ARROW FINANCIAL CORP
Form 10-Q
August 08, 2017

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
FORM 10-Q
[X] QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d)
OF THE SECURITIES EXCHANGE ACT OF 1934
For the Quarterly Period Ended June 30, 2017
or
[ ] TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d)
OF THE SECURITIES EXCHANGE ACT OF 1934
Commission File Number: 0-12507

## ARROW FINANCIAL CORPORATION

(Exact name of registrant as specified in its charter)
New
York
22-2448962
(State
or
other (I.R.S.
jurisdiction Employer
of Identification
incorporation No.)
or
organization)
250 GLEN STREET, GLENS FALLS, NEW
YORK 12801
(Address of principal
executive offices) (Zip
Code)
Registrant's telephone
number, including area
code: (518) 745-1000
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. x Yes No

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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). $x$ Yes No

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

Large accelerated filer
Accelerated
filer x
(Do not
check if a
Non-accelerated filer
smaller
reporting
company)
Smaller reporting company
Emerging growth company
If an emerging growth company, indicate
by check mark if the registrant has elected
not to use the extended transition period
for complying with any new or revised
financial accounting standard provided
pursuant to Section 13(a) of the Exchange
Act. $\qquad$

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

Indicate the number of shares outstanding of each of the issuer's classes of common stock, as of the latest practicable date.
Class
Outstanding as of July 31, 2017
Common Stock, par value $\$ 1.00$ per share $13,509,655$
ARROW FINANCIAL CORPORATION
FORM 10-Q
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## PART I - FINANCIAL INFORMATION

## ARROW FINANCIAL CORPORATION AND SUBSIDIARIES CONSOLIDATED BALANCE SHEETS <br> (In Thousands, Except Share and Per Share Amounts) <br> (Unaudited)

## ASSETS

Cash and Due From Banks
Interest-Bearing Deposits at Banks
Investment Securities:
Available-for-Sale
Held-to-Maturity (Approximate Fair Value of \$350,355 at June 30, 2017;
$\$ 343,751$ at December 31, 2016; and $\$ 354,778$ at June 30, 2016)
Other Investments
Loans
Allowance for Loan Losses
Net Loans
Premises and Equipment, Net
Goodwill
Other Intangible Assets, Net
Other Assets
Total Assets
LIABILITIES
Noninterest-Bearing Deposits
Interest-Bearing Checking Accounts
Savings Deposits
Time Deposits over \$250,000
Other Time Deposits
Total Deposits
Federal Funds Purchased and
Securities Sold Under Agreements to Repurchase
Federal Home Loan Bank Overnight Advances
Federal Home Loan Bank Term Advances
Junior Subordinated Obligations Issued to Unconsolidated Subsidiary Trusts
Other Liabilities
Total Liabilities
STOCKHOLDERS' EQUITY
Preferred Stock, \$5 Par Value; 1,000,000 Shares Authorized
Common Stock, \$1 Par Value; 20,000,000 Shares Authorized (17,943,201
Shares Issued and Outstanding at June 30, 2017; 17,943,201 at
December 31, 2016 and 17,420,776 at June 30, 2016)
Additional Paid-in Capital
Retained Earnings
Unallocated ESOP Shares (19,466 Shares at June 30, 2017; 19,466 Shares at December 31, 2016 and 28,671 Shares at June 30, 2016)
Accumulated Other Comprehensive Loss

| June 30, | December 31, June 30, |  |
| :--- | :--- | :--- |
| 2017 | 2016 | 2016 |
|  |  |  |
| $\$ 39,105$ | $\$ 43,024$ | $\$ 46,139$ |
| 26,972 | 14,331 | 16,976 |
|  |  |  |
| 327,392 | 346,996 | 362,929 |
| 348,018 | 345,427 | 343,814 |
| 11,035 | 10,912 | 9,961 |
| $1,878,632$ | $1,753,268$ | $1,672,490$ |
| $(17,442$ | $)(17,012$ | $)(16,798$ |
| $1,861,190$ | $1,736,256$ | $1,655,692$ |
| 26,565 | 26,938 | 26,775 |
| 21,873 | 21,873 | 21,873 |
| 2,482 | 2,696 | 2,885 |
| 57,089 | 56,789 | 53,198 |
| $\$ 2,721,721$ | $\$ 2,605,242$ | $\$ 2,540,242$ |
|  |  |  |
| $\$ 433,480$ | $\$ 387,280$ | $\$ 368,378$ |
| 905,624 | 877,988 | 900,974 |
| 679,320 | 651,965 | 600,513 |
| 33,630 | 32,878 | 37,297 |
| 167,984 | 166,435 | 165,223 |
| $2,220,038$ | $2,116,546$ | $2,072,385$ |
| 40,892 | 35,836 | 41,497 |
| 122,000 | 123,000 | 102,000 |
| 55,000 | 55,000 | 55,000 |
| 20,000 | 20,000 | 20,000 |
| 23,039 | 22,008 | 23,987 |
| $2,480,969$ | $2,372,390$ | $2,314,869$ |
|  | - | - |
|  | - | - |
| 17,943 | 17,943 | 17,421 |
| 272,187 | 270,880 | 252,511 |
| 35,739 | 28,644 | 38,852 |
| $(400$ | $)(400$ | $)(850$ |
| $(6,200$ | $)$ | $(6,834$ |$)(4,742, ~), ~(77,819 \quad)$

Treasury Stock, at Cost (4,428,713 Shares at June 30, 2017; 4,441,093
Shares at December 31, 2016 and 4,380,736 Shares at June 30, 2016)
Total Stockholders' Equity
240,752 232,852 225,373
Total Liabilities and Stockholders' Equity
\$2,721,721 \$2,605,242 \$2,540,242
See Notes to Unaudited Interim Consolidated Financial Statements.
\# 3

| ARROW FINANCIAL CORPORATION AND SUBSIDIARIES |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
| CONSOLIDATED STATEMENTS OF INCOME |  |  |  |  |
| (In Thousands, Except Per Share Amounts) |  |  |  |  |
| (Unaudited) |  |  |  |  |
|  | Three M | onths | Six Mon |  |
|  | Ended Ju | ne 30, | Ended Ju | une 30, |
|  | 2017 | 2016 | 2017 | 2016 |
| INTEREST AND DIVIDEND INCOME |  |  |  |  |
| Interest and Fees on Loans | \$17,295 | \$15,708 | \$33,697 | \$30,732 |
| Interest on Deposits at Banks | 78 | 34 | 138 | 66 |
| Interest and Dividends on Investment Securities: |  |  |  |  |
| Fully Taxable | 2,013 | 2,018 | 4,003 | 4,105 |
| Exempt from Federal Taxes | 1,540 | 1,477 | 3,085 | 2,960 |
| Total Interest and Dividend Income | 20,926 | 19,237 | 40,923 | 37,863 |
| INTEREST EXPENSE |  |  |  |  |
| Interest-Bearing Checking Accounts | 381 | 311 | 712 | 621 |
| Savings Deposits | 316 | 224 | 607 | 446 |
| Time Deposits over \$250,000 | 66 | 49 | 121 | 72 |
| Other Time Deposits | 233 | 213 | 461 | 446 |
| Federal Funds Purchased and | 9 | 10 | 16 | 15 |
| $\begin{array}{llll}\text { Securities Sold Under Agreements to Repurchase } & 9 & 10 & 16\end{array}$ |  |  |  |  |
| Federal Home Loan Bank Advances | 506 | 314 | 951 | 623 |
| Junior Subordinated Obligations Issued to | 188 | 163 | 367 | 324 |
| Unconsolidated Subsidiary Trusts 1803163 |  |  |  |  |
| Total Interest Expense | 1,699 | 1,284 | 3,235 | 2,547 |
| NET INTEREST INCOME | 19,227 | 17,953 | 37,688 | 35,316 |
| Provision for Loan Losses | 422 | 669 | 780 | 1,070 |
| NET INTEREST INCOME AFTER PROVISION FOR LOAN LOSSES | 18,805 | 17,284 | 36,908 | 34,246 |
| NONINTEREST INCOME |  |  |  |  |
| Income From Fiduciary Activities | 2,150 | 2,000 | 4,168 | 3,931 |
| Fees for Other Services to Customers | 2,413 | 2,417 | 4,670 | 4,654 |
| Insurance Commissions | 2,115 | 2,133 | 4,313 | 4,341 |
| Net Gain on Securities Transactions | - | 144 | - | 144 |
| Net Gain on Sales of Loans | 204 | 159 | 250 | 338 |
| Other Operating Income | 175 | 341 | 351 | 662 |
| Total Noninterest Income | 7,057 | 7,194 | 13,752 | 14,070 |
| NONINTEREST EXPENSE |  |  |  |  |
| Salaries and Employee Benefits | 9,084 | 8,408 | 18,092 | 16,530 |
| Occupancy Expenses, Net | 2,494 | 2,335 | 5,038 | 4,798 |
| FDIC Assessments | 228 | 314 | 454 | 627 |
| Other Operating Expense | 3,831 | 3,827 | 7,528 | 7,300 |
| Total Noninterest Expense | 15,637 | 14,884 | 31,112 | 29,255 |
| INCOME BEFORE PROVISION FOR INCOME TAXES | 10,225 | 9,594 | 19,548 | 19,061 |
| Provision for Income Taxes | 3,017 | 2,947 | 5,709 | 5,865 |
| NET INCOME | \$7,208 | \$6,647 | \$13,839 | \$13,196 |
| Average Shares Outstanding 1: |  |  |  |  |
| Basic | 13,485 | 13,372 | 13,485 | 13,357 |
| Diluted | 13,568 | 13,429 | 13,581 | 13,405 |

Per Common Share:
Basic Earnings
Diluted Earnings

| $\$ 0.53$ | $\$ 0.50$ | $\$ 1.03$ | $\$ 0.99$ |
| :--- | :--- | :--- | :--- |
| 0.53 | 0.49 | 1.02 | 0.98 |

2016 Share and Per Share Amounts have been restated for the September 29, 2016 3\% stock dividend. See Notes to Unaudited Interim Consolidated Financial Statements.
\# 4

| ARROW FINANCIAL CORPORATION AND SUBSIDIARIES |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME |  |  |  |
| (In Thousands) |  |  |  |
| (Unaudited) |  |  |  |

See Notes to Unaudited Interim Consolidated Financial Statements.
\# 5

## ARROW FINANCIAL CORPORATION AND SUBSIDIARIES

CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY
(In Thousands, Except Share and Per Share Amounts)
(Unaudited)

|  | Common <br> Stock | Additional <br> Paid-In <br> Capital | Retained <br> Earnings | Unallo-c <br> ESOP <br> Shares |  | Accumu- <br> Other Co <br> prehensiv <br> Loss |  | d <br> Treasury <br> Stock | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Balance at December 31, 2016 | \$ 17,943 | \$ 270,880 | \$28,644 | \$ (400 | ) | \$ (6,834 | ) | \$(77,381) | \$232,852 |
| Net Income | - | - | 13,839 | - |  | - |  | - | 13,839 |
| Other Comprehensive Income | - | - | - | - |  | 634 |  | - | 634 |
| Cash Dividends Paid, \$.500 per Share |  | - | (6,744 ) | - |  | - |  | - | (6,744 |
| Stock Options Exercised, Net (33,062 Shares) | - | 322 | - | - |  | - |  | 379 | 701 |
| Shares Issued Under the Directors' |  |  |  |  |  |  |  |  |  |
| Stock Plan (3,927 Shares) | - | 84 | - | - |  | - |  | 43 | 127 |
| Shares Issued Under the Employee |  |  |  |  |  |  |  |  |  |
| Stock <br> Purchase Plan (7,300 Shares) | - | 160 | - | - |  | - |  | 82 | 242 |
| Shares Issued for Dividend Reinvestment Plans (24,999 Shares) |  | 569 | - | - |  | - |  | 276 | 845 |
| Stock-Based Compensation Expense | - | 172 | - | - |  | - |  | - | 172 |
| Purchase of Treasury Stock (56,908 Shares) | - | - | - | - |  | - |  | (1,916 ) | $(1,916)$ |
| Balance at June 30, 2017 | \$ 17,943 | \$272,187 | \$35,739 | \$ (400 | ) | \$ (6,200 | ) | \$ $(78,517)$ | \$240,752 |
| Balance at December 31, 2015 | \$ 17,421 | \$250,680 | \$32,139 | \$ (1,100 | ) | \$ 7,972 | ) | \$(77,197) | \$213,971 |
| Net Income | - | - | 13,196 | - |  | - |  | - | 13,196 |
| Other Comprehensive Income | - | - | - | - |  | 3,230 |  | - | 3,230 |
| Cash Dividends Paid, $\$ .485$ per Share 1 |  | - | (6,483 ) | - |  | - |  | - | (6,483 ) |
| Stock Options Exercised, Net (59,711 Shares) | - | 732 | - | - |  | - |  | 589 | 1,321 |
| Shares Issued Under the Directors' |  |  |  |  |  |  |  |  |  |
| Stock <br> Plan (3,522 Shares) | - | 69 | - | - |  | - |  | 35 | 104 |
| Shares Issued Under the Employee |  |  |  |  |  |  |  |  |  |
| Stock <br> Purchase Plan (9,433 Shares) | - | 157 | - | - |  | - |  | 93 | 250 |
| Shares Issued for Dividend Reinvestment Plans (31,275 Shares) |  | 565 | - | - |  | - |  | 309 | 874 |
| Stock-Based Compensation Expense | - | 145 | - | - |  | - |  | - | 145 |
| Tax Benefit for Disposition of Stock Options | - | 46 | - | - |  | - |  | - | 46 |
| Purchase of Treasury Stock (58,605 Shares) | - | - | - | - |  | - |  | (1,648 ) | (1,648 ) |
|  | - | 117 | - | 250 |  | - |  | - | 367 |

Allocation of ESOP Stock (26,604
Shares)
Balance at June 30, $2016 \quad \$ 17,421 \quad \$ 252,511 \quad \$ 38,852 \$(850 \quad) \$(4,742) \$(77,819) \$ 225,373$
${ }^{1}$ Cash dividends paid per share have been adjusted for the September 29, $20163.0 \%$ stock dividend. See Notes to Unaudited Interim Consolidated Financial Statements.

| ARROW FINANCIAL CORPORATION AND SUBSIDIARIES |  |  |
| :---: | :---: | :---: |
| CONSOLIDATED STATEMENTS OF CASH FLOWS |  |  |
| (Dollars in Thousands) |  |  |
| (Unaudited) |  |  |
|  | Six Month <br> June 30, | ths Ended |
| Cash Flows from Operating Activities: | 2017 | 2016 |
| Net Income | \$13,839 | \$13,196 |
| Adjustments to Reconcile Net Income to Net Cash Provided by Operating Activities: |  |  |
| Provision for Loan Losses | 780 | 1,070 |
| Depreciation and Amortization | 2,988 | 3,114 |
| Allocation of ESOP Stock | - | 367 |
| Net Gains on the Sale of Securities Available-for-Sale | - | (144 |
| Loans Originated and Held-for-Sale | (7,646 | (12,432 ) |
| Proceeds from the Sale of Loans Held-for-Sale | 8,118 | 10,628 |
| Net Gains on the Sale of Loans | (250 | (338 |
| Net Losses on the Sale of Premises and Equipment, Other Real Estate Owned and Repossessed Assets | 122 | 47 |
| Contributions to Retirement Benefit Plans | (459 | ) (370 |
| Deferred Income Tax Benefit | (94 | ) (403 |
| Shares Issued Under the Directors' Stock Plan | 127 | 104 |
| Stock-Based Compensation Expense | 172 | 145 |
| Tax Benefit from Exercise of Stock Options | 112 | - |
| Net Increase in Other Assets | (559 | (2,719 ) |
| Net Increase in Other Liabilities | 1,378 | 2,734 |
| Net Cash Provided By Operating Activities | 18,628 | 14,999 |
| Cash Flows from Investing Activities: |  |  |
| Proceeds from the Sale of Securities Available-for-Sale | - | 10,568 |
| Proceeds from the Maturities and Calls of Securities Available-for-Sale | 31,867 | 43,780 |
| Purchases of Securities Available-for-Sale | (12,324) | ) (10,920) |
| Proceeds from the Maturities and Calls of Securities Held-to-Maturity | 30,262 | 33,809 |
| Purchases of Securities Held-to-Maturity | (33,435 ) | ) (57,572) |
| Net Increase in Loans | $(126,524)$ | (97,100 ) |
| Proceeds from the Sales of Premises and Equipment, Other Real Estate Owned and Repossessed Assets | 539 | 1,438 |
| Purchase of Premises and Equipment | (867 | ) (527 |
| Proceeds from the Sale of a Subsidiary, Net | 23 | 48 |
| Net Decrease in Other Investments | (123 | ) (1,122 ) |
| Net Cash Used By Investing Activities | $(110,582)$ | ) (77,598) |
| Cash Flows from Financing Activities: |  |  |
| Net Increase in Deposits | 103,492 | 41,962 |
| Net (Decrease) Increase in Short-Term Federal Home Loan Bank Borrowings | (1,000 | ) 20,000 |
| Net Decrease in Short-Term Borrowings | 5,056 | 18,324 |
| Purchase of Treasury Stock | (1,916 | ) (1,648 ) |
| Stock Options Exercised, Net | 701 | 1,321 |
| Shares Issued Under the Employee Stock Purchase Plan | 242 | 250 |
| Tax Benefit from Exercise of Stock Options | - | 46 |
| Shares Issued for Dividend Reinvestment Plans | 845 | 874 |
| Cash Dividends Paid | (6,744 ) | ) (6,483 ) |

Net Cash Provided By Financing Activities ..... 100,676 74,646
Net Increase in Cash and Cash Equivalents ..... 8,722 12,047
Cash and Cash Equivalents at Beginning of Period ..... 57,355 51,068
Cash and Cash Equivalents at End of Period ..... \$66,077 \$63,115
Supplemental Disclosures to Statements of Cash Flow Information: Interest on Deposits and Borrowings ..... \$3,225 \$2,545
Income Taxes ..... 5,629 6,241Non-cash Investing and Financing Activity:Transfer of Loans to Other Real Estate Owned and Repossessed Assets588394
See Notes to Unaudited Interim Consolidated Financial Statements.

\# 7

## NOTES TO INTERIM CONSOLIDATED FINANCIAL STATEMENTS

(Unaudited)

## Note 1. ACCOUNTING POLICIES

In the opinion of the management of Arrow Financial Corporation (Arrow), the accompanying unaudited consolidated interim financial statements contain all of the adjustments necessary to present fairly the financial position as of June 30, 2017, December 31, 2016 and June 30, 2016; the results of operations for the three- and six-month periods ended June 30, 2017 and 2016; the consolidated statements of comprehensive income for the three- and six-month periods ended June 30, 2017 and 2016; the changes in stockholders' equity for the six-month periods ended June 30, 2017 and 2016; and the cash flows for the six-month periods ended June 30, 2017 and 2016. All such adjustments are of a normal recurring nature. Certain prior period amounts have been reclassified to conform to the current presentation, including a new requirement to present time deposits with balances greater than $\$ 250,000$ which were previously presented as balances of $\$ 100,000$ or greater. The preparation of financial statements requires the use of management estimates. The unaudited consolidated interim financial statements should be read in conjunction with the audited annual consolidated financial statements of Arrow for the year ended December 31, 2016, included in Arrow's 2016 Form 10-K.

New Accounting Standards Updates (ASU): Effective January 1, 2017, Arrow adopted FASB accounting standard ASU 2016-09 "Improvements to Employee Share-Based Payment Accounting," which makes several revisions to equity compensation accounting. Under the new guidance all excess tax benefits and deficiencies that occur when an award is exercised or expires are recognized in income tax expense as discrete period items. Previously, these transactions were typically recorded directly within equity. Excess tax benefits are also recognized at the time an award is exercised compared to the previous requirement to delay recognition until the deduction reduces taxes payable. All tax related cash flows recognized on stock-based compensation expense are classified as an operating activity in our consolidated statements of cash flows on a prospective basis. Accordingly, prior periods have not been adjusted. ASU 2016-09 also provides an accounting policy election to recognize forfeitures of awards as they occur when estimating stock-based compensation expense rather than the previous requirement to estimate forfeitures from inception. Further, ASU 2016-09 permits employers to use a net-settlement feature to withhold taxes on equity compensation awards up to the maximum statutory tax rate without affecting the equity classification of the award. Under previous guidance, withholding of equity awards in excess of the minimum statutory requirement resulted in liability classification for the entire award. The related cash remittance by the employer for employee taxes is treated as a financing activity in the statement of cash flows.
The annual effect of the 2017 tax provision will primarily depend upon the share price of Arrow common stock which affects the probability of exercise of certain stock options and the magnitude of windfalls upon exercise. Income tax benefits from stock options exercised in the period reduced our effective tax rate for the six months ended June 30, 2017, which resulted in an increase in earnings of approximately $\$ 112$ thousand, representing earnings per share of less than $\$ 0.01$.
In addition, during 2017, through the date of this report, the FASB issued 11 accounting standards updates. Some of the standards listed below did not have an immediate impact on Arrow, but could in the future.
ASU 2014-09 - Revenue from Contracts with Customers will change revenue recognition guidance under GAAP and is based on the principle that revenue is recognized to depict the transfer of goods or services to customers in an amount that reflects consideration to which the entity expects to be entitled in exchange for those goods and services. The ASU also requires additional disclosure about the nature, amount, timing and uncertainty of revenue and cash flows arising from customer contracts, including significant judgments and changes in judgments and assets recognized from costs incurred to obtain or fulfill a contract. For financial reporting purposes, the standard allows for either full retrospective adoption, meaning the standard is applied to all of the periods presented, or modified retrospective adoption, meaning the standard is applied only to the most current period presented in the financial statements with the cumulative effect of initially applying the standard recognized at the date of initial application.

Initially, ASU 2014-09 was effective for Arrow on January 1, 2017; however, in August 2015, the FASB issued ASU No. 2015-14 - Revenue from Contracts with Customers - Deferral of the Effective Date, which deferred the effective date to January 1, 2018. Early adoption is not permitted. In addition, the FASB has begun to issue targeted updates to clarify specific implementation issues of ASU 2014-09. These updates include ASU No. 2016-08 - Principal versus Agent Considerations (Reporting Revenue Gross versus Net), ASU No. 2016-10 - Identifying Performance Obligations and Licensing, ASU No. 2016-12 - Narrow-Scope Improvements and Practical Expedients, and ASU No. 2016-20 - Technical Corrections and Improvements to Top 606 - Revenue from Contract with Customers. We are currently in the process of identifying and implementing required changes to the timing of our revenue recognition. We do not expect that the adoption of this change in accounting for revenue will have a material impact on our financial position or the results of operations in periods subsequent to its adoption.
ASU 2016-01 "Recognition and Measurement of Financial Assets and Financial Liabilities" will significantly change the income statement impact of equity investments. For Arrow, the standard is effective for the first quarter of 2018, and will require that equity investments be measured at fair value, with changes in fair value measured in net income. As of June 30, 2017, we hold $\$ 1.5$ million of fair value in equity investments and we do not expect that the adoption of this change in accounting for equity investments will have a material impact on our financial position or the results of operations in periods subsequent to its adoption.
ASU 2016-02 "Leases" will require the recognition of operating leases. For Arrow, the standard becomes effective in the first quarter of 2019. We do not expect that the adoption of this change in accounting for operating leases will have a material impact on our financial position or the results of operations in periods subsequent to its adoption. As of June 30, 2017, we have less than $\$ 2.3$ million in minimum lease payments for existing operating leases of branch and insurance locations with varying expiration dates from 2017 to 2031.
ASU 2016-13 "Financial Instruments - Credit Losses" will change the way we and other financial entities recognize losses on assets measured at amortized costs and change the method for recognizing credit losses on securities available-for-sale. Currently, loan losses are recognized using an "incurred loss" methodology. Under ASU 2016-13, the methodology will change to a current expected loss over the life of the loan. Currently, credit losses on available-for-sale securities reduce the carrying value of the instrument and cannot be reversed. Under ASU 2016-13, the amount of the credit loss is carried as a valuation allowance and can be reversed. For Arrow, the
standard is effective for the first quarter of 2020 and early adoption is allowed in 2019. The Company is currently evaluating the impact of the pending adoption of the ASU on its consolidated financial statements. The initial adjustment will not be reported in earnings, but as the cumulative effect of a change in accounting principle. At this time we have not calculated the estimated impact that this Update will have on our Allowance for Loan Losses, however, we anticipate it will have a significant impact on the methodology process we utilize to calculate the allowance.
ASU 2017-01 "Business Combinations" defines when a set of assets and activities constitutes a business for the purposes of determining whether transactions should be accounted for as acquisitions (or disposals) of assets or businesses. Currently, the three elements required to be present in a business are inputs, processes, and outputs. The amendments in this Update allow for a business to consist of inputs, processes, and the ability to create output. For Arrow, the standard becomes effective in the first quarter of 2018. This Update will likely have no effect on our accounting for acquisitions and dispositions of businesses.
ASU 2017-04 "Intangibles-Goodwill and Other" changes the procedures for evaluating impairment of goodwill. Prior to this Update, entities were required to perform procedures to determine the fair value of the underlying assets and liabilities following the guidance for determining the fair value of assets and liabilities in a business combination. This additional step to impairment testing has been eliminated. Under the amendments in this Update, entities should perform goodwill impairment testing by comparing the fair value of a reporting unit to its carrying value. This amendment should reduce the cost and complexity of evaluating goodwill for impairment. For Arrow, the standard becomes effective in the first quarter of 2019, however, early adoption is permitted. This amendment will not affect our assessment of goodwill impairment since we currently perform the analysis of comparing carrying value to fair value of our reporting units that have goodwill and we have not had to perform a Step 2 Impairment Test to date. ASU 2017-07 "Compensation-Retirement Benefits" improves the presentation of net periodic pension cost and net periodic post-retirement benefit cost by requiring that an employer disaggregate the service cost component from the other components of net benefit cost. The amendments also provide explicit guidance on how to present the service cost component and the other components of net benefit cost in the income statement and allow only the service cost component of net benefit cost to be eligible for capitalization. For Arrow, the standard becomes effective in the first quarter of 2018, however, early adoption is permitted. We do not expect that the adoption of this change in accounting for pension costs will have a material impact on our financial position or the results of operations in periods subsequent to its adoption.

ASU 2017-08 "Receivables-Nonrefundable Fees and Other Costs" amends the amortization period for certain purchased callable debt securities held at a premium. This shortens the amortization period for the premium to the earliest call date. Under current generally accepted accounting principles (GAAP), entities generally amortize the premium as an adjustment of yield over the contractual life of the instrument. For Arrow, the standard becomes effective in the first quarter of 2019, however, early adoption is permitted as early as the first quarter of 2017. We do not expect that the adoption of this change in accounting for certain callable debt securities will have a material impact on our financial position or the results of operations in periods subsequent to its adoption.
ASU 2017-09 "Compensation-Stock Compensation" provides guidance about which changes to the terms and conditions of a share-based payment award require an entity to apply modification accounting in Topic 718. The guidance highlights the requirements for applying modification accounting and the exception criteria relating to changes in share based payment terms. For Arrow, the standard becomes effective in the first quarter of 2018, however, early adoption is permitted as early as the third quarter of 2017. We do not expect that the adoption of this change in accounting for share-based payment awards will have a material impact on our financial position or the results of operations in periods subsequent to its adoption.
\# 9

Note 2. INVESTMENT SECURITIES (In Thousands)
The following table is the schedule of Available-For-Sale Securities at June 30, 2017, December 31, 2016 and June 30, 2016:
Available-For-Sale Securities

| U.S. |  | Mortgage- | Corporate | Mutual <br> Funds | Total |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Government | State and | Backed | and Other | Fun | Avail |
| \& Agency | Municipal | Securitie |  |  | For |
| Obligations | Obligations | Residential | Securities | Equity Securities | Securitie |

June 30, 2017
Available-For-Sale Securities, at Amortized Cost
Available-For-Sale Securities, at Fair Value
Gross Unrealized Gains
Gross Unrealized Losses 8
Available-For-Sale Securities, Pledged as Collateral
\$ 146,914 $\quad \$ 15,410 \quad \$ 161,324 \quad \$ 2,500 \quad \$ 1,120 \quad \$ 327,268$

| 147,085 | 15,441 | 161,077 | 2,299 | 1,490 | 327,392 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 252 | 31 | 964 | - | 370 | 1,617 |
| 81 | - | 1,211 | 201 | - | 1,493 |

Maturities of Debt Securities, at Amortized Cost:

| Within One Year | $\$-$ | $\$ 5,482$ | $\$ 3,842$ | $\$ 1,500$ | $\$-$ | $\$ 10,824$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| From 1 - 5 Years | 146,914 | 8,966 | 105,663 | - | - | 261,543 |
| From 5 - 10 Years | - | 442 | 51,819 | - | - | 52,261 |
| Over 10 Years | - | 520 | - | 1,000 | - | 1,520 |

Maturities of Debt Securities, at Fair Value:

| Within One Year | $\$-$ | $\$ 5,483$ | $\$ 3,893$ | $\$ 1,499$ | $\$-$ | $\$ 10,875$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| From 1 - 5 Years | 147,085 | 8,996 | 105,638 | - | - | 261,719 |
| From 5 - 10 Years | - | 442 | 51,546 | - | - | 51,988 |
| Over 10 Years | - | 520 | - | 800 | - | 1,320 |


| Securities in a Continuous <br> Loss Position, at Fair Value: |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Less than 12 Months | $\$ 49,176$ | $\$ 543$ | $\$ 97,870$ | $\$ 1,499$ | $\$-$ | $\$ 149,088$ |
| 12 Months or Longer | - | - | - | 800 | - | 800 |
| Total | $\$ 49,176$ | $\$ 543$ | $\$ 97,870$ | $\$ 2,299$ | $\$-$ | $\$ 149,888$ |
| Number of Securities in a | 13 | 2 | 34 | 3 | - | 52 |

Unrealized Losses on Securities in a Continuous Loss Position:

| Less than 12 Months | $\$ 81$ | $\$-$ | $\$ 1,211$ | $\$ 1$ | $\$-$ | $\$ 1,293$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 12 Months or Longer | - | - | - | 200 | - | 200 |
| Total | $\$ 81$ | $\$-$ | $\$ 1,211$ | $\$ 201$ | $\$-$ | $\$ 1,493$ |

Disaggregated Details:

US Treasury Obligations, at Amortized Cost
US Treasury Obligations, at Fair Value
$\begin{aligned} & \text { US Agency Obligations, } \\ & \text { at Amortized Cost }\end{aligned} \quad 92,317$
US Agency Obligations, at Fair Value
US Government Agency
Securities, at Amortized Cost
US Government Agency
Securities, at Fair Value
Government Sponsored Entity
Securities, at Amortized Cost
Government Sponsored Entity
Securities, at Fair Value
\$ 54,597
54,676

92,409

Available-For-Sale Securities

| U.S. <br> Government \& Agency Obligations | State and <br> Municipal <br> Obligations | Mortgage- <br> Backed <br> Securities <br> Residential | Corporate and Other <br> Debt <br> Securities | Mutual <br> Funds <br> and <br> Equity <br> Securities | Total <br> Available- <br> For-Sale <br> Securities |
| :---: | :---: | :---: | :---: | :---: | :---: |
| \$ 147,110 | \$ 27,684 | \$ 168,189 | \$ 3,512 | \$ 1,120 | \$347,615 |
| 147,377 | 27,690 | 167,239 | 3,308 | 1,382 | 346,996 |
| 304 | 24 | 986 | - | 262 | 1,576 |
| 37 | 18 | 1,936 | 204 | - | 2,195 |
|  |  |  |  |  | 262,852 |

Securities in a Continuous
Loss Position, at Fair Value:

| Less than 12 Months | $\$ 70,605$ | $\$ 12,165$ | $\$ 126,825$ | $\$ 500$ | $\$-$ | $\$ 210,095$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 12 Months or Longer | - | 7,377 | - | 2,809 | - | 10,186 |
| Total | $\$ 70,605$ | $\$ 19,542$ | $\$ 126,825$ | $\$ 3,309$ | $\$-$ | $\$ 220,281$ |
| Number of Securities in a | 19 | 84 | 40 | 4 | - | 147 |

Unrealized Losses on
Securities in a Continuous
Loss Position:

| Less than 12 Months | $\$ 37$ | $\$ 13$ | $\$ 1,936$ | $\$ 1$ | $\$-$ | $\$ 1,987$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 12 Months or Longer | - | 5 | - | 203 | - | 208 |
| Total | $\$ 37$ | $\$ 18$ | $\$ 1,936$ | $\$ 204$ | $\$-$ | $\$ 2,195$ |

Disaggregated Details:
$\begin{aligned} & \text { US Treasury Obligations, } \\ & \text { at Amortized Cost }\end{aligned} \quad \$ 54,701$
US Treasury Obligations, 54,706
at Fair Value
US Agency Obligations, at Amortized Cost

92,409
US Agency Obligations,
at Fair Value
US Government Agency
Securities, at Amortized Cost
US Government Agency
Securities, at Fair Value
Government Sponsored Entity
Securities, at Amortized Cost
Government Sponsored Entity
Securities, at Fair Value
\$ 3,694

3,724
164,495
163,515

Available-For-Sale Securities

| U.S. <br> Government \& Agency Obligations | State and Municipal Obligations | Mortgage- <br> Backed <br> Securities - <br> Residential | Corporate and Other <br> Debt <br> Securities | Mutual <br> Funds <br> and <br> Equity <br> Securities | Total <br> Available- <br> For-Sale <br> Securities |
| :---: | :---: | :---: | :---: | :---: | :---: |
| \$ 155,859 | \$ 36,256 | \$ 157,926 | \$ 5,749 | \$ 1,120 | \$356,910 |
| 157,990 | 36,425 | 161,728 | 5,555 | 1,231 | 362,929 |
| 2,131 | 169 | 3,806 | 6 | 111 | 6,223 |
|  | - | 4 | 200 | - | 204 |
|  |  |  |  |  | 267,912 |

Securities in a Continuous
Loss Position, at Fair Value:

| Less than 12 Months | $\$-$ | $\$-$ | $\$ 710$ | $\$-$ | $\$-$ | $\$ 710$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| 12 Months or Longer | - | 256 | - | 2,281 | - | 2,537 |
| Total | $\$-$ | $\$ 256$ | $\$ 710$ | $\$ 2,281$ | $\$-$ | $\$ 3,247$ |
| Number of Securities in a | - | 1 | 2 | 3 | - | 6 |

Unrealized Losses on Securities
in a Continuous Loss Position:
Less than 12 Months
12 Months or Longer

Total
Disaggregated Details:
US Agency Obligations, at Amortized Cost
US Agency Obligations, at Fair Value
US Government Agency
Securities, at Amortized Cost
\$ 10,318
US Government Agency
Securities, at Fair Value
Government Sponsored Entity
Securities, at Amortized Cost
Government Sponsored Entity
Securities, at Fair Value
\$ 155,859
157,990

The following table is the schedule of Held-To-Maturity Securities at June 30, 2017, December 31, 2016 and June 30, 2016:
Held-To-Maturity Securities

|  | State and <br> Municipal <br> Obligations | Mortgage- <br> Backed <br> Securities <br> Residential | Corporate and Othe <br> Debt <br> Securities | te Total <br> er Held-To <br> Maturity <br> Securities |
| :---: | :---: | :---: | :---: | :---: |
| June 30, 2017 |  |  |  |  |
| Held-To-Maturity Securities, at Amortized Cost | \$ 280,485 | \$ 67,533 | \$ | -\$348,018 |
| Held-To-Maturity Securities, at Fair Value | 282,157 | 68,198 | - | 350,355 |
| Gross Unrealized Gains | 3,208 | 677 | - | 3,885 |
| Gross Unrealized Losses | 1,536 | 12 | - | 1,548 |
| Held-To-Maturity Securities, Pledged as Collateral |  |  |  | 327,820 |
| Maturities of Debt Securities, at Amortized Cost: |  |  |  |  |
| Within One Year | \$ 13,986 | \$ - | \$ | -\$13,986 |
| From 1-5 Years | 91,072 | 61,506 | - | 152,578 |
| From 5-10 Years | 164,161 | 6,027 | - | 170,188 |
| Over 10 Years | 11,266 | - | - | 11,266 |
| Maturities of Debt Securities, at Fair Value: |  |  |  |  |
| Within One Year | \$ 14,006 | \$ - | \$ | -\$14,006 |
| From 1-5 Years | 92,549 | 62,078 | - | 154,627 |
| From 5-10 Years | 164,399 | 6,120 | - | 170,519 |
| Over 10 Years | 11,203 | - | - | 11,203 |
| Securities in a Continuous <br> Loss Position, at Fair Value: |  |  |  |  |
| Less than 12 Months | \$ 93,046 | \$ 4,338 | \$ | -\$97,384 |
| 12 Months or Longer | 403 | - | - | 403 |
| Total | \$ 93,449 | \$ 4,338 | \$ | -\$97,787 |
| Number of Securities in a Continuous Loss Position | 263 | 9 | - | 272 |
| Unrealized Losses on Securities in a Continuous Loss Position: |  |  |  |  |
| Less than 12 Months | \$ 1,534 | \$ 12 | \$ | -\$ 1,546 |
| 12 Months or Longer | 2 | - | - | 2 |
| Total | \$ 1,536 | \$ 12 | \$ | -\$1,548 |
| Disaggregated Details: <br> US Government Agency |  | \$ 3,106 |  |  |


| Securities, at Amortized Cost |  |
| :--- | :--- |
| US Government Agency | 3,121 |
| Securities, at Fair Value <br> Government Sponsored Entity | 64,427 |
| Securities, at Amortized Cost <br> Government Sponsored Entity <br> Securities, at Fair Value | 65,077 |

\# 13

Held-To-Maturity Securities

| State and | Mortgage- | Corporate Total |  |
| :--- | :--- | :--- | :--- |
| Municipal | Backed | and Other Held-To |  |
| Oecurities - Debt | Maturity |  |  |
| Obligations | Residential | Securities | Securities |

December 31, 2016
Held-To-Maturity Securities, at Amortized Cost
Held-To-Maturity Securities, at Fair Value
Gross Unrealized Gains
Gross Unrealized Losses
Held-To-Maturity Securities, Pledged as Collateral

Securities in a Continuous
Loss Position, at Fair Value:
Less than 12 Months
12 Months or Longer
Total
Number of Securities in a
Continuous Loss Position
Unrealized Losses on Securities in a Continuous Loss Position:
Less than 12 Months
12 Months or Longer
Total
Disaggregated Details:
US Government Agency
Securities, at Amortized Cost
US Government Agency
Securities, at Fair Value
Government Sponsored Entity
Securities, at Amortized Cost
Government Sponsored Entity
Securities, at Fair Value
June 30, 2016

| Held-To-Maturity Securities, <br> at Amortized Cost | $\$ 257,982$ | $\$ 84,832$ | $\$ 1,000$ | $\$ 343,814$ |
| :---: | :--- | :--- | :--- | :--- |
| Held-To-Maturity Securities, <br> at Fair Value | 265,983 | 87,795 | 1,000 | 354,778 |
| Gross Unrealized Gains <br> Gross Unrealized Losses <br> Held-To-Maturity Securities, <br> Pledged as Collateral | 8,002 | 2,963 | - | 10,965 |
|  |  | - | - | 1 |


| Securities in a Continuous <br> Loss Position, at Fair Value: <br> Less than 12 Months | $\$-$ | $\$-$ | $\$-$ | $\$-$ |
| :--- | :--- | :--- | :--- | :--- |
| 12 Months or Longer | 659 | - | - | 659 |
| Total | $\$ 659$ | $\$-$ | $\$-$ | $\$ 659$ |
| Number of Securities in a <br> Continuous Loss Position | 3 | - | - | 3 |
| Unrealized Losses on <br> Securities in a Continuous <br> Loss Position: |  |  |  |  |
| Less than 12 Months <br> 12 Months or Longer | $\$-$ | $\$-$ | $\$-$ | $\$-$ |
| Total | 1 | - | - | 1 |
|  | $\$ 1$ | $\$-$ | $\$-$ | $\$ 1$ |

Held-To-Maturity Securities

| State and | Mortgage- | Corporate Total |  |
| :--- | :--- | :--- | :--- |
| Municipal | Backed | and Other Held-To |  |
| Oecurities - Debt | Maturity |  |  |
| Obligations | Residential | Securities | Securities |

June 30, 2016
Disaggregated Details:
US Government Agency
Securities, at Amortized Cost
US Government Agency
Securities, at Fair Value
Government Sponsored Entity
Securities, at Amortized Cost
Government Sponsored Entity
Securities, at Fair Value
\$ 3,497
3,622
81,335

84,173

In the tables above, maturities of mortgage-backed-securities - residential are included based on their expected average lives. Actual maturities will differ from the table above because issuers may have the right to call or prepay obligations with, or without, prepayment penalties.
Securities in a continuous loss position, in the tables above for June 30, 2017, December 31, 2016 and June 30, 2016, do not reflect any deterioration of the credit worthiness of the issuing entities. U.S. Agency issues, including agency-backed collateralized mortgage obligations and mortgage-backed securities, are all rated at least Aaa by Moody's or AA+ by Standard and Poor's. The state and municipal obligations are general obligations supported by the general taxing authority of the issuer, and in some cases are insured. Obligations issued by school districts are supported by state aid. For any non-rated municipal securities, credit analysis is performed in-house based upon data that has been submitted by the issuers to the NY State Comptroller. That analysis reflects satisfactory credit worthiness of the municipalities. Corporate and other debt securities continue to be rated above investment grade according to Moody's and Standard and Poor's. Subsequent to June 30, 2017, and through the date of filing this report, there were no securities downgraded below investment grade.
The unrealized losses on these temporarily impaired securities are primarily the result of changes in interest rates for fixed rate securities where the interest rate received is less than the current rate available for new offerings of similar securities, changes in market spreads as a result of shifts in supply and demand, and/or changes in the level of prepayments for mortgage related securities. Because we do not currently intend to sell any of our temporarily impaired securities, and because it is not more likely-than-not that we would be required to sell the securities prior to recovery, the impairment is considered temporary.

Note 3. LOANS (In Thousands)
Loan Categories and Past Due Loans
The following table presents loan balances outstanding as of June 30, 2017, December 31, 2016 and June 30, 2016 and an analysis of the recorded investment in loans that are past due at these dates. Generally, Arrow considers an amortizing loan past due 30 or more days when the borrower is two payments past due. Loans held-for-sale of $\$ 261$, $\$ 483$ and $\$ 2,440$ as of June 30, 2017, December 31, 2016 and June 30, 2016, respectively, are included in the residential real estate balances for current loans.


The Company disaggregates its loan portfolio into the following four categories:
Commercial - The Company offers a variety of loan options to meet the specific needs of our commercial customers including term loans, time notes and lines of credit. Such loans are made available to businesses for working capital needs such as inventory and receivables, business expansion and equipment purchases. Generally, a collateral lien is placed on equipment or other assets owned by the borrower. These loans carry a higher risk than commercial real estate loans due to the nature of the underlying collateral, which can be business assets such as equipment and accounts receivable and generally have a lower liquidation value than real estate. In the event of default by the borrower, the Company may be required to liquidate collateral at deeply discounted values. To reduce the risk, management usually obtains personal guarantees of the borrowers.
\# 16

Commercial Real Estate - The Company offers commercial real estate loans to finance real estate purchases, refinancings, expansions and improvements to commercial properties. Commercial real estate loans are made to finance the purchases of real property which generally consists of real estate with completed structures. These commercial real estate loans are secured by first liens on the real estate, which may include apartments, commercial structures, housing businesses, healthcare facilities, and both owner- and non owner-occupied facilities. These loans are typically less risky than commercial loans, since they are secured by real estate and buildings, and are generally originated in amounts of no more than $80 \%$ of the appraised value of the property. However, the Company also offers commercial construction and land development loans to finance projects, primarily within the communities that we serve. Many projects will ultimately be used by the borrowers' businesses, while others are developed for resale. These real estate loans are also secured by first liens on the real estate, which may include apartments, commercial structures, housing business, healthcare facilities and both owner-occupied and non-owner-occupied facilities. There is enhanced risk during the construction period, since the loan is secured by an incomplete project.

Consumer Loans - The Company offers a variety of consumer installment loans to finance personal expenditures. Most of these loans carry a fixed rate of interest with principal repayment terms typically ranging from one to five years, based upon the nature of the collateral and the size of the loan. In addition to installment loans, the Company also offers personal lines of credit and overdraft protection. Several loans are unsecured, which carry a higher risk of loss. Also included in this category are automobile loans. The Company primarily finances the purchases of automobiles indirectly through dealer relationships located throughout upstate New York and Vermont. Most of these loans carry a fixed rate of interest with principal repayment terms typically ranging from three to seven years. Indirect consumer loans are underwritten on a secured basis using the underlying collateral being financed.

Residential Real Estate Mortgages - Residential real estate loans consist primarily of loans secured by first or second mortgages on primary residences. We originate adjustable-rate and fixed-rate one-to-four-family residential real estate loans for the construction, purchase or refinancing of an existing mortgage. These loans are collateralized primarily by owner-occupied properties generally located in the Company's market area. Loans on one-to-four-family residential real estate are generally originated in amounts of no more than $85 \%$ of the purchase price or appraised value (whichever is lower), or have private mortgage insurance. The Company's underwriting analysis for residential mortgage loans typically includes credit verification, independent appraisals, and a review of the borrower's financial condition. Mortgage title insurance and hazard insurance are normally required. It is our general practice to underwrite our residential real estate loans to secondary market standards. Construction loans have a unique risk, because they are secured by an incomplete dwelling. This risk is reduced through periodic site inspections, including one at each loan draw period. In addition, the Company offers fixed home equity loans as well as home equity lines of credit to consumers to finance home improvements, debt consolidation, education and other uses. Our policy allows for a maximum loan to value ratio of $80 \%$, although periodically higher advances are allowed. The Company originates home equity lines of credit and second mortgage loans (loans secured by a second junior lien position on one-to-four-family residential real estate). Risk is generally reduced through underwriting criteria, which include credit verification, appraisals, a review of the borrower's financial condition, and personal cash flows. A security interest, with title insurance when necessary, is taken in the underlying real estate.

Allowance for Loan Losses
The following table presents a roll-forward of the allowance for loan losses and other information pertaining to the allowance for loan losses:
Allowance for Loan Losses

Commercial<br>CommercialReal Estate Consumer Residential UnallocatedTotal

## Roll-forward of the Allowance for Loan Losses

for the Quarterly Periods:

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$\left.\begin{array}{lllllll}\text { March 31, 2017 } & \$ 939 & \$ 5,449 & \$ 6,702 & \$ 4,126 & \$- & \$ 17,216 \\ \text { Charge-offs } & (23 & ) & - & (277 & ) & (5 \\ \text { Recoveries } & 5 & - & 104 & - & - & (305\end{array}\right)$

Allowance for Loan Losses

Commercial<br>Commercial Real Estate Consumer Residential UnallocatedTotal

Roll-forward of the Allowance for Loan Losses for the Year-to-Date Periods:
December 31, 2016
Charge-offs
Recoveries
Provision
June 30, 2017
December 31, 2015
Charge-offs
Recoveries
Provision
June 30, 2016
June 30, 2017
Allowance for loan losses - Loans
Individually Evaluated for Impairment
Allowance for loan losses - Loans
Collectively Evaluated for Impairment
Ending Loan Balance - Individually
Evaluated for Impairment
Ending Loan Balance - Collectively
Evaluated for Impairment
December 31, 2016
Allowance for loan losses - Loans Individually Evaluated for Impairment Allowance for loan losses - Loans Collectively Evaluated for Impairment Ending Loan Balance - Individually
Evaluated for Impairment
Ending Loan Balance - Collectively
Evaluated for Impairment

| \$- | $\$-$ | $\$-$ | $\$-$ | $\$-$ | $\$-$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 1,017 | 5,677 | 6,120 | 4,198 | - | 17,012 |
| - | 890 | 91 | 1,098 | - | 2,079 |
| $\$ 105,155$ | $\$ 430,756$ | $\$ 537,270$ | $\$ 678,008$ | $\$-$ | $\$ 1,751,189$ |

June 30, 2016
Allowance for loan losses - Loans Individually Evaluated for Impairment Allowance for loan losses - Loans
Collectively Evaluated for Impairment
Ending Loan Balance - Individually
Evaluated for Impairment
Ending Loan Balance - Collectively
Evaluated for Impairment

| $\$-$ | $\$ 250$ | $\$-$ | $\$-$ | $\$-$ | $\$ 250$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 1,128 | 5,566 | 5,742 | 4,026 | 86 | 16,548 |
| - | 3,542 | 93 | 640 | - | 4,275 |
| $\$ 106,651$ | $\$ 414,070$ | $\$ 508,445$ | $\$ 639,049$ | $\$-$ | $\$ 1,668,215$ |

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Through the provision for loan losses, an allowance for loan losses is maintained that reflects our best estimate of the inherent risk of loss in the Company's loan portfolio as of the balance sheet date. Additions are made to the allowance for loan losses through a periodic provision for loan losses. Actual loan losses are charged against the allowance for loan losses when loans are deemed uncollectible and recoveries of amounts previously charged off are recorded as credits to the allowance for loan losses.
Our loan officers and risk managers meet at least quarterly to discuss and review the conditions and risks associated with certain criticized and classified commercial-related relationships. In addition, our independent internal loan review department performs periodic reviews of the risk ratings on individual loans in our commercial loan portfolio. We use a two-step process to determine the provision for loan losses and the amount of the allowance for loan losses. We measure impairment on our impaired loans on a quarterly basis. Our impaired loans are generally nonaccrual loans over $\$ 250$ thousand and all troubled debt restructured loans. Our impaired loans are generally considered to be collateral dependent with the specific reserve, if any, determined based on the value of the collateral less estimated costs to sell.
The remainder of the portfolio is evaluated on a pooled basis. For each homogeneous loan pool, we estimate a total loss factor based on the historical net loss rates adjusted for applicable qualitative factors. We update the total loss factors assigned to each loan category on a quarterly basis. For the commercial and commercial real estate categories, we further segregate the loan categories by credit risk profile (pools of loans graded satisfactory, special mention and substandard). Additional description of the credit risk classifications is detailed in the Credit Quality Indicators section of this note.
We determine the annualized historical net loss rate for each loan category using a trailing three-year net charge-off average. We then apply a loss emergence period factor to the historical net loss rate to account for the time it takes to identify the loss after a loss-causing event. While historical net loss experience provides a reasonable starting point for our analysis, historical net losses, or even recent trends in net losses, do not by themselves form a sufficient basis to determine the appropriate level of the allowance for loan losses. Therefore, we also consider and adjust historical net loss factors for qualitative factors that impact the inherent risk of loss associated with our loan categories within our total loan portfolio. These include:
Changes in the volume and severity of past due, nonaccrual and adversely classified loans
Changes in the nature and volume of the portfolio and in the terms of loans
Changes in the value of the underlying collateral for collateral dependent loans
Changes in lending policies and procedures, including changes in underwriting standards and collection, charge-off,
and recovery practices not considered elsewhere in estimating credit losses
Changes in the quality of the loan review system
Changes in the experience, ability, and depth of lending management and other relevant staff
Changes in international, national, regional, and local economic and business conditions and developments that affect the collectibility of the portfolio
The existence and effect of any concentrations of credit, and changes in the level of such concentrations The effect of other external factors such as competition and legal and regulatory requirements on the level of estimated credit losses in the existing portfolio or pool
While not a significant part of the allowance for loan losses methodology, in 2016, we maintained an unallocated portion of the total allowance for loan losses related to the overall level of imprecision inherent in the estimation of the appropriate level of allowance for loan losses.

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Credit Quality Indicators
The following table presents the credit quality indicators by loan category at June 30, 2017, December 31, 2016 and June 30, 2016:
Loan Credit Quality Indicators

Commercial<br>Commercial Real Estate Consumer Residential Total

June 30, 2017
Credit Risk Profile by Creditworthiness Category:

| Satisfactory | $\$ 120,388$ | $\$ 412,423$ |  | $\$ 532,811$ |
| :--- | :--- | :--- | :--- | :--- |
| Special Mention | 1,269 | 1,414 | 2,683 |  |
| Substandard | 4,602 | 27,973 |  | 32,575 |
| Doubtful | - | - |  | - |
| Credit Risk Profile Based on Payment Activity: |  |  | $\$ 578,317$ | $\$ 727,733$ |
| Performing |  |  | 437 | 4,076 |

December 31, 2016
Credit Risk Profile by Creditworthiness Category:

| Satisfactory | $\$ 95,722$ | $\$ 396,907$ |  | $\$ 492,629$ |
| :--- | :--- | :--- | :--- | :--- |
| Special Mention | 1,359 | 7,008 | 8,367 |  |
| Substandard | 8,074 | 27,731 |  | 35,805 |
| Doubtful | - | - |  | - |
| Credit Risk Profile Based on Payment Activity: |  |  | $\$ 536,614$ | $\$ 675,489$ |
| Performing |  |  | 747 | 3,617 |

June 30, 2016
Credit Risk Profile by Creditworthiness Category:
Satisfactory \$473,742

Special Mention
Substandard
1,290 10,429
11,719
Doubtful
Credit Risk Profile Based on Payment Activity:
Performing $\quad \$ 508,014 \quad \$ 636,751 \quad \$ 1,144,765$
$\begin{array}{llll}\text { Nonperforming } & 524 & 2,938 & 3,462\end{array}$
We use an internally developed system of five credit quality indicators to rate the credit worthiness of each commercial loan defined as follows: 1) Satisfactory - "Satisfactory" borrowers have acceptable financial condition with satisfactory record of earnings and sufficient historical and projected cash flow to service the debt. Borrowers have satisfactory repayment histories and primary and secondary sources of repayment can be clearly identified; 2) Special Mention - Loans in this category have potential weaknesses that deserve management's close attention. If left uncorrected, these potential weaknesses may result in deterioration of the repayment prospects for the asset or in the institution's credit position at some future date. "Special mention" assets are not adversely classified and do not expose an institution to sufficient risk to warrant adverse classification. Loans which might be assigned this risk rating include loans to borrowers with deteriorating financial strength and/or earnings record and loans with potential for problems due to weakening economic or market conditions; 3) Substandard - Loans classified as "substandard" are inadequately protected by the current sound net worth or paying capacity of the borrower or the collateral pledged, if
any. Loans in this category have well defined weaknesses that jeopardize the repayment. They are characterized by the distinct possibility that the bank will sustain some loss if the deficiencies are not corrected. "Substandard" loans may include loans which are likely to require liquidation of collateral to effect repayment, and other loans where character or ability to repay has become suspect. Loss potential, while existing in the aggregate amount of substandard assets, does not have to exist in individual assets classified substandard; 4) Doubtful - Loans classified as "doubtful" have all of the weaknesses inherent in those classified as "substandard" with the added characteristic that the weaknesses make collection or liquidation in full, on the basis of current existing facts, conditions, and values highly questionable and improbable. Although possibility of loss is extremely high, classification of these loans as "loss" has been deferred due to specific pending factors or events which may strengthen the value (i.e. possibility of additional collateral, injection of capital, collateral liquidation, debt restructure, economic recovery, etc). Loans classified as "doubtful" need to be placed on
non-accrual; and 5) Loss - Loans classified as "loss" are considered uncollectible and of such little value that their continuance as bankable assets is not warranted. As of the date of the balance sheet, all loans in this category have been charged-off to the allowance for loan losses. Large commercial loans are evaluated on an annual basis, unless the credit quality indicator falls to a level of "special mention" or below, when the loan is evaluated quarterly. The credit quality indicator is one of the factors used to determine any loss, as further described in this footnote. For the purposes of the table above, nonperforming consumer and residential loans are those loans on nonaccrual status or are 90 days or more past due and still accruing interest.

## Impaired Loans

The following table presents information on impaired loans based on whether the impaired loan has a recorded related allowance or has no recorded related allowance:
Impaired Loans
Commercial
Commercial Real Estate Consumer Residential Total
June 30, 2017
Recorded Investment:

| With No Related Allowance | \$ | -\$ 1,178 | \$ 88 | \$ 802 | \$2,068 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| With a Related Allowance | 503 | - | - | 288 | 791 |
| Unpaid Principal Balance: |  |  |  |  |  |
| With No Related Allowance | - | 1,178 | 88 | 802 | 2,068 |
| With a Related Allowance | 503 | - | - | 288 | 791 |

December 31, 2016
Recorded Investment:

| With No Related Allowance $\$$ | $-\$ 890$ | $\$ 91$ | $\$ 1,098$ | $\$ 2,079$ |
| :--- | :--- | :--- | :--- | :--- |
| With a Related Allowance | - | - | - | - |
| Unpaid Principal Balance: | - |  |  |  |
| With No Related Allowance - | 890 | 91 | 1,098 | 2,079 |

June 30, 2016
Recorded Investment:

| With No Related Allowance \$ | $-\$ 1,850$ | $\$ 93$ | $\$ 640$ | $\$ 2,583$ |
| :--- | :--- | :--- | :--- | :--- |
| With a Related Allowance - | 1,692 | - | - | 1,692 |
| Unpaid Principal Balance:    <br> With No Related Allowance - 1,850 93 640 <br> With a Related Allowance - 1,692 - - \$2,583 |  |  |  |  |

For the Quarter Ended:
June 30, 2017
Average Recorded Balance:
With No Related Allowance \$
With a Related Allowance 252
Interest Income Recognized:
With No Related Allowance -

| $-\$ 1,031$ | $\$ 88$ | $\$ 804$ | $\$ 1,923$ |
| :--- | :--- | :--- | :--- |
| - | - | 288 | 540 |

With a Related Allowance -
$\begin{array}{llll}- & 2 & 4 & 6\end{array}$
Cash Basis Income:
With No Related Allowance -

With a Related Allowance -
June 30, 2016
Average Recorded Balance:
With No Related Allowance \$
With a Related Allowance -
Interest Income Recognized:
With No Related Allowance -
With a Related Allowance
-
Cash Basis Income:
With No Related Allowance -
With a Related Allowance

Impaired Loans

Commercial<br>Commercial Real Estate Consumer Residential Total

For the Year-To-Date Period Ended:
June 30, 2017
Average Recorded Balance:

| With No Related Allowance | $\$$ | \$ 1,034 | $\$ 90$ | $\$ 950$ | $\$ 2,074$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
| With a Related Allowance | 252 | - | - | 144 | 396 |
| Interest Income Recognized: |  |  |  |  |  |
| With No Related Allowance | - | - | 3 | 4 | 7 |
| With a Related Allowance | - | - | - | - | - |
| Cash Basis Income: | - | - | - | - | - |
| With No Related Allowance | - | - | - | - | - |

June 30, 2016
Average Recorded Balance:
With No Related Allow
With a Related Allowance
Interest Income Recognized:
With No Related Allowance
With a Related Allowance
Cash Basis Income:
With No Related Allowance
With a Related Allowance
At June 30, 2017, December 31, 2016 and June 30, 2016, all impaired loans were considered to be collateral dependent and were therefore evaluated for impairment based on the fair value of collateral less estimated cost to sell. Interest income recognized in the table above, represents income earned after the loans became impaired and includes restructured loans in compliance with their modified terms and nonaccrual loans where we have recognized interest income on a cash basis.
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Loans Modified in Trouble Debt Restructurings
The following table presents information on loans modified in trouble debt restructurings during the periods indicated. All loans were modified under Arrow's own programs. The principal modification, for all the modifications in the table below, involved payment deferrals.
Loans Modified in Trouble Debt Restructurings During the Period
Commercial
Commercial Real Estate Consumer Residential Total
For the Quarter Ended:
June 30, 2017

| Number of Loans | 1 | - | 2 |  | - | 3 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Pre-Modification Outstanding Recorded Investment | \$ 503 | \$ | -\$ | 10 | \$ | -\$513 |
| Post-Modification Outstanding Recorded Investment | 503 | - | 10 |  | - | 513 |
| Subsequent Default, Number of Contracts | - | - | - |  | - | - |
| Subsequent Default, Recorded Investment | - | - | - |  | - | - |
| June 30, 2016 |  |  |  |  |  |  |
| Number of Loans | - | - | 1 |  | - | 1 |
| Pre-Modification Outstanding Recorded Investment | \$ | \$ | -\$ | 8 | \$ | -\$8 |
| Post-Modification Outstanding Recorded Investment | - | - | 8 |  | - | 8 |
| Subsequent Default, Number of Contracts | - | - | - |  | - | - |
| Subsequent Default, Recorded Investment | - | - | - |  | - | - |

For the Year-To-Date Period Ended:
June 30, 2017
$\begin{array}{llllll}\text { Number of Loans } & 1 & - & 4 & - & 5\end{array}$
Pre-Modification Outstanding Recorded Investment $\quad \$ 503 \quad \$ \quad$ — $\$ 26$ \$ $\$ 529$
Post-Modification Outstanding Recorded Investment 503 - 26 - 529
Subsequent Default, Number of Contracts
Subsequent Default, Recorded Investment
June 30, 2016

|  | - |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :---: | :---: |
| Number of Loans |  |  | - | 1 |  |  |  |
| Pre-Modification Outstanding Recorded Investment | $\$-$ | $\$$ |  | $\$$ | 8 | $\$$ | $-\$ 8$ |
| Post-Modification Outstanding Recorded Investment | - |  | - | 8 | - | 8 |  |
| Subsequent Default, Number of Contracts | - | - | - | - | - |  |  |
| Subsequent Default, Recorded Investment | - | - | - | - | - |  |  |

In general, loans requiring modification are restructured to accommodate the projected cashflows of the borrower. No loans modified during the preceding twelve months subsequently defaulted as of June 30, 2017. In addition, no commitments have been made to extend credit to borrowers whose loans have been modified in a troubled debt restructuring.

## Note 4. GUARANTEES (In Thousands)

The following table presents the balance for commitments to extend credit and standby letters of credit for the periods ended June 30, 2017, December 31, 2016 and June 30, 2016:
Commitments to Extend Credit and Letters of Credit

| June 30, | December | 31, June 30, |
| :--- | :--- | :--- |
| 2017 | 2016 | 2016 |

Notional Amount:
Commitments to Extend Credit \$290,818 \$ 296,442 \$292,839
Standby Letters of Credit 3,373 3,445 3,137
Fair Value:
Commitments to Extend Credit \$- \$- \$-
Standby Letters of Credit $25 \quad 30 \quad 24$
Arrow is party to financial instruments with off-balance sheet risk in the normal course of business to meet the financing needs of its customers. These financial instruments include commitments to extend credit and standby letters of credit. Commitments to extend credit include home equity lines of credit, commitments for residential and commercial construction loans and other personal and commercial lines of credit. These instruments involve, to varying degrees, elements of credit and interest rate risk in excess of the amount recognized in the consolidated balance sheets. The contract or notional amounts of those instruments reflect the extent of the involvement Arrow has in particular classes of financial instruments.
Arrow's exposure to credit loss in the event of nonperformance by the other party to the financial instrument for commitments to extend credit and standby letters of credit is represented by the contractual notional amount of those instruments. Arrow uses the same credit policies in making commitments and conditional obligations as it does for on-balance sheet instruments.
Commitments to extend credit are agreements to lend to a customer as long as there is no violation of any condition established in the contract. Commitments generally have fixed expiration dates or other termination clauses and may require payment of a fee. Since many of the commitments are expected to expire without being drawn upon, the total commitment amounts do not necessarily represent future cash requirements. Arrow evaluates each customer's creditworthiness on a case-by-case basis. Home equity lines of credit are secured by residential real estate. Construction commitments are secured by underlying real estate. For other lines of credit, the amount of collateral obtained, if deemed necessary by Arrow upon extension of credit, is based on management's credit evaluation of the counterparty. Collateral held varies, but may include accounts receivable, inventory, property, plant and equipment, and income-producing commercial properties. Most of the commitments are variable rate instruments. Arrow has issued conditional commitments in the form of standby letters of credit to guarantee payment on behalf of a customer and guarantee the performance of a customer to a third party. Standby letters of credit generally arise in connection with lending relationships. The credit risk involved in issuing these instruments is essentially the same as that involved in extending loans to customers. Contingent obligations under standby letters of credit at June 30, 2017, December 31, 2016 and June 30, 2016 represent the maximum potential future payments Arrow could be required to make. Typically, these instruments have terms of 12 months or less and expire unused; therefore, the total amounts do not necessarily represent future cash requirements. Each customer is evaluated individually for creditworthiness under the same underwriting standards used for commitments to extend credit and on-balance sheet instruments. Company policies governing loan collateral apply to standby letters of credit at the time of credit extension. Loan-to-value ratios generally range from $50 \%$ for movable assets, such as inventory, to $100 \%$ for liquid assets, such as bank CD's. Fees for standby letters of credit typically range from $1 \%$ to $3 \%$ of the notional amount. Fees are collected upfront and are amortized over the life of the commitment. The fair values of Arrow's standby letters of credit at June 30, 2017, December 31, 2016 and June 30, 2016, in the table above, were the same as the carrying amounts. The fair value of standby letters of credit is based on the fees currently charged for similar agreements or the cost to terminate the arrangement with the counterparties.

The fair value of commitments to extend credit is determined by estimating the fees to enter into similar agreements, taking into account the remaining terms and present creditworthiness of the counterparties, and for fixed rate loan commitments, the difference between the current and committed interest rates. Arrow provides several types of commercial lines of credit and standby letters of credit to its commercial customers. The pricing of these services is not isolated, as Arrow considers the customer's complete deposit and borrowing relationship in pricing individual products and services. The commitments to extend credit also include commitments under home equity lines of credit, for which Arrow charges no fee. The carrying value and fair value of commitments to extend credit are not material and Arrow does not expect to incur any material loss as a result of these commitments.

## Note 5. COMPREHENSIVE INCOME (In Thousands)

The following table presents the components of other comprehensive income for the three-month period ended June 30, 2017 and 2016:
Schedule of Comprehensive Income


The following table presents the changes in accumulated other comprehensive income by component: Changes in Accumulated Other Comprehensive Income (Loss) by Component ${ }^{(1)}$

For the Quarter-To-Date periods ended:
$\left.\begin{array}{llllll}\text { March 31, } 2017 & \$(335 & ) & \$(5,628) \$(717) \$(6,680) \\ \text { Other comprehensive income or loss before reclassifications } & 409 & - & - & 409\end{array}\right)$

For the Year-To-Date periods ended:

| December 31, 2016 | \$ (382 | ) | \$(5,737) | \$(715) | \$(6,834) |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Other comprehensive income or loss before reclassifications | 456 |  | - |  | 456 |
| Amounts reclassified from accumulated other comprehensive income | - |  | 181 | (3 | 178 |
| Net current-period other comprehensive income | 456 |  | 181 | (3 | 634 |
| June 30, 2017 | \$ 74 |  | \$ $(5,556)$ | \$(718) | \$ $(6,200)$ |
| December 31, 2015 | \$ 629 |  | \$ 7,893 ) | \$(708) | \$(7,972) |
| Other comprehensive income or loss before reclassifications | 3,119 |  | - | - | 3,119 |
| Amounts reclassified from accumulated other comprehensive income | (88 | ) | 203 | (4 | 111 |
| Net current-period other comprehensive income | 3,031 |  | 203 | (4 | 3,230 |
| June 30, 2016 | \$ 3,660 |  | \$ 7,690 ) | \$(712) | \$ $(4,742)$ |

(1) All amounts are net of tax. Amounts in parentheses indicate debits.
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The following table presents the reclassifications out of accumulated other comprehensive income: Reclassifications Out of Accumulated Other Comprehensive Income ${ }^{(1)}$

|  | Amounts <br> Reclassified <br> from |  |
| :--- | :--- | :--- |
| Details about Accumulated Other | Accumulated$\quad$ Affected Line Item in the Statement |  |
| Other |  |  |
| Comprehensive Income (Loss) Components | Comprehensive <br> Income | Where Net Income Is Presented |

For the Quarter-to-date periods ended:
June 30, 2017
Unrealized gains and losses on available-for-sale securities \$ -

| - | Provision for Income Taxes |
| :--- | :--- |
| $\$-$ | Net of Tax |

Amortization of defined benefit pension items:

Prior-service costs
Actuarial gains/(losses)
Total reclassifications for the period

$$
\begin{equation*}
\$ 3 \tag{181}
\end{equation*}
$$

June 30, 2016
Unrealized gains and losses on available-for-sale securities $\quad \$ 144$
${ }^{(2)}$ Salaries and Employee Benefits
) (2) Salaries and Employee Benefits
) Total before Tax
Provision for Income Taxes
) Net of Tax
) Net of Tax

Gain on Securities Transactions Total before Tax
) Provision for Income Taxes Net of Tax

Amortization of defined benefit pension items:
Prior-service costs
Actuarial gains/(losses)

Total reclassifications for the period
\$ 4
${ }^{(2)}$ Salaries and Employee Benefits
) (2) Salaries and Employee Benefits
) Total before Tax
Provision for Income Taxes

Net of Tax

For the Year-to-date periods ended:
June 30, 2017
Unrealized gains and losses on available-for-sale securities \$ -
Gain on Securities Transactions Total before Tax

| - | Provision for Income Taxes |
| :--- | :--- |
|  | Net of Tax |

Amortization of defined benefit pension items:

| Prior-service costs | \$ 6 |  | Salaries and Employee Benefits |
| :---: | :---: | :---: | :---: |
| Actuarial gains/(losses) | (359 | ) (2) | Salaries and Employee Benefits |
|  | (353 | ) | Total before Tax |
|  | 175 |  | Provision for Income Taxes |
|  | \$ (178 | ) | Net of Tax |
| Total reclassifications for the period | \$ (178 |  | Net of Tax |

Reclassifications Out of Accumulated Other Comprehensive Income ${ }^{(1)}$

|  | Amounts <br> Reclassified <br> from |
| :--- | :--- | :--- |
| Accumulated |  |$\quad$ Affected Line Item in the Statement

June 30, 2016

Unrealized gains and losses on available-for-sale securities $\$ 144$
144
(56
\$ 88
Amortization of defined benefit pension items:
Prior-service costs
Actuarial gains/(losses)

Total reclassifications for the period
$7 \quad$ (2) Salaries and Employee Benefits
\$ (334 ) ${ }^{(2)}$ Salaries and Employee Benefits
(327 ) Total before Tax
128 Provision for Income Taxes
\$ (199 ) Net of Tax
\$ (111 ) Net of Tax
(1) Amounts in parentheses indicate debits to profit/loss.
(2) These accumulated other comprehensive income components are included in the computation of net periodic pension cost.
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## Note 6. STOCK BASED COMPENSATION PLANS

Under our 2013 Long-Term Incentive Plan, we granted options in the first quarter of 2017 to purchase shares of our common stock. The fair values of the options were estimated on the date of grant using the Black-Scholes option-pricing model. The fair value of our grants is expensed over the four year vesting period. The following table presents a roll-forward of our stock option plans and grants issued during 2017:
Schedule of Share-based Compensation Arrangements

|  | Stock <br> Option <br> Plans |
| :--- | :--- |
|  |  |
| Roll-Forward of Shares Outstanding: | 355,651 |
| Outstanding at January 1, 2017 | 54,000 |
| Granted | $-33,062)$ |
| Exercised | - |
| Forfeited | 376,589 |
| Outstanding at June 30, 2017 | 237,443 |
| Exercisable at Period-End | 139,146 |
| Vested and Expected to Vest |  |
|  | $\$ 22.52$ |
| Roll-Forward of Shares Outstanding - Weighted Average Exercise Price: |  |
| Outstanding at January 1, 2017 | 37.20 |
| Granted | 21.22 |
| Exercised | - |
| Forfeited | 24.74 |
| Outstanding at June 30, 2017 | 21.96 |
| Exercisable at Period-End | 29.49 |
| Vested and Expected to Vest |  |
|  |  |
| Grants Issued During 2017 - Weighted Average Information: | $\$ 6.44$ |
| Fair Value | 2.72 |

The following table presents information on the amounts expensed for the periods ended June 30, 2017 and 2016: Share-Based Compensation Expense

| For the |  |
| :--- | :--- |
| Three | For the Six |
| Months | Months |
| Ended | Ended June |
| June 30, | 30, |
| 20172016 | 20172016 |

Share-Based Compensation Expense $\$ 89$ \$71 $\$ 172$ \$145
Arrow also sponsors an Employee Stock Purchase Plan under which employees purchase Arrow's common stock at a $5 \%$ discount below market price. Under current accounting guidance, a stock purchase plan with a discount of $5 \%$ or less is not considered a compensatory plan.

Note 7. RETIREMENT PLANS (Dollars in Thousands)
The following tables provide the components of net periodic benefit costs for the three and six-month periods ended June 30, 2017 and 2016.

Plan Contributions During the Period
\$ -
\$ 219 \$ 150

We were not required to make a contribution to our qualified pension plan in 2017, and currently, we do not expect to make additional contributions in 2017. Arrow makes contributions to its other post-retirement benefit plans in an amount equal to benefit payments for the year.

Note 8. EARNINGS PER COMMON SHARE (In Thousands, Except Per Share Amounts)
The following table presents a reconciliation of the numerator and denominator used in the calculation of basic and diluted earnings per common share ("EPS") for periods ended June 30, 2017 and 2016. All share and per share amounts have been adjusted for the September 29, $20163 \%$ stock dividend.
Earnings Per Share

Earnings Per Share - Basic:
Net Income
Quarterly Year-to-Date
Period Ended: Period Ended:
June 30,June 30, June 30, June 30, 2017201620172016

Weighted Average Shares - Basic
Earnings Per Share - Basic
Earnings Per Share - Diluted:

| Net Income | $\$ 7,208$ | $\$ 6,647$ | $\$ 13,839$ | $\$ 13,196$ |
| :--- | :--- | :--- | :--- | :--- |
| Weighted Average Shares - Basic | 13,485 | 13,372 | 13,485 | 13,357 |
| Dilutive Average Shares Attributable to Stock Options | 83 | 57 | 96 | 48 |
| Weighted Average Shares - Diluted | 13,568 | 13,429 | 13,581 | 13,405 |
| Earnings Per Share - Diluted | $\$ 0.53$ | $\$ 0.49$ | $\$ 1.02$ | $\$ 0.98$ |

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Note 9. FAIR VALUE OF FINANCIAL INSTRUMENTS (In Thousands)
FASB ASC Subtopic 820-10 defines fair value, establishes a framework for measuring fair value in Generally Accepted Accounting Principles (GAAP) and requires certain disclosures about fair value measurements. We do not have any nonfinancial assets or liabilities measured at fair value on a recurring basis. The only assets or liabilities that Arrow measured at fair value on a recurring basis at June 30, 2017, December 31, 2016 and June 30, 2016 were securities available-for-sale. Arrow held no securities or liabilities for trading on such dates.
The table below presents the financial instrument's fair value and the amounts within the fair value hierarchy based on the lowest level of input that is significant to the fair value measurement:
Fair Value of Assets and Liabilities Measured on a Recurring and Nonrecurring Basis
Fair Value Measurements at Reporting Date Using:
Quoted
Prices


Fair Value of Assets and Liabilities Measured on a Recurring
Basis:
June 30, 2017
Securities Available-for Sale:
U.S. Government \& Agency Obligations

State and Municipal Obligations
Mortgage-Backed Securities - Residential
Corporate and Other Debt Securities
Mutual Funds and Equity Securities
Total Securities Available-for-Sale
December 31, 2016
Securities Available-for Sale:
U.S. Government \& Agency Obligations

State and Municipal Obligations
Mortgage-Backed Securities - Residential
Corporate and Other Debt Securities
Mutual Funds and Equity Securities
Total Securities Available-for Sale
June 30, 2016
Securities Available-for Sale:
U.S. Government \& Agency Obligations

State and Municipal Obligations
Mortgage-Backed Securities - Residential
Corporate and Other Debt Securities
Mutual Funds and Equity Securities
Total Securities Available-for Sale

| $\$ 147,085$ | $\$ 54,676$ | $\$ 92,409$ | $\$-$ |
| :--- | :--- | :--- | :--- |
| 15,441 | - | 15,441 | - |
| 161,077 | - | 161,077 | - |
| 2,299 | - | 2,299 | - |
| 1,490 | - | 1,490 | - |
| $\$ 327,392$ | $\$ 54,676$ | $\$ 272,716$ | $\$-$ |


| $\$ 147,377$ | $\$ 54,706$ | $\$ 92,671$ | $\$-$ |
| :--- | :--- | :--- | :--- |
| 27,690 | - | 27,690 | - |
| 167,239 | - | 167,239 | - |
| 3,308 | - | 3,308 | - |
| 1,382 | - | 1,382 | - |
| $\$ 346,996$ | $\$ 54,706$ | $\$ 292,290$ | $\$-$ |


| $\$ 157,990$ | \$- |  | $\$ 157,990$ | $\$-$ |
| :--- | :--- | :--- | :--- | :--- |
| 36,425 | - | 36,425 | - |  |
| 161,728 | - | 161,728 | - |  |
| 5,555 | - | 5,555 | - |  |
| 1,231 | - | 1,231 | - |  |
| $\$ 362,929$ | $\$-$ | $\$ 362,929$ | $\$-$ |  |

Fair Value of Assets and Liabilities Measured on a
Nonrecurring Basis:
June 30, 2017

| Collateral Dependent Impaired Loans | $\$ 791$ | $\$-$ | $\$-$ | $\$ 791$ | $\$(146)$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Other Real Estate Owned and Repossessed Assets, Net | 1,613 | - | - | 1,613 | $(584)$ |
| December 31, 2016 |  |  |  |  |  |
| Collateral Dependent Impaired Loans <br> Other Real Estate Owned and Repossessed Assets, Net | $\$-$ | $\$-$ | $\$-$ | $\$-$ | $\$-$ |
| June 30, 2016 |  |  |  |  |  |
| Collateral Dependent Impaired Loans | $\$-686$ | $\$(587)$ |  |  |  |
| Other Real Estate Owned and Repossessed Assets, Net | 91,692 | $\$-$ | $\$-$ | $\$ 1,692$ | $\$(250)$ |
|  |  | - | - | 933 | $(732)$ |

We determine the fair value of financial instruments under the following hierarchy:
Level 1 - Unadjusted quoted prices in active markets that are accessible at the measurement date for identical, unrestricted assets or liabilities;
Level 2 - Quoted prices for similar assets or liabilities in active markets, quoted prices for identical or similar assets or diabilities in markets that are not active, or inputs that are observable, either directly or indirectly, for substantially the full term of the asset or liability; and
Level 3 - Prices or valuation techniques that require inputs that are both significant to the fair value measurement and unobservable (i.e., supported by little or no market activity).

There were no transfers between Levels 1, 2 and 3 for the three months ended June 30, 2017, December 31, 2016 and June 30, 2016.

Fair Value Methodology for Assets and Liabilities Measured on a Recurring Basis
The fair value of Level 1 securities available-for-sale are based on unadjusted, quoted market prices from exchanges in active markets. The fair value of Level 2 securities available-for-sale are based on an independent bond and equity pricing service for identical assets or significantly similar securities and an independent equity pricing service for equity securities not actively traded. The pricing service uses a variety of techniques to arrive at fair value including market maker bids, quotes and pricing models. Inputs to the pricing models include recent trades, benchmark interest rates, spreads and actual and projected cash flows.

Fair Value Methodology for Assets and Liabilities Measured on a Nonrecurring Basis
The Company uses the fair value of underlying collateral to estimate the specific reserves for collateral dependent impaired loans. The fair value of underlying collateral is generally determined through independent appraisals, which generally include various Level 3 inputs which are not identifiable. The appraisals may be adjusted by management for qualitative factors such as economic conditions and estimated liquidation expenses ranging from $15 \%$ to $25 \%$. Based on the valuation techniques used, the fair value measurements for collateral dependent impaired loans are classified as Level 3. Other assets which might have been included in this table include mortgage servicing rights, goodwill and other intangible assets. Arrow evaluates each of these assets for impairment on a quarterly basis, with no impairment recognized for these assets at June 30, 2017, December 31, 2016 and June 30, 2016.

## Fair Value by Balance Sheet Grouping

The following table presents a summary of the carrying amount, the fair value or an amount approximating fair value and the fair value hierarchy of Arrow's financial instruments:

Schedule of Fair Values by Balance Sheet Grouping

June 30, 2017
Cash and Cash Equivalents
Securities Available-for-Sale
Securities Held-to-Maturity
Federal Home Loan Bank and Federal Reserve Bank Stock
Net Loans
Accrued Interest Receivable
Deposits
Federal Funds Purchased and Securities
Sold Under Agreements to Repurchase
Federal Home Loan Bank Overnight Advances
Federal Home Loan Bank Term Advances
Junior Subordinated Obligations Issued to Unconsolidated Subsidiary Trusts
Accrued Interest Payable
December 31, 2016
Cash and Cash Equivalents
Securities Available-for-Sale
Securities Held-to-Maturity
Federal Home Loan Bank and Federal
Reserve Bank Stock
Net Loans
Accrued Interest Receivable
Deposits
Federal Funds Purchased and Securities
Sold Under Agreements to Repurchase
Federal Home Loan Bank Overnight Advances
Federal Home Loan Bank Term Advances
Junior Subordinated Obligations Issued to Unconsolidated Subsidiary Trusts
Accrued Interest Payable
June 30, 2016
Cash and Cash Equivalents
Securities Available-for-Sale
Securities Held-to-Maturity
Federal Home Loan Bank and Federal
Reserve Bank Stock
Net Loans
Accrued Interest Receivable
Deposits
Federal Funds Purchased and Securities
Sold Under Agreements to Repurchase

| Carrying | Fair |
| :--- | :--- |
| Amount | Value |


| $\$ 57,355$ | $\$ 57,355$ | $\$ 57,355$ | $\$$ | $\$$ | - |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 346,996 | 346,996 | 54,706 | 292,290 | - |  |
| 345,427 | 343,751 | - | 343,751 | - |  |
| 10,912 | 10,912 | 10,912 | - | - |  |
| $1,736,256$ | $1,720,078$ | - | - | $1,720,078$ |  |
| 6,684 | 6,684 | 6,684 | - | - |  |
| $2,116,546$ | $2,109,557$ | $1,917,233192,324$ | - |  |  |
| 35,836 | 35,836 | 35,836 | - | - |  |
| 123,000 | 123,000 | 123,000 | - | - |  |
| 55,000 | 55,118 | - | 55,118 | - |  |
| 20,000 | 20,000 | - | 20,000 | - |  |
| 247 | 247 | 247 | - | - |  |

Fair Value Hierarchy
Level 1 Level 2 Level 3

| $\$ 66,077$ | $\$ 66,077$ | $\$ 66,077$ | $\$$ | $\$$ | - |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 327,392 | 327,392 | 54,676 | 272,716 | - |  |
| 348,018 | 350,355 | - | 350,355 | - |  |
| 11,035 | 11,035 | 11,035 | - | - |  |
| $1,861,190$ | $1,844,301$ | - | - | $1,844,301$ |  |
| 6,563 | 6,563 | 6,563 | - | - |  |
| $2,220,038$ | $2,212,256$ | $2,018,424193,832$ | - |  |  |
| 40,892 | 40,892 | 40,892 | - | - |  |
| 122,000 | 122,000 | 122,000 | - | - |  |
| 55,000 | 55,448 | - | 55,448 | - |  |
| 20,000 | 20,000 | - | 20,000 | - |  |
| 252 | 252 | 252 | - | - |  |


| $\$ 63,115$ | $\$ 63,115$ | $\$ 63,115$ | $\$$ | $\$$ | - |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 362,929 | 362,929 | - | 362,929 | - |  |
| 343,814 | 354,778 | - | 354,778 | - |  |
| 9,961 | 9,961 | 9,961 | - | - |  |
| $1,655,692$ | $1,664,713$ | - | - | $1,664,713$ |  |
| 6,383 | 6,383 | 6,383 | - | - |  |
| $2,072,385$ | $2,067,328$ | $1,869,865197,463$ | - |  |  |
| 41,497 | 41,497 | 41,497 | - | - |  |


| Federal Home Loan Bank Overnight Advances | 102,000 | 102,000 | 102,000 | - | - |
| :---: | :--- | :--- | :--- | :--- | :--- | :--- |
| Federal Home Loan Bank Term Advances | 55,000 | 56,145 | - | 56,145 | - |
| Junior Subordinated Obligations Issued | 20,000 | 20,000 | - | 20,000 | - |
| to Unconsolidated Subsidiary Trusts | 231 | 231 | 231 | - | - |
| Accrued Interest Payable |  |  |  |  |  |

Fair Value Methodology for Financial Instruments Not Measured on a Recurring or Nonrecurring Basis
Securities held-to-maturity are fair valued utilizing an independent bond pricing service for identical assets or significantly similar securities. The pricing service uses a variety of techniques to arrive at fair value including market maker bids, quotes and pricing models. Inputs to the pricing models include recent trades, benchmark interest rates, spreads and actual and projected cash flows.
Fair values for loans are estimated for portfolios of loans with similar financial characteristics. Loans are segregated by type such as commercial, commercial real estate, residential mortgage, indirect and other consumer loans. Each loan category is further segmented into fixed and adjustable interest rate terms and by performing and nonperforming categories. The fair value of performing loans is calculated by discounting scheduled cash flows through the estimated maturity using estimated market discount rates that reflect the credit and interest rate risk inherent in the loan. The estimate of maturity is based on historical experience with repayments for each loan classification, modified, as required, by an estimate of the effect of current economic and lending conditions. Fair value for nonperforming loans is generally based on recent external appraisals. If appraisals are not available, estimated cash flows are discounted using a rate commensurate with the risk associated with the estimated cash flows. Assumptions regarding credit risk, cash flows and discount rates are judgmentally determined using available market information and specific borrower information.
The fair value of time deposits is based on the discounted value of contractual cash flows, except that the fair value is limited to the extent that the customer could redeem the certificate after imposition of a premature withdrawal penalty. The discount rates are estimated using the FHLBNY yield curve, which is considered representative of Arrow's time deposit rates. The fair value of all other deposits is equal to the carrying value.
The fair value of FHLBNY advances is estimated based on the discounted value of contractual cash flows. The discount rate is estimated using current rates on FHLBNY advances with similar maturities and call features. Based on Arrow's capital adequacy, the book value of the outstanding trust preferred securities (Junior Subordinated Obligations Issued to Unconsolidated Subsidiary Trusts) are considered to approximate fair value since the interest rates are variable (indexed to LIBOR) and Arrow is well-capitalized.

Report of Independent Registered Public Accounting Firm
The Board of Directors and Stockholders
Arrow Financial Corporation:
We have reviewed the consolidated balance sheets of Arrow Financial Corporation and subsidiaries (the Company) as of June 30, 2017 and 2016, the related consolidated statements of income and comprehensive income for the threeand six-month periods ended June 30, 2017 and 2016, and the statements of changes in stockholders' equity and cash flows for the six-month periods ended June 30, 2017 and 2016. These consolidated financial statements are the responsibility of the Company's management.

We conducted our reviews in accordance with the standards of the Public Company Accounting Oversight Board (United States). A review of interim financial information consists principally of applying analytical procedures and making inquiries of persons responsible for financial and accounting matters. It is substantially less in scope than an audit conducted in accordance with the standards of the Public Company Accounting Oversight Board (United States), the objective of which is the expression of an opinion regarding the financial statements taken as a whole.
Accordingly, we do not express such an opinion.
Based on our reviews, we are not aware of any material modifications that should be made to the consolidated financial statements referred to above for them to be in conformity with U.S. generally accepted accounting principles.

We have previously audited, in accordance with standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheet of Arrow Financial Corporation and subsidiaries as of December 31, 2016, and the related consolidated statements of income, comprehensive income, changes in stockholders' equity, and cash flows for the year then ended (not presented herein); and in our report dated March 14, 2017, we expressed an unqualified opinion on those consolidated financial statements. In our opinion, the information set forth in the accompanying consolidated balance sheet as of December 31, 2016, is fairly stated, in all material respects, in relation to the consolidated balance sheet from which it has been derived.

## /s/ KPMG LLP

Albany, New York
August 8, 2017
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## ARROW FINANCIAL CORPORATION AND SUBSIDIARIES MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

June 30, 2017
Note on Terminology - In this Quarterly Report on Form 10-Q, the terms "Arrow," "the registrant," "the company," "we," "us, and "our" generally refer to Arrow Financial Corporation and its subsidiaries as a group, except where the context indicates otherwise. At certain points in this Report, our performance is compared with that of our "peer group" of financial institutions. Unless otherwise specifically stated, the peer group for the purposes of this Form $10-\mathrm{Q}$ is comprised of the group of 348 domestic bank holding companies with $\$ 1$ to $\$ 3$ billion in total consolidated assets as identified in the Federal Reserve Board's "Bank Holding Company Performance Report" for March 31, 2017 (the most recent such Report currently available), and peer group data contained herein has been derived from such Report.

The Company and Its Subsidiaries - Arrow is a two-bank holding company headquartered in Glens Falls, New York. Our banking subsidiaries are Glens Falls National Bank and Trust Company (Glens Falls National) whose main office is located in Glens Falls, New York, and Saratoga National Bank and Trust Company (Saratoga National) whose main office is located in Saratoga Springs, New York. Our non-bank subsidiaries include Capital Financial Group, Inc. (an insurance agency specializing in selling and servicing group health care policies); two property and casualty insurance agencies: Upstate Agency LLC and McPhillips Agency (which is a division of Glens Falls National Insurance Agencies LLC); North Country Investment Advisers, Inc. (a registered investment adviser that provides investment advice to our proprietary mutual funds); Glens Falls National Community Development Corporation (which invests in qualifying community development projects); and Arrow Properties, Inc. (a real estate investment trust, or REIT). Our holding company also owns directly two subsidiary business trusts, organized in 2003 and 2004 to issue trust preferred securities (TRUPs), which are still outstanding.

Forward Looking Statements - This Quarterly Report on Form 10-Q contains statements that are not historical in nature but rather are based on our beliefs, assumptions, expectations, estimates and projections about the future. These statements are "forward-looking statements" within the meaning of Section 21E of the Securities Exchange Act of 1934, as amended, and involve a degree of uncertainty and attendant risk. Words such as "expects," "believes," "anticipates," "estimates" and variations of such words and similar expressions are intended to identify such forward-looking statements. Some of these statements, such as those included in the interest rate sensitivity analysis in Part I, Item 3, entitled "Quantitative and Qualitative Disclosures About Market Risk," are merely presentations of what future performance or changes in future performance would look like based on hypothetical assumptions and on simulation models. Other forward-looking statements are based on our general perceptions of market conditions and trends in business activity, both our own and in the banking industry generally, as well as current management strategies for future operations and development.
Examples of Forward-Looking Statements:

## Topic

Future compliance with regulatory capital standards

## VISA

Impact of market rate structure on net interest margin, loan yields and deposit rates Impact of market rate structure on net interest margin, loan yields and deposit rates
Future level of residential real estate loans
Future level of indirect consumer loans
Future level of commercial loans

## Page Location

First paragraph under "Regulatory Capital and Increase in Stockholders' Equity"
47 "VISA Class B Common Stock"
51 All paragraphs under "Quarterly Taxable Equivalent Yield on Loans"
Last paragraph under "Quantitative and Qualitative Disclosures about Market Risk
50 Both paragraphs under "Residential Real Estate Loans"
51 Last paragraph under "Consumer Loans"
51 Third paragraph under "Commercial Loans, and Commercial Real Estate Loans"

Impact of changes in mortgage rates
Provision for loan losses
Future level of nonperforming assets Liquidity

Fees for other services to customers

54 First paragraph in section
54 Last four paragraphs under "Risk Elements"
57 Last paragraph under "LIQUIDITY"
60, Second paragraph under "Noninterest Income"
63 .
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These forward-looking statements may not be exhaustive, are not guarantees of future performance and involve certain risks and uncertainties that are difficult to quantify or, in some cases, to identify. You should not place undue reliance on any such forward-looking statements. In the case of all forward-looking statements, actual outcomes and results may differ materially from what the statements predict or forecast. Factors that could cause or contribute to such differences include, but are not limited to:
rapid and dramatic changes in economic and market conditions, such as the U.S. economy experienced during the ${ }^{\text {a }}$ financial crisis of 2008-2010;
b.sharp fluctuations in interest rates, economic activity, or consumer spending patterns;
c.sudden changes in the market for products we provide, such as real estate loans;
significant changes in banking, corporate income tax, or other laws and regulations, including both enactment of
d.new legal or regulatory measures (e.g., the Dodd-Frank Act) or the modification or elimination of pre-existing measures;
significant changes in U.S. monetary or fiscal policy, including new or revised monetary programs or targets
e. adopted or announced by the Federal Reserve ("monetary tightening or easing") or significant new federal
legislation materially affecting the federal budget ("fiscal tightening or expansion");
f.enhanced competition from unforeseen sources (e.g., so-called Fintech enterprises); and similar uncertainties inherent in banking operations or business generally, including technological developments and g. changes.

Readers are cautioned not to place undue reliance on forward-looking statements in this Report, which speak only as of the date hereof. We undertake no general obligation to revise or update the forward-looking statements contained in this Report to reflect the occurrence of unanticipated events at any point in the future. This Quarterly Report should be read in conjunction with our Annual Report on Form 10-K for the year ended December 31, 2016.

## USE OF NON-GAAP FINANCIAL MEASURES

The Securities and Exchange Commission (SEC) has adopted Regulation G, which applies to all public disclosures, including earnings releases, made by registered companies that contain "non-GAAP financial measures." GAAP is generally accepted accounting principles in the United States of America. Under Regulation G, companies making public disclosures containing non-GAAP financial measures must also disclose, along with each non-GAAP financial measure, certain additional information, including a reconciliation of the non-GAAP financial measure to the closest comparable GAAP financial measure and a statement of the Company's reasons for utilizing the non-GAAP financial measure as part of its financial disclosures. The SEC has exempted from the definition of "non-GAAP financial measures" certain commonly used financial measures that are not based on GAAP. When these exempted measures are included in public disclosures, supplemental information is not required. The following measures used in this Report, which are commonly utilized by financial institutions, have not been specifically exempted by the SEC and may constitute "non-GAAP financial measures" within the meaning of the SEC's new rules, although we are unable to state with certainty that the SEC would so regard them.

Tax-Equivalent Net Interest Income and Net Interest Margin: Net interest income, as a component of the tabular presentation by financial institutions of Selected Financial Information regarding their recently completed operations, as well as disclosures based on that tabular presentation, is commonly presented on a tax-equivalent basis. That is, to the extent that some component of the institution's net interest income, which is presented on a before-tax basis, is exempt from taxation (e.g., is received by the institution as a result of its holdings of state or municipal obligations), an amount equal to the tax benefit derived from that component is added to the actual before-tax net interest income total. This adjustment is considered helpful in comparing the financial institution's net interest income (before tax) to that of another institution or in analyzing the institution's net interest income trend line over time, to correct any analytical distortion that might otherwise arise from the fact that financial institutions vary widely in the proportions of their portfolios that are invested in tax-exempt securities, or from the fact that even a single institution may significantly alter over time the proportion of its own portfolio that is invested in tax-exempt obligations. Moreover,
net interest income is itself a component of a second financial measure commonly used by financial institutions, net interest margin, which is the ratio of net interest income (before tax) to average earning assets. For purposes of this measure as well, tax-equivalent net interest income is generally used by financial institutions, again to provide a better basis of comparison from institution to institution and/or to better demonstrate a single institution's performance over time. We follow these practices.

The Efficiency Ratio: Financial institutions often use an "efficiency ratio" as a measure of expense control. The efficiency ratio typically is defined as the ratio of noninterest expense to net interest income and noninterest income. Net interest income as utilized in calculating the efficiency ratio is typically the same as the net interest income presented in Selected Financial Information table discussed in the preceding paragraph, i.e., it is expressed on a tax-equivalent basis. Moreover, many financial institutions, in calculating the efficiency ratio, also adjust both noninterest expense and noninterest income to exclude from these items (as calculated under GAAP) certain recurring component elements of income and expense, such as intangible asset amortization (which is included in noninterest expense under GAAP but may be excluded therefrom for purposes of calculating the efficiency ratio) and securities gains or losses (which are reflected in the calculation of noninterest income under GAAP but may be excluded therefrom for purposes of calculating the efficiency ratio). We make these adjustments.

Tangible Book Value per Share: Tangible equity is total stockholders' equity less intangible assets. Tangible book value per share is tangible equity divided by total shares issued and outstanding. Tangible book value per share is often regarded as a more meaningful comparative ratio than book value per share as calculated under GAAP, that is, total stockholders' equity including intangible assets divided by total shares issued and outstanding. Intangible assets includes many items, but in our case, essentially represents goodwill.

Adjustments for Certain Items of Income or Expense: In addition to our regular utilization in our public filings and disclosures of the various non-GAAP measures commonly utilized by financial institutions discussed above, we also may elect from time to time, in connection with our presentation of various financial measures prepared in accordance with GAAP, such as net income, earnings per share (i.e. EPS), return on average assets (i.e. ROA), and return on average equity (i.e. ROE), to provide as well certain comparative disclosures that adjust these GAAP financial measures, typically by removing therefrom the impact of certain transactions or other material items of income or expense that are unusual or unlikely to be repeated. We do so only if we believe that provision of the resulting non-GAAP financial measures may improve the average investor's understanding of our results of operations by separating out items that have a disproportional positive or negative impact on the particular period in question or by otherwise permitting a better comparison from period-to-period in our results of operations with respect to our fundamental lines of business, including the commercial banking business.
We believe that the non-GAAP financial measures disclosed by us from time-to-time are useful in evaluating our performance and that such information should be considered as supplemental in nature, and not as a substitute for or superior to, the related financial information prepared in accordance with GAAP. Our non-GAAP financial measures may differ from similar measures presented by other companies.

Arrow Financial Corporation
Selected Quarterly Information
(Dollars In Thousands, Except Per Share Amounts - Unaudited)

| Quarter Ended | $6 / 30 / 2017$ | $3 / 31 / 2017$ | $12 / 31 / 2016$ | $9 / 30 / 2016$ | $6 / 30 / 2016$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Net Income | $\$ 7,208$ | $\$ 6,631$ | $\$ 6,600$ | $\$ 6,738$ | $\$ 6,647$ |
| Transactions Recorded in Net Income (Net <br> of Tax): |  |  |  |  |  |
| Net Gain (Loss) on Securities Transactions | - | - | $(101$ | $)$ | - |
|  |  |  |  |  | 88 |
| Share and Per Share Data:(1) |  |  |  |  |  |
| Period End Shares Outstanding | 13,495 | 13,481 | 13,483 | 13,426 | 13,388 |
| Basic Average Shares Outstanding | 13,485 | 13,484 | 13,441 | 13,407 | 13,372 |
| Diluted Average Shares Outstanding | 13,568 | 13,594 | 13,565 | 13,497 | 13,429 |
| Basic Earnings Per Share | $\$ 0.53$ | $\$ 0.49$ | $\$ 0.49$ | $\$ 0.50$ | $\$ 0.50$ |
| Diluted Earnings Per Share | 0.53 | 0.49 | 0.49 | 0.50 | 0.49 |
| Cash Dividend Per Share | 0.250 | 0.250 | 0.250 | 0.243 | 0.243 |

Selected Quarterly Average Balances:

| Interest-Bearing Deposits at Banks | 24,480 | 23,565 | 34,731 | 21,635 | 22,195 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Investment Securities | 684,570 | 695,615 | 684,906 | 696,712 | 701,526 |
| Loans | 1,842,543 | 1,781,113 | 1,726,738 | 1,680,850 | 1,649,401 |
| Deposits | 2,206,365 | 2,161,798 | 2,160,156 | 2,063,832 | 2,082,449 |
| Other Borrowed Funds | 207,270 | 205,436 | 157,044 | 209,946 | 165,853 |
| Stockholders' Equity | 239,396 | 235,257 | 230,198 | 228,048 | 223,234 |
| Total Assets | 2,677,843 | 2,626,470 | 2,572,425 | 2,528,124 | 2,496,795 |
| Return on Average Assets, annualized | 1.08 | \% 1.02 | \% 1.02 | \% 1.06 | \% 1.07 |
| Return on Average Equity, annualized | 12.08 | \% 11.43 | \% 11.41 | \% 11.75 | \% 11.98 |
| Return on Tangible Equity, annualized ${ }^{(2)}$ | 13.45 | \% 12.76 | \% 12.77 | \% 13.18 | \% 13.47 |
| Average Earning Assets | 2,551,593 | 2,500,293 | 2,446,375 | 2,399,197 | 2,373,122 |
| Average Paying Liabilities | 2,005,421 | 1,977,628 | 1,933,974 | 1,892,583 | 1,891,017 |
| Interest Income, Tax-Equivalent ${ }^{(3)}$ | 21,875 | 20,945 | 20,709 | 20,222 | 20,154 |
| Interest Expense | 1,699 | 1,536 | 1,404 | 1,405 | 1,284 |
| Net Interest Income, Tax-Equivalent ${ }^{(3)}$ | 20,176 | 19,409 | 19,305 | 18,817 | 18,870 |
| Tax-Equivalent Adjustment ${ }^{(3)}$ | 949 | 948 | 939 | 940 | 917 |

Efficiency Ratio Calculation: (4)
Noninterest Expense
Less: Intangible Asset Amortization
Net Noninterest Expense
Net Interest Income, Tax-Equivalent ${ }^{(3)}$
Noninterest Income
Less: Net Securities Gain (Loss)
Net Gross Income
Efficiency Ratio (Non-GAAP)

| $\$ 15,637$ | $\$ 15,475$ |
| :--- | :--- |
| 70 | 71 |
| 15,567 | 15,404 |
| 20,176 | 19,409 |
| 7,057 | 6,695 |
| - | - |
| 27,233 | 26,104 |
| 57.16 | $\%$ |
| 59.01 |  |

Period-End Capital Information:
Total Stockholders' Equity (i.e. Book Value) $\$ 240,752$

| Book Value per Share (1) | 17.84 | 17.51 | 17.27 | 17.07 | 16.83 |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| Goodwill and Other Intangible Assets, net | 24,355 | 24,448 | 24,569 | 24,675 | 24,758 |  |
| Tangible Book Value per Share ${ }^{(1,2)}$ | 16.04 | 15.70 | 15.45 | 15.23 | 14.98 |  |
|  |  |  |  |  |  |  |
| Capital Ratios:(5) | 9.35 | $\%$ | 9.37 | $\%$ | 9.47 | $\%$ |
| Tier 1 Leverage Ratio | 12.68 | $\%$ | 12.84 | $\%$ | 12.97 | $\%$ |

Arrow Financial Corporation
Selected Quarterly Information - Continued
(Dollars In Thousands, Except Per Share Amounts - Unaudited)

Footnotes:

1. Share and Per Share Data have been restated for the September 29, 2016, 3\% stock dividend.

Tangible Book Value, Tangible Equity and Return on Tangible Equity exclude goodwill and other intangible assets, net from total equity. These are non-GAAP financial measures which we believe provide investors with
information that is useful in understanding our financial performance. See "Use of Non-GAAP Financial Measures" on page 38.

|  | $6 / 30 / 2017$ | $3 / 31 / 2017$ | $12 / 31 / 2016$ | $9 / 30 / 2016$ | $6 / 30 / 2016$ |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Total Stockholders' Equity (GAAP) | $\$ 240,752$ | $\$ 236,111$ | $\$ 232,852$ | $\$ 229,208$ | $\$ 225,373$ |
| Less: Goodwill and Other Intangible | 24,355 | 24,448 | 24,569 | 24,675 | 24,758 |
| assets, net | $\$ 216,397$ | $\$ 211,663$ | $\$ 208,283$ | $\$ 204,533$ | $\$ 200,615$ |
| Tangible Equity (Non-GAAP) | 13,495 | 13,481 | 13,483 | 13,426 | 13,388 |
| Period End Shares Outstanding | $\$ 16.04$ | $\$ 15.70$ | $\$ 15.45$ | $\$ 15.23$ | $\$ 14.98$ |
| Tangible Book Value per Share <br> $\quad$ (Non-GAAP) | 7,208 | 6,631 | 6,600 | 6,738 | 6,647 |
| Net Income | $\%$ | $\%$ | 12.77 | $\%$ | 13.18 |
| Return on Tangible Equity (Net | 13.45 | $\% 12.76$ | $\%$ | 13.47 | $\%$ |

Net Interest Margin is the ratio of our annualized tax-equivalent net interest income to average earning assets. This
3.is also a non-GAAP financial measure which we believe provides investors with information that is useful in understanding our financial performance. See "Use of Non-GAAP Financial Measures" on page 38.

Interest Income (GAAP)
Add: Tax-Equivalent adjustment (Non-GAAP)
Interest Income - Tax Equivalent (Non-GAAP)
Net Interest Income (GAAP)
Add: Tax-Equivalent adjustment (Non-GAAP)
Net Interest Income - Tax Equivalent (Non-GAAP)
Average Earning Assets
Net Interest Margin (Non-GAAP)*

| $6 / 30 / 2017$ | $3 / 31 / 2017$ | $12 / 31 / 2016$ | $9 / 30 / 2016$ | $6 / 30 / 2016$ |
| :--- | :--- | :--- | :--- | :--- |
| $\$ 20,926$ | $\$ 19,997$ | $\$ 19,770$ | $\$ 19,282$ | $\$ 19,237$ |
| 949 | 948 | 939 | 940 | 917 |
|  |  |  |  |  |
| $\$ 21,875$ | $\$ 20,945$ | $\$ 20,709$ | $\$ 20,222$ | $\$ 20,154$ |
| $\$ 19,227$ | $\$ 18,461$ | $\$ 18,366$ | $\$ 17,877$ | $\$ 17,953$ |
| 949 | 948 | 939 | 940 | 917 |
|  |  |  |  |  |
| $\$ 20,176$ | $\$ 19,409$ | $\$ 19,305$ | $\$ 18,817$ | $\$ 18,870$ |
| $\$ 2,551,593$ | $\$ 2,500,293$ | $\$ 2,446,375$ | $\$ 2,399,197$ | $\$ 2,373,122$ |
| 3.17 | $\%$ | 3.15 | $\%$ | 3.14 |

Financial Institutions often use the "efficiency ratio", a non-GAAP ratio, as a measure of expense control. We believe the efficiency ratio provides investors with information that is useful in understanding our financial 4. performance. We define our efficiency ratio as the ratio of our noninterest expense to our net gross income (which equals our tax-equivalent net interest income plus noninterest income, as adjusted). There is no GAAP financial measure that is closely comparable to the efficiency ratio. See "Use of Non-GAAP Financial Measures" on page 38.
5.For the recently-completed quarter, all of the regulatory capital ratios in the table on page 40 and the table in this Note 5, below, as well as the Total Risk-Weighted Assets and Common Equity Tier 1 Capital amounts listed in the
table below, are estimates based on, and calculated in accordance with, bank regulatory capital rules. The Common Equity Tier 1 Capital Ratio (CET1 Ratio) of Arrow as of 6/30/2017 that is listed in the tables (i.e., 12.68\%) not only exceeds the currently required minimum CET1 Ratio (including Conservation Buffer) of $5.750 \%$, but also exceeds the minimum CET1 Ratio that will be required when the Conservation Buffer is fully phased-in, on January 1, 2019, of $7.00 \%$ (including the ultimate required Conservation Buffer of $2.50 \%$ ).

| 6/30/2017 | $3 / 31 / 2017$ | $12 / 31 / 2016$ | $9 / 30 / 2016$ | $6 / 30 / 2016$ |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $\$ 1,802,455$ | $\$ 1,747,318$ | $\$ 1,707,829$ | $\$ 1,690,646$ | $\$ 1,662,381$ |  |  |
| 228,586 | 224,369 | 221,472 | 216,382 | 211,801 |  |  |
| 12.68 | $\%$ | 12.84 | $\%$ | 12.97 | $\%$ | 12.80 |

* Quarterly ratios have been annualized

| Arrow Financial Corporation |  |  |
| :---: | :---: | :---: |
| Selected Year-to-Date Information |  |  |
| (Dollars In Thousands, Except Per Share Amounts - Unaudited) |  |  |
| Six Months Ended | 6/30/2017 | 6/30/2016 |
| Net Income | \$13,839 | \$13,196 |
| Transactions Recorded in Net Income (Net of Tax): |  |  |
| Net Gain on Securities Transactions | - | 88 |
| Share and Per Share Data: ${ }^{(1)}$ |  |  |
| Period End Shares Outstanding | 13,495 | 13,388 |
| Basic Average Shares Outstanding | 13,485 | 13,357 |
| Diluted Average Shares Outstanding | 13,581 | 13,405 |
| Basic Earnings Per Share | \$ 1.03 | \$0.99 |
| Diluted Earnings Per Share | 1.02 | 0.98 |
| Cash Dividend Per Share | 0.50 | 0.49 |
| Selected Year-to-Date Average Balances: |  |  |
| Interest-Bearing Deposits at Banks | 24,025 | 21,680 |
| Investment Securities | 690,061 | 709,025 |
| Loans | 1,811,998 | 1,622,210 |
| Deposits | 2,184,204 | 2,076,207 |
| Other Borrowed Funds | 206,358 | 154,564 |
| Stockholders' Equity | 237,338 | 220,771 |
| Total Assets | 2,652,298 | 2,476,613 |
| Return on Average Assets, annualized | 1.05 \% | 1.07 \% |
| Return on Average Equity, annualized | 11.76 \% | 12.02 \% |
| Return on Tangible Equity, annualized (Non-GAAP) ${ }^{(2)}$ | 13.11 \% | 13.55 \% |
| Average Earning Assets | 2,526,084 | 2,352,915 |
| Average Paying Liabilities | 1,991,601 | 1,879,237 |
| Interest Income, Tax-Equivalent (Non-GAAP) ${ }^{(3)}$ | 42,820 | 39,703 |
| Interest Expense | 3,235 | 2,547 |
| Net Interest Income, Tax-Equivalent (Non-GAAP) (3) | 39,585 | 37,156 |
| Tax-Equivalent Adjustment (Non-GAAP) (3) | 1,897 | 1,840 |
| Net Interest Margin, annualized (Non-GAAP) ${ }^{(3)}$ | 3.16 \% | 3.18 \% |
| Efficiency Ratio Calculation: ${ }^{(4)}$ |  |  |
| Noninterest Expense | 31,112 | 29,255 |
| Less: Intangible Asset Amortization | 141 | 150 |
| Net Noninterest Expense | 30,971 | 29,105 |
| Net Interest Income, Tax-Equivalent (Non-GAAP) ${ }^{(3)}$ | 39,585 | 37,156 |
| Noninterest Income | 13,752 | 14,070 |
| Less: Net Securities Gain | - | 144 |
| Net Gross Income | 53,337 | 51,082 |
| Efficiency Ratio (Non-GAAP) | 58.07 \% | 56.98 \% |

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Arrow Financial Corporation
Selected Year-to-Date Information - Continued
(Dollars In Thousands, Except Per Share Amounts - Unaudited)

Footnotes:

1. Share and Per Share Data have been restated for the September 29, 2016, 3\% stock dividend.

Tangible Book Value, Tangible Equity and Return on Tangible Equity exclude goodwill and other intangible assets, net from total equity. These are non-GAAP financial measures which we believe 2. provide investors with information that is useful in understanding our financial performance. See "Use of Non-GAAP Financial Measures" on page 38.

|  | $6 / 30 / 2017$ | $6 / 30 / 2016$ |
| :--- | :--- | :--- |
| Total Stockholders' Equity (GAAP) | $\$ 240,752$ | $\$ 225,373$ |
| Less: Goodwill and Other Intangible assets, net | 24,355 | 24,758 |
| Tangible Equity (Non-GAAP) | $\$ 216,397$ | $\$ 200,615$ |
|  |  | 13,388 |
| Period End Shares Outstanding | 13,495 | $\$ 16.04$ |
| Tangible Book Value per Share (Non-GAAP) | $\$ 13,839$ | 13,196 |
| Net Income | \% |  |
| Return on Tangible Equity (Net Income/Tangible Equity - Annualized) | 13.11 | 13.55 |

Net Interest Margin is the ratio of our annualized tax-equivalent net interest income to average earning assets. This is also a non-GAAP financial measure which we believe provides investors with
3.information that is useful in understanding our financial performance. See "Use of Non-GAAP

Financial Measures" on page 38.

Interest Income (GAAP)
Add: Tax-Equivalent adjustment (Non-GAAP)
Net Interest Income - Tax Equivalent (Non-GAAP)
Net Interest Income (GAAP)
Add: Tax-Equivalent adjustment (Non-GAAP)
Net Interest Income - Tax Equivalent (Non-GAAP)
Average Earning Assets
Net Interest Margin (Non-GAAP)*

6/30/2017 6/30/2016
\$40,923 \$37,863
\$ 1,897 \$1,840
\$42,820 \$39,703
\$37,688 \$35,316
1,897 1,840
\$39,585 \$37,156
\$2,526,084 \$2,352,915
$3.16 \quad \% \quad 3.18 \quad \%$

Financial Institutions often use the "efficiency ratio", a non-GAAP ratio, as a measure of expense control. We believe the efficiency ratio provides investors with information that is useful in
4. understanding our financial performance. We define our efficiency ratio as the ratio of our noninterest expense to our net gross income (which equals our tax-equivalent net interest income plus noninterest income, as adjusted). See "Use of Non-GAAP Financial Measures" on page 38.

* Year-to-date ratios have been annualized

Average Consolidated Balance Sheets and Net Interest Income Analysis
(see "Use of Non-GAAP Financial Measures" on page 38)
(Fully Taxable Basis using a marginal tax rate of 35\%)
(Dollars In Thousands)

Quarter Ended June 30:

Interest-Bearing Deposits at Banks
Investment Securities:
Fully Taxable
Exempt from Federal Taxes
Loans
Total Earning Assets
Allowance for Loan Losses
Cash and Due From Banks
Other Assets
Total Assets
Deposits:
Interest-Bearing Checking Accounts
Savings Deposits
Time Deposits of $\$ 250,000$ or More
Other Time Deposits
Total Interest-Bearing Deposits
Short-Term Borrowings
FHLBNY Term Advances and Other Long-Term
Debt
Total Interest-Bearing Liabilities
Demand Deposits
Other Liabilities
Total Liabilities
Stockholders' Equity
Total Liabilities and Stockholders' Equity
Net Interest Income (Tax-equivalent Basis)
(Non-GAAP) ${ }^{(1)}$
Reversal of Tax Equivalent Adjustment
Net Interest Income
Net Interest Spread (Non-GAAP) ${ }^{(1)}$
Net Interest Margin (Non-GAAP) ${ }^{(1)}$

2017 - 2016

|  | Interest | Rate |  | Interest | Rate |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Average | Income/ | Earned/ | Average | Income/ | Earned/ |
| Balance | Expense | Paid | Balance | Expense | Paid |
| \$24,480 | \$78 | 1.28 \% | \$22,195 | \$34 | 0.62 \% |
| 400,315 | 2,018 | 2.02 | 428,611 | 2,023 | 1.90 |
| 284,255 | 2,351 | 3.32 | 272,915 | 2,260 | 3.33 |
| 1,842,543 | 17,428 | 3.79 | 1,649,401 | 15,837 | 3.86 |
| 2,551,593 | 21,875 | 3.44 | 2,373,122 | 20,154 | 3.42 |
| (17,143 |  |  | (16,242 |  |  |
| 35,029 |  |  | 30,113 |  |  |
| 108,364 |  |  | 109,802 |  |  |
| \$2,677,843 |  |  | \$2,496,795 |  |  |


| $\$ 918,235$ | 381 | 0.17 | $\$ 928,904$ | 311 | 0.13 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| 681,197 | 317 | 0.19 | 602,625 | 224 | 0.15 |
| 31,126 | 66 | 0.85 | 29,487 | 98 | 1.34 |
| 167,593 | 232 | 0.56 | 164,148 | 164 | 0.40 |
| $1,798,151$ | 996 | 0.22 | $1,725,164$ | 797 | 0.19 |
| 132,270 | 271 | 0.82 | 90,853 | 81 | 0.36 |
| 75,000 | 432 | 2.31 | 75,000 | 406 | 2.18 |
| $2,005,421$ | 1,699 | 0.34 | $1,891,017$ | 1,284 | 0.27 |
| 408,214 |  |  | 357,285 |  |  |
| 24,812 |  |  | 25,259 |  |  |
| $2,438,447$ |  |  | $2,273,561$ |  |  |
| 239,396 |  |  | 223,234 |  |  |
| $\$ 2,677,843$ |  |  | $\$ 2,496,795$ |  |  |

20,176 18,870
(949 ) (0.15)\% (917 ) (0.16)\%
\$19,227 \$17,953
$3.10 \% \quad 3.15 \%$
$3.17 \% \quad 3.20 \%$
${ }^{1}$ See Note 3 on p. 43

${ }^{1}$ See Note 3 on p. 43

## OVERVIEW

We reported net income for the second quarter of 2017 of $\$ 7.2$ million, an increase of $\$ 561$ thousand, or $8.4 \%$, over our net income for the second quarter of 2016 . Diluted earnings per share (EPS) for the quarter were $\$ 0.53$, an increase of $8.2 \%$ from the EPS of $\$ 0.49$ reported for the second quarter of 2016. Return on average equity (ROE) for the second quarter of 2017 continued to be strong at $12.08 \%$, up from an ROE of $11.98 \%$ for the quarter ended June 30, 2016. Return on average assets (ROA) for the 2017 second quarter was $1.08 \%$, an increase from an ROA of $1.07 \%$ for the quarter ended June 30, 2016. Tax-equivalent net interest income (a non-GAAP measure) increased between the respective quarters by approximately $6.9 \%$, mainly due to the $7.5 \%$ increase in average earning assets. The composition of earning assets changed in the current quarter through an increase in higher yielding loans and a decrease in lower yielding investment securities. Specifically, total loans increased between the respective period ends by $\$ 206.1$ million, or $12.3 \%$, while investment securities decreased by $\$ 7.0$ million, or $1.0 \%$. Salaries and employee benefits expenses increased by $8.0 \%$ in the second quarter of 2017 compared to the 2016 quarter, due to increased staffing levels, normal salary increases, and increases in medical claims under our health benefit plans. Total assets were $\$ 2.72$ billion at June 30, 2017, which represented an increase of $\$ 116.5$ million, or $4.5 \%$, from the level at December 31, 2016, and an increase of $\$ 181.5$ million, or $7.1 \%$, from the June 30, 2016 level.
The changes in net income, net interest income and net interest margin between the three and six-month periods are more fully described under the heading "RESULTS OF OPERATIONS," beginning on page 59.
Stockholders' equity was $\$ 240.8$ million at June 30, 2017, an increase of $\$ 7.9$ million, or $3.4 \%$, from the December 31, 2016 level of $\$ 232.9$ million, and an increase of $\$ 15.4$ million, or $6.8 \%$, from the prior year level. The components of the change in stockholders' equity since year-end 2016 are presented in the Consolidated Statement of Changes in Stockholders' Equity on page 6, and are discussed in more detail in the next section.
Regulatory Capital and Increase in Stockholders' Equity: At June 30, 2017, we exceeded by a substantial amount all required minimum capital ratios under the new bank regulatory capital rules at both the holding company and bank levels. At that date, both of our banks, as well as our holding company, continued to qualify as "well-capitalized" under the revised capital classification guidelines that became effective contemporaneously with the new bank regulatory capital rules in 2015. Because of our continued profitability and strong asset quality, our regulatory capital levels throughout recent years have consistently remained well in excess of the various required regulatory minimums in effect from time to time, as they do at present. As a result of the Dodd-Frank Act, however, required minimum regulatory capital levels for insured banks and their parent holding companies will continue to increase, as a percentage of risk-based assets in the upcoming years through 2019.
At June 30, 2017, our book value per share was $\$ 17.84$, up by $6.0 \%$ over the year earlier level, and our tangible book value per share (a non-GAAP measure that deducts intangible assets from stockholders' equity) was $\$ 16.04$, an increase of $\$ 1.06$, or $7.1 \%$, over the level as of June 30,2016 . See the disclosure on page 38 related to our use of non-GAAP financial measures generally, and tangible book value, specifically. In the first six months of 2017, total stockholders' equity increased by $3.4 \%$ and our total book value per share also increased by $3.3 \%$. The increase in stockholders' equity over the first six months of 2017 principally reflected the following factors: (i) $\$ 13.8$ million of net income for the period and (ii) issuance of $\$ 2.1$ million of common stock through our employee benefit and dividend reinvestment plans; reduced by (iii) cash dividends of $\$ 6.7$ million; and (iv) repurchases of our own common stock, primarily in connection with our approved treasury stock repurchase plan, of $\$ 1.9$ million. On June 30, 2017, our closing stock price was $\$ 31.65$, representing a trading multiple of 1.97 to our tangible book value. As adjusted for a $3.0 \%$ stock dividend distributed September 29, 2016, the Company paid a quarterly cash dividend of $\$ 0.243$ per share for each of the first three quarters of 2016, and a cash dividend of $\$ 0.25$ per share for the last quarter of 2016 and the first and second quarters of 2017.

Loan Quality: Our net charge-offs for the second quarter of 2017 were $\$ 196$ thousand as compared to $\$ 158$ thousand for the comparable 2016 quarter. Our ratio of net charge-offs to average loans (annualized) was $0.04 \%$ for the second quarter of 2017 compared to $0.04 \%$ for the second quarter of 2016. Our peer group's weighted average ratio of net charge-offs to average loans was $0.05 \%$ for the quarter ended March 31, 2017. See page 37 for a discussion of our
peer group. At June 30, 2017, our allowance for loan losses was $\$ 17.4$ million representing $0.93 \%$ of total loans, down 4 basis points from the December 31, 2016 ratio. We believe this allowance is appropriate and reflects the continuing strong credit quality in the loan portfolio.
Nonperforming loans were $\$ 7.1$ million at June 30, 2017, representing $0.38 \%$ of period-end loans, a decrease of 5 basis points from our year-earlier ratio, which compares favorably with the weighted average ratio of our peer group of $0.75 \%$ at March 31, 2017.

Loan Segments: During the second quarter of 2017, we experienced increases in outstanding balances in each of the largest segments of our loan portfolio, without any significant deterioration in our credit quality. During the quarter, our total loans grew by $\$ 67.8$ million, or $3.7 \%$. The largest portion of such increase in dollar terms was in residential real estate loans, which expanded by $\$ 27.1$ million, or $3.8 \%$. The largest percentage increase was in our commercial loan portfolio, which grew by $\$ 7.4$ million, or $6.2 \%$.

Commercial Loans: These loans comprised $6.7 \%$ of our loan portfolio at period-end. The business sector in our service area, including small- and mid-sized businesses with headquarters in the area, continued to be in reasonably good financial condition at period-end, and some lines of business appear to be experiencing modest improvement during the year.
Commercial Real Estate Loans: These loans comprised $23.5 \%$ of our loan portfolio at period-end. Commercial property values in our region have remained stable in recent periods. We update the appraisals on our nonperforming and watched CRE loan properties as deemed necessary, usually when the loan is downgraded or when we perceive significant market deterioration since our last appraisal.

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Consumer Loans: These loans (primarily automobile loans) comprised 30.8\% of our loan portfolio at period-end. Consumer automobile loans at June 30, 2017, were $\$ 571$ million, or $98.7 \%$ of this portfolio segment. In the first six months of 2017, we did not experience any significant increase in our delinquency rate or in the percentage of nonperforming loans in this segment.
Residential Real Estate Loans: These loans, including home equity loans, made up 39.0\% of our portfolio at period-end. The residential real estate market in our service area has been stable in recent periods. During the first six months of 2017, refinancings of our own loans represented about $20 \%$ of our total originations. We originated nearly all of the residential real estate loans currently held in our portfolio and apply conservative underwriting standards to our originations. We typically sell a portion, sometimes a significant portion, of our residential real estate mortgage originations into the secondary market, although our sales of originations as a percentage of our total originations have diminished somewhat in recent periods.

Liquidity and Access to Credit Markets: We have not experienced any liquidity problems or special concerns thus far in 2017, nor did we in any prior years back to and during the financial crisis. The terms of our lines of credit with our correspondent banks, the Federal Home Loan Bank of New York ("FHLBNY") and the Federal Reserve Bank have not changed significantly in recent periods (see our general liquidity discussion on page 57). Historically, we have principally relied on asset-based liquidity (i.e., funds in overnight investments and cash flow from maturing investments and loans) with liability-based liquidity as a secondary source of funds (our main liability-based sources are overnight borrowing arrangements with our correspondent banks, an arrangement for overnight borrowing and term credit advances from the FHLBNY, and an additional arrangement for short-term advances at the Federal Reserve Bank discount window). We regularly perform a liquidity stress test and periodically test our contingent liquidity plan to ensure that we can generate an adequate amount of available funds to meet a wide variety of potential liquidity crises, including a severe crisis.

Visa Class B Common Stock: We, like other former Visa member banks, bear some indirect contingent liability for Visa's future liability under a settlement regarding certain antitrust claims involving merchant discounts to the extent that Visa's liability might exceed the remaining litigation escrow account amount. In light of the current state of covered litigation at Visa, which is winding down, as well as the substantial remaining dollar amounts in Visa's escrow fund, we determined that the balance that Visa maintains in its escrow fund is substantially sufficient to satisfy Visa's remaining direct liability to such claims without further resort to the contingent liability of the former Visa member banks such as ours. At June 30, 2017, the Company held 27,771 shares of Visa Class B common stock. A potential future conversion of these shares into Visa Class A common stock could result in approximately 46 thousand shares. There continue to be restrictions remaining on Visa Class B shares held by us. We continue not to recognize any economic value for these shares.

## CHANGE IN FINANCIAL CONDITION

Summary of Selected Consolidated Balance Sheet Data
(Dollars in Thousands)

|  | At Period-End |  |  | \$ Change <br> From <br> December | \$ Change <br> From June | \% Change |  | \% <br> Change |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\begin{aligned} & \text { June } 30 \text {, } \\ & 2017 \end{aligned}$ | $\begin{aligned} & \text { December } \\ & 2016 \end{aligned}$ | $\begin{aligned} & \text {, June 30, } \\ & 2016 \end{aligned}$ |  |  | $\begin{aligned} & \text { From } \\ & \text { Decer } \end{aligned}$ |  | From June |
| Interest-Bearing Bank Balances | \$26,972 | \$ 14,331 | \$16,976 | \$ 12,641 | \$9,996 | 88.2 | \% | 58.9 \% |
| Securities Available-for-Sale | 327,392 | 346,996 | 362,929 | (19,604 | ) $(35,537$ | ) (5.6 | )\% | (9.8)\% |
| Securities Held-to-Maturity | 348,018 | 345,427 | 343,814 | 2,591 | 4,204 | 0.8 | \% | 1.2 \% |
| Loans ${ }^{(1)}$ | 1,878,632 | 1,753,268 | 1,672,490 | 125,364 | 206,142 | 7.2 | \% | 12.3 \% |
| Allowance for Loan Losses | 17,442 | 17,012 | 16,798 | 430 | 644 | 2.5 | \% | 3.8 |
| Earning Assets ${ }^{(1)}$ | 2,592,049 | 2,470,934 | 2,406,170 | 121,115 | 185,879 | 4.9 | \% | 7.7 \% |
| Total Assets | \$2,721,721 | \$ 2,605,242 | \$2,540,242 | \$ 116,479 | \$ 181,479 | 4.5 | \% | 7.1 \% |
| Demand Deposits | \$433,480 | \$ 387,280 | \$368,378 | \$46,200 | \$65,102 | 11.9 | \% | 17.7 \% |
| Interest-Bearing Checking Accounts | 905,624 | 877,988 | 900,974 | 27,636 | 4,650 | 3.1 | \% | 0.5 \% |
| Savings Deposits | 679,320 | 651,965 | 600,513 | 27,355 | 78,807 | 4.2 | \% | 13.1 \% |
| Time Deposits over \$250,000 | 33,630 | 32,878 | 72,730 | 752 | (39,100 | ) 2.3 | \% | (53.8)\% |
| Other Time Deposits | 167,984 | 166,435 | 129,790 | 1,549 | 38,194 | 0.9 | \% | 29.4 \% |
| Total Deposits | \$2,220,038 | \$ 2,116,546 | \$2,072,385 | \$ 103,492 | \$147,653 | 4.9 | \% | 7.1 |
| Federal Funds Purchased and Securities Sold Under | \$40,892 | \$ 35,836 | \$41,497 | \$5,056 | \$(605 | 14.1 | \% | (1.5 )\% |
| Agreements to Repurchase | \$40,892 | \$35,836 | \$41,497 | \$5,056 | \$(605 | 14.1 |  | (1.5 )\% |
| FHLB Advances - Overnight | 122,000 | 123,000 | 102,000 | (1,000 | ) 20,000 | (0.8 | )\% | 19.6 \% |
| FHLB Advances - Term | 55,000 | 55,000 | 55,000 | - | - | - | \% | - \% |
| Stockholders' Equity | 240,752 | 232,852 | 225,373 | 7,900 | 15,379 | 3.4 | \% | 6.8 |

Municipal Deposits: Fluctuations in balances of our interest-bearing checking and savings accounts and time deposits greater than $\$ 250,000$ are largely the result of municipal deposit fluctuations. Municipal deposits on average represent $28 \%$ to $34 \%$ of our total deposits. Municipal deposits are typically placed in interest-bearing checking and savings accounts, as well as various time deposits.
In general, there is a seasonal pattern to municipal deposits which dip to a low point in August each year. Account balances tend to increase throughout the fall and into early winter from tax deposits, flatten out after the beginning of the ensuing calendar year, and increase again at the end of March from the electronic deposit of NYS Aid payments to school districts. In addition to these seasonal fluctuations within types of accounts, the overall level of municipal deposit balances fluctuates from year-to-year as some municipalities move their accounts in and out of our banks due to competitive factors. Often, the balances of municipal deposits at the end of a quarter are not representative of the average balances for that quarter. Competition for municipal deposits from non-banking entities has increased and led to a decline in the deposits maintained in interest bearing checking accounts.
If in the future, interest rates begin to rise significantly or the competition for municipal deposits otherwise becomes more intense, we may experience a sustained decrease in municipal deposit levels and/or an elevation in the rates we are forced to pay on such deposits above our normal rates.
Changes in Sources of Funds: Our total deposits increased $\$ 103.5$ million, or 4.9\%, from December 31, 2016 to June 30, 2017. While our municipal deposits decreased slightly by $0.9 \%$ during the period, our consumer and business deposit balances increased by $7.3 \%$. While most of our significant loan growth during the first quarter was funded by our increase in deposits, we also use as necessary one or more of our alternate sources of funds, including overnight
and term advances from the FHLB. At June 30, 2017, our overnight advances from the FHLB were $\$ 122$ million, down slightly from the 2016 year end balance of $\$ 123$ million and up $\$ 20$ thousand from the balance on June 30, 2016. At June 30, 2017, our term advances from the FHLB were $\$ 55.0$ million, unchanged from both our year-end 2016 balance and our June 30, 2016 balance.
Changes in Earning Assets: Our loan portfolio at June 30, 2017, was $\$ 1.88$ billion, up by $\$ 125.4$ million, or $7.2 \%$, from the December 31, 2016 level and up by $\$ 206.1$ million, or $12.3 \%$, from the June 30, 2016 level. We experienced the following trends in our four largest segments:

1. Commercial loans. This segment of our portfolio increased significantly by $\$ 21.1$ million, or $20.1 \%$, during the first six months of 2017, representing the impact of demand for such loans during the period.
2. Commercial real estate loans. This segment of our portfolio increased by $\$ 10.2$ million, or $2.4 \%$, during the first six months of 2017, representing the continued strong demand for such loans offset in part by a few large payoffs during the period.

Consumer loans (primarily automobile loans through indirect lending). As of June 30, 2017, these loans, primarily 3. auto loans, had increased by $\$ 41.4$ million, or $7.7 \%$, from the December 31, 2016 balance, reflecting a continuation . of strong demand for new and used vehicles region-wide and an expansion of our dealer network for indirect lending.
4. Residential real estate loans. This segment increased during the first six months of 2017, by $\$ 52.7$ million, or $7.8 \%$. As in prior periods, we elected to sell a portion of the residential mortgage loans we originated during the period to Freddie Mac. Gross originations were up during the period, compared to the comparable 2016 period, and we retained a higher percentage of our originations than in the
year earlier period. Nevertheless, demand for new mortgage loans remained strong throughout the first quarter, reflecting continuing low rates and a stable local economy with low unemployment.

Most of our incoming cash flows during the first six months of 2017 came from increased deposit balances (some of which were seasonal). We used these positive cash-flows as well as loan amortization payments and a reduction in our investment securities portfolio to principally fund our loan growth. Our investment securities portfolio decreased slightly between December 31, 2016 and June 30, 2017, by $\$ 17.0$ million, or $2.5 \%$.

## Deposit Trends

The following two tables provide information on trends in the balance and mix of our deposit portfolio by presenting, for each of the last five quarters, the quarterly average balances by deposit type and the percentage of total deposits represented by each deposit type. The principal change in deposit balances over the period was the steady increase in demand deposits and savings deposits from June 30, 2016 to June 30, 2017. As mentioned previously, the volatility in interest-bearing checking deposit account balances is mainly due to seasonal fluctuations in municipal deposits. If and to the extent that interest rates, and corresponding deposit rates, across all maturities, begin to increase in future periods from their current continuing very low rates, we would expect these trends to change, as depositors shift back to higher-rate, longer term deposits, putting heightened pressure on our net interest margin.

Quarterly Average Deposit Balances
(Dollars in Thousands)

| Quarter Ended |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
|  | $6 / 30 / 2017$ | $3 / 31 / 2017$ | $12 / 31 / 2016$ | $9 / 30 / 2016$ | $6 / 30 / 2016$ |
|  | $\$ 408,214$ | $\$ 389,606$ | $\$ 383,226$ | $\$ 381,195$ | $\$ 357,285$ |
| Demand Deposits | 681,197 | 6977,662 | 921,971 | 869,439 | 928,904 |
| Interest-Bearing Checking Accounts | 918,235 | 894,928 | 607,850 | 602,625 |  |
| Savings Deposits | 31,126 | 33,758 | 39,058 | 41,267 | 29,487 |
| Time Deposits over $\$ 250,000$ | 167,593 | 165,861 | 165,973 | 164,081 | 164,148 |
| Other Time Deposits | $\$ 2,206,365$ | $\$ 2,161,798$ | $\$ 2,160,156$ | $\$ 2,063,832$ | $\$ 2,082,449$ |
| Total Deposits |  |  |  |  |  |

Percentage of Total Quarterly Average Deposits

|  | Quarter Ended |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 6/30/2013/31/2017 |  |  | 12/31/2016 |  | 9/30/ |  | 6/30 |  |
| Demand Deposits | 18.5 | \% 18.0 | \% | 17.7 | \% | 18.5 | \% | 17.2 | \% |
| Interest-Bearing Checking Accounts | 41.6 | \% 41.4 | \% | 42.7 | \% | 42.1 | \% | 44.6 | \% |
| Savings Deposits | 30.9 | \% 31.3 | \% | 30.1 | \% | 29.4 | \% | 28.9 | \% |
| Time Deposits over \$250,000 |  | \% 1.6 | \% | 1.8 | \% | 2.0 | \% | 1.4 | \% |
| Other Time Deposits |  | \% 7.7 | \% | 7.7 | \% | 8.0 | \% | 7.9 | \% |
| Total Deposits | 100.0 | . 0 \% 100.0 | \% | 100.0 | \% | 100.0 | \% | 100.0 | \% |

Quarterly Cost of Deposits

|  | Quarter Ended |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 6/30/20BT31/2017 |  |  | 12/31/2016 |  | 9/30/ | 016 | 6/30/ | 016 |
| Demand Deposits | - \% | - | \% | - | \% | - | \% | - | \% |
| Interest-Bearing Checking Accounts | 0.17 | 0.15 |  | 0.15 |  | 0.15 |  | 0.13 |  |
| Savings Deposits | 0.19 | 0.17 |  | 0.16 |  | 0.15 |  | 0.15 |  |
| Time Deposits over \$250,000 | 0.85 | 0.66 |  | 0.55 |  | 0.59 |  | 0.67 |  |
| Other Time Deposits | 0.56 | 0.56 |  | 0.60 |  | 0.56 |  | 0.51 |  |
| Total Deposits | 0.18 | 0.17 |  | 0.16 |  | 0.16 |  | 0.15 |  |

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During the quarter ended June 30, 2017, our average deposit cost on most deposit categories increased slightly due to certain deposit customers shifting funds to higher rate deposit products. In addition, we have increased our rates on promotional time deposits over $\$ 250,000$. This shift may represent merely the beginning of a general increase in deposit rates for banks in response to the program initiated by the Federal Reserve in late 2015 to drive up short term rates through a series of gradual rate increases. Given the uncertainty surrounding the future of interest rates, we are unable to predict at this time what the short- or long-term effect of the Federal Reserve's interest rate determinations may be.

Non-Deposit Sources of Funds
We have several sources of funding other than new deposits. Historically, we have borrowed funds from the Federal Home Loan Bank ("FHLB") under a variety of programs, including fixed and variable rate short-term borrowings and borrowings in the form of "structured advances." These structured advances typically have original maturities of 3 to 10 years with some advances being callable by the FHLB
at certain dates. If the advances are called, we may elect to receive replacement advances from the FHLB at the then prevailing FHLB rates of interest. We currently do not have any structured advances in this portfolio.
We no longer rely on TRUPs as a source of new funds. As a result of the passage of the Dodd-Frank Act in 2010 and its removal of Tier 1 regulatory capital treatment for TRUPs issued after the Act's grandfathering date, we like all insured financial institutions of our size or larger have not issued any TRUPs since that date and are not likely to issue any TRUPs in the future. However, consistent with the grandfathering provision in Dodd-Frank, the $\$ 20$ million principal amount of Junior Subordinated Obligations Issued to Unconsolidated Subsidiary Trusts listed on our consolidated balance sheet as of June 30, 2017 (i.e., our previously issues TRUPS) will, subject to certain limits, continue to qualify as Tier 1 regulatory capital for Arrow until such TRUPs mature or are redeemed, as is further discussed under "Capital Resources" beginning on page 55 of this Report. These trust preferred securities are subject to early redemption by us if the proceeds cease to qualify as Tier 1 capital of Arrow for any reason, or if any of certain other unanticipated but negative events should occur, such as any adverse change in tax laws that might deny the Company the ability to deduct interest paid on these obligations for federal income tax purposes.

## Loan Trends

The following two tables present, for each of the last five quarters, the quarterly average balances by loan type and the percentage of total loans represented by each loan type. For purposes of the following tables only, we have broken out Home Equity loans from Residential Real Estate loans (they are otherwise included in a single category in this Report). We have also combined Commercial Loans and Commercial Real Estate Loans into a single category (they are treated as separate categories in other sections of this Report). Over the last five quarters, the average balances for all of the below-listed categories of loans have steadily increased.

Quarterly Average Loan Balances
(Dollars in Thousands)

| Quarter Ended |  |  |  |  |  |  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :---: | :---: | :---: | :---: | :---: |
|  | $6 / 30 / 2017$ | $3 / 31 / 2017$ | $12 / 31 / 2016$ | $9 / 30 / 2016$ | $6 / 30 / 2016$ |  |  |  |  |  |
| Commercial and Commercial Real Estate | $\$ 556,014$ | $\$ 541,187$ | $\$ 532,456$ | $\$ 524,523$ | $\$ 519,775$ |  |  |  |  |  |
| Residential Real Estate | 538,884 | 518,263 | 490,427 | 470,865 | 462,253 |  |  |  |  |  |
| Home Equity | 138,125 | 135,910 | 135,939 | 133,009 | 131,513 |  |  |  |  |  |
| Consumer Loans ${ }^{(1)}$ | 609,520 | 585,753 | 567,916 | 552,454 | 535,860 |  |  |  |  |  |
| Total Loans | $\$ 1,842,543$ | $\$ 1,781,113$ | $\$ 1,726,738$ | $\$ 1,680,851$ | $\$ 1,649,401$ |  |  |  |  |  |

Percentage of Total Quarterly Average Loans
Quarter Ended
6/30/2013/31/2017 12/31/2016 9/30/2016 6/30/2016
Commercial and Commercial Real Estate 30.2 \% 30.4 \% $30.8 \quad \% \quad 31.2 \quad \% \quad 31.5 \quad \%$
$\begin{array}{llllllllll}\text { Residential Real Estate } \quad 29.2 & \% & 29.1 & \% & 28.4 & \% & 28.0 & \% & 28.0 & \%\end{array}$
Home Equity
Consumer Loans ${ }^{(1)}$
$\begin{array}{lllllllll}\text { Total Loans } & 100.0 \% & 100.0 & \% & 100.0 & \% & 100.0 & \% & 100.0\end{array}$
${ }^{(1)}$ The category "Other Consumer Loans", in the tables above, includes home improvement loans secured by mortgages, which are otherwise included by us as part of our residential real estate loans in this Report.

Maintenance of High Quality in the Loan Portfolio: We did not experience any material weakening in the quality of our loan portfolio or any segment thereof. In general, we have historically underwritten our residential real estate loans to secondary market standards for prime loans and have not engaged in subprime mortgage lending as a business line. Similarly, we have historically applied high underwriting standards in our commercial and commercial real estate lending operations and generally in our indirect (automobile) lending program as well. We have occasionally made loans, including indirect loans, to borrowers having FICO scores below the highest credit quality classifications,
where special circumstances such as competitive considerations have led us to conclude it was appropriate to do so, with suitable protections against any enhanced perceived risk in such loans. We also have had extensions of credit outstanding to borrowers who have developed credit problems after origination resulting in deterioration of their FICO scores.

Residential Real Estate Loans: In recent years, residential real estate and home equity loans have represented the largest single segment of our loan portfolio (comprising $39.0 \%$ of the entire portfolio at June 30, 2017), eclipsing both our commercial and commercial real estate loans, which represented $30.2 \%$ of the portfolio on that date, and our consumer loans (primarily automobile loans), which were $30.8 \%$ of the portfolio. Our gross originations for residential real estate loans (including refinancings of pre-existing mortgage loans) were $\$ 98.0$ million and $\$ 71.6$ million for the first six months of 2017 and 2016, respectively. We expect this trend (i.e., substantially increased originations over the prior year periods) to continue during 2017. Origination totals substantially exceeded the sum of repayments and prepayments in the second quarters of both years, but in each period we also sold a portion of these originations on or immediately after origination. In the first six months of 2017 , we sold $\$ 7.7$ million, or $7.8 \%$, of our originations. In the first six months of 2016, we sold a larger dollar amount, $\$ 10.4$ million, or $14.5 \%$, of our originations. During recent periods, commencing in 2014, we have offered additional
competitive products for variable rate (adjustable) residential real estate and construction loans. These variable rate loans have not been subprime loans. We have not sold any of these variable rate loans into the secondary market.

Commercial Loans and Commercial Real Estate Loans: For the first six months of 2017, combined commercial and commercial real estate loan originations continued to be strong, with an annualized growth rate of $7.7 \%$.
Substantially all commercial and commercial real estate loans in our portfolio were extended to businesses or borrowers located in our regional market. Less than $12 \%$ of the loans in the commercial portfolio have variable rates tied to prime, FHLBNY rates or U.S. Treasury indices. We have not experienced any significant weakening in the quality of our commercial loan portfolio in recent years.
It is entirely possible, for the reasons discussed in the preceding section on Residential Real Estate Loans, that we may experience a reduction in the demand for commercial and commercial real estate loans and/or a weakening in the quality of this segment of the portfolio in upcoming periods. This is particularly likely if the ultimate effect of the Fed's current rate hike program triggers a significant and long-lasting increase in prevailing interest rates for medium-or long credits. Generally, the business sector, at least in our service area, appeared to be in reasonably good financial condition at period-end.

Consumer Loans (primarily automobile loans through indirect lending): At June 30, 2017, our automobile loans (primarily loans originated through dealerships located in upstate New York and Vermont) represented the third largest category of loans in our portfolio, and continued to be a significant component of our business comprising almost a third of our loan portfolio.
Our new automobile loan volume for the first six months of 2017 remained strong, at $\$ 160.0$ million, up from the $\$ 149.0$ million originated in first six months of 2016. As a result of these originations, our consumer loan portfolio also grew in the first six months of 2017, by $\$ 41.4$ million, or $7.7 \%$, from our December 31, 2016 balance.
For credit quality purposes, we assign our potential automobile loan customers into one of four tiers, ranging from lower to higher quality in terms of anticipated credit risk. In recent periods a slightly higher ratio of our automobile loan originations have involved customers in the lower two tiers, i.e., loans entailing somewhat higher credit risk. However, in the first six months of 2017, we experienced no significant increase in our net charge-offs on automobile loans. Our lending staff not only utilizes credit evaluation software tools but also reviews and evaluates each loan individually. We believe our disciplined approach to evaluating risk has contributed to maintaining our strong loan quality in this segment of our portfolio.
Recently, several market indicators have suggested that auto loan demand is weakening somewhat on a national scale, although not in every market area. Our average maturity for automobile loan originations has expanded in recent years, reflective of a larger market development. If we encounter some weakening in auto demand in our service area (and we have not, to date), we may experience limited, if any, overall growth in this segment of our portfolio in upcoming periods, regardless of whether the auto company lending affiliates continue to offer highly-subsidized loans. Of course, in this segment of our portfolio, as in the other segments, any substantial increase in prevailing interest rates in upcoming periods, presumably in response to the Fed's rate rise program, would likely have some negative impact on our originations. The same also may occur if economic conditions in our indirect loan service area should generally weaken in upcoming periods.

The following table indicates the annualized tax-equivalent yield of each loan category for the past five quarters. Quarterly Taxable Equivalent Yield on Loans

Quarter Ended
6/30/20BT31/2017 12/31/2016 9/30/2016 6/30/2016
Commercial and Commercial Real Estate
Residential Real Estate
Home Equity
Consumer Loans
Total Loans

| $4.30 \%$ | 4.25 | $\%$ | 4.29 | $\%$ | 4.28 | $\%$ | 4.44 | $\%$ |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| $4.03 \%$ | 4.10 | $\%$ | 4.09 | $\%$ | 4.20 | $\%$ | 4.22 | $\%$ |
| $3.41 \%$ | 3.28 | $\%$ | 3.11 | $\%$ | 3.13 | $\%$ | 3.08 | $\%$ |
| $3.21 \%$ | 3.14 | $\%$ | 3.18 | $\%$ | 3.19 | $\%$ | 3.18 | $\%$ |
| $3.79 \%$ | 3.76 | $\%$ | 3.78 | $\%$ | 3.82 | $\%$ | 3.86 | $\%$ |

The average yield in our total loan portfolio during the second quarter of 2017 was down slightly compared to the average yield during the second quarter of 2016 but was up slightly compared to the average yield in the total portfolio during the immediately preceding quarter (the first quarter of 2017). All loan yields in the current quarter increased in comparison to the immediately preceding quarter with the exception of the residential real estate portfolio. The residential real estate portfolio yield continued to decline due to an increase in our sales of higher yielding loans. Generally, average rates on newly-originated loans made by us in all segments of our portfolio in the recently-completed quarter were at least equal to, and in most cases slightly above, the average rates for comparable loans originated by us in the immediately preceding quarter and in the year-earlier quarter.
Regardless of the future direction or magnitude of changes in prevailing interest rates, the yield on our loan portfolio will ultimately be impacted by such changes. However, the timing and degree of responsiveness, in loans generally and as between various categories of loans, will be influenced by a variety of other factors, including the extent of federal government participation in the home mortgage market, the makeup of our loan portfolio, the shape of the yield curve, consumer expectations and preferences, and the rate at which the portfolio expands.

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## Investment Portfolio Trends

The table below presents the changes in the period-end balances for the securities available-for-sale and the securities held-to-maturity investment portfolios from December 31, 2016 to June 30, 2017 (in thousands).
The net reduction in the two portfolios on a combined basis during the period (of $\$ 13.0$ million, or $1.9 \%$ ) reflected our strategy in recent years to reallocate earning assets from investment securities to higher yielding loans to maximize earning asset yields.

|  | (Dollars in Thousands) |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Fair Value at Period-End |  |  | Net Unrealized Gains (Losses) |  |  |  |
|  |  |  |  | For Period Ended |  |  |  |
|  | 6/30/2017 | 12/31/2016 | Change | 6/30/20172/31/2016 Change |  |  |  |
| Securities Available-for-Sale: |  |  |  |  |  |  |  |
| U.S. Treasury Securities | \$54,676 | \$ 54,706 | \$(30 | ) $\$ 78$ | \$ 5 |  | \$73 |
| U.S. Agency Securities | 92,409 | 92,671 | (262 | ) 93 | 262 |  | (169 |
| State and Municipal Obligations | 15,441 | 27,690 | (12,249 | ) 31 | 6 |  | 25 |
| Mortgage-Backed Securities-Residential | 161,077 | 167,239 | (6,162 | ) $(247$ | ) $(950$ |  | 703 |
| Corporate and Other Debt Securities | 2,299 | 3,308 | (1,009 | ) (201 | ) (204 |  | 3 |
| Mutual Funds and Equity Securities | 1,490 | 1,382 | 108 | 370 | 262 |  | 108 |
| Total | \$327,392 | \$ 346,996 | \$(19,604) | ) \$124 | \$ (619 |  | \$743 |
| Securities Held-to-Maturity: |  |  |  |  |  |  |  |
| State and Municipal Obligations | \$282,157 | \$ 267,127 | \$15,030 | \$1,672 | \$ (1,765 |  | \$3,437 |
| Mortgage-Backed Securities-Residential | 68,198 | 75,624 | (7,426 | ) 665 | 89 |  | 576 |
| Corporate and Other Debt Securities | - | 1,000 | (1,000 | ) - | - |  | - |
| Total | \$350,355 | \$ 343,751 | \$6,604 | \$2,337 | \$ (1,676 |  | \$4,013 |

At June 30, 2017, we held no investment securities in either of our securities portfolios that consisted of or included, directly or indirectly, obligations of foreign governments or governmental agencies or foreign issuers. As of both period-ends presented in the above table, all listed mortgage-backed securities were guaranteed by U.S. Government Agency or government sponsored enterprises (GSEs), such as Fannie Mae or Freddie Mac.
Mortgage-backed securities provide to the investor monthly portions of principal and interest payments pursuant to the contractual obligations of the underlying mortgages. In the case of most CMOs, the principal and interest payments on the pooled mortgages are separated into two or more components (tranches), with each tranche having a separate estimated life, risk profile and yield. Our practice has been to purchase only those CMOs that are guaranteed by GSEs or other federal agencies and only those CMO tranches with shorter maturities and no more than moderate extension risk. Included in corporate and other debt securities are trust preferred securities issued by other financial institutions prior to May 19, 2010, the grandfathering date for TRUPs in Dodd Frank, that were highly rated at the time of purchase.
During the first six months of 2017, our net unrealized gain on held-to-maturity municipal obligations increased $\$ 3.4$ million due to a slight decline in yields of new municipal securities.
Other-Than-Temporary Impairment
Each quarter we evaluate all investment securities with a fair value less than amortized cost, both in the available-for-sale portfolio and the held-to-maturity portfolio, to determine if there exists other-than-temporary impairment for any such security as defined under generally accepted accounting principles. There were no other-than-temporary impairment losses in the first six months of 2017.
Change in Net Unrealized Securities Gains (Losses): Nearly all of the change in our net unrealized gains or losses during recent periods has been attributable to changes in the market yields during the periods in question, with little or no change in the credit-worthiness of the issuers.

Investment Sales, Purchases and Maturities
(In Thousands)
The following table summarizes sales of investment securities within the available-for-sale and held-to-maturity portfolios for the three and six-month periods ended June 30, 2017 and 2016:

| Three |  |
| :---: | :---: |
| Months |  |
| Ended | Ended |
| 7008200 |  |

Sales

Available-For-Sale Portfolio:

| Mortgage-Backed Securities-Residential $\$ \mathbf{\$ -}$ | $\$ \$-$ |  |
| :--- | :--- | :--- |
| U.S. Agency Securities | $-4,793$ | $-4,793$ |
| Corporate Bonds and Other | $-5,631$ | $-5,631$ |
| Total | $-10,424$ | $-10,424$ |
| Net Gains on Securities Transactions | -144 | -144 |
| Proceeds on the Sales of Securities | $\$ \$ 10,568$ | $\$-\$ 10,568$ |

Held-to-Maturity Portfolio:
State and Municipal Obligations \$ \$- \$ -
Net Gains on Securities Transactions
Proceeds on the Sales of Securities
$\$ \$-\quad \$ \$-$
Investment yields in the debt markets experienced some volatility in the fourth quarter of 2016 and the first six months of 2017. We regularly review our interest rate risk position along with our security holdings to evaluate if market opportunities have arisen that may permit us to reposition certain securities available-for-sale to enhance portfolio performance. In the just-completed quarter, the market presented few such opportunities.
The following table summarizes purchases of investment securities within the available-for-sale and held-to-maturity portfolios for the three and six-month periods ended June 30, 2017 and 2016, as well as proceeds from the maturity and calls of investment securities within each portfolio for the respective periods presented:

Three Months
Ended Six Months Ended
6/30/20176/30/2016 6/30/20176/30/2016
Purchases:
Available-for-Sale Portfolio
U.S. Agency Securities $\quad \$-\quad \$-\quad \$-\quad \$-$
$\begin{array}{lllll}\text { State and Municipal Obligations } & - & 10,920 & - & 10,920\end{array}$
Mortgage-Backed Securities-Residential - $\quad$ - 12,324 -
Other - - - -
Total Purchases $\quad \$-\quad \$ 10,920 \quad \$ 12,324 \$ 10,920$
Maturities \& Calls $\quad \$ 20,041$ \$26,277 $\$ 31,867 \$ 43,780$

Purchases:
Three Months Six Months Ended
Ended

Held-to-Maturity Portfolio
State and Municipal Obligations $\quad \$ 32,879$ \$50,702 $\$ 33,435 \$ 57,572$
Mortgage-Backed Securities-Residential - - - -
$\begin{array}{lll}\text { Total Purchases } & \$ 32,879 \$ 50,702 & \$ 33,435 \$ 57,572\end{array}$
Maturities \& Calls
\$19,788 \$ 24,596 \$30,262 \$33,809

Asset Quality
The following table presents information related to our allowance and provision for loan losses for the past five quarters.
Summary of the Allowance and Provision for Loan Losses
(Dollars in Thousands, Loans Stated Net of Unearned Income)

| $6 / 30 / 2017$ | $3 / 31 / 2017$ | $12 / 31 / 2016$ | $9 / 30 / 2016$ | $6 / 30 / 2016$ |
| :--- | :--- | :--- | :--- | :--- |
|  |  |  |  |  |
| $\$ 1,878,632$ | $\$ 1,810,805$ | $\$ 1,753,268$ | $\$ 1,707,216$ | $\$ 1,672,490$ |
| $1,842,543$ | $1,781,113$ | $1,726,738$ | $1,680,850$ | $1,649,401$ |
| $2,721,721$ | $2,656,386$ | $2,605,242$ | $2,580,485$ | $2,540,242$ |

Allowance for Loan Losses, Quarter-to-Date:

| Allowance for Loan Losses, Beginning of Period | \$17,216 |  | \$17,012 |  | \$16,975 |  | \$ 16,798 |  | \$16,287 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Provision for Loan Losses, QTD | 422 |  | 358 |  | 483 |  | 480 |  | 669 |
| Loans Charged-off, QTD | (305 | ) | (270 | ) | (486 | ) | (367 | ) | (201 |
| Recoveries of Loans Previously Charged-off | 109 |  | 116 |  | 40 |  | 64 |  | 43 |
| Net Charge-offs, QTD | (196 | ) | 154 |  | 447 |  | 303 |  | 158 |
| Allowance for Loan Losses, End of Period | \$17,442 |  | \$17,216 |  | \$17,012 |  | \$16,975 |  | \$16,798 |
| Nonperforming Assets, at Period-End: |  |  |  |  |  |  |  |  |  |
| Nonaccrual Loans | \$5,222 |  | \$4,273 |  | \$4,193 |  | \$6,107 |  | \$6,705 |
| Loans Past Due 90 or More Days and Still Accruing Interest | 1,821 |  | - |  | 1,201 |  | 548 |  | 456 |
| Restructured and in Compliance with Modified Terms | 101 |  | 101 |  | 106 |  | 107 |  | 111 |
| Total Nonperforming Loans | 7,144 |  | 4,374 |  | 5,500 |  | 6,762 |  | 7,272 |
| Repossessed Assets | 90 |  | 103 |  | 101 |  | 149 |  | 47 |
| Other Real Estate Owned | 1,523 |  | 1,631 |  | 1,585 |  | 868 |  | 885 |
| Total Nonperforming Assets | \$8,757 |  | \$6,108 |  | \$7,186 |  | \$7,779 |  | \$8,204 |

Asset Quality Ratios:

| Allowance to Nonperforming Loans | 244.15 | \% 393.60 | \% 309.31 | \% 251.04 | \% 231.00 |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Allowance to Period-End Loans | 0.93 | \% 0.95 | \% 0.97 | \% 0.99 | \% 1.00 |
| Provision to Average Loans (Quarter) ${ }^{(1)}$ | 0.09 | \% 0.08 | \% 0.11 | \% 0.11 | \% 0.16 |
| Provision to Average Loans (YTD) ${ }^{(1)}$ | 0.09 | \% 0.08 | \% 0.12 | \% 0.13 | \% 0.09 |
| Net Charge-offs to Average Loans (Quarter) (1) | 0.04 | \% 0.04 | \% 0.10 | \% 0.07 | \% 0.04 |
| Net Charge-offs to Average Loans (YTD) ${ }^{(1)}$ | 0.04 | \% 0.04 | \% 0.06 | \% 0.05 | \% 0.03 |
| Nonperforming Loans to Total Loans | 0.38 | \% 0.24 | \% 0.31 | \% 0.40 | \% 0.43 |
| Nonperforming Assets to Total Assets | 0.32 | 0.23 | 0.2 | \% 0.30 | \% 0.32 |

Provision for Loan Losses
Through the provision for loan losses, an allowance is maintained that reflects our best estimate of probable incurred loan losses related to specifically identified impaired loans as well as the inherent risk of loss related to the remaining portfolio. Loan charge-offs are recorded to this allowance when loans are deemed uncollectible, in whole or in part. As loans become past due, consideration is given to the status of those loans and whether or not to classify them as nonaccrual loans. Any loans 90 days past due and still accruing interest have been evaluated and the borrowers have
been deemed to have the capacity to repay all principal and interest and, therefore, have not been classified as nonaccrual.
In the second quarter of 2017, we made a $\$ 422$ thousand provision for loan losses, compared to a provision of $\$ 669$ thousand for the second quarter of 2016 and a provision of $\$ 358$ thousand for the first quarter of 2017. The provision was primarily driven by net charge-offs of $\$ 196$ thousand, growth in outstanding loan balances, a net increase in certain qualitative factors for automobile loans, and impairment of one commercial real estate loan offset, in part, by a net decrease in qualitative factors in certain segments of our portfolio (primarily commercial real estate) and a reduction in classified commercial and commercial real estate loans. The reduction in commercial real estate qualitative factors results mostly from a decrease in the annual growth rate of that portfolio. See Note 3 to our unaudited interim consolidated financial statements for a discussion on how we classify our credit quality indicators as well as the balance in each category.
The ratio of the allowance for loan losses to total loans was $0.93 \%$ at June 30, 2017, a decrease of 4 basis points from the $0.97 \%$ ratio at December 31, 2016 and a decrease of 7 basis points from the $1.00 \%$ ratio at June 30, 2016.

We consider our accounting policy relating to the allowance for loan losses to be a critical accounting policy, given the uncertainty involved in evaluating the level of the allowance required to cover credit losses inherent in the loan portfolio, and the material effect that such judgments may have on our results of operations. Our process for determining the provision for loan losses is described in Note 3 to our unaudited interim consolidated financial statements.
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## Risk Elements

Our nonperforming assets at June 30, 2017 amounted to $\$ 8.8$ million, an increase of $\$ 1.6$ million, or $21.9 \%$, from the December 31, 2016 total and an increase of $\$ 0.6$ million, or $6.7 \%$, from the year earlier total. In all recent periods, our ratios of nonperforming assets to total assets have remained below the average ratios for our peer group, although the average peer group ratios have improved dramatically in recent years, from post-crisis levels that were substantially higher than their current levels (and substantially higher than our ratios during such periods). (See page 37 for a discussion of our peer group.) At March 31, 2017, our ratio of loans past due 90 or more days plus nonaccrual loans plus other real estate owned to total assets was $0.22 \%$, well below the $0.71 \%$ ratio of our peer group at such date (the latest date for which peer group information is available). At June 30, 2017 our ratio increased slightly to $0.32 \%$, however, this is still far below the most recent ratio for our peer group.
The following table presents the balance of other non-current loans at period-end as to which interest income was being accrued (i.e. loans 30 to 89 days past due, as defined in bank regulatory guidelines). These non-current loans are not included in our nonperforming assets but entail heightened risk.
Loans Past Due 30-89 Days and Accruing Interest
(\$ in 000's)

|  | 6/30/2017 |  | $12 / 31 / 2016$ |
| :--- | :--- | :--- | :--- |
| 6/30/2016 |  |  |  |
| Commercial Loans | $\$ 176$ | $\$ 134$ | $\$ 87$ |
| Commercial Real Estate Loans | - | 121 | 167 |
| Residential Real Estate Loans | 2,228 | 2,461 | 1,649 |
| Consumer Loans - Primarily Indirect Automobile | 5,367 | 6,369 | 4,715 |
| Total Delinquent Loans | $\$ 7,771$ | $\$ 9,085$ | $\$ 6,618$ |

At June 30, 2017, our loans in this category totaled $\$ 7.8$ million, a decrease of $\$ 1.3$ million, or $14.5 \%$, from the $\$ 9.1$ million of such loans at December 31, 2016. The June 30, 2017 total of non-current loans equaled $0.41 \%$ of loans then outstanding, whereas the year-end 2016 total equaled $0.52 \%$ of loans then outstanding. The decrease from December 31, 2016 is primarily attributable to a decrease in delinquent automobile loans, which were at a seasonally elevated level at year-end 2016 but declined (improved) during the first quarter of 2017, to a more normal level. The number and dollar amount of our performing loans that demonstrate characteristics of potential weakness from time-to-time (potential problem loans) typically is a very small percentage of our portfolio. See the table of Credit Quality Indicators in Note 3 to our unaudited interim consolidated financial statements. We consider all performing commercial and commercial real estate loans classified as substandard or lower (as reported in Note 3) to be potential problem loans. The dollar amount of such loans at June 30, 2017 was $\$ 32.6$ million, down from the dollar amount of such loans at December 31, 2016, when the amount was $\$ 35.8$ million, due primarily to the upgrade of several commercial borrowers. These loans will continue to be closely monitored and we do expect to collect all payments of contractual interest and principal in full on these classified loans. Total nonperforming assets at period-end increased slightly by $\$ 0.6$ million, or $6.7 \%$ from June 30,2016 . This change resulted primarily from several commercial loans moving to nonaccrual status.
The economy in our market area has been relatively strong in recent years, compared to the immediate post-crisis years, but any general weakening of the U.S. economy in upcoming periods would likely have an adverse effect on the economy in our market area as well, and ultimately on our loan portfolio, particularly our commercial and commercial real estate portfolio.
As of June 30, 2017, we held for sale three residential real estate properties and one commercial property in other real estate owned. We do not expect to acquire a significant number of other real estate properties in the near term as a result of payment defaults or the foreclosure process.
We do not currently anticipate significant increases in our nonperforming assets, other non-current loans as to which interest income is still being accrued or potential problem loans, but can give no assurances in this regard.

## CAPITAL RESOURCES

Regulatory Capital Standards
Capital Adequacy Requirements. An important area of banking regulation is the federal banking system's promulgation and enforcement of minimum capitalization standards for banks and bank holding companies. The following is a summary of certain definitions of capital under the various new capital measures in the revised capital rules:
Common Equity Tier 1 Capital (CET1): Equals the sum of common stock instruments and related surplus (net of treasury stock), retained earnings, accumulated other comprehensive income (AOCI), and qualifying minority interests, minus applicable regulatory adjustments and deductions. Such deductions will include AOCI, if the organization has exercised its irrevocable option not to include AOCI in capital (we made such an election). Mortgage-servicing assets, deferred tax assets, and investments in financial institutions are limited to 15 percent of CET1 in the aggregate and 10 percent of CET1 for each such item individually. Additional Tier 1 Capital: Equals the sum of noncumulative perpetual preferred stock, tier 1 minority interests, grandfathered TRUPs, and Troubled Asset Relief Program instruments, minus applicable regulatory adjustments and deductions.
Tier 2 Capital: Equals the sum of subordinated debt and preferred stock, total capital minority interests not included in Tier 1, and allowance for loan and lease losses (not exceeding 1.25 percent of risk-weighted assets) minus applicable regulatory adjustments and deductions.

The following table presents the current minimum regulatory capital ratios applicable to our holding company and banks under the revised capital rules (as of January 1, 2017), as well as the increased minimum capital ratios that will apply at certain dates over the remaining portion of the phase-in period (i.e., as of January 1, 2018 and January 1, 2019):

Capital Ratio
Minimum CET1 Ratio
Capital Conservation Buffer ("Buffer")
Minimum CET1 Ratio Plus Buffer
Minimum Tier 1 Risk-Based Capital Ratio
Minimum Tier 1 Risk-Based Capital Ratio Plus Buffer
Minimum Total Risk-Based Capital Ratio
Minimum Total Risk-Based Capital Ratio Plus Buffer
Minimum Leverage Ratio

Year, as of January 1
201720182019
$4.500 \% 4.500 \% 4.500 \%$
$1.250 \% 1.875 \% 2.500 \%$
$5.750 \% 6.375 \% 7.000 \%$
$6.000 \% 6.000 \% 6.000 \%$
$7.250 \% 7.875 \% 8.500 \%$
$8.000 \% 8.000 \% 8.000 \%$
$9.250 \% 9.875 \% 10.500 \%$
$4.000 \% 4.000 \% 4.000 \%$

These minimum capital ratios, especially the CET1 ratio (4.5\%) and the enhanced Tier 1 risk-based capital ratio ( $6.0 \%$ ), represent a heightened and more restrictive capital regime than institutions like ours previously had to meet under the prior capital rules.
At June 30, 2017, our holding company and both of our banks exceeded by a substantial amount each of the applicable minimum capital ratios established under the revised capital rules, including the minimum CET1 Ratio, the minimum Tier 1 Risk-Based Capital Ratio, the minimum Total Risk-Based Capital Ratio, and the minimum Leverage Ratio, including in the case of each risk-based ratio, the phased-in portion of the capital buffer.

Prompt Corrective Action Capital Classifications. Under applicable banking law, federal banking regulators are required to take prompt corrective action with respect to depository institutions that do not meet certain minimum capital requirements. For these purposes, the regulators have established five capital classifications for banking institutions, ranging from the highest category of "well-capitalized" to the lowest category of "critically under-capitalized". As a result of the regulators' adoption of the revised capital rules, the definitions for determining which of the five capital classifications a particular banking organization will fall into were changed, effective as of January 1, 2015. Under the revised capital classifications, a banking institution is considered "well-capitalized" if it meets the following capitalization standards on the date of measurement: a CET1 risk-based capital ratio of $6.50 \%$ or greater, a Tier 1 risk-based capital ratio of $8.00 \%$ or greater, a total risk-based capital ratio of $10.00 \%$ or greater, and a Tier 1 leverage ratio of $5.00 \%$ or greater, provided the institution is not subject to any regulatory order or written directive regarding capital maintenance. Federal banking law also ties the ability of banking organizations to engage in certain types of activities and to utilize certain procedures to such organizations' continuing to qualify for inclusion in one of the two highest ranking of these capitalization categories, i.e., as "well-capitalized" or "adequately capitalized."

Our Current Capital Ratios: The table below sets forth the regulatory capital ratios of our holding company and our two subsidiary banks, Glens Falls National and Saratoga National, under the current capital rules, as of June 30, 2017:


| Current Regulatory Minimum (2017) | 5.750\%(1) | $7.250 \%^{(1)}$ | $9.250 \%(1)$ | 4.000 | $\%$ |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- |
| FDICIA's Prompt Corrective Action - "Well-Capitalized" Standard | 6.500 | $\%$ | 8.000 | $\%$ | 10.000 | $\%$ |
| (2017) |  | $7.000 \%^{(2)}$ | $8.500 \%^{(2)}$ | $10.500 \%(2)$ | 4.000 | $\%$ |

${ }^{(1)}$ Including currently phased-in $1.25 \%$ capital conservation buffer
${ }^{(2)}$ Including the fully phased-in $2.50 \%$ capital conservation buffer
At June 30, 2017, our holding company and both banks exceeded the minimum regulatory capital ratios established under the current capital rules and each also qualified as "well-capitalized", the highest category in the new capital classification scheme established by federal bank regulatory agencies under the "prompt corrective action" standards, as described above.
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## Capital Components; Stock Repurchases; Dividends

Stockholders' Equity: Stockholders' equity was $\$ 240.8$ million at June 30, 2017, an increase of $\$ 7.9$ million, or $3.4 \%$, from December 31, 2016. The most significant factors contributing to this increase were net income for the period of $\$ 13.8$ million, an increase in other comprehensive income of $\$ 0.6$ million, and increases in book equity from our various stock-based compensation and dividend reinvestment plans of $\$ 2.1$ million. These equity enhancing developments during the quarter were offset, in part, by cash dividends of $\$ 6.7$ million and purchases of our own common stock of $\$ 1.9$ million.

Trust Preferred Securities: In each of 2003 and 2004, we issued $\$ 10$ million of trust preferred securities (TRUPs) in a private placement. Under the Federal Reserve Board's regulatory capital rules then in effect, TRUPs proceeds typically qualified as Tier 1 capital for bank holding companies such as ours, but only in amounts up to $25 \%$ of Tier 1 capital, net of goodwill less any associated deferred tax liability. Under the Dodd-Frank Act, any trust preferred securities that Arrow might issue on or after the grandfathering date set forth in Dodd-Frank (May 19, 2010) would no longer qualify as Tier 1 capital under bank regulatory capital guidelines, whereas TRUPs outstanding prior to the grandfathering cutoff date set forth in Dodd-Frank (May 19, 2010) would continue to qualify as Tier 1 capital until maturity or redemption, subject to limitations. Thus, our outstanding TRUPs continue to qualify as Tier 1 regulatory capital, subject to such limitations.

Stock Repurchase Program: In October 2016, the Board of Directors approved a $\$ 5.0$ million stock repurchase program, effective January 1, 2017 (the 2017 program), under which management is authorized, in its discretion, to repurchase from time-to-time during 2017, in the open market or in privately negotiated transactions, up to $\$ 5$ million of Arrow common stock, to the extent management believes purchase of the Company's stock is an attractive use of available capital and in the best interests of stockholders. This 2017 program replaced a similar repurchase program which was in effect during 2016 (the 2016 program), which also authorized the repurchase of up to $\$ 5.0$ million of Arrow common stock. As of June 30, 2017 approximately $\$ 1.3$ million had been used under the 2017 program to repurchase Arrow shares. This total does not include repurchases of Arrow's Common Stock other than through its repurchase program, i.e., repurchases of Arrow shares on the market utilizing funds accumulated under Arrow's Dividend Reinvestment Plan and the surrender or deemed surrender of Arrow stock to the Company in connection with employees' stock-for-stock exercises of compensatory stock options to buy Arrow stock.

Dividends: Our common stock is traded on NasdaqGS ${ }^{\circledR}$ under the symbol AROW. The high and low stock prices for the past six quarters listed below represent actual sales transactions, as reported by NASDAQ. On July 26, 2017, our Board of Directors declared a 2017 third quarter cash dividend of $\$ 0.25$ payable on September 15, 2017. Per share amounts in the following table have been restated for our September 29, $20163 \%$ stock dividend.

Cash
Market Price Dividends
Low High Declared
2016
First Quarter $\$ 23.83$ \$26.74 \$ 0.243
Second Quarter $25.16 \quad 29.51 \quad 0.243$
$\begin{array}{llll}\text { Third Quarter } & 28.62 & 34.08 & 0.243\end{array}$
Fourth Quarter $30.56 \quad 41.70 \quad 0.250$
2017
First Quarter $\quad \$ 32.76$ \$40.95 \$ 0.250
Second Quarter $31.05 \quad 36.00 \quad 0.250$
Quarter Ended June
30,

Cash Dividends Per Share
Diluted Earnings Per Share
Dividend Payout Ratio
Total Equity (in thousands)
Shares Issued and Outstanding (in thousands)
Book Value Per Share
Intangible Assets (in thousands)
Tangible Book Value Per Share

## LIQUIDITY

The objective of effective liquidity management is to ensure that we have the ability to raise cash when we need it at a reasonable cost. We must be capable of meeting expected and unexpected obligations to our customers at any time. Given the uncertain nature of customer demands as well as the need to maximize earnings, we must have available reasonably priced sources of funds, both on- and off-balance sheet, that can be accessed quickly in time of need.
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Our primary sources of available liquidity are overnight investments in federal funds sold, interest bearing bank balances at the Federal Reserve Bank, and cash flow from investment securities and loans. Certain investment securities are selected at purchase as available-for-sale based on their marketability and collateral value, as well as their yield and maturity. Our securities available-for-sale portfolio was $\$ 327.4$ million at June 30, 2017, a decrease of $\$ 19.6$ million, from the year-end 2016 level. Due to the potential for volatility in market values, we are not always able to assume that securities may be sold on short notice at their carrying value, even to provide needed liquidity. In addition to liquidity from short-term investments, investment securities and loans, we have supplemented available operating liquidity with additional off-balance sheet sources such as federal funds lines of credit with correspondent banks and credit lines with the FHLBNY. Our federal funds lines of credit are with two correspondent banks totaling $\$ 35$ million; we did not draw on these lines during the three months ended June 30, 2017.

To support our borrowing relationship with the FHLBNY, we have pledged collateral, including residential mortgage and home equity loans. At June 30, 2017, we had outstanding collateral obligations with the FHLBNY of $\$ 237$ million; on such date, our unused borrowing capacity at the FHLBNY was approximately $\$ 248$ million. In addition we have identified brokered certificates of deposit as an appropriate off-balance sheet source of funding accessible in a relatively short time period. Also, our two bank subsidiaries have each established a borrowing facility with the Federal Reserve Bank of New York, pledging certain consumer loans as collateral for potential "discount window" advances, which we maintain for contingency liquidity purposes. At June 30, 2017, the amount available under this facility was approximately $\$ 399$ million, and there were no advances then outstanding. We measure and monitor our basic liquidity as a ratio of liquid assets to total short-term liabilities, both with and without the availability of borrowing arrangements. Based on the level of overnight funds investments, available liquidity from our investment securities portfolio, cash flows from our loan portfolio, our stable core deposit base and our significant borrowing capacity, we believe that our liquidity is sufficient to meet all funding needs that may arise in connection with any reasonably likely events or occurrences. At June 30, 2017, our basic liquidity ratio, including our FHLB collateralized borrowing capacity, was $10.4 \%$ of total assets, or $\$ 174$ million in excess of our internally-set minimum target ratio of $4 \%$.
Because of our consistently favorable credit quality and strong balance sheet, we did not experience any significant liquidity constraints in the three-month period ended June 30, 2017 and did not experience any such constraints in any prior year, back to and including the financial crisis years. We have not at any time during such period been forced to pay premium rates to obtain retail deposits or other funds from any source.

## RESULTS OF OPERATIONS

Three Months Ended June 30, 2017 Compared With
Three Months Ended June 30, 2016
Summary of Earnings Performance
(Dollars in Thousands, Except Per Share Amounts)
Quarter Ended

|  | $6 / 30 / 2017$ |  |  | $6 / 30 / 2016$ | Change | $\%$ |  |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :---: |
| Change |  |  |  |  |  |  |  |

We reported net income of $\$ 7.2$ million and diluted earnings per share (EPS) of $\$ .53$ for the second quarter of 2017, compared to net income of $\$ 6.6$ million and diluted EPS of $\$ .49$ for the second quarter of 2016.
We experienced no gains on securities sales in the second quarter of 2017 as we did not sell any securities in that period. This compares to net gains of $\$ 88$ thousand, net of tax, on the sale of securities in the comparable 2016 period.

The following narrative discusses the quarter-to-quarter changes in net interest income, noninterest income, noninterest expense and income taxes.

Net Interest Income
Summary of Net Interest Income
(Taxable Equivalent Basis, Dollars in Thousands)

|  | Quarter Ended |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 6/30/2017 | 6/30/2016 | 6 Change | \% Change |
| Interest and Dividend Income | \$21,875 | \$20,154 | \$1,721 | 8.5 \% |
| Interest Expense | 1,699 | 1,284 | 415 | 32.3 |
| Net Interest Income | 20,176 | 18,870 | 1,306 | 6.9 |
| Tax-Equivalent Adjustment | 949 | 917 | 32 | 3.5 |
| Average Earning Assets ${ }^{(1)}$ | 2,551,593 | 2,373,122 | 178,471 | 7.5 |
| Average Interest-Bearing Liabilitie | 2,005,421 | 1,891,017 | 114,404 | 6.0 |
| Yield on Earning Assets ${ }^{(1)}$ | 3.44 \% | \% 3.42 \% | \% 0.02 | \% 0.6 |
| Cost of Interest-Bearing Liabilities | 0.34 | 0.27 | 0.07 | \% 25.9 |
| Net Interest Spread | 3.10 | 3.15 | (0.05 | \% (1.6 |
| Net Interest Margin | 3.17 | 3.20 | (0.03 | )\% (0.9 |

${ }^{(1)}$ Includes Nonaccrual Loans
Our net interest margin (which we define as our net interest income on a tax-equivalent basis divided by average earning assets, annualized) for the second quarter of 2017 decreased slightly by 3 basis points to $3.17 \%$, from $3.20 \%$ during the second quarter of 2016. Our net interest margin, as well as our tax-equivalent net income, from which the margin is derived, are non-GAAP financial measures. (See the discussion under "Use of Non-GAAP Financial Measures," on page 38, and the tabular information and notes on pages 40 through 43, regarding our reasons for using these and other non-GAAP measures and the reconciliation thereof to comparable GAAP measures.) Net interest income for the just completed quarter, on a taxable equivalent basis, increased by $\$ 1.3$ million, or $6.9 \%$, from the second quarter of 2016, largely due to an increase in our average earning assets of $7.5 \%$, as compared to the $6.0 \%$
increase in our average interest-bearing liabilities. The slight decrease in net interest margin was the result of overnight borrowings increasing at a faster rate than our average earning assets. Despite the slight decrease in net interest margin during the second quarter of 2017 as compared to the second quarter of 2016, our net interest margin increased in each of the last three quarters (see page 41). The impact of recent interest rate changes on our net interest margin and net interest income are discussed above in this Report under the sections entitled "Deposit Trends" and "Loan Trends."
As discussed previously under the heading "Asset Quality" beginning on page 54, the provision for loan losses for the second quarter of 2017 was $\$ 422$ thousand, compared to a provision of $\$ 669$ thousand for the 2016 quarter.

Noninterest Income
Summary of Noninterest Income
(Dollars in Thousands)

|  | Quarter Ended |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 6/30/20 | 1630/2016 | Change | $\begin{aligned} & \% \\ & \text { Change } \end{aligned}$ |
| Income From Fiduciary Activities | \$2,150 | \$ 2,000 | \$ 150 | 7.5 \% |
| Fees for Other Services to Customers | 2,413 | 2,417 | (4 | ) (0.2 )\% |
| Insurance Commissions | 2,115 | 2,133 | (18 | ) $(0.8) \%$ |
| Net Gain on Securities Transactions | - | 144 | (144 | ) (100.0)\% |
| Net Gain on the Sale of Loans | 204 | 159 | 45 | 28.3 \% |
| Other Operating Income | 175 | 341 | (166 | ) (48.7)\% |
| Total Noninterest Income | \$7,057 | \$ 7,194 | \$(137) | ) (1.9 )\% |

Total noninterest income in the current quarter was $\$ 7.1$ million, down slightly from total noninterest income for the second quarter of 2016.
Fees for other services to customers, the largest segment of our noninterest income, remained consistent at $\$ 2.4$ million for the second quarter of 2017, as compared to the second quarter of 2016. In addition to service charge income on deposits, this category also includes debit card interchange income, revenues related to the sale of mutual funds to our customers by third party providers, and servicing income on sold loans. Debit card usage by our customers has continued to grow in recent periods, which has generally offset the negative effect of reduced debit interchange rates. Generally, we do not believe that the limits on debit interchange fees resulting from Dodd-Frank will have a material adverse impact on our financial condition or results of operations in future periods. However, a lawsuit is currently pending in federal court challenging the reduced post Dodd-Frank fee structure as still being too high. At the request of the Federal Reserve Bank, the court has permitted continuation of the current fee structure until the case is decided or settled.
The $\$ 144$ thousand decrease in net securities gains between the periods was due to the fact that we did not sell any securities in the second quarter of 2017. The increase in net gain on the sale of loans between the quarters was primarily attributable to an increase in the percentage of newly originated higher rate loans that were sold during the 2017 quarter compared to the 2016 quarter. See page 50 for our discussion of loan sales.
The decrease in other operating income is related to a reduction in our pass through income (loss) from our limited partnership investments between the period. In the second quarter of 2017 we recorded a loss of $\$ 118$ thousand on such investments while in the 2016 second quarter, we recorded income of $\$ 105$ thousand.

Noninterest Expense
Summary of Noninterest Expense
(Dollars in Thousands)

|  | Quarter Ended |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 6/30/2017 | 6/30/2016 | Change | $\%$ <br> Change |
| Salaries and Employee Benefits | \$9,084 | \$8,408 | \$676 | 8.0 \% |
| Occupancy Expense of Premises, Net | 1,269 | 1,221 | 48 | 3.9 |
| Furniture and Equipment Expense | 1,225 | 1,114 | 111 | 10.0 |
| FDIC and FICO Assessments | 228 | 314 | (86 ) | (27.4) |
| Amortization | 70 | 74 | (4) | (5.4) |
| Other Operating Expense | 3,761 | 3,753 | 8 | 0.2 |
| Total Noninterest Expense | \$ 15,637 | \$14,884 | \$753 | 5.1 |
| Efficiency Ratio | 57.16 \% | 57.14 \% | 0.02 \% | - |

Noninterest expense for the second quarter of 2017 was $\$ 15.6$ million, an increase of $\$ 0.8$ million, or $5.1 \%$, from the expense for the second quarter of 2016 . However, the rate of increase in expense on a year-over-year basis was less than the rate of growth in average total loans or in average total assets between the same two periods. The increase in noninterest expense was reflected in our efficiency ratio, which was $57.16 \%$ for the second quarter of 2017, up slightly (by 2 basis points) from our ratio for the comparable 2016 quarter. The efficiency ratio (a ratio where lower is better), is a commonly used non-GAAP financial measure in the banking industry that purports to reflect an institution's operating efficiency. We calculate our efficiency ratio as the ratio of noninterest expense (excluding, under our definition, intangible asset amortization) to (i) net interest income (on a tax-equivalent basis) plus (ii) noninterest income (excluding net securities gains or losses). See the discussion on this non-GAAP measure on page 38 of this Report under the heading "Use of Non-GAAP Financial Measures" and the related tabular information and notes on pages 40 through 43 of this Report. The efficiency ratio included by the Federal Reserve Board in its "Peer Holding Company Performance Reports" excludes net securities gains or losses from the denominator (as does our calculation), but unlike our ratio does not exclude intangible asset amortization from the numerator. Our efficiency ratios in recent periods have consistently compared favorably to the ratios of our peer group as disclosed in the Fed's Performance Reports (see page 37 for a discussion of our peer group), even after adjusting for the definitional difference. For the three-month period ended March 31, 2017 (the most recent reporting period for which peer group information is available), the peer group's efficiency ratio was $67.23 \%$, and our ratio was $59.01 \%$ (not adjusted for the definitional difference).

Salaries and employee benefits expense increased $8.0 \%$ in the second quarter of 2017 compared to the 2016 quarter. The primary reason for for the increase is increased staffing levels and normal salary increases. Employee benefit expenses increased by $\$ 229$ thousand or $13.6 \%$ primarily related to increases in medical claims under our health benefit plans.
The 2017 increase in other operating expense was primarily attributable to increases in the expenses for third-party computer processing.

Income Taxes
Summary of Income Taxes
(Dollars in Thousands)

|  | Quarter Ended |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 6/30/201 | 76/30/2016 | Change | \% Change |
| Provision for Income Taxes | \$3,017 | \$ 2,947 | \$ 70 | 2.4 \% |
| Effective Tax Rate | 29.5 \% | 30.7 \% | (1.2 | (3.9) |

The decrease in the effective tax rate in the second quarter of 2017 over the 2016 quarter, was primarily attributable to a change in state tax law that reduced our state tax expense combined with tax-exempt income representing a slightly larger percentage of our total income in the 2017 quarter than in the prior year quarter combined with the impact of the adoption of new guidance on the accounting for share-based payment transactions. The new guidance resulted in excess tax benefits from these transactions to be recorded as a reduction in the provision for income taxes.
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## RESULTS OF OPERATIONS

Six Months Ended June 30, 2017 Compared With
Six Months Ended June 30, 2016
Summary of Earnings Performance
(Dollars in Thousands, Except Per Share Amounts)

> Six Months Ended

|  | $6 / 30 / 2017$ | $6 / 30 / 2016$ | Change | \% |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Change |  |  |  |  |  |
| Net Income | $\$ 13,839$ | $\$ 13,196$ | $\$ 643$ | 4.9 | $\%$ |
| Diluted Earnings Per Share | 1.02 | 0.98 | 0.04 | 4.1 |  |
| Return on Average Assets | 1.05 | $\%$ | 1.07 | $\%$ | $(0.02) \%$ |
| Return on Average Equity | 11.76 | $\%$ | 12.02 | $\%$ | $(0.26) \%$ |
| (2.2 ) |  |  |  |  |  |

We reported net income of $\$ 13.8$ million and diluted earnings per share (EPS) of $\$ 1.02$ for the first six months of 2017, compared to net income of $\$ 13.2$ million and diluted EPS of $\$ 0.98$ for the first six months of 2016.
We experienced no gains on securities sales in the first six months of 2017 as we did not sell any securities in that period. This compares to net gains of $\$ 88$ thousand, net of tax, on the sale of securities in the comparable 2016 period.

The following narrative discusses the period-to-period changes in net interest income, noninterest income, noninterest expense and income taxes.

Net Interest Income
Summary of Net Interest Income
(Taxable Equivalent Basis, Dollars in Thousands)
Six Months Ended

|  | $6 / 30 / 2017$ | $6 / 30 / 2016$ | Change | $\%$ |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
|  | $\$ 42,820$ | $\$ 39,703$ | $\$ 3,117$ | 7.9 | $\%$ |
| Interest and Dividend Income | 3,235 | 2,547 | 688 | 27.0 | $\%$ |
| Interest Expense | 39,585 | 37,156 | 2,429 | 6.5 | $\%$ |
| Net Interest Income | 1,897 | 1,840 | 57 | 3.1 | $\%$ |
| Tax-Equivalent Adjustment | $2,526,084$ | $2,352,915$ | 173,169 | 7.4 | $\%$ |
| Average Earning Assets ${ }^{(1)}$ | 1,879 |  |  |  |  |
| Average Interest-Bearing Liabilities | $1,991,601$ | $1,879,237$ | 112,364 | 6.0 | $\%$ |

Yield on Earning Assets ${ }^{(1)} \quad 3.42 \quad \% \quad 3.39 \quad \% \quad 0.03 \quad \% \quad 0.9 \quad \%$
Cost of Interest-Bearing Liabilities $0.33 \quad 0.27 \quad 0.06$ \% $22.2 \%$
$\begin{array}{lllll}\text { Net Interest Spread } & 3.09 & 3.12 & (0.03 & \text { )\% (1.0 )\% }\end{array}$
$\left.\begin{array}{llll}\text { Net Interest Margin } & 3.16 & 3.18 & (0.02\end{array}\right) \%(0.6) \%$
${ }^{(1)}$ Includes Nonaccrual Loans
In comparing the first six months of 2016 and the first six months of 2017, our net interest margin (which we define as our net interest income on a tax-equivalent basis divided by average earning assets, annualized) decreased by 2 basis points, from $3.18 \%$ to $3.16 \%$. Our net interest margin, as well as our tax-equivalent net interest income from which the margin is derived, are non-GAAP measures. See the discussion under "Use of Non-GAAP Financial Measures," on page 38, and the tabular information and notes on pages 40 through 43, regarding our net interest margin and tax-equivalent net interest income, which are commonly used non-GAAP financial measures. Despite the slight decrease in net interest margin during the first six months of 2017 as compared to the first six months of 2016, our net interest margin increased slightly in each of the last three quarters, i.e., the fourth quarter of 2016 and the first two
quarters of 2017 (see p. 41). Among other things, the recent increase in net interest margin between the respective periods reflected both a continuing modest shift in our asset mix, from investment securities to loans, which triggered a slight increase in average yield on total assets. Net interest income for the just completed six-month period, on a taxable equivalent basis, increased by $\$ 2.4$ million, or $6.5 \%$, over the 2016 amount, principally due to the positive impact of a $7.4 \%$ increase in the level of our average earning assets. The impact of recent interest rate changes on our net interest margin and net interest income are discussed above in this Report under the sections entitled "Deposit Trends" and "Loan Trends."
As discussed previously under the heading "Asset Quality" beginning on page 54, the provision for loan losses for the first six months of 2017 was $\$ 780$ thousand, compared to a provision of $\$ 1.1$ million for the 2016 period.
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Noninterest Income
Summary of Noninterest Income
(Dollars in Thousands)

|  | Six Months Ended |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 6/30/201 | 7/30/2016 | Change | $\%$ <br> Change |
| Income From Fiduciary Activities | \$4,168 | \$ 3,931 | \$ 237 | 6.0 \% |
| Fees for Other Services to Customers | 4,670 | 4,654 | 16 | 0.3 |
| Insurance Commissions | 4,313 | 4,341 | (28 | ) (0.6 ) |
| Net Gain on Securities Transactions | - | 144 | (144 | ) (100.0) |
| Net Gain on the Sale of Loans | 250 | 338 | (88 | ) (26.0 ) |
| Other Operating Income | 351 | 662 | (311 | ) (47.0 ) |
| Total Noninterest Income | \$13,752 | \$ 14,070 | \$ (318) | ) (2.3 |

Total noninterest income in the just completed six-month period was $\$ 13.8$ million, a small decrease of $\$ 318$ thousand, or $2.3 \%$, from total noninterest income of $\$ 14.1$ million for the first six months of 2016.
Increases between the two periods in income from fiduciary activities and fees for other services to customers were more than offset by decreases in other operating income, net securities gains and net gains on the sale of loans.
Insurance commission income remained approximately the same. . The increase in income from fiduciary activities is primarily due to increases in assets under management and service fees in response to recent positive market activity. The $\$ 144$ thousand decrease in net securities gains between the periods was due to the fact that we did not sell any securities in the first six months of 2017. The decrease in other operating income between the periods was due to the fact that we recognized significant income in the 2016 period from our investment in regional business incubation enterprises (limited partnerships), which was not recognized by us in the 2017 period.
Fees for other services to customers, the largest segment of our noninterest income, increased by $\$ 16$ thousand, or $0.3 \%$ between the first six months of 2016 and the first six months of 2017. In addition to service charge income on deposits, this category also includes debit card interchange income, revenues related to the sale of mutual funds to our customers by third party providers, and servicing income on sold loans. The increase in the 2017 period was primarily attributable to income received from a card processor which more than offset the incremental costs of issuing new debit cards with chip technology to our existing customers. Debit card usage by our customers continued to grow between and during the respective periods, offsetting the negative effect of industry-wide reduced debit interchange rates (which were mandated for large banks by Dodd-Frank but have also spread to smaller banks for competitive reasons). If debit card usage continues to grow, as we believe it will, it should continue to offset the negative impact of reduced interchange fees. However, a lawsuit is currently pending in federal court challenging the reduced post Dodd-Frank fee structure as still being too high. At the request of the Federal Reserve Bank, the court has permitted continuation of the current fee structure until the case is settled.
See our discussion on our investment securities portfolio beginning on page 53 of this Report. The decrease of $\$ 88$ thousand in net gains on the sale of loans is primarily due to a slight reduction in the premium obtained on these loan sales.

Noninterest Expense
Summary of Noninterest Expense
(Dollars in Thousands)

|  | Six Months Ended |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |
|  | $6 / 30 / 2017$ | $6 / 30 / 2016$ | Change | \% |  |
| Salaries and Employee Benefits | $\$ 18,092$ | $\$ 16,530$ | $\$ 1,562$ | 9.4 | \% |
| Occupancy Expense of Premises, Net | 2,616 | 2,562 | 54 | 2.1 |  |

\(\left.\begin{array}{llllll}Furniture and Equipment Expense \& 2,422 \& 2,236 \& 186 \& 8.3 <br>
FDIC and FICO Assessments \& 454 \& 627 \& (173 \& ) \& (27.6) <br>
Amortization \& 141 \& 150 \& (9 \& ) \& (6.0) <br>
Other Operating Expense \& 7,387 \& 7,150 \& 237 \& 3.3 <br>
Total Noninterest Expense \& \$ 31,112 \& \$ 29,255 \& \$ 1,857 \& 6.3 <br>

Efficiency Ratio \& 58.07 \& \% \& 56.98 \& \% \& 1.09\end{array}\right) \%\)| 1.9 |
| :--- |

Noninterest expense for the first six months of 2017 was $\$ 31.1$ million, an increase of $\$ 1.9$ million, or $6.3 \%$, from the expense for the first six months of 2016. This increase on a year-over-year basis represents less than the growth in average total loans or in average total assets between the same two periods. Our efficiency ratio was $58.07 \%$ for the first six months of 2017, up by 109 basis points (a slight drop in efficiency) from our ratio for the comparable 2016 period. This ratio (a ratio where lower is better), is a commonly used non-GAAP financial measure in the banking industry that purports to reflect operating efficiency. We calculate our efficiency ratio as the ratio of noninterest expense (excluding, under our definition, intangible asset amortization) to (i) net interest income (on a tax-equivalent basis) plus (ii) noninterest income (excluding net securities gains or losses). See the discussion on this non-GAAP measure on page 38 of this Report under the heading "Use of Non-GAAP Financial Measures" and the related tabular information and notes on pages 40 through 43 of this Report. The efficiency ratio included by the Federal Reserve Board in its "Peer Holding Company Performance Reports" excludes net securities gains or losses from the denominator (as does our calculation), but unlike our ratio does not exclude intangible asset amortization from the numerator. Our efficiency ratios in recent periods have compared favorably to the ratios of our peer group as disclosed
in the Fed's Performance Reports (see page 37 for a discussion of our peer group), even after adjusting for the definitional difference. For the three-month period ended March 31, 2017 (the most recent reporting period for which peer group information is available), the peer group efficiency ratio was $67.23 \%$, and our ratio was $59.01 \%$ (not adjusted for the definitional difference).
Salaries and employee benefits expense increased $9.4 \%$ in the first six months of 2017 over the 2016 period, reflecting an increase of $7.7 \%$ in salaries and an increase of $14.2 \%$ in benefits. The increase in salary increase expense was due in part to staffing expansion and normal merit increases. The increase in our benefit expenses was primarily due to medical claims incurred under the company's minimum premium health insurance plan during the 2017 period. The 2017 increase in other operating expense was primarily attributable to increases in the expenses for third-party computer processing.

Income Taxes
Summary of Income Taxes
(Dollars in Thousands)
Six Months Ended
6/30/2017 6/30/2016 Change $\stackrel{\text { \% }}{\text { Change }}$
Provision for Income Taxes \$5,709 \$5,865 \$(156) (2.7)\%
Effective Tax Rate $\quad 29.2$ \% 30.8 \% (1.6 ) (5.2)
The decrease in the effective tax rate in the first six months of 2017 over the first six months of 2016, was primarily attributable to a change in state tax law that reduced our state tax expense combined with tax-exempt income representing a slightly larger percentage of our total income in the 2017 than in the prior year combined with the impact of the adoption of new guidance on the accounting for share-based payment transactions. The new guidance resulted in excess tax benefits from these transactions to be recorded as a reduction in the provision for income taxes.

## Item 3.

## QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

In addition to credit risk in our loan portfolio and liquidity risk, discussed on page 57 of this Report, we have market risk in our business activities. Market risk is the possibility that changes in future market rates (interest rates) or prices (market value of our financial instruments) will make our position less valuable. The ongoing monitoring and management of market risk, principally interest rate risk, is an important component of our asset/liability management process, which is governed by policies that are reviewed and approved annually by the Board of Directors. The Board of Directors delegates responsibility for carrying out asset/liability oversight and control to management's
Asset/Liability Committee ("ALCO"). In this capacity ALCO develops guidelines and strategies impacting our asset/liability profile based upon estimated market risk sensitivity, policy limits and overall market interest rate levels and trends. As of the date of this Report, we are not using, and have not in recent periods used, derivatives, such as interest rate swaps, in our risk management process.
Interest rate risk is the exposure of our net interest income to changes in interest rates. Interest rate risk is directly related to the different maturities and repricing characteristics of interest-bearing assets and liabilities, as well as to the risk of prepayment of loans and early withdrawal of time deposits, and the fact that the speed and magnitude of responses to interest rate changes vary by product.
The ALCO utilizes the results of a detailed and dynamic simulation model to quantify the estimated exposure of net interest income to sustained interest rate changes. While ALCO routinely monitors simulated net interest income sensitivity over a rolling two-year horizon, it also utilizes additional tools to monitor potential longer-term interest rate risk.
Our current simulation model captures the impact of changing interest rates on the interest income received and interest expense paid on all interest rate-sensitive assets and liabilities reflected on our consolidated balance sheet. This sensitivity analysis is compared to pre-established ALCO policy limits which specify a maximum tolerance level for net interest income exposure over a one year horizon. Our current sensitivity analysis model examines both a hypothetical upward shift of interest rates (currently, 200 basis points) and a hypothetical downward shift in interest rates (currently, 100 basis points, subject to certain zero rate limitations), and assumes (i) no balance sheet growth and (ii) a repricing of interest-bearing assets and liabilities at their earliest reasonably predictable repricing dates following the shift. For repricing purposes, we normally assume a parallel and pro-rata shift in rates for both assets and liabilities, over a 12 month period.
We occasionally need to make ad hoc adjustments to our model. During recent years, the Federal Reserve's targeted federal funds rate has remained at historically low levels. From 2010-2015 it was within a range of 0 to $.50 \%$; since then, the range has increased by 75 basis points to a range of $1.00 \%$ to $1.25 \%$, but remains very low. The low prevailing short-term rates have led us to revise our standard model for the decreasing interest rate simulation for short-term liabilities and assets. Under our revised model, we have continued to apply our usual 100 basis point downward shift in interest rates for liabilities and assets on the long end of the yield curve, but we have begun to assume, for purposes of modeling our short-term liabilities and assets bearing interest rates of less than $1.00 \%$, a hypothetical downward shift of less that the normal rate utilized (i.e., less than 100 basis points) and in some cases have made no downward shift at all in the modeled interest rates if such rates only slightly exceed zero at the measurement date. As under our old model, we continue to assume that hypothetical interest rate shifts, upward or downward, affect assets and liabilities simultaneously, depending solely upon the contractual maturities of the particular assets and liabilities in question.
Applying the revised simulation model analysis as of June 30, 2017, a 200 basis point increase in all interest rates demonstrated a $2.63 \%$ decrease in net interest income over the ensuing 12 month period, and a 100 basis point decrease (adjusted, as described above) demonstrated a $0.08 \%$ increase in net interest income, when compared with our base projection. These amounts were well within our ALCO policy limits. The preceding sensitivity analysis does not represent a forecast on our part and should not be relied upon as being indicative of expected operating results in the event of actual rate changes.
The hypothetical estimates underlying the sensitivity analysis are based upon numerous assumptions including: the nature and timing of changes in interest rates including yield curve shape, prepayments on loans and securities,
deposit decay rates, pricing decisions on loans and deposits, reinvestment/replacement of asset and liability cash flows, and others. While assumptions are developed based upon current economic and local market conditions, we cannot make any assurance as to the predictive nature of these assumptions including how customer preferences or competitor influences might change.
Also, as market conditions vary from those assumed in the sensitivity analysis, actual results may differ due to: prepayment/refinancing levels deviating from those assumed, the varying impact of interest rate changes on caps or floors on adjustable rate assets, the potential effect of changing debt service levels on customers with adjustable rate loans, depositor early withdrawals and product preference changes, unanticipated shifts in the yield curve and other internal/external variables. Furthermore, the sensitivity analysis does not reflect balance sheet growth or actions that ALCO might take in responding to or anticipating changes in interest rates.
In general, we expect that our interest-bearing liabilities, which are primarily deposit liabilities, many of them bearing a very low interest rate, will likely reprice more rapidly when prevailing rates begin to rise than our interest-earning assets, which would have a negative short-term impact on our net interest margin and net interest income, beyond that reported in the simulation analysis, above. However, many of our interest-earning assets also have relatively short maturities such that, following a rise in rates, they too will likely commence to reprice upward, but only after a lag period, which will then have an offsetting positive impact on net interest income in ensuing periods.

## Item 4.

## CONTROLS AND PROCEDURES

Senior management, including the Chief Executive Officer and Chief Financial Officer, has evaluated the effectiveness of the design and operation of Arrow's disclosure controls and procedures (as defined in Rule 13a-15(e) under the Securities Exchange Act of 1934, as amended) as of June 30, 2017. Based upon that evaluation, senior management, including the Chief Executive Officer and Chief Financial Officer, concluded that our disclosure controls and procedures were effective. Further, there were no changes made in our internal control over financial reporting that occurred during the most recent fiscal quarter that had materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

## PART II - OTHER INFORMATION

Item 1.
Legal Proceedings
The Company, including its subsidiary banks, are not currently the subject of any material pending legal proceedings, other than ordinary routine litigation occurring in the normal course of their business. On an ongoing basis, we are often the subject of, or a party to, various legal claims by other parties against us, by us against other parties, or involving us, which arise in the normal course of business. The various pending legal claims against us will not, in the opinion of management based upon consultation with counsel, result in any material liability.
Item 1.A.
Risk Factors
We believe that the Risk Factors identified in our Annual Report on Form 10-K for the year ended December 31, 2016, continue to represent the most significant risks to our future results of operations and financial conditions, without modification or amendment. Please refer to such Risk Factors as listed in Part I, Item 1A, of our Annual Report on Form 10-K for the fiscal year ended December 31, 2016.
Item 2.
Unregistered Sales of Equity Securities and Use of Proceeds
Unregistered Sales of Equity Securities
There were no unregistered sales of the Company's equity securities by or on behalf of the Company during the just-completed quarter.

Issuer Purchases of Equity Securities
The following table presents information about purchases by Arrow of its common stock during the quarter ended June 30, 2017:

${ }^{1}$ The total number of shares of Common Stock purchased by the Company in each month in the quarter and the average price paid per share are listed in columns A and B, respectively. All shares identified in column A were either (i) shares purchased in open market transactions under the Arrow Financial Corporation Automatic Dividend

Reinvestment Plan (DRIP) on behalf of participating stockholders, under the general supervision of the Board as administrator, (ii) shares surrendered (or deemed surrendered) to Arrow by holders of Arrow stock options in connection with such holders' stock-for-stock exercises of such options. and (iii) shares repurchased under the publicly announced Repurchase Program. Specifically, in the months indicated, the total number of shares identified in column A includes shares purchased on the open market on behalf of DRIP participants as well as shares delivered to (or deemed delivered) by option holders in connection with stock-for-stock exercises of their options, as follows: in April, DRIP purchases (1,401 shares), stock option exercises (8,039 shares); in May, DRIP purchases (1,283 shares),
stock option exercises ( 1,423 shares); and in June, DRIP purchases (14,201 shares), stock option exercises (1,476 shares); and repurchased under the publicly-announced Repurchase Program ( 12,000 shares).
${ }^{2}$ Represents total number of shares repurchased by the Company during the quarter under the publicly-announced 2017 Repurchase Program (i.e., the $\$ 5$ million stock repurchase program authorized by the Board of Directors in October 2016 and effective January 1, 2017).
${ }^{3}$ Represents the maximum dollar amount of repurchase authority remaining at each month-end during the quarter under the 2017 Repurchase Program.
Item 3.
Defaults Upon Senior Securities - None
Item 4.
Mine Safety Disclosures - None
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Item 5.
Other Information - None

Item 6.
Exhibits
Exhibit Number Exhibit
15 Awareness Letter
31.1 Certification of Chief Executive Officer under SEC Rule 13a-14(a)/15d-14(a)
31.2 Certification of Chief Financial Officer under SEC Rule 13a-14(a)/15d-14(a)

32 Certification of Chief Executive Officer under 18 U.S.C. Section 1350 and Certification of Chief Financial Officer under 18 U.S.C. Section 1350
101.INS XBRL Instance Document
101.SCH XBRL Taxonomy Extension Schema Document
101.CAL XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF XBRL Taxonomy Extension Definition Linkbase Document
101.LAB XBRL Taxonomy Extension Labels Linkbase Document
101.PRE XBRL Taxonomy Extension Presentation Linkbase Document

## 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.
ARROW FINANCIAL CORPORATION
Registrant
August 8, $2017{ }^{/ \mathrm{s} / \text { Thomas J. Murphy }}$
Date Thomas J. Murphy, President and Chief Executive Officer

August 8, 2017 /s/Terry R. Goodemote
Date Terry R. Goodemote, Executive Vice President, Treasurer and Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer)
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