prepayment rate ${ }^{1}$ | 9.26 | \% 12.70 | \% 35.21 | \% 42.77 |  | 3.46 |
| Annual prepayment estimates based up prepayment rate is determined by weig | an interes the prepa | inal |  | ight |  |  |

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The interest rate sensitivity of our mortgage servicing rights is modeled over a range of $+/-50$ basis points. At June 30, 2016, a 50 basis point decrease in mortgage interest rates is expected to decrease the fair value of our mortgage servicing rights by $\$ 53.6$ million. A 50 basis point increase in mortgage interest rates is expected to increase the fair value of our mortgage servicing rights by $\$ 31.0$ million. In the model, changes in the value of servicing rights due to changes in interest rates assume stable relationships between residential mortgage rates and prepayment speeds. Changes in market conditions can cause variations from these assumptions. These factors and others may cause changes in the value of our mortgage servicing rights to differ from our expectations.

The aging status of our mortgage loans serviced for others by investor at June 30, 2016 follows (in thousands): Past Due

|  | Current | 30 to 59 60 to 89 90 Days |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
|  |  | Days | Days | or More |

The Company has off-balance sheet credit risk related to residential mortgage loans sold to U.S. government agencies with recourse prior to 2008 under various community development programs. These loans consist of first lien, fixed-rate residential mortgage loans underwritten to standards approved by the agencies including full documentation and originated under programs available only for owner-occupied properties. However, these loans have a higher risk of delinquency and loss given default than traditional residential mortgage loans. The Company no longer sells residential mortgage loans with recourse other than obligations under standard representations and warranties. The recourse obligation relates to loan performance for the life of the loan and the Company is obligated to repurchase the loan at the time of foreclosure for the unpaid principal balance plus unpaid interest. The principal balance of residential mortgage loans sold subject to recourse obligations totaled $\$ 145$ million at June 30, 2016, $\$ 155$ million at December 31, 2015 and $\$ 169$ million at June 30, 2015. A separate accrual for these off-balance sheet commitments is included in Other liabilities in the Consolidated Balance Sheets. At June 30, 2016, approximately 2 percent of the loans sold with recourse with an outstanding principal balance of $\$ 3.5$ million were either delinquent more than 90 days, in bankruptcy or in foreclosure and 5 percent with an outstanding balance of $\$ 7.2$ million were past due 30 to 89 days. The provision for credit losses on loans sold with recourse is included in Mortgage banking costs in the Consolidated Statements of Earnings.

The activity in the accrual for losses on loans sold with recourse included in Other liabilities in the Consolidated Balance Sheets is summarized as follows (in thousands):

| Three M | Months | Six Mon | nths |
| :---: | :---: | :---: | :---: |
| Ended |  | Ended |  |
| June 30, |  | June 30, |  |
| 2016 | 2015 | 2016 | 2015 |
| \$4,443 | \$7,020 | \$4,649 | \$7,299 |
| 245 | (40 | ) 391 | 130 |
| (349 ) | ) (289 | ) (701 ) | (738 ) |
| \$4,339 | \$6,691 | \$4,339 | \$6,691 |

The Company also has obligations to repurchase or provide indemnification for residential mortgage loans sold to government sponsored entities due to standard representations and warranties made under contractual agreements and to service loans in accordance with investor guidelines. The Company has established accruals for losses related to these obligations that are included in Other liabilities in the Consolidated Balance Sheets and in Mortgage banking
costs in the Consolidated Statements of Earnings.
The Company repurchased 9 loans from the agencies for $\$ 2.6$ million during the second quarter of 2016. There were three indemnifications on loans paid during the second quarter of 2016. Losses recognized on indemnifications and repurchases were insignificant.

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A summary of unresolved deficiency requests from the agencies follows (in thousands, except for number of unresolved deficiency requests):

| June 30, | June 30, |
| :--- | :--- |
| 2016 | 2015 |

Number of unresolved deficiency requests

The activity in the accruals for mortgage losses is summarized as follows (in thousands).

| Three Months <br> Ended | Six Months Ended <br> June 30, |  |  |
| :--- | :--- | :--- | :--- |
| June 30, | 2015 | 2016 | 2015 |
| 2016 | 201,140 | $\$ 7,732$ | $\$ 11,868$ |
| $\$ 8,129$ | $\$ 11,140$ |  |  |
| 2,553 | $(2,216$ | $)$ | 3,903 |$(3,004)$

Beginning balance $\$ 8,129$ \$11,140 \$7,732 \$11,868
Provision for losses 2,553 (2,216 ) 3,903 (3,004 )
Charge-offs, net (2,639) (16 ) (3,592) 44
Ending balance $\quad \$ 8,043 \quad \$ 8,908 \quad \$ 8,043 \quad \$ 8,908$
(7) 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 251,837 Visa Class B shares which are convertible into 415,103 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. Therefore, no value has been currently assigned to the Class B shares and no value may be assigned until the Class B shares are converted into a known number of Class A shares.

On March 3, 2015, the Bank and the Company were named as defendants in a putative class action alleging (1) that the manner in which the Bank posted charges to its consumer deposit accounts was improper from September 1, 2011 through July 8, 2014, the period after which the Bank and BOK Financial had settled a class action respecting a similar claim, and before it made changes to its posting order and (2) that the manner in which the Bank posted charges to its small business deposit accounts was improper from July 9, 2009 through July 8, 2014. The Court has denied the Bank's motion to dismiss the claims as pre-empted by federal law, but limited the plaintiffs' claim to a only breach of contract action involving Oklahoma customers. Discovery is on-going. Based on currently available information, management has established an accrual within a reasonable range of probable losses and anticipates the claims will be resolved without material loss to the Company.

On June 24, 2015, the Bank received a complaint alleging that an employee had colluded with a borrower and an individual in misusing revenues pledged to municipal bonds for which the Bank 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 is cooperating with an investigation by, the Securities and Exchange Commission. 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 the 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, subject to oversight by a court appointed monitor. The terminated employee has filed an action against the Bank alleging the Bank defamed the employee and made a demand for indemnification respecting the SEC investigation which demand the respective boards of directors of the Company and the Bank have denied. The Bank has been advised by its counsel that there is no basis for the employee's action and that any recovery by the employee is remote.

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The Director of the New Mexico Securities Division of the State of New Mexico Regulation and Licensing Department ("the Director") has issued a Notice of Contemplated Action in connection with the purchase of various municipal bonds by the elected County Treasurer of Bernalillo County, New Mexico, from BOK Financial Securities, Inc., the Company's broker-dealer affiliate. The Director seeks to determine whether to seek sanctions, which could include a fine and/or the suspension or revocation of registration, on the grounds that the Company's broker-dealer affiliate violated the suitability rule. The County of Bernalillo, New Mexico, has commenced arbitration pursuant to the Arbitration Rules of FINRA seeking recovery of $\$ 5.6$ million dollars arising out of the purchase. The Company has been advised by its counsel that there is no basis to suggest the Director should make such a determination and that any recovery by the County is remote.

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 two private equity funds 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 determined by the nature of the entity. 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. Variable interest entities are consolidated based on the determination that the Company is the primary beneficiary including 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.

BOKF Equity, LLC, an indirect wholly-owned subsidiary, is the general partner of two consolidated private equity funds ("the Funds"). The Funds provide alternative investment opportunities to certain customers, some of which are related parties, through unaffiliated limited partnerships. These unaffiliated limited partnerships generally invest in distressed assets, asset buy-outs or venture capital companies. As general partner, BOKF Equity, LLC has the power to direct activities that most significantly affect the Funds' performance and contingent obligations to make additional investments totaling $\$ 4.5$ million at June 30, 2016. Substantially all of the obligations are offset by limited partner commitments. The Company does not accrue its contingent liability to fund investments. The Volcker Rule in Title VI of the Dodd-Frank Act will limit both the amount and structure of these types of investments.

Consolidated tax credit investment entities represent the Company's interest in entities earning federal new market tax credits related to qualifying loans. The Company has the power to direct the activities that most significantly impact the variable interest's economic performance of the entity including being the primary beneficiary of or the obligation to absorb losses of the variable interest that could be significant to the variable interest.

Other consolidated alternative investments include entities held under merchant banking authority. While the Company owns a majority of the voting interest in these entities, its ability to manage daily operations is limited by applicable banking regulations. Consolidated other assets includes total tangible assets, identifiable intangible assets and goodwill held by these entities.

The Company also has interests in various unrelated alternative investments generally consisting of unconsolidated limited partnership interests in or loans to entities for which investment return is primarily in the form of tax credits or that invest in distressed real estate loans and properties, energy development, venture capital and other activities. The

Company is prohibited by banking regulations from controlling or actively managing the activities of these investments and the Company's maximum exposure to loss is restricted to its investment balance. The Company's obligation to fund alternative investments is included in Other liabilities in the Consolidated Balance Sheets.

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A summary of consolidated and unconsolidated alternative investments as of June 30, 2016, December 31, 2015 and June 30, 2015 is as follows (in thousands):

June 30, 2016

Loans \begin{tabular}{llll}

Other \& \begin{tabular}{l}
Other Other <br>
assets

 \& 

Non-controlling <br>
liabilities borrowings interests
\end{tabular}

\end{tabular}

Consolidated:
Private equity funds $\$-\quad \$ 20,469 \quad \$-\quad \$-\quad \$ 16,316$
Tax credit entities $10,000 \quad 11,895-10,964 \quad 10,000$
Other - $\quad 35,387 \quad 2,004 \quad 2,272 \quad 7,589$
Total consolidated $\$ 10,000 \$ 67,751 \quad \$ 2,004 \quad \$ 13,236 \quad \$ 33,905$

Unconsolidated:
$\begin{array}{llllll}\text { Tax credit entities } & \$ 32,679 & \$ 102,138 & \$ 30,953 & \$- & \$- \\ \text { Other } & - & 23,439 & 13,767 & - & - \\ \text { Total unconsolidated } & \$ 32,679 & \$ 125,577 & \$ 44,720 & \$- & \$-\end{array}$

Dec. 31, 2015
Loans $\begin{array}{llll}\text { Other } & \begin{array}{l}\text { Other } \\ \text { assets }\end{array} & \text { Other } & \text { Non-controlling } \\ \text { liabilities borrowings }\end{array}$
Consolidated:
Private equity funds $\$-\quad \$ 22,472 \quad \$-\quad \$-\quad \$ 17,823$
Tax credit entities $10,000 \quad 12,206 \quad-\quad 10,964 \quad 10,000$
Other - 40,453 2,198 2,831 9,260
Total consolidated $\$ 10,000 \$ 75,131 \quad \$ 2,198 \quad \$ 13,795 \quad \$ 37,083$

Unconsolidated:
$\begin{array}{llllll}\text { Tax credit entities } & \$ 16,916 & \$ 85,274 & \$ 14,572 & \$- & \$- \\ \text { Other } & - & 15,506 & 6,319 & - & - \\ \text { Total unconsolidated } & \$ 16,916 & \$ 100,780 & \$ 20,891 & \$- & \$-\end{array}$

June 30, 2015
Loans $\begin{array}{llll}\text { Other } & \text { Other } & \text { Other } & \text { Non-controlling } \\ \text { assets } & \text { liabilities borrowings interests }\end{array}$
Consolidated:
Private equity funds $\$-\quad \$ 24,399 \quad \$-\quad \$-\quad \$ 19,278$
Tax credit entities $10,000 \quad 12,516 \quad-\quad 10,964 \quad 10,000$
Other - 41,221 2,738 2,784 7,923
Total consolidated $\quad \$ 10,000 \$ 78,136 \quad \$ 2,738 \quad \$ 13,748 \quad \$ 37,201$

Unconsolidated:
Tax credit entities $\quad \$ 18,147 \$ 91,949 \quad \$ 22,585 \quad \$-\quad \$-$
Other - $\quad 12,184 \quad 3,918 \quad-\quad$ -
Total unconsolidated $\$ 18,147 \$ 104,133 \$ 26,503 \quad \$-\quad \$-$

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## Other Commitments and Contingencies

At June 30, 2016, Cavanal Hill Funds' assets included U.S. Treasury, cash management and tax-free money market funds. Assets of these funds consist of highly-rated, short-term obligations of the U.S. Treasury, corporate issuers and U.S. states and municipalities. The net asset value of units in these funds was $\$ 1.00$ at June 30, 2016. 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 2016 or 2015.
(8) Shareholders' Equity

On July 26, 2016, the Company declared a quarterly cash dividend of $\$ 0.43$ per common share on or about August 26, 2016 to shareholders of record as of August 12, 2016.

Dividends declared were $\$ 0.43$ per share and $\$ 0.86$ per share during the three and six months ended June 30, 2016 and $\$ 0.42$ per share and $\$ 0.84$ during the three and six months ended June 30, 2015.

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. AOCI also includes unrealized gains on AFS securities that were transferred from AFS to investment securities in the third quarter of 2011. Such amounts are being amortized over the estimated remaining life of the security as an adjustment to yield, offsetting the related amortization of premium on the transferred securities. 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. Accumulated losses on the interest rate lock hedge of the 2005 subordinated debt issuance were reclassified into income over the ten-year life of the debt. 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):

Balance, Dec. 31, 2014
Net change in unrealized gain (loss)
Reclassification adjustments included in earnings:

| Interest revenue, Investment securities, Taxable securities | - | (313 | ) | - | - | (313 ) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Interest expense, Subordinated debentures | - | - |  | - | 121 | 121 |
| Net impairment losses recognized in earnings | 92 | - |  | - | - | 92 |
| Gain on available for sale securities, net | (7,760 | ) - |  | - | - | (7,760 ) |
| Other comprehensive income (loss), before income taxes | (7,797 | ) $(313$ | ) | - | 121 | (7,989 |
| Federal and state income taxes ${ }^{1}$ | (3,033 | ) (122 | ) | - | 47 | (3,108 |
| Other comprehensive income (loss), net of income taxes | (4,764 | ) (191 | ) | - | 74 | (4,881 ) |
| Balance, June 30, 2015 | \$54,475 | \$ 185 |  | \$ $(2,868)$ | \$ - | \$51,792 |
| Balance, Dec. 31, 2015 | \$23,284 | \$ 68 |  | \$ (1,765 ) | \$ | \$21,587 |
| Net change in unrealized gain (loss) | 166,566 | - |  | - | - | 166,566 |
| Reclassification adjustments included in earnings: |  |  |  |  |  |  |
| Interest revenue, Investment securities, Taxable securities | - | (112 | ) | - | - | (112 ) |
| Interest expense, Subordinated debentures | - | - |  | - | - | - |
| Net impairment losses recognized in earnings | - | - |  | - | - | - |
| Gain on available for sale securities, net | (9,290 | - |  | - | - | (9,290 ) |
| Other comprehensive income (loss), before income taxes | 157,276 | (112 | ) | - | - | 157,164 |
| Federal and state income taxes ${ }^{1}$ | 61,163 | (44 | ) | - | - | 61,119 |
| Other comprehensive income (loss), net of income taxes | 96,113 | (68 | ) | - | - | 96,045 |
| Balance, June 30, 2016 | \$ 119,397 | \$ - |  | \$ (1,765 ) | \$ - | \$ 117,632 |

${ }^{1}$ Calculated using a 39 percent effective tax rate.

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(9) Earnings Per Share
(In thousands, except share and per share amounts)

Numerator:
Net income attributable to BOK Financial Corp. shareholders
Less: Earnings allocated to participating securities
Numerator for basic earnings per share - income available to common shareholders
Effect of reallocating undistributed earnings of participating securities
Numerator for diluted earnings per share - income available to common shareholders

Denominator:
Weighted average shares outstanding
Less: Participating securities included in weighted average shares outstanding
Denominator for basic earnings per common share
Dilutive effect of employee stock compensation plans ${ }^{1}$
Denominator for diluted earnings per common share
Basic earnings per share
Diluted earnings per share
${ }^{1}$ Excludes employee stock options with exercise prices greater than current market price.

| Three M Ended June 30, | onths | Six Months Ended June 30, |  |
| :---: | :---: | :---: | :---: |
| 2016 | 2015 | 2016 | 2015 |
| \$65,801 | \$ 79,230 | \$ 108,365 | \$ 154,073 |
| 821 | 944 | 1,359 | 1,758 |
| 64,980 | 78,286 | 107,006 | 152,315 |
| - | 1 | - | 2 |
| \$64,980 | \$ 78,287 | \$ 107,006 | \$ 152,317 |

66,069,3928,917,977 66,100,27968,960,043
$823,505 \quad 821,636 \quad 829,065 \quad 784,716$
65,245,8868,096,341 65,271,21458,175,327
$57,039 \quad 114,012 \quad 45,963 \quad 102,059$
65,302,9266,210,353 65,317,17768,277,386
\$1.00 \$ $1.15 \quad \$ 1.64 \quad \$ 2.23$
\$1.00 \$ $1.15 \quad \$ 1.64 \quad \$ 2.23$

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(10) Reportable Segments

Reportable segments reconciliation to the Consolidated Financial Statements for the three months ended June 30, 2016 is as follows (in thousands):

|  | Commercial | Consumer | Wealth <br> Management | Funds Management and Other | BOK <br> Financial Consolidated |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Net interest revenue from external sources | \$118,480 | \$22,349 | \$6,269 | \$ 35,514 | \$ 182,612 |
| Net interest revenue (expense) from internal sources | (14,575 | ) 8,876 | 7,193 | (1,494 | - |
| Net interest revenue | 103,905 | 31,225 | 13,462 | 34,020 | 182,612 |
| Provision for credit losses | 6,852 | 1,318 | (239 | 12,069 | 20,000 |
| Net interest revenue after provision for credit losses | 97,053 | 29,907 | 13,701 | 21,951 | 162,612 |
| Other operating revenue | 51,497 | 60,780 | 75,772 | 833 | 188,882 |
| Other operating expense | 52,594 | 66,146 | 61,414 | 74,571 | 254,725 |
| Net direct contribution | 95,956 | 24,541 | 28,059 | (51,787 | 96,769 |
| Gain on financial instruments, net | - | 15,045 | - | (15,045 | - |
| Change in fair value of mortgage servicing rights | - | (16,283 | ) - | 16,283 | - |
| Gain (loss) on repossessed assets, net | (598 | ) 252 | - | 346 | - |
| Corporate expense allocations | 8,883 | 16,630 | 10,417 | (35,930 | - |
| Net income before taxes | 86,475 | 6,925 | 17,642 | (14,273 ) | 96,769 |
| Federal and state income taxes | 33,639 | 2,694 | 6,863 | (12,699 ) | 30,497 |
| Net income | 52,836 | 4,231 | 10,779 | (1,574 | 66,272 |
| Net income attributable to non-controlling interests | - | - | - | 471 | 471 |
| Net income attributable to BOK Financial Corp. shareholders | \$52,836 | \$4,231 | \$ 10,779 | \$ 2,045 | \$65,801 |
| Average assets | \$ 16,973,663 | \$8,774,881 | \$5,765,390 | \$ 472,108 | \$31,986,042 |
| Average invested capital | 1,167,840 | 266,561 | 240,693 | 1,634,377 | 3,309,471 |

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Reportable segments reconciliation to the Consolidated Financial Statements for the six months ended June 30, 2016 is as follows (in thousands):

|  | Commercial | Consumer | Wealth <br> Management | Funds Management and Other | BOK <br> Financial Consolidated |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Net interest revenue from external sources | \$235,116 | \$43,799 | \$ 12,347 | \$ 73,922 | \$365,184 |
| Net interest revenue (expense) from internal sources | (29,109 | ) 18,229 | 14,857 | (3,977 ) | ) - |
| Net interest revenue | 206,007 | 62,028 | 27,204 | 69,945 | 365,184 |
| Provision for credit losses | 28,423 | 3,020 | (390 ) | ) 23,947 | 55,000 |
| Net interest revenue after provision for credit losses | 177,584 | 59,008 | 27,594 | 45,998 | 310,184 |
| Other operating revenue | 96,605 | 117,139 | 144,518 | (9,636 ) | ) 348,626 |
| Other operating expense | 108,663 | 124,194 | 122,098 | 144,670 | 499,625 |
| Net direct contribution | 165,526 | 51,953 | 50,014 | (108,308 ) | ) 159,185 |
| Gain on financial instruments, net | - | 31,626 | - | (31,626 ) | ) |
| Change in fair value of mortgage servicing rights | - | (44,271 | ) - | 44,271 | - |
| Gain (loss) on repossessed assets, net | (680 | ) 406 | - | 274 | - |
| Corporate expense allocations | 17,627 | 32,608 | 20,952 | (71,187 ) | ) - |
| Net income before taxes | 147,219 | 7,106 | 29,062 | (24,202 ) | ) 159,185 |
| Federal and state income taxes | 57,268 | 2,764 | 11,305 | (19,412 ) | ) 51,925 |
| Net income | 89,951 | 4,342 | 17,757 | (4,790 ) | ) 107,260 |
| Net loss attributable to non-controlling interests | - | - | - | (1,105 ) | ) $(1,105$ |
| Net income attributable to BOK Financial Corp. shareholders | \$89,951 | \$4,342 | \$ 17,757 | \$ (3,685 ) | ) \$108,365 |
| Average assets | \$ 16,971,339 | \$8,731,085 | \$5,665,218 | \$ 379,615 | \$31,747,257 |
| Average invested capital | 1,160,485 | 262,762 | 236,798 | 1,638,864 | 3,298,909 |

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Reportable segments reconciliation to the Consolidated Financial Statements for the three months ended June 30, 2015 is as follows (in thousands):

|  | Commercial | Consumer | Wealth <br> Management | Funds <br> Management and Other | BOK <br> Financial Consolidated |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Net interest revenue from external sources | \$108,620 | \$21,721 | \$6,221 | \$ 39,169 | \$ 175,731 |
| Net interest revenue (expense) from internal sources | (12,643 | ) 6,838 | \$5,487 | 318 | - |
| Net interest revenue | 95,977 | 28,559 | 11,708 | 39,487 | 175,731 |
| Provision for credit losses | (47 | ) 1,614 | (399 | 2,832 | 4,000 |
| Net interest revenue after provision for credit losses | 96,024 | 26,945 | 12,107 | 36,655 | 171,731 |
| Other operating revenue | 45,273 | 59,688 | 70,599 | 725 | 176,285 |
| Other operating expense | 50,801 | 52,511 | 58,277 | 65,524 | 227,113 |
| Net direct contribution | 90,496 | 34,122 | 24,429 | (28,144 ) | ) 120,903 |
| Gain (loss) on financial instruments, net | - | (9,135 | ) (28 | 9,163 | - |
| Change in fair value of mortgage servicing rights | - | 8,010 | - | (8,010 ) | ) - |
| Gain (loss) on repossessed assets, net | (58 | ) 479 | - | (421 | - |
| Corporate expense allocations | 10,782 | 18,953 | 10,187 | (39,922 | - |
| Net income before taxes | 79,656 | 14,523 | 14,214 | 12,510 | 120,903 |
| Federal and state income taxes | 30,986 | 5,649 | 5,529 | (1,534 ) | ) 40,630 |
| Net income | 48,670 | 8,874 | 8,685 | 14,044 | 80,273 |
| Net income attributable to non-controlling interests | - | - | - | 1,043 | 1,043 |
| Net income attributable to BOK Financial Corp. shareholders | \$48,670 | \$8,874 | \$8,685 | \$ 13,001 | \$79,230 |
| Average assets | \$16,262,457 | \$8,970,936 | \$5,319,568 | \$ (88,889 ) | ) \$30,464,072 |
| Average invested capital | 1,028,989 | 269,388 | 224,971 | 1,821,262 | 3,344,610 |

[^9]Reportable segments reconciliation to the Consolidated Financial Statements for the six months ended June 30, 2015 is as follows (in thousands):

|  | Commercial | Consumer | Wealth <br> Management | Funds Management and Other | BOK <br> Financial Consolidated |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Net interest revenue from external sources | \$209,795 | \$42,440 | \$ 11,597 | \$ 79,625 | \$343,457 |
| Net interest revenue (expense) from internal sources | (25,278 | ) 13,658 | \$ 11,566 | 54 | - |
| Net interest revenue | 184,517 | 56,098 | 23,163 | 79,679 | 343,457 |
| Provision for credit losses | (8,949 | ) 3,036 | (747 | 10,660 | 4,000 |
| Net interest revenue after provision for credit losses | 193,466 | 53,062 | 23,910 | 69,019 | 339,457 |
| Other operating revenue | 87,720 | 120,883 | 137,559 | (3,860 | ) 342,302 |
| Other operating expense | 99,947 | 104,817 | 112,757 | 129,857 | 447,378 |
| Net direct contribution | 181,239 | 69,128 | 48,712 | (64,698 | 234,381 |
| Gain (loss) on financial instruments, net | - | (5,577 | ) (28 | 5,605 | - |
| Change in fair value of mortgage servicing rights | - | (512 | ) - | 512 | - |
| Gain (loss) on repossessed assets, net | (14 | ) 557 | - | (543 | - |
| Corporate expense allocations | 22,023 | 37,155 | 20,170 | (79,348 | - |
| Net income before taxes | 159,202 | 26,441 | 28,514 | 20,224 | 234,381 |
| Federal and state income taxes | 61,930 | 10,286 | 11,092 | (4,294 | 79,014 |
| Net income | 97,272 | 16,155 | 17,422 | 24,518 | 155,367 |
| Net income attributable to non-controlling interests | - | - | - | 1,294 | 1,294 |
| Net income attributable to BOK Financial Corp. shareholders | \$97,272 | \$16,155 | \$ 17,422 | \$ 23,224 | \$ 154,073 |
| Average assets | \$16,266,341 | \$8,885,400 | \$5,385,266 | \$ (318,256 ) | ) $\$ 30,218,751$ |
| Average invested capital | 1,013,117 | 270,738 | 224,247 | 1,823,406 | 3,331,508 |

[^10]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. 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 three and six months ended June 30, 2016 and 2015, respectively. Transfers between significant other observable inputs and significant unobservable inputs during the three and six months ended June 30 , 2016 and 2015 are included in the summary of changes in recurring fair values measured using unobservable 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 June 30, 2016, December 31, 2015 or June 30, 2015.

[^11]Assets and Liabilities Measured at Fair Value on a Recurring Basis
The fair value of financial assets and liabilities measured on a recurring basis was as follows as of June 30, 2016 (in thousands):


Assets:
Trading securities:
U.S. government agency debentures
U.S. government agency residential mortgage-backed securities

Municipal and other tax-exempt securities
Other trading securities
Total trading securities
Available for sale securities:
U.S. Treasury

Municipal and other tax-exempt
U.S. government agency residential mortgage-backed securities

Privately issued residential mortgage-backed securities
Commercial mortgage-backed securities guaranteed by U.S.
government agencies
Other debt securities

| $\$ 18,909$ | $\$$ | $-\$ 18,909$ | $\$$ |
| :--- | :--- | :--- | :--- |
| 122,306 | - | 122,306 | - |
| 52,721 | - | 52,721 | - |
| 17,686 | - | 17,686 | - |
| 211,622 | - | 211,622 | - |
|  |  |  |  |
| 1,004 | 1,004 | - | - |
| 50,262 | - | 40,662 | 9,600 |
| $5,700,268$ | - | $5,700,268$ | - |
| 126,313 | - | 126,313 | - |
| $2,911,946-$ | $2,911,946$ | - |  |
| 4,151 | - | - | 4,151 |
| 17,931 | - | 17,931 | - |
| 18,814 | 3,785 | 15,029 | - |
| $8,830,689$ | 4,789 | $8,812,149$ | 13,751 |
|  |  |  |  |
| 237,959 | - | 237,959 | - |
| 25,306 | 25,306 | - | - |
| 263,265 | 25,306 | 237,959 | - |
| 430,728 | - | 420,979 | 9,749 |
| 190,747 | - | - | 190,747 |
| 883,673 | 7,246 | 876,427 | - |
| 719,159 | 4,808 | 714,351 | - |

Perpetual preferred stock
Equity securities and mutual funds
Total available for sale securities
Fair value option securities:
U.S. government agency residential mortgage-backed securities
U.S. Treasury

Total fair value option securities
Residential mortgage loans held for sale
Mortgage servicing rights ${ }^{1}$
Derivative contracts, net of cash collateral ${ }^{2}$
Liabilities:
Derivative contracts, net of cash collateral ${ }^{2}$
$719,159 \quad 4,808 \quad 714,351 \quad-$
${ }_{1}$ 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 6, Mortgage Banking Activities.
See Note 3 for detail of fair value of derivative contracts by contract type. Derivative contracts in asset positions that were valued based on quoted prices in active markets for identical instruments (Level 1) are primarily
${ }^{2}$ exchange-traded energy and agricultural derivative contacts, net of cash margin. Derivative contacts in liability positions that were valued using quoted prices in active markets for identical instruments are exchange-traded interest rate and energy derivative contracts, net of cash margin.

The fair value of financial assets and liabilities measured on a recurring basis was as follows as of December 31, 2015 (in thousands):


Assets:
Trading securities:
U.S. government agency debentures
U.S. government agency residential mortgage-backed securities

Municipal and other tax-exempt securities
Other trading securities
Total trading securities
Available for sale securities:
U.S. Treasury

Municipal and other tax-exempt
U.S. government agency residential mortgage-backed securities

Privately issued residential mortgage-backed securities
Commercial mortgage-backed securities guaranteed by U.S.
government agencies
Other debt securities
Perpetual preferred stock
Equity securities and mutual funds
Total available for sale securities
Fair value option securities:
U.S. government agency residential mortgage-backed securities
U.S. Treasury

Total fair value option securities
Residential mortgage loans held for sale
Mortgage servicing rights ${ }^{1}$
Derivative contracts, net of cash collateral ${ }^{2}$
Liabilities:
Derivative contracts, net of cash collateral ${ }^{2}$

| $\$ 61,295$ | $\$$ | $-\$ 61,295$ | $\$$ | - |
| :--- | :--- | :--- | :--- | :--- |
| 10,989 | - | 10,989 | - |  |
| 31,901 | - | 31,901 | - |  |
| 18,219 | - | 18,219 | - |  |
| 122,404 | - | 122,404 | - |  |
|  |  |  |  |  |
| 995 | 995 | - | - |  |
| 56,817 | - | 47,207 | 9,610 |  |
| $5,898,351-$ | $5,898,351$ | - |  |  |
| 139,118 | - | 139,118 | - |  |
| $2,905,796$ | - | $2,905,796$ | - |  |
| 4,151 | - | - | 4,151 |  |
| 19,672 | - | 19,672 | - |  |
| 17,833 | 3,265 | 14,568 | - |  |
| $9,042,733$ | 4,260 | $9,024,712$ | 13,761 |  |
|  |  |  |  |  |
| 444,217 | - | 444,217 | - |  |
| - | - | - | - |  |
| 444,217 | - | 444,217 | - |  |
| 308,439 | - | 300,565 | 7,874 |  |
| 218,605 | - | - | 218,605 |  |
| 586,270 | 38,530 | 547,740 | - |  |
| 581,701 | - | 581,701 | - |  |

${ }_{1}$ 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 6, Mortgage Banking Activities.
See Note 3 for detail of fair value of derivative contracts by contract type. Derivative contracts based on quoted prices in active markets for identical instruments (Level 1) are exchange-traded energy derivative contacts, net of
2 cash margin. Derivative contracts in liability positions that were valued using quoted prices in active markets for identical instruments (Level 1) are exchange-traded interest rate and agricultural derivative contracts, net of cash margin.

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The fair value of financial assets and liabilities measured on a recurring basis was as follows as of June 30, 2015 (in thousands):


Assets:
Trading securities:
U.S. government agency debentures
U.S. government agency residential mortgage-backed securities

Municipal and other tax-exempt securities
Other trading securities
Total trading securities
Available for sale securities:
U.S. Treasury

Municipal and other tax-exempt
U.S. government agency residential mortgage-backed securities

Privately issued residential mortgage-backed securities
Commercial mortgage-backed securities guaranteed by U.S.
government agencies
Other debt securities
Perpetual preferred stock
Equity securities and mutual funds
Total available for sale securities
Fair value option securities:
U.S. government agency residential mortgage-backed securities
U.S. Treasury

Total fair value option securities
Residential mortgage loans held for sale
Mortgage servicing rights ${ }^{1}$
Derivative contracts, net of cash collateral ${ }^{2}$
Liabilities:
Derivative contracts, net of cash collateral ${ }^{2}$


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 6, Mortgage Banking Activities.
See Note 3 for detail of fair value of derivative contracts by contract type. Derivative contracts based on quoted prices in active markets for identical instruments (Level 1) are exchange-traded energy derivative contacts, net of cash margin. Derivative contracts in liability positions that were valued using quoted prices in active markets for identical instruments (Level 1) were exchange-traded agricultural derivative contracts.

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 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 references 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 assesses the appropriateness of these inputs monthly.

## 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. The reduction in fair value is recognized in earnings during the current period.

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. The change in the fair value would be recognized in earnings in the current period.
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 residential mortgage loans held for sale are based upon quoted market prices of such loans sold in securitization transactions, including related unfunded loan commitments and forward sales contracts. The fair value of mortgage loans that were unable to be sold to U.S. government agencies were determined using quoted prices of loans that are sold in securitization transactions with a liquidity discount applied.

Other Assets - Private Equity Funds
The fair value of the portfolio investments of the Company's two private equity funds is based upon net asset value reported by the underlying funds, as adjusted by the general partner when necessary, as a practical expedient to measure the fair value of the investments in the underlying funds. The Company's private equity funds provide customers alternative investment opportunities as limited partners of the funds. As fund of funds, the private equity
funds invest in other limited partnerships or limited liability companies that invest substantially all of their assets in U.S. companies pursuing diversified investment strategies including early-stage venture capital, distressed securities and corporate or asset buy-outs. Private equity fund assets are long-term, illiquid investments. No secondary market exists for these assets. The private equity funds typically invest in funds that provide no redemption rights to investors. The fair value of the private equity investments may only be realized through cash distributions from the underlying funds.

See Note 7 for disclosure of the fair value of the private equity funds using the net asset value per share of the underlying investments, as a practical expedient, included in Other assets in the Consolidated Balance Sheets of the Company.

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The following represents the changes for the three months ended June 30, 2016 related to assets measured at fair value on a recurring basis using significant unobservable inputs (in thousands):


The following represents the changes for the six months ended June 30, 2016 related to assets measured at fair value on a recurring basis using significant unobservable inputs (in thousands):

| Available for Sale Securities |  |
| :---: | :---: |
| Municipal <br> and Othe <br> other debt <br> tax-exempt ${ }^{\text {securities }}$ | Residential mortgage loans held for sale |
| \$9,610 \$ 4,151 | \$ 7,874 |
| - - | 3,540 |
| - - | - |
| - - | (1,362 ) |
| - - | - |
| - - | (303 ) |
| (10 ) - | - |
| \$9,600 \$ 4,151 | \$ 9,749 |

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The following represents the changes for the three months ended June 30, 2015 related to assets measured at fair value on a recurring basis using significant unobservable inputs (in thousands):

| Available for Sale <br> Securities |  |  |
| :--- | :--- | :--- |
| Municipal <br> and <br> other | debt <br> tax-exempt <br> securities | Residential <br> mortgage <br> loans held <br> for sale |
| $\$ 9,623$ | $\$ 4,150$ | $\$ 6,870$ |
| - | - | 944 |
| - | - | - |
| - | - | - |
| - | - | - |
| - | - | 159 |
| $(6$ | - | - |
| $\$ 9,617$ | $\$ 4,150$ | $\$ 7,973$ |

The following represents the changes for the six months ended June 30, 2015 related to assets measured at fair value on a recurring basis using significant unobservable inputs (in thousands):
$\left.\begin{array}{llll} & \begin{array}{l}\text { Available for Sale } \\ \text { Securities }\end{array} & \\ & \begin{array}{l}\text { Municipal Other } \\ \text { and other debt } \\ \text { tax-exempsecurities }\end{array} & \begin{array}{l}\text { Residential } \\ \text { mortgage } \\ \text { loans held }\end{array} \\ \text { for sale }\end{array}\right\}$

[^12]A summary of quantitative information about assets measured at fair value on a recurring basis using Significant Unobservable Inputs (Level 3) as of June 30, 2016 follows (in thousands):

| Par | Amortized <br> Cost/Unpaid Fair | Valuation |  | Range |
| :--- | :--- | :--- | :--- | :--- |
| Value | Unobservable Input | (Weighted <br> (rincipal <br> Balance | Value | Technique(s) |

Available for sale securities

| Municipal and other tax-exempt securities | \$10,370 | \$ 10,312 | \$9,600 | Discounted cash flows ${ }^{1}$ | Interest rate spread | $\begin{array}{ll} 5.34 \%-5.64 \% & 2 \\ (5.60 \%) & \\ 90.00 \%-93.28 \% & 3 \\ (92.58 \%) \end{array}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Other debt | 4,400 | 4,400 | 4,151 | Discounted cash flows |  | $\begin{aligned} & 5.51 \%-5.96 \% \\ & (5.91 \%) \end{aligned}$ |
| securities | 4,400 |  | 4,151 | Discounted cash flows | Interest rate spread | 94.32\%-94.34 |

Residential
mortgage loans N/A 10,518
held for sale

Quoted prices of loans Liquidity discount sold in securitization applied to the market value of a mortgage loans $92.69 \%$ qualifying for sale to U.S. government agencies.

Discounted cash flows developed using discount rates primarily based on reference to interest rate spreads for
${ }^{1}$ comparable securities of similar duration and credit rating as determined by the nationally-recognized rating agencies, adjusted for lack of trading volume.
${ }_{2}$ Interest rate yields used to value investment grade tax-exempt securities represent a spread of 474 to 513 basis points over average yields for comparable tax-exempt securities.
${ }^{3}$ Represents fair value as a percentage of par value.
Interest rate yields used to value investment grade taxable securities based on comparable short-term taxable securities which are generally yielding less than 1 percent.

A summary of quantitative information about Recurring Fair Value Measurements based on Significant Unobservable Inputs (Level 3) as of December 31, 2015 follows (in thousands):

|  | Amortized |  |  | Range |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Par | Cost/Unpaid Fair | Valuation | Unobservable Input | (Weighted <br> (Value <br> Principal | Value |
|  | Technique(s) |  | Average) |  |  |


| Available for sale securities |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Municipal and other |  |  |  |  |  | $\begin{aligned} & 5.47 \%-5.77 \% \\ & (5.73 \%) \end{aligned}$ |
| tax-exempt securities | \$10,370 | \$ 10,311 | \$9,610 | Discounted cash flows ${ }^{1}$ | Interest rate spread | $\begin{aligned} & 92.34 \%-92.93 \% \\ & (92.67 \%) \end{aligned}$ |
|  |  |  |  |  |  | 5.80\%-5.92\% |
| Other debt securities | 4,400 | 4,400 | 4,151 | Discounted cash flows ${ }^{1}$ | Interest rate spread | (5.90\%) |

Quoted prices of loans Liquidity discount
Residential
mortgage loans N/A 8,395 held for sale


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A summary of quantitative information about Recurring Fair Value Measurements based on Significant Unobservable Inputs (Level 3) as of June 30, 2015 follows (in thousands):

| Par | Amortized Fair |  |  | Range <br> Value <br> Cost |
| :--- | :--- | :--- | :--- | :--- |
|  | Value |  |  |  | Valuation Technique(s) | Unobservable Input | (Weighted <br> Average) |
| :--- | :--- |

Available for sale securities
Municipal and other tax-exempt securities

Residential mortgage loans N/A 8,384 held for sale

| Other debt | 4,400 | 4,400 | 4,150 |
| :--- | :--- | :--- | :--- |
| Discounted cash flows ${ }^{1}$ Interest rate spread |  |  |  |

\$ 10,370 \$ 10,310 \$9,617 Discounted cash flows ${ }^{1}$ Interest rate spread

4,150
Discounted cash flows

Range
(Weighted
Average)

| $5.11 \%-5.41 \%$ | 2 |
| :--- | ---: |
| $(5.37 \%)$ |  |
| $92.50 \%-92.85 \%$ | 3 |
| $(92.74 \%)$ |  |
| $4.36 \%-5.69 \%$ | 4 |
| $(5.54 \%)$ |  |
| $94.25 \%-94.33$ | 3 |
| $(94.32 \%)$ |  |

(5.37\%)
92.50\%-92.85\% 3
(92.74\%)
(5.54\%)
94.25\%-94.33 3
(94.32\%)

| Quoted prices of loans | Liquidity discount applied <br> sold in securitization |
| :--- | :--- |
| to the market value of a |  |
| transactions, with a | mortgage loans qualifying 95.09\% |
| liquidity discount | for sale to U.S. |
| applied | government agencies. |

Quoted prices of loans Liquidity discount applied to the market value of a mortgage loans qualifying $95.09 \%$ for sale to U.S. government agencies.

Discounted cash flows developed using discount rates primarily based on reference to interest rate spreads for
${ }^{1}$ comparable securities of similar duration and credit rating as determined by the nationally-recognized rating agencies, adjusted for lack of trading volume.
${ }_{2}$ Interest rate yields used to value investment grade tax-exempt securities represent a spread of 502 to 527 basis points over average yields for comparable tax-exempt securities.
${ }^{3}$ Represents fair value as a percentage of par value.
${ }_{4}$ Interest rate yields used to value investment grade taxable securities based on comparable short-term taxable securities which are generally yielding less than 1 percent.

Fair Value of Assets and Liabilities Measured on a Non-Recurring Basis
Assets measured at fair value on a non-recurring basis include 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) during the period. The carrying value represents only those assets with a balance at June 30, 2016 for which the fair value was adjusted during the three and six months ended June 30, 2016:

Fair Value Adjustments for the Three Months
Carrying Value at June 30,
2016

Ended
June 30, 2016
Recognized in:
Qufitgulificant Significant Gross Net losses Priotker Unobservable charge-offifs charge-offand Observable Inputs against expenses of against expenses of

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|  | in Inputs |  | allowancepossessed |  | allowancerepossessed |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Active |  |  | asset | for loan | assets, net |
|  | Markets |  | loan |  | losses |  |
|  | for |  | losses |  |  |  |
|  | Identical |  |  |  |  |  |
|  | Instruments |  |  |  |  |  |
| Impaired loans | \$ \$ 634 | \$ 42,342 | \$7,041 | \$ | -\$29,186 | \$ |
| Real estate and other repossessed assets | -5,709 | 1,693 | - | 751 | - | 1,068 |

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The following represents the carrying value of assets measured at fair value on a non-recurring basis (and related losses) during the period. The carrying value represents only those assets with a balance at June 30, 2015 for which the fair value was adjusted during the three and six months ended June 30, 2015:

Fair Value Adjustments for the
Three Months


The fair value of collateral-dependent impaired loans secured by real estate 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 the same or 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 June 30, 2016 follows (in thousands):

|  | Fair <br> Value | Valuation <br> Technique(s) | Unobservable Input |
| :--- | :--- | :--- | :--- | :--- |

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 June 30, 2015 follows (in thousands):

|  | Fair <br> Value | Valuation <br> Technique(s) | Unobservable Input | Range <br> (Weighted |
| :--- | :--- | :--- | :--- | :--- |
| Average) |  |  |  |  |

1 Marketability adjustments include consideration of estimated costs to sell which is approximately $10 \%$ of the fair value.

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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 basis as of June 30, 2016 (dollars in thousands):

Cash and due from banks
Interest-bearing cash and cash equivalents
Trading securities:
U.S. government agency debentures
U.S. government agency residential mortgage-backed securities
Municipal and other tax-exempt securities
Other trading securities
Total trading securities
Investment securities:
Municipal and other tax-exempt
U.S. government agency residential mortgage-backed securities
Other debt securities
Total investment securities
Available for sale securities:
U.S. Treasury

Municipal and other tax-exempt
U.S. government agency residential mortgage-backed securities
Privately issued residential mortgage-backed securities
Commercial mortgage-backed securities guaranteed by U.S.
government agencies
Other debt securities
Perpetual preferred stock
Equity securities and mutual funds
Total available for sale securities
Fair value option securities:
U.S. government agency residential mortgage-backed securities
U.S. Treasury

Total fair value option securities
Residential mortgage loans held for sale
Loans:
Commercial
Commercial real estate
Residential mortgage

| Carrying <br> Value | Estimated <br> Fair <br> Value | Quoted <br> Prices in <br> Active <br> Markets for Identical Instruments (Level 1) | Significant |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  | Other | Significant |
|  |  |  | Observablenobservable |  |
|  |  |  | Inputs | Inputs |
|  |  |  | (Level | (Level 3) |
|  |  |  | $2)$ |  |
| \$498,713 | \$ 498,713 | \$ 498,713 | \$ | -\$ |
| 1,907,838 | 1,907,838 | 1,907,838 | - | - |
|  |  |  | - |  |
| 18,909 | 18,909 | - | 18,909 |  |
| 122,306 | 122,306 | - | $122,306 \text { - }$ |  |
| 52,721 | 52,721 | - | 52,721 - |  |
| 17,686 | 17,686 | - | 17,686 - |  |
| 211,622 | 211,622 | - | 211,622 - |  |
| 334,551 | 340,700 | - | 340,700 - |  |
| 23,750 | 25,233 | - | 25,233 - |  |
| 202,410 | 233,129 | - | 233,129 - |  |
| 560,711 | 599,062 | - | 599,062 - |  |
| 1,004 | 1,004 | 1,004 | $-\quad-$ |  |
| 50,262 | 50,262 | - | $40,662 \quad 9,600$ |  |
| 5,700,268 | 5,700,268 | - | 5,700,268 - |  |
| 126,313 | 126,313 | - | 126,313 - |  |
| 2,911,946 | 2,911,946 | - | 2,911,946- |  |
| 4,151 | 4,151 | - | - | 4,151 |
| 17,931 | 17,931 | - | 17,931 | - |
| 18,814 | 18,814 | 3,785 | 15,029 | - |
| 8,830,689 | 8,830,689 | 4,789 | 8,812,14913,751 |  |
| 237,959 | 237,959 | - | 237,959 - |  |
| 25,306 | 25,306 | 25,306 | - | - |
| 263,265 | 263,265 | 25,306 | 237,959 | - |
| 430,728 | 430,728 | - | 420,979 | 9,749 |
| 10,356,437 | 10,172,70 | - | - | 10,172,701 |
| 3,581,966 | 3,563,378 | - | - | 3,563,378 |
| 1,880,923 | 1,913,208 | - | - | 1,913,208 |

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| Personal | 587,423 | 582,353 | - | - | 582,353 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Total loans | $16,406,749$ | $16,231,640$ | - | - | $16,231,640$ |
| Allowance for loan losses | $(243,259$ | $)$ | - | - | - |
| Loans, net of allowance | $16,163,490$ | $16,231,640$ | - | - | $16,231,640$ |
| Mortgage servicing rights | 190,747 | 190,747 | - | - | 190,747 |
| Derivative instruments with positive fair value, net of cash | 883,673 | 883,673 | 7,246 | 876,427 | - |
| margin | $18,512,740$ | $18,512,740-$ | - | $18,512,740$ |  |
| Deposits with no stated maturity | $2,247,061$ | $2,252,212$ | - | - | $2,252,212$ |
| Time deposits | $6,360,199$ | $6,342,885$ | - | - | $6,342,885$ |
| Other borrowed funds | 371,812 | 371,808 | - | 150,234 | 221,574 |
| Subordinated debentures | 719,159 | 719,159 | 4,808 | 714,351 | - |

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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 basis as of December 31, 2015 (dollars in thousands):

Cash and due from banks
Interest-bearing cash and cash equivalents
Trading securities:
U.S. government agency debentures
U.S. government agency residential mortgage-backed securities
Municipal and other tax-exempt securities
Other trading securities
Total trading securities
Investment securities:
Municipal and other tax-exempt
U.S. government agency residential mortgage-backed securities
Other debt securities
Total investment securities
Available for sale securities:
U.S. Treasury

| Carrying <br> Value | Estimated <br> Fair <br> Value | Quoted <br> Prices in <br> Active <br> Markets for <br> Identical <br> Instruments <br> (Level 1) |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  | Signific Other | ant Significant |
|  |  |  | Observablenobservable |  |
|  |  |  | Inputs | Inputs |
|  |  |  | (Level | (Level 3) |
|  |  |  | 2) |  |
| \$ 573,699 | \$ 573,699 | \$ 573,699 | \$ | -\$ |
| 2,069,900 | 2,069,900 | 2,069,900 | - | - |
|  |  |  |  |  |
| 61,295 | 61,295 | - | 61,295 - |  |
| 10,989 | 10,989 | - |  |  |
| 31,901 | 31,901 | - | 31,901 - |  |
| 18,219 | 18,219 | - | 18,219 |  |
| 122,404 | 122,404 | - | 122,404 - |  |
| 365,258 | 368,910 | - | 368,910 - |  |
| 26,833 | 27,874 | - | 27,874 - |  |
| 205,745 | 232,375 | - | 232,375 - |  |
| 597,836 | 629,159 | - | 629,159 - |  |
| 995 | 995 | 995 | $-\quad-$ |  |
| 56,817 | 56,817 | - | $47,207 \quad 9,610$ |  |
| 5,898,351 | 5,898,351 | - | 5,898,351- |  |
| 139,118 | 139,118 | - | 139,118 - |  |
| 2,905,796 | 2,905,796 | - | 2,905,796- |  |
| 4,151 | 4,151 | - | - | 4,151 |
| 19,672 | 19,672 | - | 19,672 | - |
| 17,833 | 17,833 | 3,265 | 14,568 | - |
| 9,042,733 | 9,042,733 | 4,260 | 9,024,71213,761 |  |
| 444,217 | 444,217 | - | 444,217 - |  |
| - | - | - | $\overline{444,217}-$ |  |
| 444,217 | 444,217 | - |  |  |
| 308,439 | 308,439 | - | 300,565 7,874 |  |
| 10,252,531 | 10,053,952 | - | - | 10,053,952 |
| 3,259,033 | 3,233,476 | - | - | 3,233,476 |
| 1,876,893 | 1,902,976 | - | - | 1,902,976 |
| 552,697 | 549,068 | - | - | 549,068 |
| 15,941,154 | 15,739,472 | - | - | 15,739,472 |


| Allowance for loan losses | (225,524 | - | - | - | - |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Loans, net of allowance | 15,715,630 | 15,739,472 | - | - | 15,739,472 |
| Mortgage servicing rights | 218,605 | 218,605 | - | - | 218,605 |
| Derivative instruments with positive fair value, net of cash margin | 586,270 | 586,270 | 38,530 | 547,740 | - |
| Deposits with no stated maturity | 18,682,094 | 18,682,09 |  | - | 18,682,094 |
| Time deposits | 2,406,064 | 2,394,562 | - | - | 2,394,562 |
| Other borrowed funds | 6,051,515 | 5,600,932 | - | - | 5,600,932 |
| Subordinated debentures | 226,350 | 223,758 | - | - | 223,758 |
| Derivative instruments with negative fair value, net of cash margin | 581,701 | 581,701 | - | 581,701 | - |

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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 basis as of June 30, 2015 (dollars in thousands):

Cash and due from banks
Interest-bearing cash and cash equivalents
Trading securities:
U.S. government agency debentures
U.S. government agency residential mortgage-backed securities
Municipal and other tax-exempt securities
Other trading securities
Total trading securities
Investment securities:
Municipal and other tax-exempt
U.S. government agency residential mortgage-backed securities
Other debt securities
Total investment securities
Available for sale securities:
U.S. Treasury

Municipal and other tax-exempt
U.S. government agency residential mortgage-backed securities
Privately issued residential mortgage-backed securities
Commercial mortgage-backed securities guaranteed by U.S. government agencies
Other debt securities
Perpetual preferred stock
Equity securities and mutual funds
Total available for sale securities
Fair value option securities:
U.S. government agency residential mortgage-backed securities
U.S. Treasury

Total fair value option securities
Residential mortgage loans held for sale
Loans:
Commercial
Commercial real estate
Residential mortgage
Personal
Total loans

| CarryingValue | Estimated <br> Fair <br> Value | Quoted <br> Prices in <br> Active <br> Markets for <br> Identical <br> Instruments <br> (Level 1) | Significant |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  | Other | Significant |
|  |  |  | Observabllenobservable |  |
|  |  |  |  | Inputs |
|  |  |  | (Level | (Level 3) |
|  |  |  | 2) |  |
| \$443,577 | \$ 443,577 | \$ 443,577 | \$ | -\$ |
| 2,119,072 | 2,119,072 | 2,119,072 | - | - |
| 40,212 | 40,212 | - | 40,212 | - |
| 23,090 | 23,090 | - | 23,090 | - |
| 62,801 | 62,801 | - | $62,801 \quad-$ |  |
| 32,106 | 32,106 | - | $32,106 \quad-$ |  |
| 158,209 | 158,209 | - | 158,209 — |  |
| 389,824 | 392,367 | - | 392,367 - |  |
| 30,867 | 32,133 | - | 32,133 - |  |
| 204,973 | 217,542 | - | 217,542 - |  |
| 625,664 | 642,042 | - | 642,042 - |  |
| 1,000 | 1,000 | 1,000 | $-\quad-$ |  |
| 61,624 | 61,624 | - | $52,007 \quad 9,617$ |  |
| 6,339,449 | 6,339,449 | - | 6,339,449 - |  |
| 154,150 | 154,150 | - | 154,150 - |  |
| 2,401,364 | 2,401,364 | - | 2,401,364 |  |
| 4,150 | 4,150 | - | - | 4,150 |
| 19,648 | 19,648 | - | 19,648 | - |
| 18,732 | 18,732 | 4,216 | 14,516 | - |
| 9,000,117 | 9,000,117 | 5,216 | 8,981,13413,767 |  |
| 436,324 | 436,324 | - | 436,324 - |  |
| - | - | - | - | - |
| 436,324 | 436,324 | - | 436,324 | 4 |
| 502,571 | 502,571 | - | 494,598 | 7,973 |
| 9,775,721 | 9,605,218 | - | - | 9,605,218 |
| 3,033,497 | 3,011,614 | - | - | 3,011,614 |
| 1,884,728 | 1,913,482 | - | - | 1,913,482 |
| 430,190 | 426,983 | - | - | 426,983 |
| 15,124,136 | 14,957,297 | - | - | 14,957,297 |


| Allowance for loan losses | $(201,087$ | - | - | - | - |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Loans, net of allowance | $14,923,049$ | $14,957,297-$ | - | $14,957,297$ |  |
| Mortgage servicing rights | 198,694 | 198,694 | - | - | 198,694 |
| Derivative instruments with positive fair value, net of cash | 630,435 | 630,435 | 11,484 | 618,951 | - |
| margin | $18,435,350$ | $18,435,350$ | - | - | $18,435,350$ |
| Deposits with no stated maturity | $2,624,379$ | $2,618,625$ | - | - | $2,618,625$ |
| Time deposits | $5,108,872$ | $5,088,104$ | - | - | $5,088,104$ |
| Other borrowed funds | 226,278 | 222,842 | - | - | 222,842 |
| Subordinated debentures | 620,277 | 620,277 | 1,080 | 619,197 | - |
| Derivative instruments with negative fair value, net of cash <br> margin |  |  |  |  |  |

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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.

The following methods and assumptions were used in estimating the fair value of these financial instruments:
Cash and Cash Equivalents
The book value reported in the consolidated balance sheets for cash and short-term instruments approximates those assets' fair values.

Securities
The fair values of securities are generally based on Significant Other Observable Inputs such as quoted prices for comparable instruments or interest rates and credit spreads, yield curves, volatilities, prepayment speeds and loss severities.

Loans
The fair value of loans, excluding loans held for sale, are based on discounted cash flow analyses using interest rates and credit and liquidity spreads currently being offered for loans with similar remaining terms to maturity and risk, adjusted for the impact of interest rate floors and ceilings which are classified as Significant Unobservable Inputs. The fair values of loans were estimated to approximate their discounted cash flows less loan loss allowances allocated to these loans of $\$ 217$ million at June 30, 2016, $\$ 195$ million at December 31, 2015 and $\$ 172$ million at June 30, 2015. A summary of assumptions used in determining the fair value of loans follows:

| Range of | Average <br> Contractual <br> Re-pricing |
| :--- | :--- |
| Yields | Discount <br> (in years) |

June 30, 2016:
Commercial $0.38 \%-30.00 \% \quad 0.69 \quad 0.55 \%-3.68 \%$
Commercial real estate $0.38 \%-18.00 \% \quad 0.73 \quad 0.80 \%-3.65 \%$
Residential mortgage $1.70 \%-18.00 \% \quad 1.97 \quad 1.25 \%-3.75 \%$
Personal $\quad 0.25 \%-21.00 \% \quad 0.35 \quad 0.71 \%-3.91 \%$

December 31, 2015:
Commercial $0.25 \%-30.00 \% \quad 0.62 \quad 0.52 \%-4.34 \%$
Commercial real estate $0.38 \%-18.00 \% \quad 0.73 \quad 0.95 \%-3.93 \%$
Residential mortgage $1.67 \%-18.00 \% \quad 2.42 \quad 0.86 \%-4.25 \%$
Personal $\quad 0.38 \%-21.00 \% \quad 0.37 \quad 1.19 \%-4.11 \%$
June 30, 2015:
Commercial $\quad 0.19 \%-30.00 \% \quad 0.63 \quad 0.49 \%-4.42 \%$
Commercial real estate $0.38 \%-18.00 \% \quad 0.76 \quad 1.01 \%-3.77 \%$
Residential mortgage $1.25 \%-18.00 \% \quad 2.20 \quad 0.97 \%-3.99 \%$
Personal $\quad 0.38 \%-21.00 \% \quad 0.42 \quad 0.78 \%-4.16 \%$
Deposits

The fair values of time deposits are based on discounted cash flow analyses using interest rates currently being offered on similar transactions which are considered Significant Unobservable Inputs. Estimated fair value of deposits with no stated maturity, which includes demand deposits, transaction deposits, money market deposits and savings accounts, is equal to the amount payable on demand. Although market premiums paid reflect an additional value for these low cost deposits, adjusting fair value for the expected benefit of these deposits is prohibited. Accordingly, the positive effect of such deposits is not included in the tables above.

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A summary of assumptions used in determining the fair value of time deposits follows:

| Range of | Average |
| :--- | :--- |
| Contractual | Re-pricing <br> (in years) |
| Yields | Rate |

June 30, $2016 \quad 0.03 \%-9.64 \% \quad 2.15 \quad 1.16 \%-1.43 \%$
December 31, $20150.02 \%-5.50 \% 1.78 \quad 1.11 \%-1.57 \%$
June 30, $2015 \quad 0.02 \%-9.64 \% 1.68 \quad 0.80 \%-1.30 \%$

## Other Borrowings and Subordinated Debentures

The fair values of these instruments are based upon discounted cash flow analyses using interest rates currently being offered on similar instruments which are considered Significant Unobservable Inputs. A summary of assumptions used in determining the fair value of other borrowing and subordinated debentures follows:

| Range of | Average |
| :--- | :--- |
| Contractual | Re-pricing <br> (in years) |
| Discount |  |
| Rate |  |

June 30, 2016:
Other borrowed funds $0.25 \%-3.28 \% \quad 0.02 \quad 0.30 \%-2.92 \%$
Subordinated debentures $1.32 \%-5.38 \% \quad 8.35 \quad 2.16 \%-5.38 \%$

December 31, 2015:
Other borrowed funds $0.25 \%-3.40 \% \quad 0.00 \quad 0.20 \%-2.89 \%$
Subordinated debentures $1.05 \% \quad 1.37 \quad 2.12 \%$
June 30, 2015:
Other borrowed funds $0.25 \%-5.07 \% \quad 0.00 \quad 0.08 \%-2.65 \%$
Subordinated debentures $0.96 \quad \% \quad 1.88 \quad 1.79 \%$

## Off-Balance Sheet Instruments

The fair values of commercial loan commitments are based on fees currently charged to enter into similar agreements, taking into account the remaining terms of the agreements. The fair values of these off-balance sheet instruments were not significant at June 30, 2016, December 31, 2015 or June 30, 2015.
Fair Value Election

As more fully disclosed in Note 2 and Note 6 to the Consolidated Financial Statements, the Company has elected to carry all residential mortgage-backed securities guaranteed by U.S. government agencies and U.S. Treasury 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.

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(12) Subsequent Events

The Company evaluated events from the date of the consolidated financial statements on June 30, 2016 through the issuance of those consolidated financial statements included in this Quarterly Report on Form 10-Q. No events were identified requiring recognition in and/or disclosure in the consolidated financial statements.

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Six-Month Financial Summary - Unaudited
Consolidated Daily Average Balances, Average Yields and Rates
(In Thousands, Except Per Share Data)

Assets
Interest-bearing cash and cash equivalents
Trading securities
Investment securities
Taxable
Tax-exempt
Total investment securities
Available for sale securities
Taxable
Tax-exempt
Total available for sale securities
Fair value option securities
Restricted equity securities
Residential mortgage loans held for sale
Loans ${ }^{2}$
Allowance for loan losses
Loans, net of allowance
Total earning assets
Receivable on unsettled securities sales
Cash and other assets
Total assets
Six Months Ended
June 30, 2016
$\begin{array}{llll}\text { Average } & \text { Revenue/ Yield/ Average } & \text { Revenue/ Yield/ } \\ \text { Balance } & \text { Expense } & \text { Rate Balance } & \text { Expense Rate }\end{array}$
$\begin{array}{llllll}\text { \$2,037,433 } & \$ 5,275 & 0.52 \% & \$ 2,045,761 & \$ 2,672 & 0.26 \% \\ 212,954 & 1,502 & & 2,142 & & \end{array}$

| 228,460 | 6,244 | $5.47 \%$ | 239,195 | 6,577 | $5.50 \%$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 346,468 | 3,862 | $2.23 \%$ | 396,422 | 3,089 | $1.56 \%$ |
| 574,928 | 10,106 | $3.52 \%$ | 635,617 | 9,666 | $3.04 \%$ |

8,848,806 88,277 2.04\% 8,997,344 85,460 $\quad 1.94 \%$
$\begin{array}{llllll}71,967 & 1,738 & 5.01 \% & 84,785 & 1,759 & 4.31 \%\end{array}$
8,920,773 90,015 $2.06 \% ~ 9,082,129 \quad 87,219 \quad 1.96 \%$
$409,456 \quad 4,651 \quad 2.29 \% 420,119 \quad 4,323 \quad 2.22 \%$
306,833 $\quad 8,174 \quad 5.33 \% ~ 200,766 \quad 5,825 \quad 5.80 \%$
345,429 6,208 $3.62 \% ~ 406,482 \quad 6,841 \quad 3.38 \%$
16,127,563 286,889 3.58\% 14,730,936 264,555 $3.62 \%$
(239,782 )
15,887,781 286,889 $3.63 \% \quad 14,534,252 \quad 264,555 \quad 3.67 \%$
28,695,587 412,820 2.91\% 27,459,268 382,372 $2.82 \%$
82,335
2,969,335
\$31,747,257 \$30,218,75
Liabilities and equity
Interest-bearing deposits:
Transaction
Savings
Time
Total interest-bearing deposits
Funds purchased
Repurchase agreements
Other borrowings
Subordinated debentures
Total interest-bearing liabilities
Non-interest bearing demand deposits
Due on unsettled securities purchases
Other liabilities
Total equity
Total liabilities and equity
Tax-equivalent Net Interest Revenue
Tax-equivalent Net Interest Revenue to Earning Assets
Less tax-equivalent adjustment
Net Interest Revenue
Provision for credit losses
Other operating revenue

| $\$ 9,673,849$ | $\$ 6,577$ | $0.14 \%$ | $\$ 10,200,234$ | $\$ 4,662$ | $0.09 \%$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 407,300 | 195 | $0.10 \%$ | 373,878 | 197 | $0.11 \%$ |
| $2,332,082$ | 13,767 | $1.19 \%$ | $2,655,550$ | 18,512 | $1.41 \%$ |
| $12,413,231$ | 20,539 | $0.33 \%$ | $13,229,662$ | 23,371 | $0.36 \%$ |
| 91,446 | 109 | $0.24 \%$ | 66,504 | 29 | $0.09 \%$ |
| 636,952 | 161 | $0.05 \%$ | 886,781 | 165 | $0.04 \%$ |
| $5,829,974$ | 16,482 | $0.57 \%$ | $3,545,381$ | 5,500 | $0.31 \%$ |
| 229,581 | 1,588 | $1.39 \%$ | 327,844 | 3,860 | $2.37 \%$ |
| $19,201,184$ | 38,879 | $0.41 \%$ | $18,056,172$ | 32,925 | $0.37 \%$ |
| $8,133,945$ |  |  | $7,941,409$ |  |  |
| 125,931 |  |  | 178,084 |  |  |
| 951,455 |  |  | 676,489 |  |  |
| $3,334,742$ |  |  | $3,366,597$ |  |  |
| $\$ 31,747,257$ |  |  | $\$ 30,218,751$ |  |  |

\$31,747,257 \$30,218,751

| $\$ 373,941$ | $2.50 \%$ | $\$ 349,447$ | $2.45 \%$ |
| :--- | :--- | :--- | :--- |
|  | $2.64 \%$ |  | $2.58 \%$ |
| 8,757 |  | 5,990 |  |
| 365,184 |  | 343,457 |  |
| 55,000 |  | 4,000 |  |
| 348,626 |  | 342,302 |  |

Other operating expense
Income before taxes
Federal and state income taxes
Net income
Net income (loss) attributable to non-controlling interests
Net income attributable to BOK Financial Corp. shareholders
Earnings Per Average Common Share Equivalent:
Net income:
Basic \$1.64 \$2.23

## Diluted

 \$1.64\$2.23Yield 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 includes 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.

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Quarterly Financial Summary - Unaudited
Consolidated Daily Average Balances, Average Yields and Rates
(In Thousands, Except Per Share Data)

Assets
Interest-bearing cash and cash equivalents
Trading securities
Investment securities
Taxable
Tax-exempt
Total investment securities
Available for sale securities
Taxable
Tax-exempt
Total available for sale securities
Fair value option securities
Restricted equity securities
Residential mortgage loans held for sale
Loans ${ }^{2}$
Allowance for loan losses
Loans, net of allowance
Total earning assets
Receivable on unsettled securities sales
Cash and other assets
Total assets
Liabilities and equity
Interest-bearing deposits:
Transaction
Savings
Time
Total interest-bearing deposits
Funds purchased
Repurchase agreements
Other borrowings
Subordinated debentures
Total interest-bearing liabilities
Non-interest bearing demand deposits
Due on unsettled securities purchases
Other liabilities
Total equity
Total liabilities and equity
Tax-equivalent Net Interest Revenue
Tax-equivalent Net Interest Revenue to Earning
Assets
Less tax-equivalent adjustment
Net Interest Revenue
Provision for credit losses

Three Months Ended
June 30, 2016
March 31, 2016

| Average Balance | Revenue/ Expense | Yield/ <br> Rate | Average Balance | Revenue/ <br> Expense | Yield/ Rate |
| :---: | :---: | :---: | :---: | :---: | :---: |
| \$2,022,028 | \$2,569 | 0.51\% | \$2,052,840 | \$2,706 | 0.53\% |
| 237,808 | 775 | 1.89\% | 188,100 | 727 | 2.47\% |
| 227,103 | 3,069 | 5.41\% | 229,817 | 3,175 | 5.53\% |
| 335,288 | 1,878 | 2.25\% | 357,648 | 1,984 | 2.22\% |
| 562,391 | 4,947 | 3.52\% | 587,465 | 5,159 | 3.51\% |
| 8,819,135 | 43,345 | 2.01\% | 8,878,478 | 44,932 | 2.06\% |
| 70,977 | 862 | 5.06\% | 72,958 | 876 | 4.95\% |
| 8,890,112 | 44,207 | 2.04\% | 8,951,435 | 45,808 | 2.08\% |
| 368,434 | 2,062 | 2.19\% | 450,478 | 2,589 | 2.38\% |
| 319,136 | 3,863 | 4.84\% | 294,529 | 4,311 | 5.85\% |
| 401,114 | 3,508 | 3.53\% | 289,743 | 2,700 | 3.75\% |
| 16,263,132 | 144,708 | 3.58\% | 15,991,993 | 142,181 | 3.57\% |
| (245,448 | ) |  | (234,116 |  |  |
| 16,017,684 | 144,708 | 3.63\% | 15,757,877 | 142,181 | 3.63\% |
| 28,818,707 | 206,639 | 2.91\% | 28,572,467 | 206,181 | 2.92\% |
| 49,568 |  |  | 115,101 |  |  |
| 3,117,767 |  |  | 2,820,903 |  |  |
| \$31,986,042 |  |  | \$31,508,471 |  |  |


| $\$ 9,590,855$ | $\$ 3,260$ | $0.14 \%$ | $\$ 9,756,843$ | $\$ 3,317$ | $0.14 \%$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 417,122 | 102 | $0.10 \%$ | 397,479 | 93 | $0.09 \%$ |
| $2,297,621$ | 6,635 | $1.16 \%$ | $2,366,543$ | 7,132 | $1.21 \%$ |
| $12,305,598$ | 9,997 | $0.33 \%$ | $12,520,865$ | 10,542 | $0.34 \%$ |
| 70,682 | 33 | $0.19 \%$ | 112,211 | 76 | $0.27 \%$ |
| 611,264 | 72 | $0.05 \%$ | 662,640 | 89 | $0.05 \%$ |
| $6,076,028$ | 8,675 | $0.57 \%$ | $5,583,917$ | 7,807 | $0.56 \%$ |
| 232,795 | 878 | $1.52 \%$ | 226,368 | 710 | $1.26 \%$ |
| $19,296,367$ | 19,655 | $0.41 \%$ | $19,106,001$ | 19,224 | $0.40 \%$ |
| $8,162,134$ |  | $8,105,756$ |  |  |  |
| 93,812 |  | 158,050 |  |  |  |
| $1,089,483$ |  | 813,427 |  |  |  |
| $3,344,246$ |  | $3,325,237$ |  |  |  |
| $\$ 31,986,042$ |  | $\$ 31,508,471$ |  |  |  |
|  |  |  |  |  |  |

\$186,957 2.52\%
$2.65 \%$
4,385
182,572
35,000
$\left.\begin{array}{lll}\text { Other operating revenue } & 188,882 & 159,744 \\ \text { Other operating expense } & 254,725 & 244,900 \\ \text { Income before taxes } & 96,769 & 62,416 \\ \text { Federal and state income taxes } & 30,497 & 21,428 \\ \text { Net income } & 66,272 & 40,988 \\ \begin{array}{l}\text { Net income (loss) attributable to non-controlling } \\ \text { interests }\end{array} & 471 & (1,576\end{array}\right)$

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 includes 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.

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Three Months Ended
December 31, 2015
September 30, 2015
June 30, 2015

| Average | Revenue | Yield / | Average | Revenue / | Yield / | Average | Revenue / | Yield / |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Balance | /Expense ${ }^{1}$ | Rate | Balance | Expense ${ }^{1}$ | Rate | Balance | Expense ${ }^{1}$ | Rate |
| \$1,995,945 | \$ 1,466 | 0.29\% | \$2,038,611 | \$ 1,442 | 0.28\% | \$2,002,456 | \$ 1,250 | 0.25\% |
| 150,402 | 840 | 2.86\% | 179,098 | 945 | 2.70\% | 127,391 | 585 | 1.85\% |
| 232,566 | 3,144 | 5.41\% | 233,914 | 3,211 | 5.49\% | 236,956 | 3,251 | 5.49\% |
| 369,803 | 1,413 | 1.53\% | 382,177 | 1,468 | 1.54\% | 391,533 | 1,526 | 1.56\% |
| 602,369 | 4,557 | 3.03\% | 616,091 | 4,679 | 3.04\% | 628,489 | 4,777 | 3.05\% |
| 8,894,019 | 43,649 | 2.02\% | 8,862,917 | 43,473 | 1.99\% | 8,980,312 | 42,355 | 1.92\% |
| 77,071 | 786 | 4.22\% | 79,344 | 796 | 4.15\% | 82,694 | 838 | 4.21\% |
| 8,971,090 | 44,435 | 2.04\% | 8,942,261 | 44,269 | 2.01\% | 9,063,006 | 43,193 | 1.94\% |
| 435,449 | 2,461 | 2.32\% | 429,951 | 2,480 | 2.30\% | 435,294 | 2,320 | 2.17\% |
| 262,461 | 3,905 | 5.95\% | 255,610 | 3,802 | 5.95\% | 221,911 | 3,228 | 5.82\% |
| 310,425 | 2,968 | 3.85\% | 401,359 | 3,793 | 3.79\% | 464,269 | 3,892 | 3.37\% |
| 15,586,998 | 139,372 | 3.55\% | 15,192,311 | 135,498 | 3.54\% | 14,905,352 | 135,603 | 3.65\% |
| (207,156 |  |  | (202,829 ) |  |  | (198,400 |  |  |
| 15,379,842 | 139,372 | 3.60\% | 14,989,482 | 135,498 | 3.59\% | 14,706,952 | 135,603 | 3.70\% |
| 28,107,983 | 200,004 | 2.86\% | 27,852,463 | 196,908 | 2.83\% | 27,649,768 | 194,848 | 2.84\% |
| 62,228 |  |  | 64,591 |  |  | 94,374 |  |  |
| 2,909,965 |  |  | 2,852,679 |  |  | 2,719,930 |  |  |
| \$31,080,176 |  |  | \$30,769,733 |  |  | \$30,464,072 |  |  |


| \$9,527,491 | \$2,098 | 0.09\% | \$9,760,839 | \$2,061 | 0.08\% | \$ 10,063,589 | \$2,197 | 0.09\% |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 382,284 | 89 | 0.09\% | 379,828 | 97 | 0.10\% | 381,833 | 103 | 0.11\% |
| 2,482,714 | 7,881 | 1.26\% | 2,557,874 | 8,573 | 1.33\% | 2,651,820 | 8,966 | 1.36\% |
| 12,392,489 | 10,068 | 0.32\% | 12,698,541 | 10,731 | 0.34\% | 13,097,242 | 11,266 | 0.35\% |
| 73,220 | 21 | 0.11\% | 70,281 | 15 | 0.08\% | 63,312 | 13 | 0.08\% |
| 623,921 | 68 | 0.04\% | 672,085 | 49 | 0.03\% | 773,977 | 61 | 0.03\% |
| 4,957,175 | 4,720 | 0.38\% | 4,779,981 | 3,637 | 0.30\% | 4,001,479 | 3,047 | 0.31\% |
| 226,332 | 644 | 1.13\% | 226,296 | 596 | 1.04\% | 307,903 | 1,695 | 2.21\% |
| 18,273,137 | 15,521 | 0.34\% | 18,447,184 | 15,028 | 0.32\% | 18,243,913 | 16,082 | 0.35\% |
| 8,312,961 |  |  | 7,994,607 |  |  | 7,996,717 |  |  |
| 248,811 |  |  | 90,135 |  |  | 151,369 |  |  |
| 884,652 |  |  | 838,612 |  |  | 690,604 |  |  |
| 3,360,615 |  |  | 3,399,195 |  |  | 3,381,469 |  |  |
| \$31,080,176 |  |  | \$30,769,733 |  |  | \$30,464,072 |  |  |
|  | \$ 184,483 | 2.52\% |  | \$ 181,880 | 2.51\% |  | \$178,766 | 2.49\% |
|  |  | 2.64\% |  |  | 2.61\% |  |  | 2.61\% |
|  | 3,222 |  |  | 3,244 |  |  | 3,035 |  |
|  | 181,261 |  |  | 178,636 |  |  | 175,731 |  |
|  | 22,500 |  |  | 7,500 |  |  | 4,000 |  |
|  | 161,115 |  |  | 163,436 |  |  | 176,285 |  |
|  | 232,558 |  |  | 224,628 |  |  | 227,113 |  |
|  | 87,318 |  |  | 109,944 |  |  | 120,903 |  |

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| 26,242 | 34,128 | 40,630 |
| :--- | :--- | :--- |
| 61,076 | 75,816 | 80,273 |
| 1,475 | 925 | 1,043 |
| $\$ 59,601$ | $\$ 74,891$ | $\$ 79,230$ |
|  |  |  |
| $\$ 0.89$ | $\$ 1.09$ | $\$ 1.15$ |
| $\$ 0.89$ | $\$ 1.09$ | $\$ 1.15$ |

Quarterly Earnings Trends - Unaudited
(In thousands, except share and per share data)

Interest revenue
Interest expense
Net interest revenue
Provision for credit losses
Net interest revenue after provision for credit losses
Other operating revenue
Brokerage and trading revenue
Transaction card revenue
Fiduciary and asset management revenue
Deposit service charges and fees
Mortgage banking revenue
Other revenue
Total fees and commissions
Other gains, net
Gain (loss) on derivatives, net
Gain (loss) on fair value option securities, net
Change in fair value of mortgage servicing rights
Gain on available for sale securities, net
Total other-than-temporary impairment losses
Portion of loss recognized in other comprehensive income
Net impairment losses recognized in earnings
Total other operating revenue
Other operating expense
Personnel
Business promotion
Charitable contributions to BOKF Foundation
Professional fees and services
Net occupancy and equipment
Insurance
Data processing and communications
Printing, postage and supplies
Net losses and operating expenses of repossessed assets
Amortization of intangible assets
Mortgage banking costs
Other expense
Total other operating expense
Net income before taxes
Federal and state income taxes
Net income
Net income (loss) attributable to non-controlling interests
Net income attributable to BOK Financial Corporation shareholders

Three Months Ended
June 30, March 31, Dec. 31, Sept. 30, June 30, $20162016 \quad 2015 \quad 2015 \quad 2015$

| $\$ 202,267$ | $\$ 201,796$ | $\$ 196,782$ | $\$ 193,664$ | $\$ 191,813$ |
| :--- | :--- | :--- | :--- | :--- |
| 19,655 | 19,224 | 15,521 | 15,028 | 16,082 |
| 182,612 | 182,572 | 181,261 | 178,636 | 175,731 |
| 20,000 | 35,000 | 22,500 | 7,500 | 4,000 |
| 162,612 | 147,572 | 158,761 | 171,136 | 171,731 |


| 39,530 | 32,341 | 30,255 | 31,582 | 36,012 |
| :--- | :--- | :--- | :--- | :--- |
| 34,950 | 32,354 | 32,319 | 32,514 | 32,778 |
| 34,813 | 32,056 | 31,165 | 30,807 | 32,712 |
| 22,618 | 22,542 | 22,813 | 23,606 | 22,328 |
| 38,224 | 34,430 | 25,039 | 33,170 | 36,846 |
| 13,352 | 11,904 | 14,233 | 12,978 | 11,871 |
| 183,487 | 165,627 | 155,824 | 164,657 | 172,547 |
| 1,307 | 1,560 | 2,329 | 1,161 | 1,457 |
| 10,766 | 7,138 | $(732$ | $) 1,283$ | $(1,032$ |
| 4,279 | 9,443 | $(4,127$ | $) 5,926$ | $(8,130$ |
| $(16,283$ | $)(27,988$ | $) 7,416$ | $(11,757$ | $) 8,010$ |
| 5,326 | 3,964 | 2,132 | 2,166 | 3,433 |
| - | - | $(2,114$ | $)-$ | - |
| - | - | 387 | - | - |
| - | - | $(1,727$ | $)-$ | - |
| 188,882 | 159,744 | 161,115 | 163,436 | 176,285 |


| 142,490 | 135,843 | 133,182 | 129,062 | 132,695 |
| :--- | :--- | :--- | :--- | :--- |
| 6,703 | 5,696 | 8,416 | 5,922 | 7,765 |
| - | - | - | 796 | - |
| 14,158 | 11,759 | 10,357 | 10,147 | 9,560 |
| 19,677 | 18,766 | 19,356 | 18,689 | 18,927 |
| 7,129 | 7,265 | 5,415 | 4,864 | 5,116 |
| 32,802 | 32,017 | 31,248 | 30,708 | 30,655 |
| 3,889 | 3,907 | 3,108 | 3,376 | 3,553 |
| 1,588 | 1,070 | 343 | 267 | 223 |
| 2,624 | 1,159 | 1,090 | 1,089 | 1,090 |
| 15,809 | 12,379 | 11,496 | 9,107 | 8,227 |
| 7,856 | 15,039 | 8,547 | 10,601 | 9,302 |
| 254,725 | 244,900 | 232,558 | 224,628 | 227,113 |
| 96,769 | 62,416 | 87,318 | 109,944 | 120,903 |
| 30,497 | 21,428 | 26,242 | 34,128 | 40,630 |
| 66,272 | 40,988 | 61,076 | 75,816 | 80,273 |
| 471 | $(1,576$ | $) 1,475$ | 925 | 1,043 |
| $\$ 65,801$ | $\$ 42,564$ | $\$ 59,601$ | $\$ 74,891$ | $\$ 79,230$ |

Earnings per share:
$\begin{array}{llllll}\text { Basic } & \$ 1.00 & \$ 0.64 & \$ 0.89 & \$ 1.09 & \$ 1.15\end{array}$
Diluted
Average shares used in computation:
Basic
Diluted
65,245,887 65,296,541 66,378,380 67,668,076 68,096,341
$65,302,92665,331,42866,467,72967,762,48368,210,353$

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PART II. Other Information
Item 1. Legal Proceedings
See discussion of legal proceedings at Note 7 to the Consolidated Financial Statements. Item 2. Unregistered Sales of Equity Securities and Use of Proceeds

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 June 30, 2016.

| Period | Total <br> Number of <br> Shares <br> Purchased ${ }^{2}$ | Average <br> Price <br> Paid per <br> Share | Total <br> Number of Shares Purchased as Part of Publicly Announced Plans or Programs ${ }^{1}$ | Maximum <br> Number of Shares that May Yet Be Purchased Under the Plans |
| :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
|  |  |  |  |  |
| April 1 to April 30, 2016 | - | \$- | - | 3,125,926 |
| May 1 to May 31, 2016 | 140,000 | \$ 57.41 | - | 2,985,926 |
| June 1 to June 30, 2016 | 165,169 | \$ 58.93 | - | 2,820,757 |
| Total | 305,169 |  | - |  |

On October 1, 2015, the Company's board of directors authorized the Company to repurchase up to five million ${ }_{1}$ shares of the Company's common stock. As of June 30, 2016, the Company had repurchased 2,179,243 shares under this plan. Future repurchases of the Company's common stock will vary based on market conditions, regulatory limitations and other factors.
${ }_{2}$ The Company routinely repurchases mature shares from employees to cover the exercise price and taxes in connection with employee stock option exercises.
Item 6. Exhibits
31.1 Certification of Chief Executive Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
31.2Certification of Chief Financial Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002
${ }_{32}$ Certification of Chief Executive Officer and Chief Financial Officer Pursuant to 18 U.S.C. Section 1350, as ${ }^{3}$ Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

Interactive data files pursuant to Rule 405 of Regulation S-T: (i) the Consolidated Balance Sheets, (ii) the 101 Consolidated Statements of Earnings, (iii) the Consolidated Statements of Changes in Equity, (iv) the

Consolidated Statement of Cash Flows and (v) the Notes to Consolidated Financial Statements

Items 1A, 3, 4 and 5 are not applicable and have been omitted.

## Signatures

Pursuant to the requirements 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
(Registrant)

Date: July 29, 2016
/s/ Steven E. Nell
Steven E. Nell
Executive Vice President and Chief Financial Officer
/s/ John C. Morrow
John C. Morrow
Senior Vice President and
Chief Accounting Officer

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[^0]:    - 31 -

[^1]:    Total Colorado State Bank \& Trust $\quad 1,439,037 \quad 1,328,166 \quad 1,442,166 \quad 1,437,558 \quad 1,358,949$

[^2]:    - 38 -

[^3]:    - 60 -

[^4]:    - 68 -

[^5]:    - 82 -

[^6]:    - 85 -

[^7]:    - 87 -

[^8]:    - 90 -

[^9]:    - 110 -

[^10]:    - 111 -

[^11]:    - 112 -

[^12]:    - 118 -

