## 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 September 30, 2016
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 | $\underline{22-2448962}$ |
| :---: | ---: |
| (State or other jurisdiction of <br> incorporation or organization) | (I.R.S. Employer |
| Identification No.) |  |

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 $\qquad$ No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). $\qquad$
$\qquad$ 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 $\quad$ Accelerated filer $\underline{x} \quad$ Non-accelerated filer $\quad$ Smaller reporting company

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). _ Yes $\quad \mathrm{x}$ No
Indicate the number of shares outstanding of each of the issuer's classes of common stock, as of the latest practicable date.

## Class

Common Stock, par value $\$ 1.00$ per share

Outstanding as of October 31, 2016
$13,467,310$

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ARROW FINANCIAL CORPORATION
    FORM 10-Q
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## ARROW FINANCIAL CORPORATION AND SUBSIDIARIES CONSOLIDATED BALANCE SHEETS <br> (In Thousands, Except Share and Per Share Amounts) (Unaudited)

## ASSETS

Cash and Due From Banks
Interest-Bearing Deposits at Banks
Investment Securities:
Available-for-Sale
Held-to-Maturity (Approximate Fair Value of $\$ 347,441$ at September 30, 2016; $\$ 325,930$ at December 31, 2015; and $\$ 324,009$ at September 30, 2015)

Federal Home Loan Bank and Federal Reserve Bank Stock
Loans
Allowance for Loan Losses
Net Loans
Premises and Equipment, Net
Goodwill
Other Intangible Assets, Net
Other Assets
Total Assets
LIABILITIES
Noninterest-Bearing Deposits
NOW Accounts
Savings Deposits
Time Deposits of \$100,000 or More
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 at September 30, 2016; 17,420,776 at December 31, 2015 and 17,420,776 at September 30, 2015)
Additional Paid-in Capital
Retained Earnings
Unallocated ESOP Shares (38,396 Shares at September 30, 2016; 55,275
Shares at December 31, 2015; and 55,185 Shares at September 30, 2015)
Accumulated Other Comprehensive Loss

| 17,943 |  | 17,421 |  | 17,421 |
| :---: | :---: | :---: | :---: | :---: |
| 269,680 |  | 250,680 |  | 249,931 |
| 25,400 |  | 32,139 |  | 28,791 |
| (750) |  | $(1,100)$ |  | $(1,100)$ |
| $(5,442)$ |  | $(7,972)$ |  | $(6,520)$ |
| $(77,623)$ |  | $(77,197)$ |  | $(77,381)$ |
| 229,208 |  | 213,971 |  | 211,142 |
| 2,580,485 | \$ | 2,446,188 | \$ | 2,419,551 |

See Notes to Unaudited Interim Consolidated Financial Statements.

# ARROW FINANCIAL CORPORATION AND SUBSIDIARIES <br> CONSOLIDATED STATEMENTS OF INCOME 

(In Thousands, Except Per Share Amounts)
(Unaudited)

|  | Three Months Ended September 30, |  |  |  | Nine Months Ended September 30, |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2016 |  | 2015 |  | 2016 |  | 2015 |  |
| INTEREST AND DIVIDEND INCOME |  |  |  |  |  |  |  |  |
| Interest and Fees on Loans | \$ | 15,833 | \$ | 14,364 | \$ | 46,565 | \$ | 41,953 |
| Interest on Deposits at Banks |  | 34 |  | 13 |  | 100 |  | 60 |
| Interest and Dividends on Investment Securities: |  |  |  |  |  |  |  |  |
| Fully Taxable |  | 1,889 |  | 1,979 |  | 5,994 |  | 5,936 |
| Exempt from Federal Taxes |  | 1,526 |  | 1,475 |  | 4,486 |  | 4,279 |
| Total Interest and Dividend Income |  | 19,282 |  | 17,831 |  | 57,145 |  | 52,228 |
| INTEREST EXPENSE |  |  |  |  |  |  |  |  |
| NOW Accounts |  | 320 |  | 292 |  | 941 |  | 960 |
| Savings Deposits |  | 231 |  | 189 |  | 677 |  | 538 |
| Time Deposits of \$100,000 or More |  | 128 |  | 89 |  | 313 |  | 267 |
| Other Time Deposits |  | 164 |  | 179 |  | 497 |  | 566 |
| Federal Funds Purchased and |  |  |  |  |  |  |  |  |
| Securities Sold Under Agreements to Repurchase |  | 9 |  | 5 |  | 24 |  | 15 |
| Federal Home Loan Bank Advances |  | 390 |  | 353 |  | 1,013 |  | 804 |
| Junior Subordinated Obligations Issued to |  |  |  |  |  |  |  |  |
| Unconsolidated Subsidiary Trusts |  | 163 |  | 146 |  | 487 |  | 432 |
| Total Interest Expense |  | 1,405 |  | 1,253 |  | 3,952 |  | 3,582 |
| NET INTEREST INCOME |  | 17,877 |  | 16,578 |  | 53,193 |  | 48,646 |
| Provision for Loan Losses |  | 480 |  | 537 |  | 1,550 |  | 882 |
| NET INTEREST INCOME AFTER PROVISION FOR LOAN LOSSES |  | 17,397 |  | 16,041 |  | 51,643 |  | 47,764 |
| NONINTEREST INCOME |  |  |  |  |  |  |  |  |
| Income From Fiduciary Activities |  | 1,923 |  | 1,923 |  | 5,854 |  | 5,907 |
| Fees for Other Services to Customers |  | 2,491 |  | 2,331 |  | 7,144 |  | 6,904 |
| Insurance Commissions |  | 2,127 |  | 2,343 |  | 6,468 |  | 6,849 |
| Net Gain on Securities Transactions |  | - |  | - |  | 144 |  | 106 |
| Net Gain on Sales of Loans |  | 310 |  | 236 |  | 649 |  | 488 |
| Other Operating Income |  | 263 |  | 304 |  | 925 |  | 1,183 |
| Total Noninterest Income |  | 7,114 |  | 7,137 |  | 21,184 |  | 21,437 |
| NONINTEREST EXPENSE |  |  |  |  |  |  |  |  |
| Salaries and Employee Benefits |  | 8,693 |  | 8,699 |  | 25,223 |  | 24,577 |
| Occupancy Expenses, Net |  | 2,425 |  | 2,275 |  | 7,223 |  | 7,106 |
| FDIC Assessments |  | 217 |  | 297 |  | 844 |  | 873 |
| Other Operating Expense |  | 3,747 |  | 3,579 |  | 11,047 |  | 10,632 |
| Total Noninterest Expense |  | 15,082 |  | 14,850 |  | 44,337 |  | 43,188 |
| INCOME BEFORE PROVISION FOR INCOME TAXES |  | 9,429 |  | 8,328 |  | 28,490 |  | 26,013 |
| Provision for Income Taxes |  | 2,691 |  | 2,395 |  | 8,556 |  | 7,920 |
| NET INCOME | \$ | 6,738 | \$ | 5,933 | \$ | 19,934 | \$ | 18,093 |
| Average Shares Outstanding: |  |  |  |  |  |  |  |  |
| Basic |  | 13,407 |  | 13,275 |  | 13,374 |  | 13,273 |
| Diluted |  | 13,497 |  | 13,317 |  | 13,439 |  | 13,314 |
| Per Common Share: |  |  |  |  |  |  |  |  |
| Basic Earnings | \$ | 0.50 | \$ | 0.45 | \$ | 1.49 | \$ | 1.36 |
| Diluted Earnings |  | 0.50 |  | 0.45 |  | 1.48 |  | 1.36 |

[^0]
# ARROW FINANCIAL CORPORATION AND SUBSIDIARIES CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME <br> (In Thousands) <br> (Unaudited) 

|  | Three Months Ended September 30, |  |  |  | Nine Months Ended September 30, |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\underline{2016}$ |  | $\underline{2015}$ |  | $\underline{2016}$ |  | $\underline{2015}$ |  |
| Net Income | \$ | 6,738 | \$ | 5,933 | \$ | 19,934 | \$ | 18,093 |
| Other Comprehensive Income, Net of Tax: |  |  |  |  |  |  |  |  |
| Net Unrealized Securities Holding (Losses) Gains Arising During the Period |  | (810) |  | 543 |  | 2,309 |  | 384 |
| Reclassification Adjustments for Securities Gains Included in Net Income |  | - |  | - |  | (88) |  | (65) |
| Amortization of Net Retirement Plan Actuarial Loss |  | 111 |  | 117 |  | 314 |  | 352 |
| Accretion of Net Retirement Plan Prior Service Credit |  | (1) |  | (9) |  | (5) |  | (25) |
| Other Comprehensive Income Gain (Loss) |  | (700) |  | 651 |  | 2,530 |  | 646 |
| Comprehensive Income | \$ | 6,038 | \$ | 6,584 | \$ | 22,464 | \$ | $\underline{18,739}$ |

See Notes to Unaudited Interim Consolidated Financial Statements.

## ARROW FINANCIAL CORPORATION AND SUBSIDIARIES

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

|  | Common Stock |  | Additional Paid-In Capital |  | Retained Earnings |  | Unallocated ESOP Shares |  | Accumulated Other Comprehensive Loss |  | Treasury Stock |  | Total |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Balance at December 31, 2015 | \$ | 17,421 | \$ | 250,680 | \$ | 32,139 | \$ | $(1,100)$ | \$ | $(7,972)$ |  | $(77,197)$ |  | 213,971 |
| Net Income |  | - |  | - |  | 19,934 |  | - |  | - |  | - |  | 19,934 |
| Other Comprehensive Income |  | - |  | - |  | - |  | - |  | 2,530 |  | - |  | 2,530 |
| 3\% Stock Dividend (522,425 Shares) |  | 522 |  | 16,415 |  | $(16,937)$ |  | - |  | - |  | - |  | - |
| Cash Dividends Paid, \$.728 per Share |  | - |  | - |  | $(9,736)$ |  | - |  | - |  | - |  | $(9,736)$ |
| Stock Options Exercised, Net (80,449 Shares) |  | - |  | 980 |  | - |  | - |  | - |  | 795 |  | 1,775 |
| Shares Issued Under the Directors' Stock Plan (3,522 Shares) |  | - |  | 76 |  | - |  | - |  | - |  | 36 |  | 112 |
| Shares Issued Under the Employee Stock Purchase Plan (13,041 Shares) |  | - |  | 229 |  | - |  | - |  | - |  | 129 |  | 358 |
| Shares Issued for Dividend Reinvestment Plans (44,448 Shares) |  | - |  | 862 |  | - |  | - |  | - |  | 440 |  | 1,302 |
| Stock-Based Compensation Expense |  | - |  | 215 |  | - |  | - |  | - |  | - |  | 215 |
| Tax Benefit from Exercise of Stock Options |  | - |  | 63 |  | - |  | - |  | - |  | - |  | 63 |
| Purchase of Treasury Stock (64,146 Shares) |  | - |  | - |  | - |  | - |  | - |  | $(1,826)$ |  | $(1,826)$ |
| Allocation of ESOP Stock (17,997 Shares) |  | - |  | 160 |  | - |  | 350 |  | - |  | - |  | 510 |
| Balance at September 30, 2016 | \$ | 17,943 | \$ | 269,680 | \$ | 25,400 | \$ | (750) | \$ | $(5,442)$ | \$ | $(77,623)$ | \$ | 229,208 |
| Balance at December 31, 2014 | \$ | 17,079 | \$ | 239,721 | \$ | 29,458 | \$ | $(1,450)$ | \$ | $(7,166)$ | \$ | $(76,716)$ | \$ | 200,926 |
| Net Income |  | - |  | - |  | 18,093 |  | - |  | - |  | - |  | 18,093 |
| Other Comprehensive Income |  | - |  | - |  | - |  | - |  | 646 |  | - |  | 646 |
| 2\% Stock Dividend (341,400 Shares) |  | 342 |  | 8,939 |  | $(9,281)$ |  | - |  | - |  | - |  | - |
| Cash Dividends Paid, $\$ .714$ per Share ${ }^{1}$ |  | - |  | - |  | $(9,479)$ |  | - |  | - |  | - |  | $(9,479)$ |
| Stock Options Exercised, Net (24,554 Shares) |  | - |  | 289 |  | - |  | - |  | - |  | 242 |  | 531 |
| Shares Issued Under the Directors' Stock Plan (4,579 Shares) |  | - |  | 73 |  | - |  | - |  | - |  | 45 |  | 118 |
| Shares Issued Under the Employee Stock Purchase Plan (13,990 Shares) |  | - |  | 222 |  | - |  | - |  | - |  | 137 |  | 359 |
| Shares Issued for Dividend Reinvestment Plans (16,112 Shares) |  | - |  | 281 |  | - |  | - |  | - |  | 158 |  | 439 |
| Stock-Based Compensation Expense |  | - |  | 233 |  | - |  | - |  | - |  | - |  | 233 |
| Tax Benefit for Disposition of Stock Options |  | - |  | 31 |  | - |  | - |  | - |  | - |  | 31 |
| Purchase of Treasury Stock (46,403 Shares) |  | - |  | - |  | - |  | - |  | - |  | $(1,247)$ |  | $(1,247)$ |
| Allocation of ESOP Stock (17,645 Shares) |  | - |  | 142 |  | - |  | 350 |  | - |  | - |  | 492 |
| Balance at September 30, 2015 | \$ | 17,421 | \$ | 249,931 | \$ | 28,791 | \$ | $(1,100)$ | \$ | $(6,520)$ | \$ | $(77,381)$ | \$ | 211,142 |

[^1]
# ARROW FINANCIAL CORPORATION AND SUBSIDIARIES CONSOLIDATED STATEMENTS OF CASH FLOWS <br> (Dollars in Thousands) <br> (Unaudited) 

## Cash Flows from Operating Activities:

Net Income
Adjustments to Reconcile Net Income to Net Cash Provided by Operating Activities:
Provision for Loan Losses
Depreciation and Amortization
Allocation of ESOP Stock
Gains on the Sale of Securities Available-for-Sale
Loans Originated and Held-for-Sale
Proceeds from the Sale of Loans Held-for-Sale
Net Gains on the Sale of Loans
Net Losses on the Sale of Premises and Equipment, Other Real Estate Owned and Repossessed Assets

Contributions to Retirement Benefit Plans
Deferred Income Tax (Benefit) Expense
Shares Issued Under the Directors' Stock Plan
Stock-Based Compensation Expense
Net Increase in Other Assets
Net Increase in Other Liabilities
Net Cash Provided By Operating Activities
Cash Flows from Investing Activities:
Proceeds from the Sale of Securities Available-for-Sale
Proceeds from the Maturities and Calls of Securities Available-for-Sale
Purchases of Securities Available-for-Sale
Proceeds from the Maturities and Calls of Securities Held-to-Maturity
Purchases of Securities Held-to-Maturity
Net Increase in Loans
Proceeds from the Sales of Premises and Equipment, Other Real Estate Owned and Repossessed
Assets
Purchase of Premises and Equipment
Proceeds from the Sale of a Subsidiary, Net
Net Decrease (Increase) in Other Investments
Net Cash Used By Investing Activities
Cash Flows from Financing Activities:
Net Increase in Deposits
Net Decrease in Short-Term Borrowings
Federal Home Loan Bank Advances
Purchase of Treasury Stock
Stock Options Exercised, Net
Shares Issued Under the Employee Stock Purchase Plan
Tax Benefit from Exercise of Stock Options
Shares Issued for Dividend Reinvestment Plans
Cash Dividends Paid
Net Cash Provided By Financing Activities
Net Increase in Cash and Cash Equivalents
Cash and Cash Equivalents at Beginning of Period
Cash and Cash Equivalents at End of Period
Supplemental Disclosures to Statements of Cash Flow Information:
Interest on Deposits and Borrowings
Income Taxes
Non-cash Investing and Financing Activity: Transfer of Loans to Other Real Estate Owned and Repossessed Assets

856
Nine Months Ended September 30,

| 2016 |  |  |
| ---: | ---: | ---: |
|  | 19,934 |  |
|  | $\$$ | 18,093 |
|  | 1,550 |  |


| 72 | - |
| :---: | :---: |
| 3,468 | (292) |
| $(82,294)$ | $(175,347)$ |

179,103531359

|  | $(9,736)$ |
| ---: | ---: |
| 108,116 |  |
|  | 50,991 |
| 51,068 |  |
| $\$ \quad 102,059$ |  |


| $\$$ | 3,932 | $\$$ | 3,548 |
| :--- | :--- | :--- | :--- |
| 9,761 |  |  |  |

2,213

[^2]
## 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 September 30, 2016, December 31, 2015 and September 30, 2015; the results of operations for the three-month period ended September 30, 2016; the consolidated statements of comprehensive income for the three- and nine-month periods ended September 30, 2016; the changes in stockholders' equity for the nine-month periods ended September 30, 2016 and 2015; and the cash flows for the nine-month periods ended September 30, 2016 and 2015. All such adjustments are of a normal recurring nature. Certain prior period amounts have been reclassified to conform to the current presentation. 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, 2015, included in Arrow's 2015 Form 10-K.

New Accounting Standards Updates (ASU): During 2016, through the date of this report, the FASB issued 15 accounting standards updates. Some of the standards listed below did not have an immediate impact on Arrow, but could in the future.

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 September 30, 2016 , we hold a $\$ 1.1$ million cost basis in a small portfolio of 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 September 30, 2016, we have less than $\$ 3.0$ million in operating leases.

ASU 2016-09 "Compensation - Stock Compensation" simplifies certain aspects of accounting for share-based payment transactions, including the tax consequences, classification of awards as either equity or liabilities, and classification on the statement of cash flows. For Arrow, the standard becomes effective in the first quarter of 2017. We do not expect that the adoption of this change in accounting for stock-based compensation will have a material impact on our financial position or the results of operations in periods subsequent to its adoption.

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.

ASU 2016-15 "Statement of Cash Flows" provides guidance on the classification of eight specific cash flow issues in order to increase consistency in reporting. Currently, GAAP is either unclear or does not include specific guidance on the cash flow issues addressed in this Update. Arrow currently reports the specifically identified cash flow transactions using the appropriate classification as outlined in the Update. For Arrow, the standard becomes effective in the first quarter of 2017. We do not expect that the adoption of this change in classification for financial reporting will have a material impact on our financial position or the results of operations in periods subsequent to its adoption.

## Note 2. INVESTMENT SECURITIES (In Thousands)

The following table is the schedule of Available-For-Sale Securities at September 30, 2016, December 31, 2015 and September 30, 2015:

Available-For-Sale Securities

|  | U.S. Agency Obligations |  | State and Municipal Obligations |  | MortgageBacked Securities Residential |  | Corporate and Other Debt Securities |  | MutualFundsand EquitySecurities |  | Total Available-For-Sale Securities |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| September 30, 2016 |  |  |  |  |  |  |  |  |  |  |  |  |
| Available-For-Sale Securities, at Amortized Cost | \$ | 152,511 | \$ | 31,562 | \$ | 144,598 | \$ | 4,500 | \$ | 1,120 | \$ | 334,291 |
| Available-For-Sale Securities, at Fair Value |  | 153,926 |  | 31,628 |  | 148,087 |  | 4,299 |  | 1,250 |  | 339,190 |
| Gross Unrealized Gains |  | 1,415 |  | 69 |  | 3,489 |  | - |  | 130 |  | 5,103 |
| Gross Unrealized Losses |  | - |  | 3 |  | - |  | 201 |  | - |  | 204 |
| Available-For-Sale Securities, Pledged as Collateral |  |  |  |  |  |  |  |  |  |  |  | 277,832 |
| Maturities of Debt Securities, at Amortized Cost: |  |  |  |  |  |  |  |  |  |  |  |  |
| Within One Year | \$ | - | \$ | 19,303 | \$ | 10,214 | \$ | 2,000 | \$ | - | \$ | 31,517 |
| From 1-5 Years |  | 152,511 |  | 11,191 |  | 129,956 |  | 1,500 |  | - |  | 295,158 |
| From 5-10 Years |  | - |  | 508 |  | 4,370 |  | - |  | - |  | 4,878 |
| Over 10 Years |  | - |  | 560 |  | 58 |  | 1,000 |  | - |  | 1,618 |
| Maturities of Debt Securities, at Fair Value: |  |  |  |  |  |  |  |  |  |  |  |  |
| Within One Year | \$ | - | \$ | 19,304 | \$ | 10,294 | \$ | 1,999 | \$ | - | \$ | 31,597 |
| From 1-5 Years |  | 153,926 |  | 11,256 |  | 132,916 |  | 1,500 |  | - |  | 299,598 |
| From 5-10 Years |  | - |  | 508 |  | 4,814 |  | - |  | - |  | 5,322 |
| Over 10 Years |  | - |  | 560 |  | 63 |  | 800 |  | - |  | 1,423 |
| Securities in a Continuous Loss Position, at Fair Value: |  |  |  |  |  |  |  |  |  |  |  |  |
| Less than 12 Months | \$ | - | \$ | 9,237 | \$ | - | \$ | 1,022 | \$ | - | \$ | 10,259 |
| 12 Months or Longer |  | - |  | - |  | - |  | 1,800 |  | - |  | 1,800 |
| Total | \$ | - | \$ | 9,237 | \$ | - | \$ | 2,822 | \$ | - | \$ | 12,059 |
| Number of Securities in a Continuous Loss Position |  | - |  | 1 |  | 2 |  | 3 |  | - |  | 6 |
| Unrealized Losses on |  |  |  |  |  |  |  |  |  |  |  |  |
| Securities in a Continuous |  |  |  |  |  |  |  |  |  |  |  |  |
| Less than 12 Months | \$ | - | \$ | 3 | \$ | - | \$ | 1 | \$ | - | \$ | 4 |
| 12 Months or Longer |  | - |  | - |  | - |  | 200 |  | - |  | 200 |
| Total | \$ | - | \$ | 3 | \$ | - | \$ | 201 | \$ | - | \$ | 204 |

December 31, 2015
Available-For-Sale Securities, at Amortized Cost
Available-For-Sale Securities, at Fair Value
Gross Unrealized Gains
Gross Unrealized Losses
Available-For-Sale Securities, Pledged as Collateral

| $\$ 155,932$ | $\$$ | 52,306 | $\$$ | 177,376 | $\$$ | 14,544 | $\$$ | 1,120 | $\$$ |
| ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |
| 155,782 |  | 52,408 | 178,588 | 14,299 |  | 1,232 | 402,309 |  |  |
| 264 | 105 | 2,236 | - | 112 | 2,717 |  |  |  |  |
| 414 | 3 | 1,024 | 245 | - | 1,686 |  |  |  |  |
|  |  |  |  |  |  | 310,857 |  |  |  |

Available-For-Sale Securities


The following table is the schedule of Held-To-Maturity Securities at September 30, 2016, December 31, 2015 and September 30, 2015:
Held-To-Maturity Securities

|  | State and Municipal Obligations |  | MortgageBacked Securities Residential |  | Corporate and Other Debt Securities |  |  | Total Held-To Maturity curities |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| September 30, 2016 |  |  |  |  |  |  |  |  |
| Held-To-Maturity Securities, at Amortized Cost | \$ | 257,255 | \$ | 79,983 | \$ | 1,000 | \$ | 338,238 |
| Held-To-Maturity Securities, at Fair Value |  | 263,897 |  | 82,544 |  | 1,000 |  | 347,441 |
| Gross Unrealized Gains |  | 6,712 |  | 2,561 |  | - |  | 9,273 |
| Gross Unrealized Losses |  | 70 |  | - |  | - |  | 70 |
| Held-To-Maturity Securities, Pledged as Collateral |  |  |  |  |  |  |  | 320,774 |

Held-To-Maturity Securities

|  | State and Municipal Obligations |  | MortgageBacked Securities Residential |  | Corporate and Other Debt Securities |  | Total <br> Held-To <br> Maturity <br> Securities |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Maturities of Debt Securities, at Amortized Cost: |  |  |  |  |  |  |  |  |
| Within One Year | \$ | 35,911 | \$ | - | \$ | - | \$ | 35,911 |
| From 1-5 Years |  | 87,464 |  | 72,422 |  | - |  | 159,886 |
| From 5-10 Years |  | 129,891 |  | 7,561 |  | - |  | 137,452 |
| Over 10 Years |  | 3,989 |  | - |  | 1,000 |  | 4,989 |
| Maturities of Debt Securities, at Fair Value: |  |  |  |  |  |  |  |  |
| Within One Year | \$ | 35,966 | \$ | - | \$ | - | \$ | 35,966 |
| From 1-5 Years |  | 89,979 |  | 74,680 |  | - |  | 164,659 |
| From 5-10 Years |  | 133,817 |  | 7,864 |  | - |  | 141,681 |
| Over 10 Years |  | 4,135 |  | - |  | 1,000 |  | 5,135 |
| Securities in a Continuous Loss Position, at Fair Value: |  |  |  |  |  |  |  |  |
| Less than 12 Months | \$ | 11,891 | \$ | - | \$ | - | \$ | 11,891 |
| 12 Months or Longer |  | 1,172 |  | - |  | - |  | 1,172 |
| Total | \$ | 13,063 | \$ | - | \$ | - | \$ | 13,063 |
| Number of Securities in a Continuous Loss Position |  | 3 |  | - |  | - |  | 3 |
| Unrealized Losses on Securities in a Continuous Loss Position: |  |  |  |  |  |  |  |  |
| Less than 12 Months | \$ | 68 | \$ | - | \$ | - | \$ | 68 |
| 12 Months or Longer |  | 2 |  | - |  | - |  | 2 |
| Total | \$ | 70 | \$ | - | \$ | - | \$ | 70 |

## December 31, 2015

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

| $\$ 226,053$ | $\$$ | 93,558 | $\$$ | 1,000 | $\$$ |
| ---: | ---: | ---: | ---: | ---: | ---: |
| 230,621 | 94,309 | 1,000 | 325,930 |  |  |
| 4,619 | 868 | - | 5,487 |  |  |
| 51 | 117 | - | 168 |  |  |

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


|  | State and Municipal Obligations |  | MortgageBacked Securities Residential |  | Corporate and Other Debt Securities |  | Total Held-To Maturity Securities |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| September 30, 2015 |  |  |  |  |  |  |  |  |
| Held-To-Maturity Securities, at Amortized Cost | \$ | 218,502 | \$ | 97,978 | \$ | 1,000 | \$ | 317,480 |
| Held-To-Maturity Securities, at Fair Value |  | 223,050 |  | 99,959 |  | 1,000 |  | 324,009 |
| Gross Unrealized Gains |  | 4,633 |  | 1,981 |  | - |  | 6,614 |
| Gross Unrealized Losses |  | 85 |  | - |  | - |  | 85 |
| Held-To-Maturity Securities, Pledged as Collateral |  |  |  |  |  |  |  | 296,921 |
| Securities in a Continuous Loss Position, at Fair Value: |  |  |  |  |  |  |  |  |
| Less than 12 Months | \$ | - | \$ | - | \$ | - | \$ | - |
| 12 Months or Longer |  | 14,896 |  | - |  | - |  | 14,896 |
| Total | \$ | 14,896 | \$ | - | \$ | - | \$ | 14,896 |
| Number of Securities in a Continuous Loss Position |  | 51 |  | - |  | - |  | 51 |
| Unrealized Losses on |  |  |  |  |  |  |  |  |
| Loss Position: |  |  |  |  |  |  |  |  |
| Less than 12 Months | \$ | - | \$ | - | \$ | - | \$ | - |
| 12 Months or Longer |  | 85 |  | - |  | - |  | 85 |
| Total | \$ | 85 | \$ | - | \$ | - | \$ | 85 |

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.

In the available-for-sale category at September 30, 2016, U.S. agency obligations consisted solely of U.S. Government Agency securities with an amortized cost of $\$ 152.5$ million and a fair value of $\$ 153.9$ million. Mortgage-backed securities - residential consisted of U.S. Government Agency securities with an amortized cost of $\$ 10.8$ million and a fair value of $\$ 11.0$ million and government sponsored entity (GSE) securities with an amortized cost of $\$ 133.7$ million and a fair value of $\$ 137.1$ million. In the held-to-maturity category at September 30, 2016, mortgage-backed securities-residential consisted of U.S Government Agency securities with an amortized cost of $\$ 3.5$ million and a fair value of $\$ 3.6$ million and GSE securities with an amortized cost of $\$ 76.5$ million and a fair value of $\$ 78.9$ million.

In the available-for-sale category at December 31, 2015, U.S. agency obligations consisted solely of U.S. Government Agency securities with an amortized cost of $\$ 155.9$ million and a fair value of $\$ 155.8$ million. Mortgage-backed securities - residential consisted of U.S. Government Agency securities with an amortized cost of $\$ 15.7$ million and a fair value of $\$ 15.8$ million and GSE securities with an amortized cost of $\$ 161.7$ million and a fair value of $\$ 162.7$ million. In the held-to-maturity category at December 31, 2015, mortgagebacked securities-residential consisted of U.S. Government Agency securities with an amortized cost of $\$ 3.8$ million and a fair value of $\$ 3.9$ million and GSE securities with an amortized cost of $\$ 89.8$ million and a fair value of $\$ 90.5$ million.

In the available-for-sale category at September 30, 2015, U.S. agency obligations consisted solely of U.S. Government Agency securities with an amortized cost of $\$ 161.3$ million and a fair value of $\$ 162.5$ million. Mortgage-backed securities - residential consisted of US Government Agency securities with an amortized cost of $\$ 27.5$ million and a fair value of $\$ 28.1$ million and GSE securities with an amortized cost of $\$ 130.8$ million and a fair value of $\$ 133.5$ million. In the held-to-maturity category at September 30, 2015, mortgagebacked securities-residential consisted of U.S. Government Agency securities with an amortized cost of $\$ 27.8$ million and a fair value of $\$ 28.4$ million and GSE securities with an amortized cost of $\$ 70.2$ million and a fair value of $\$ 71.5$ million.

Securities in a continuous loss position, in the tables above for September 30, 2016, December 31, 2015 and September 30, 2015, 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 inhouse 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 September 30, 2016, 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 September 30, 2016, December 31, 2015 and September 30, 2015 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 $\$ 1,414, \$ 298$ and $\$ 1,004$ as of September 30, 2016, December 31, 2015 and September 30, 2015, respectively, are included in the residential real estate balances for current loans.

| September 30, 2016 | Commercial |  | Commercial Real Estate |  | Consumer |  | Residential |  | Total |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |  |  |  |  |
| Loans Past Due 30-59 Days | \$ | 38 | \$ | - | \$ | 3,793 | \$ | 271 | \$ | 4,102 |
| Loans Past Due 60-89 Days |  | 67 |  | - |  | 1,412 |  | 1,450 |  | 2,929 |
| Loans Past Due 90 or more Days |  | 160 |  | 1,106 |  | 343 |  | 1,467 |  | 3,076 |
| Total Loans Past Due |  | 265 |  | 1,106 |  | 5,548 |  | 3,188 |  | 10,107 |
| Current Loans |  | 102,789 |  | 427,905 |  | 518,155 |  | 648,260 |  | 1,697,109 |
| Total Loans | \$ | 103,054 | \$ | 429,011 | \$ | 523,703 | \$ | 651,448 | \$ | 1,707,216 |
| Loans 90 or More Days Past Due and Still Accruing Interest | \$ | - | \$ | - | \$ | - | \$ | 548 | \$ | 548 |
| Nonaccrual Loans |  | 160 |  | 3,689 |  | 532 |  | 1,726 |  | 6,107 |
| December 31, 2015 |  |  |  |  |  |  |  |  |  |  |
| Loans Past Due 30-59 Days | \$ | 98 | \$ | - | \$ | 4,598 | \$ | 955 | \$ | 5,651 |
| Loans Past Due 60-89 Days |  | 186 |  | - |  | 1,647 |  | 1,370 |  | 3,203 |
| Loans Past Due 90 or more Days |  | 203 |  | 1,469 |  | 295 |  | 2,184 |  | 4,151 |
| Total Loans Past Due |  | 487 |  | 1,469 |  | 6,540 |  | 4,509 |  | 13,005 |
| Current Loans |  | 102,100 |  | 383,470 |  | 457,983 |  | 617,394 |  | 1,560,947 |
| Total Loans | \$ | 102,587 | \$ | 384,939 | \$ | 464,523 | \$ | 621,903 | \$ | 1,573,952 |
| Loans 90 or More Days Past Due and Still Accruing Interest | \$ | - | \$ | - | \$ | - | \$ | 187 | \$ | 187 |
| Nonaccrual Loans |  | 387 |  | 2,401 |  | 450 |  | 3,195 |  | 6,433 |
| September 30, 2015 |  |  |  |  |  |  |  |  |  |  |
| Loans Past Due 30-59 Days | \$ | 47 | \$ | - | \$ | 4,258 | \$ | 427 | \$ | 4,732 |
| Loans Past Due 60-89 Days |  | 68 |  | - |  | 1,234 |  | 658 |  | 1,960 |
| Loans Past Due 90 or more Days |  | 371 |  | 1,817 |  | 350 |  | 2,909 |  | 5,447 |
| Total Loans Past Due |  | 486 |  | 1,817 |  | 5,842 |  | 3,994 |  | 12,139 |
| Current Loans |  | 102,403 |  | 371,855 |  | 453,078 |  | 597,450 |  | 1,524,786 |
| Total Loans | \$ | 102,889 | \$ | 373,672 | \$ | 458,920 | \$ | 601,444 | \$ | 1,536,925 |
| Loans 90 or More Days Past Due and Still Accruing Interest | \$ | - | \$ | - | \$ | 1 | \$ | 962 | \$ | 963 |
| Nonaccrual Loans |  | 466 |  | 2,752 |  | 439 |  | 4,134 |  | 7,791 |

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.

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 |  |  | Consumer |  | Residential |  | Unallocated |  | Total |  |
|  |  | Commercial |  | Real Estate |  |  |  |  |  |  |  |  |
| Roll-forward of the <br> Allowance for Loan Losses for the Quarterly Periods: |  |  |  |  |  |  |  |  |  |  |  |  |
| June 30, 2016 | \$ | 1,128 | \$ | 5,816 | \$ | 5,742 | \$ | 4,026 | \$ | 86 | \$ | 16,798 |
| Charge-offs |  | (34) |  | - |  | (243) |  | (90) |  | - |  | (367) |
| Recoveries |  | 5 |  | - |  | 59 |  | - |  | - |  | 64 |
| Provision |  | (76) |  | (75) |  | 513 |  | 166 |  | (48) |  | 480 |
| September 30, 2016 | \$ | 1,023 | \$ | 5,741 | \$ | 6,071 | \$ | 4,102 | \$ | 38 | \$ | 16,975 |
| June 30, 2015 | \$ | 1,815 | \$ | 3,932 | \$ | 5,416 | \$ | 3,699 | \$ | 712 | \$ | 15,574 |
| Charge-offs |  | (15) |  | - |  | (150) |  | (215) |  | - |  | (380) |
| Recoveries |  | 5 |  | - |  | 38 |  | - |  | - |  | 43 |
| Provision |  | 16 |  | 100 |  | 225 |  | 311 |  | (115) |  | 537 |
| September 30, 2015 | \$ | $1,821$ | \$ | 4,032 | \$ | 5,529 | \$ | 3,795 | \$ | 597 | \$ | 15,774 |

Allowance for Loan Losses

| Allowance f |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Commercial |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Commercial |  | Real Estate |  | Consumer |  | Residential |  | Unallocated |  | Total |  |
| Roll-forward of the Allowance for Loan |  |  |  |  |  |  |  |  |  |  |  |  |
| December 31, 2015 | \$ | 1,827 | \$ | 4,520 | \$ | 5,554 | \$ | 3,790 | \$ | 347 | \$ | 16,038 |
| Charge-offs |  | (86) |  | - |  | (591) |  | (107) |  | - |  | (784) |
| Recoveries |  | 20 |  | - |  | 150 |  | 1 |  | - |  | 171 |
| Provision |  | (738) |  | 1,221 |  | 958 |  | 418 |  | (309) |  | 1,550 |
| September 30, 2016 | \$ | 1,023 | \$ | 5,741 | \$ | 6,071 | \$ | 4,102 | \$ | 38 | \$ | 16,975 |
| December 31, 2014 | \$ | 2,100 | \$ | 4,128 | \$ | 5,210 | \$ | 3,369 | \$ | 763 | \$ | 15,570 |
| Charge-offs |  | (46) |  | - |  | (483) |  | (306) |  | - |  | (835) |
| Recoveries |  | 23 |  | - |  | 134 |  | - |  | - |  | 157 |
| Provision |  | (256) |  | (96) |  | 668 |  | 732 |  | (166) |  | 882 |
| September 30, 2015 | \$ | 1,821 | \$ | 4,032 | \$ | 5,529 | \$ | 3,795 | \$ | 597 | \$ | 15,774 |

## September 30, 2016

Allowance for loan losses

| - Loans Individually Evaluated for Impairment | \$ | - | \$ | 240 | \$ | - | \$ | - | \$ | - | \$ | 240 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Allowance for loan losses |  |  |  |  |  |  |  |  |  |  |  |  |
| - Loans Collectively |  |  |  |  |  |  |  |  |  |  |  |  |
| Evaluated for Impairment |  | 1,023 |  | 5,501 |  | 6,071 |  | 4,102 |  | 38 |  | 16,735 |
| Ending Loan Balance - |  |  |  |  |  |  |  |  |  |  |  |  |
| Impairment |  | - |  | 3,538 |  | 90 |  | 317 |  | - |  | 3,945 |
| Ending Loan Balance Collectively Evaluated for Impairment | \$ | ,054 | \$ | 5,473 | \$ | 3,613 | \$ | 131 | \$ | - | \$ | 203,271 |

## December 31, 2015

Allowance for loan losses


## September 30, 2015

Allowance for loan losses - Loans Individually $\qquad$
Allowance for loan losses - Loans Collectively Evaluated for Implunt

Ending Loan Balance Individually Evaluated for Impairment

Ending Loan Balance Collectively Evaluated for Impairment

| $\$$ | 102,725 | $\$$ | 371,301 | $\$$ | 458,790 | $\$$ | 599,933 | $\$$ | - |
| :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- | :--- |

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. 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
Further, due to the imprecise nature of the loan loss estimation process, the risk attributes of our loan portfolio may not be fully captured in data related to the determination of loss factors used to determine our analysis of the adequacy of the allowance for loan losses. Management, therefore, has established an unallocated portion within the allowance for loan losses reflecting the imprecision that naturally exists in the allowance for loan loss estimation process. The unallocated allowance for loan losses is not considered a significant component of the overall allowance for loan loss estimation process and has been declining steady over the past few quarters.


## Credit Quality Indicators

The following table presents the credit quality indicators by loan category at September 30, 2016, December 31, 2015 and September 30, 2015:

## Loan Credit Quality Indicators

|  | Commercial |  | Commercial |  | Consumer |  | Residential |  | Total |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| September 30, 2016 |  |  |  |  |  |  |  |  |  |  |
| Credit Risk Profile by Creditworthiness Category: |  |  |  |  |  |  |  |  |  |  |
| Satisfactory | \$ | 93,903 | \$ | 392,697 |  |  |  |  | \$ | 486,600 |
| Special Mention |  | 1,274 |  | 10,472 |  |  |  |  |  | 11,746 |
| Substandard |  | 7,877 |  | 25,842 |  |  |  |  |  | 33,719 |
| Doubtful |  | - |  | - |  |  |  |  |  | - |
| Credit Risk Profile Based on Payment Activity: |  |  |  |  |  |  |  |  |  |  |
| Performing |  |  |  |  | \$ | 523,171 | \$ | 649,093 | \$ | 1,172,264 |
| Nonperforming |  |  |  |  |  | 532 |  | 2,355 |  | 2,887 |
| December 31, 2015 |  |  |  |  |  |  |  |  |  |  |
| Credit Risk Profile by Creditworthiness Category: |  |  |  |  |  |  |  |  |  |  |
| Satisfactory | \$ | 93,607 | \$ | 360,654 |  |  |  |  | \$ | 454,261 |
| Special Mention |  | 1,070 |  | 4,901 |  |  |  |  |  | 5,971 |
| Substandard |  | 7,910 |  | 19,384 |  |  |  |  |  | 27,294 |
| Doubtful |  | - |  | - |  |  |  |  |  | - |
| Credit Risk Profile Based on Payment Activity: |  |  |  |  |  |  |  |  |  |  |
| Performing |  |  |  |  | \$ | 464,074 | \$ | 618,521 | \$ | 1,082,595 |
| Nonperforming |  |  |  |  |  | 449 |  | 3,382 |  | 3,831 |
| September 30, 2015 |  |  |  |  |  |  |  |  |  |  |
| Credit Risk Profile by Creditworthiness Category: |  |  |  |  |  |  |  |  |  |  |
| Satisfactory | \$ | 92,896 | \$ | 350,070 |  |  |  |  | \$ | 442,966 |
| Special Mention |  | 1,157 |  | 5,170 |  |  |  |  |  | 6,327 |
| Substandard |  | 8,836 |  | 18,432 |  |  |  |  |  | 27,268 |
| Doubtful |  | - |  | - |  |  |  |  |  | - |
| Credit Risk Profile Based on Payment Activity: |  |  |  |  |  |  |  |  |  |  |
| Performing |  |  |  |  | \$ | 458,479 | \$ | 596,348 | \$ | 1,054,827 |
| Nonperforming |  |  |  |  |  | 441 |  | 5,096 |  | 5,537 |

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 |  |  | Consumer |  | Residential |  | Total |  |
| For the Year-To-Date Period Ended: |  |  |  |  |  |  |  |  |  |  |
| September 30, 2016 |  |  |  |  |  |  |  |  |  |  |
| Average Recorded Balance: |  |  |  |  |  |  |  |  |  |  |
| With No Related Allowance | \$ | 78 | \$ | 1,635 | \$ | 102 | \$ | 481 | \$ | 2,296 |
| With a Related Allowance |  | - |  | 1,320 |  | - |  | - |  | 1,320 |
| Interest Income Recognized: |  |  |  |  |  |  |  |  |  |  |
| With No Related Allowance |  | - |  | 14 |  | 4 |  | - |  | 18 |
| With a Related Allowance |  | - |  | - |  | - |  | - |  | - |
| Cash Basis Income: |  |  |  |  |  |  |  |  |  |  |
| With No Related Allowance |  | - |  | - |  | - |  | - |  | - |
| With a Related Allowance |  | - |  | - |  | - |  | - |  | - |
| September 30, 2015 |  |  |  |  |  |  |  |  |  |  |
| Average Recorded Balance: |  |  |  |  |  |  |  |  |  |  |
| With No Related Allowance | \$ | 329 | \$ | 1,932 | \$ | 124 | \$ | 1,302 | \$ | 3,687 |
| With a Related Allowance |  | - |  | - |  | - |  | 572 |  | 572 |
| Interest Income Recognized: |  |  |  |  |  |  |  |  |  |  |
| With No Related Allowance |  | 6 |  | - |  | 4 |  | 2 |  | 12 |
| With a Related Allowance |  | - |  | - |  | - |  | - |  | - |
| Cash Basis Income: |  |  |  |  |  |  |  |  |  |  |
| With No Related Allowance |  | - |  | - |  | - |  | - |  | - |
| With a Related Allowance |  | - |  | - |  | - |  | - |  | - |

At September 30, 2016, December 31, 2015 and September 30, 2015, 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.

## 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.


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 September 30, 2016.

## Note 4. GUARANTEES (In Thousands)

The following table presents the balance for standby letters of credit for the periods ended September 30, 2016, December 31, 2015 and September 30, 2015:

Loan Commitments and Letters of Credit

| Notional Amount: | $\begin{gathered} \hline \text { September 30, } \\ 2016 \end{gathered}$ |  | $\begin{gathered} \hline \text { December 31, } \\ 2015 \end{gathered}$ |  | $\begin{gathered} \hline \text { September 30, } \\ 2015 \end{gathered}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  |  |
| Commitments to Extend Credit | \$ | 300,439 | \$ | 278,623 | \$ | 293,728 |
| Standby Letters of Credit |  | 3,483 |  | 3,065 |  | 3,201 |
| Fair Value: |  |  |  |  |  |  |
| Commitments to Extend Credit | \$ | - | \$ | - | \$ | - |
| Standby Letters of Credit |  | 31 |  | 2 |  | 10 |

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 September 30, 2016, December 31, 2015 and September 30, 2015 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 September 30, 2016, December 31, 2015 and September 30, 2015, 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-and nine-month periods ended September 30, 2016 and 2015:

Schedule of Comprehensive Income

|  | Three Months Ended September 30, |  |  |  |  |  | Nine Months Ended September 30, |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Tax |  |  |  |  |  | Tax |  |  |  |  |  |
|  |  | ore-Tax mount |  | ense) <br> nefit |  | f-Tax <br> unt |  | e-Tax <br> ount |  | ense) <br> nefit |  | of-Tax ount |
| $\underline{2016}$ |  |  |  |  |  |  |  |  |  |  |  |  |
| Net Unrealized Securities Holding (Losses) Gains Arising During the Period |  |  |  |  |  |  |  |  |  |  |  |  |
| Reclassification Adjustment for Securities Gains Included in Net |  |  |  |  |  |  |  |  |  |  |  |  |
| Amortization of Net Retirement Plan <br> Actuarial Loss |  | 181 |  | (70) |  | 111 |  | 503 |  | (189) |  | 314 |
| Accretion of Net Retirement Plan Prior Service Credit |  | (3) |  | 2 |  | (1) |  | (7) |  | 2 |  | (5) |
| Other Comprehensive Income | \$ | $(1,086)$ | \$ | 386 | \$ | (700) | \$ | 4,220 | \$ | $(1,690)$ | \$ | 2,530 |
| $\underline{2015}$ |  |  |  |  |  |  |  |  |  |  |  |  |
| Net Unrealized Securities Holding Gains Arising During the Period | \$ | 892 | \$ | (349) | \$ | 543 | \$ | 631 | \$ | (247) | \$ | 384 |
| Reclassification Adjustment for Securities Losses Included in Net Income |  | - |  | - |  | - |  | (106) |  | 41 |  | (65) |
| Amortization of Net Retirement Plan Actuarial Loss |  | 192 |  | (75) |  | 117 |  | 579 |  | (227) |  | 352 |
| Accretion of Net Retirement Plan Prior Service Credit |  | (13) |  | 4 |  | (9) |  | (41) |  | 16 |  | (25) |
| Other Comprehensive Income | \$ | 1,071 | \$ | (420) | \$ | 651 | \$ | 1,063 | \$ | (417) | \$ | 646 |

The following table presents the changes in accumulated other comprehensive income by component:


For the Year-To-Date periods ended:

| December 31, 2015 | \$ | 629 | \$ | $(7,893)$ | \$ | (708) | \$ | $(7,972)$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Other comprehensive income or loss before reclassifications |  | 2,309 |  | - |  | - |  | 2,309 |
| Amounts reclassified from accumulated other comprehensive income |  | (88) |  | 314 |  | (5) |  | 221 |
| Net current-period other comprehensive income |  | 2,221 |  | 314 |  | (5) |  | 2,530 |
| September 30, 2016 | \$ | 2,850 | \$ | $(7,579)$ | \$ | (713) | \$ | $(5,442)$ |
| December 31, 2014 | \$ | 2,539 | \$ | $(9,255)$ | \$ | (450) | \$ | $(7,166)$ |
| Other comprehensive income or loss before reclassifications |  | 384 |  | - |  | - |  | 384 |
| Amounts reclassified from accumulated other comprehensive income |  | (65) |  | 352 |  | (25) |  | 262 |
| Net current-period other comprehensive income |  | 319 |  | 352 |  | (25) |  | 646 |
| September 30, 2015 | \$ | 2,858 | \$ | $(8,903)$ | \$ | (475) | \$ | $(6,520)$ |

(1) All amounts are net of tax. Amounts in parentheses indicate debits.

The following table presents the reclassifications out of accumulated other comprehensive income:
Reclassifications Out of Accumulated Other Comprehensive Income ${ }^{(1)}$

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

September 30, 2016
Unrealized gains and losses on available-forsale securities

| $\$$ | - | 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

September 30, 2015
Unrealized gains and losses on available-forsale securities

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

Total reclassifications for the period

(178)

68 Provision for Income Taxes

|  | 68 |
| :--- | :--- |
| $\$$ | $(110)$ |

$\xlongequal{\$ \quad(110)}$ Net of Tax

| $\$$ | - | Gain on Securities Transactions |
| :--- | :--- | :--- |
|  | - | Total before Tax |
|  | - | Provision for Income Taxes |
| $\$$ | - | Net of Tax |


|  | Amounts Reclassified <br> Details about Accumulated Other <br> from Accumulated Other <br> Comprehensive Income (Loss) Components | Affected Line Item in the Statement <br> Comprehensive Income |
| :--- | :---: | :---: |

For the Year-to-date periods ended:
September 30, 2016
Unrealized gains and losses on available-forsale securities

| $\$$ | 144 | Gain on Securities Transactions |
| :--- | :--- | :--- |
|  | 144 <br> $(56)$ | Total before Tax <br>  <br> $\$$ |

Amortization of defined benefit pension items:


September 30, 2015
Unrealized gains and losses on available-forsale securities

| $\$$ | 106 | Gain on Securities Transactions |
| :--- | :--- | :--- |
|  | 106 | Total before Tax |
|  | $(41)$ | Provision for Income Taxes |
| $\$$ | 65 | Net of Tax |

Amortization of defined benefit pension items:

| Prior-service costs |  | $\begin{gathered} 41 \\ (579) \end{gathered}$ | Salaries and Employee Benefits Salaries and Employee Benefits |
| :---: | :---: | :---: | :---: |
|  |  |  |  |
|  |  | (538) | Total before Tax |
|  |  | 211 | Provision for Income Taxes |
|  | \$ | (327) | Net of Tax |
| Total reclassifications for the period | \$ | (262) | 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.

## Note 6. STOCK BASED COMPENSATION PLANS

Under our 2013 Long-Term Incentive Plan, we granted options in the first quarter of 2016 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 2016:

## Schedule of Share-based Compensation Arrangements

|  |  |
| :--- | ---: |
| Roll-Forward of Shares Outstanding: | Stock Option Plans |
| Outstanding at January 1, 2016 |  |
| Granted | 421,751 |
| Exercised | 56,650 |
| Forfeited | $(82,790)$ |
| Outstanding at September 30, 2016 | $(10,758)$ |
| Exercisable at Period-End | 384,853 |
| Vested and Expected to Vest | 253,241 |
|  |  |
| Roll-Forward of Shares Outstanding - Weighted Average Exercise Price: |  |
| Outstanding at January 1, 2016 |  |
| Granted |  |
| Exercised |  |
| Forfeited |  |
| Outstanding at September 30, 2016 | 21.93 |
| Exercisable at Period-End | 25.10 |
| Vested and Expected to Vest | 21.46 |
| Grants Issued During 2016 - Weighted Average Information: | 23.97 |
| Fair Value | 22.44 |
| Fair Value Assumptions: | 21.41 |
| Dividend Yield | 24.44 |
| Expected Volatility | $\$$ |
| Risk Free Interest Rate |  |
| Expected Lives (in years) |  |

The following table presents information on the amounts expensed for the periods ended September 30, 2016 and 2015:

## Share-Based Compensation Expense

|  | For the Three Months Ended September 30, |  |  | For the Nine Months Ended September 30, |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2016 | 2015 |  | 2016 |  | 2015 |  |
| Share-Based Compensation Expense | \$ 71 | \$ | 76 | \$ | 215 | \$ | 233 |

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 nine-month periods ended 9/30/2016 and 2015.

|  |  | yees' ion <br> n |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Net Periodic Benefit Cost |  |  |  |  |  |  |
| For the Three Months Ended September 30, 2016: |  |  |  |  |  |  |
| Service Cost | \$ | 376 | \$ | 8 | \$ | 63 |
| Interest Cost |  | 420 |  | 56 |  | 83 |
| Expected Return on Plan Assets |  | (828) |  | - |  | - |
| Amortization of Prior Service (Credit) Cost |  | (14) |  | 14 |  | (3) |
| Amortization of Net Loss |  | 140 |  | 28 |  | - |
| Net Periodic Benefit Cost | \$ | 94 | \$ | 106 | \$ | 143 |
| Plan Contributions During the Period | \$ | - | \$ | 131 | \$ | 47 |
| For the Three Months Ended September 30, 2015: |  |  |  |  |  |  |
| Service Cost | \$ | 353 | \$ | 3 | \$ | 43 |
| Interest Cost |  | 402 |  | 61 |  | 144 |
| Expected Return on Plan Assets |  | (808) |  | - |  | - |
| Amortization of Prior Service (Credit) Cost |  | (21) |  | 15 |  | (8) |
| Amortization of Net Loss |  | 139 |  | 30 |  | 24 |
| Net Periodic Benefit Cost | \$ | 65 | \$ | 109 | \$ | 203 |
| Plan Contributions During the Period | \$ | 3,000 | \$ | 70 | \$ | 106 |
| Net Periodic Benefit Cost |  |  |  |  |  |  |
| For the Nine Months Ended September 30, 2016: |  |  |  |  |  |  |
| Service Cost | \$ | 1,127 | \$ | 24 | \$ | 188 |
| Interest Cost |  | 1,262 |  | 163 |  | 178 |
| Expected Return on Plan Assets |  | $(2,483)$ |  | - |  | - |
| Amortization of Prior Service Cost (Credit) |  | (42) |  | 43 |  | (8) |
| Amortization of Net Loss |  | 419 |  | 84 |  | - |
| Net Periodic Benefit Cost | \$ | 283 | \$ | 314 | \$ | 358 |
| Plan Contributions During the Period | \$ | - | \$ | 350 | \$ | 197 |
| Estimated Future Contributions in the Current Fiscal Year | \$ | - | \$ | 117 | \$ | 66 |
| For the Nine Months Ended September 30, 2015: |  |  |  |  |  |  |
| Service Cost | \$ | 1,058 | \$ | 8 | \$ | 130 |
| Interest Cost |  | 1,203 |  | 182 |  | 361 |
| Expected Return on Plan Assets |  | $(2,423)$ |  | - |  | - |
| Amortization of Prior Service (Credit) Cost |  | (62) |  | 44 |  | (23) |
| Amortization of Net Loss |  | 417 |  | 91 |  | 71 |
| Net Periodic Benefit Cost | \$ | 193 | \$ | 325 | \$ | 539 |
| Plan Contributions During the Period | \$ | 3,000 | \$ | 344 | \$ | 231 |

We were not required to make a contribution to our qualified pension plan in 2016, and currently, we do not expect to make additional contributions in 2016. 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 September 30, 2016 and 2015. All share and per share amounts have been adjusted for the September 29, 2016 3\% stock dividend.

## Earnings Per Share

|  | Quarterly Period Ended: |  |  |  | Year-to-Date Period Ended: |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\frac{\text { September 30, }}{\underline{2016}}$ |  | $\frac{\text { September } 30,}{\underline{2015}}$ |  | $\frac{\text { September } 30,}{\underline{2016}}$ |  | $\frac{\text { September } 30,}{\underline{2015}}$ |  |
| Earnings Per Share - Basic: |  |  |  |  |  |  |  |  |
| Net Income | \$ | 6,738 | \$ | 5,933 | \$ | 19,934 | \$ | 18,093 |
| Weighted Average Shares - Basic |  | 13,407 |  | 13,275 |  | 13,374 |  | 13,273 |
| Earnings Per Share - Basic | \$ | 0.50 | \$ | 0.45 | \$ | 1.49 | \$ | 1.36 |
| Earnings Per Share - Diluted: |  |  |  |  |  |  |  |  |
| Net Income | \$ | 6,738 | \$ | 5,933 | \$ | 19,934 | \$ | 18,093 |
| Weighted Average Shares - Basic |  | 13,407 |  | 13,275 |  | 13,374 |  | 13,273 |
| Dilutive Average Shares Attributable to Stock Options |  | 90 |  | 42 |  | 65 |  | 41 |
| Weighted Average Shares - Diluted |  | 13,497 |  | 13,317 |  | 13,439 |  | 13,314 |
| Earnings Per Share - Diluted | \$ | 0.50 | \$ | 0.45 | \$ | 1.48 | \$ | 1.36 |
| Antidilutive Shares Excluded from the Calculation of Earnings Per Share |  | - |  | - |  | - |  | - |

## 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 September 30, 2016, December 31, 2015 and September 30, 2015 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 of Assets and Liabilities Measured on a Recurring Basis: | Fair Value |  | Fair Value Measurements at Reporting Date Using: |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Quoted Prices In Active Markets for Identical Assets (Level 1) |  | Significant Other <br> Observable Inputs (Level 2) |  | Significant Unobservable Inputs (Level 3) |  | Total Gains (Losses) |  |
|  |  |  |  |  |  |  |  |  |  |  |
| September 30, 2016 |  |  |  |  |  |  |  |  |  |  |
| Securities Available-for Sale: |  |  |  |  |  |  |  |  |  |  |
| U.S. Agency Obligations | \$ | 153,926 | \$ | - | \$ | 153,926 | \$ | - |  |  |
| State and Municipal Obligations |  | 31,628 |  | - |  | 31,628 |  | - |  |  |
| Mortgage-Backed Securities - Residential |  | 148,087 |  | - |  | 148,087 |  | - |  |  |
| Corporate and Other Debt Securities |  | 4,299 |  | - |  | 4,299 |  | - |  |  |
| Mutual Funds and Equity Securities |  | 1,250 |  | - |  | 1,250 |  | - |  |  |
| Total Securities Available-for-Sale | \$ | 339,190 | \$ | - | \$ | 339,190 | \$ | - |  |  |
| December 31, 2015 |  |  |  |  |  |  |  |  |  |  |
| Securities Available-for Sale: |  |  |  |  |  |  |  |  |  |  |
| U.S. Agency Obligations | \$ | 155,782 | \$ | - | \$ | 155,782 | \$ | - |  |  |
| State and Municipal Obligations |  | 52,408 |  | - |  | 52,408 |  | - |  |  |
| Mortgage-Backed Securities - Residential |  | 178,588 |  | - |  | 178,588 |  | - |  |  |
| Corporate and Other Debt Securities |  | 14,299 |  | - |  | 14,299 |  | - |  |  |
| Mutual Funds and Equity Securities |  | 1,232 |  | - |  | 1,232 |  | - |  |  |
| Total Securities Available-for Sale | \$ | 402,309 | \$ | - | \$ | 402,309 | \$ | - |  |  |
| September 30, 2015 |  |  |  |  |  |  |  |  |  |  |
| Securities Available-for Sale: |  |  |  |  |  |  |  |  |  |  |
| U.S. Agency Obligations | \$ | 162,518 | \$ | - | \$ | 162,518 | \$ | - |  |  |
| State and Municipal Obligations |  | 55,486 |  | - |  | 55,486 |  | - |  |  |
| Mortgage-Backed Securities - Residential |  | 161,637 |  | - |  | 161,637 |  | - |  |  |
| Corporate and Other Debt Securities |  | 16,672 |  | - |  | 16,672 |  | - |  |  |
| Mutual Funds and Equity Securities |  | 1,246 |  | - |  | 1,246 |  | - |  |  |
| Total Securities Available-for Sale | \$ | 397,559 | \$ | - | \$ | 397,559 | \$ | - |  |  |
| Fair Value of Assets and Liabilities Measured on a Nonrecurring Basis: |  |  |  |  |  |  |  |  |  |  |
| September 30, 2016 |  |  |  |  |  |  |  |  |  |  |
| Collateral Dependent Impaired Loans | \$ | 2,640 | \$ | - | \$ | - | \$ | 2,640 | \$ | (240) |
| Other Real Estate Owned and Repossessed Assets, Net <br> December 31, 2015 |  | 1,016 |  | - |  | - |  | 1,016 |  | (319) |
| Collateral Dependent Impaired Loans | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - |
| Other Real Estate Owned and Repossessed Assets, Net <br> September 30, 2015 |  | 2,018 |  | - |  | - |  | 2,018 |  | (687) |
| Collateral Dependent Impaired Loans | \$ | 902 | \$ | - | \$ | - | \$ | 902 | \$ | (322) |
| Other Real Estate Owned and Repossessed Assets, Net |  | 585 |  | - |  | - |  | 585 |  | (135) |

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 liabilities 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).


## 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 fair value of collateral dependent impaired loans was based on third-party appraisals of the collateral. The fair value of other real estate owned was based on third-party appraisals. 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 September 30, 2016, December 31, 2015 and September 30, 2015.

## 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:


## 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 September 30, 2016 and 2015, the related consolidated statements of income, comprehensive income for the three-month and nine-month periods ended September 30, 2016 and 2015, and related consolidated statements of changes in stockholders' equity and cash flows for the nine-month periods ended September 30, 2016 and 2015. 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, 2015, 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 10, 2016, 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, 2015, 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

November 8, 2016

# ARROW FINANCIAL CORPORATION AND SUBSIDIARIES <br> MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS <br> September 30, 2016 

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.

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). All of these are wholly-owned or majority owned subsidiaries of Glens Falls National.

Our Peer Group - 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-Q is comprised of the group of 338 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 June 30, 2016 (the most recent such Report currently available), and peer group data contained herein has been derived from such Report.

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 forwardlooking 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
Impact of changes in mortgage rates
Provision for loan losses
Future level of nonperforming assets
Liquidity
Fees for other services to customers

Page Location
$1^{\text {st }}$ paragraph under "Regulatory Capital and Increase in Stockholders' Equity"
"VISA Class B Common Stock"
$1^{\text {st }}$ and $3^{\text {rd }}$ paragraphs under "Quarterly
Taxable Equivalent Yield on Loans"
Last paragraph under "Quantitative and Qualitative Disclosures about Market Risk
$2^{\text {nd }}$ paragraph under "Residential Real Estate Loans"
Last paragraph under "Consumer Loans"
$3^{\text {rd }}$ paragraph under "Commercial Loans, and Commercial Real Estate Loans"
Paragraph under "Investment Sales, Purchases and Maturities"
$1^{\text {st }}$ paragraph in section
Last 3 paragraphs under "Risk Elements"
$2^{\text {nd }}$ paragraph under "LIQUIDITY"
$3^{\text {rd }}$ paragraph under "Noninterest Income"

Forward-looking statements contained herein are not guarantees of future performance and involve certain risks and uncertainties that are difficult to quantify or, in some cases, to identify. In the case of all such 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:
a. rapid and dramatic changes in economic and market conditions;
b. sharp fluctuations in interest rates, economic activity, and consumer spending patterns;
c. network attacks or unauthorized access to computer systems and network infrastructure, interruptions of service and other security risks, whether company-specific, industry-specific or regional or nationwide;
d. sudden changes in the market for products we provide, such as real estate loans;
e. significant new banking laws and regulations, including rules still to be issued under the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 (the Dodd-Frank Act or Dodd-Frank);
f. unexpected or enhanced competition from new or unforeseen sources, whether company-specific or industry-specific ; and g. similar uncertainties inherent in banking operations such as ours, the financial world, or governmental finance generally, including periodic heightened concerns about U.S. or state governmental budgets, deficits, spending and taxes.
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 these forward-looking statements to reflect the occurrence of unanticipated events. This Quarterly Report should be read in conjunction with our Annual Report on Form 10-K for the year ended December 31, 2015.

## USE OF NON-GAAP FINANCIAL MEASURES

In May 2016, the SEC issued an updated interpretative release relating to Regulation G. Regulation $G$ is a rule that was initially adopted by the Securities and Exchange Commission (SEC) in 2003, which establishes certain limits and requirements on the use by SEC-registered companies of so-called "non-GAAP financial measures" in their SEC filings and reports, including earnings releases. The May 2016 interpretations primarily address three issues: 1) the continuing use of certain misleading non-GAAP financial measures, particularly with respect to revenue; 2) continuing use of per share non-GAAP measures relating to liquidity, which is not permitted, versus performance, which may be permissible; and 3 ) inappropriate adjustments for tax expenses.

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 (if a comparable GAAP measure exists) 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. One such exempt non-GAAP measure is regulatory capital. Financial institutions like the Company and its subsidiary banks must calculate and report their condition under an array of bank regulatory capital measures that are financial in nature but are not based on GAAP and are not easily reconcilable to the closest comparable GAAP financial measures, even in those cases where a comparable measure exists. The Company follows industry practice in disclosing its financial condition under these various regulatory capital measures, including period-end regulatory capital ratios for itself and its subsidiary banks, in its periodic reports filed with the SEC, including this Report, and does so without compliance with Regulation G, on the widely-shared understanding that the SEC regards bank regulatory capital measures to be exempt from Regulation G.

In addition to regulatory capital measures, the Company uses in preparing its financial statements several additional non-GAAP financial measures that are commonly utilized by financial institutions but have not been specifically exempted by the SEC from Regulation G and may not be exempt. Some of the more significant non-GAAP measures generally included by the Company in its public filings with the SEC are identified and described below, with a brief explanation for the Company's usage of such measures if and when they are in fact included in filed reports. Some of these non-GAAP measures are included in this Report, including in the tables on pages 37 and 39 and the notes on pages 38 and 40. Where any such non-GAAP measure is used in this Report, and a comparable GAAP measure exists, the tabular presentation of the GAAP measure precedes presentation of the non-GAAP measure and a reconciliation of the non-GAAP measure to the GAAP measure is set forth in proximity to, or cross-referenced from, the non-GAAP measure.

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 narrative disclosures based on that tabular presentation, is often presented on a tax-equivalent basis, i.e., on a non-GAAP 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 to generate tax-equivalent net interest income. This adjustment is considered helpful in comparing one financial institution's net interest income to that of another institution or in analyzing any 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, and 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 (and included in Selected Financial Information tables), i.e., net interest margin, which is the ratio of net interest income to average earning assets. For purposes of calculating this measure, financial institutions that present net interest income on a tax-equivalent basis typically use that same measure, a non-GAAP measure, in calculating their net interest margin (which also becomes a non-GAAP measure, again to provide a better basis of comparison from institution to institution and 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. It is not a GAAP measure and no reasonably comparable GAAP measure exists. The efficiency ratio (a financial measure as to which lower is better) 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, most 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 (deducted from noninterest expense) and securities gains or losses (excluded from noninterest income). We follow these practices.

Tangible Book Value per Share: Tangible equity, a non-GAAP measure, 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 under GAAP include many items, but in our case, essentially represent goodwill.

Adjustments for Certain Items of Income or Expense: When we believe the circumstances so warrant, we occasionally include in our presentation and discussion of our financial results, in addition to the required GAAP and GAAP-based disclosures (e.g., net income, earnings per share, return on average assets, return on average equity and other GAAP-based financial measures), comparative disclosures that adjust one or more of these, GAAP financial measures by removing therefrom the impact of certain non recurring transactions or other one-time material items of income or expense. When we include such disclosures, it is because we believe that the resulting non-GAAP financial measures may improve an understanding of our results of operations by separating out items that have a disproportionate positive or negative impact on such results for the particular period in question, or where we believe the adjustment for certain items allows 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 our presentation of such non-GAAP financial measures from time-to-time may be useful to investors and the market in evaluating our performance. Any 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.

Arrow Financial Corporation
Selected Quarterly Information
(Dollars In Thousands, Except Per Share Amounts - Unaudited)
Quarter Ended
Net Income
Transactions Recorded in Net Income (Net of Tax):

Net Gain on Securities Transactions


| $9 / 30 / 2016$ |  | $6 / 30 / 2016$ |  | $3 / 31 / 2016$ |  | $12 / 31 / 2015$ |  | $9 / 30 / 2015$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $\$$ | 6,738 | $\$$ | 6,647 | $\$$ | 6,549 | $\$$ | 6,569 | $\$$ |

Efficiency Ratio Calculation: (Non-GAAP) ${ }^{(4)}$
Noninterest Expense
Less: Intangible Asset Amortization

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

## Period-End Capital Information:

Total Stockholders' Equity (i.e. Book Value)
Book Value per Share ${ }^{(1)}$
Goodwill and Other Intangible Assets, net
Tangible Book Value per Share (Non-GAAP) ${ }^{(1,2)}$
Capital Ratios: ${ }^{(5)}$
Tier 1 Leverage Ratio
Common Equity Tier 1 Capital Ratio
Tier 1 Risk-Based Capital Ratio
Total Risk-Based Capital Ratio

|  | - | 88 | - | 14 | - |
| ---: | ---: | ---: | ---: | ---: | ---: |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  | 13,426 | 13,388 | 13,361 | 13,328 | 13,292 |
|  | 13,407 | 13,372 | 13,343 | 13,306 | 13,275 |
|  | 13,497 | 13,429 | 13,379 | 13,368 | 13,317 |
| $\$$ | 0.50 | $\$$ | 0.50 | $\$$ | 0.49 |
|  | 0.50 | 0.49 | $\$$ | 0.49 | $\$$ |
|  | 0.243 | 0.243 | 0.49 |  | 0.49 |
|  |  |  | 0.24 | 0.243 | 0.45 |
|  |  |  |  |  | 0.238 |


| 21,635 | 22,195 | 21,166 | 44,603 | 17,788 |
| ---: | ---: | :---: | ---: | ---: |
| 696,712 | 701,526 | 716,523 | 716,947 | 711,830 |
| $1,680,850$ | $1,649,401$ | $1,595,018$ | $1,556,234$ | $1,502,620$ |
| $2,063,832$ | $2,082,449$ | $2,069,964$ | $2,075,825$ | $1,970,738$ |
| 209,946 | 165,853 | 143,274 | 127,471 | 148,887 |
| 228,048 | 223,234 | 218,307 | 213,219 | 209,334 |
| $2,528,124$ | $2,496,795$ | $2,456,431$ | $2,442,964$ | $2,356,121$ |
| $1.06 \%$ | $1.07 \%$ | $1.07 \%$ | $1.07 \%$ | $1.00 \%$ |
| $11.75 \%$ | $11.98 \%$ | $12.07 \%$ | $12.22 \%$ | $11.24 \%$ |
| $13.18 \%$ | $13.47 \%$ | $13.62 \%$ | $13.86 \%$ | $12.79 \%$ |
| $2,399,197$ | $2,373,122$ | $2,332,707$ | $2,317,784$ | $2,232,238$ |
| $1,892,583$ | $1,891,017$ | $1,867,455$ | $1,854,549$ | $1,772,156$ |
| 20,403 | 20,343 | 19,745 | 19,619 | 18,924 |
| 1,405 | 1,284 | 1,263 | 1,231 | 1,253 |
| 18,998 | 19,059 | 18,482 | 18,388 | 17,671 |
| 1,121 | 1,106 | 1,119 | 1,109 | 1,093 |
| $3.15 \%$ | $3.23 \%$ | $3.19 \%$ | $3.15 \%$ | $3.14 \%$ |


| \$ 15,082 | \$ 14,884 | \$ 14,370 | \$ 14,242 | \$ 14,850 |
| :---: | :---: | :---: | :---: | :---: |
| 74 | 74 | 75 | 78 | 79 |
| 15,008 | 14,810 | 14,295 | 14,164 | 14,771 |
| 18,998 | 19,059 | 18,482 | 18,388 | 17,671 |
| 7,114 | 7,194 | 6,875 | 6,687 | 7,137 |
| - | 144 | - | 23 | - |
| 26,112 | 26,109 | 25,357 | 25,052 | 24,808 |
| 57.48\% | 56.72\% | 56.37\% | 56.54\% | 59.54\% |

24,758
14.98
9.44\%
$12.80 \%$
$13.98 \%$
13.98\%
14.99\%

## 4,675

15.23

$$
\text { a } 37 \%
$$

$$
13.95 \%
$$

$$
14.96 \%
$$



22




3.19\%
3.14\%

$$
9.37 \% \quad 9.36 \%
$$

$$
12.74 \% \quad 12.84 \%
$$

Assets Under Trust Administration and Investment Management

# 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.
2. 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 35.

|  | 9/30/2016 |  | 6/30/2016 |  | 3/31/2016 |  | 12/31/2015 |  | 9/30/2015 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Total Stockholders' Equity (GAAP) | \$ | 229,208 | \$ | 225,373 | \$ | 220,703 | \$ | 213,971 | \$ | 211,142 |
| Less: Goodwill and Other Intangible assets, net |  | 24,675 |  | 24,758 |  | 24,872 |  | 24,980 |  | 25,266 |
| Tangible Equity (Non-GAAP) | \$ | 204,533 | \$ | 200,615 | \$ | 195,831 | \$ | 188,991 | \$ | 185,876 |
| Period End Shares Outstanding |  | 13,426 |  | 13,388 |  | 13,361 |  | 13,328 |  | 13,292 |
| Tangible Book Value per Share (Non-GAAP) | \$ | 15.23 | \$ | 14.98 | \$ | 14.66 | \$ | 14.18 | \$ | 13.98 |
| Net Income |  | 6,738 |  | 6,647 |  | 6,549 |  | 6,569 |  | 5,933 |
| Return on Tangible Equity (Net Income/Tangible Equity - Annualized) |  | 13.18\% |  | 13.47\% |  | 13.62\% |  | 13.86\% |  | 12.79\% |

3. 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 information that is useful in understanding our financial performance. See "Use of Non-GAAP Financial Measures" on page 35.

|  | 9/30/2016 |  | 6/30/2016 |  | 3/31/2016 |  | 12/31/2015 |  | 9/30/2015 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Interest Income (GAAP) | \$ | 19,282 | \$ | 19,237 | \$ | 18,626 | \$ | 18,510 | \$ | 17,831 |
| Add: Tax-Equivalent adjustment (Non-GAAP) |  | 1,121 |  | 1,106 |  | 1,119 |  | 1,109 |  | 1,093 |
| Interest Income - Tax Equivalent (Non-GAAP) | \$ | 20,403 | \$ | 20,343 | \$ | 19,745 | \$ | 19,619 | \$ | 18,924 |
| Net Interest Income (GAAP) | \$ | 17,877 | \$ | 17,953 | \$ | 17,363 | \$ | 17,279 | \$ | 16,578 |
| Add: Tax-Equivalent adjustment (Non-GAAP) |  | 1,121 |  | 1,106 |  | 1,119 |  | 1,109 |  | 1,093 |
| Net Interest Income - Tax Equivalent (Non-GAAP) | \$ | 18,998 | \$ | 19,059 | \$ | 18,482 | \$ | 18,388 | \$ | 17,671 |
| Average Earning Assets |  | 399,197 |  | 373,122 |  | 332,707 |  | 317,784 |  | 232,238 |
| Net Interest Margin (Non-GAAP)* |  | 3.15\% |  | 3.23\% |  | 3.19\% |  | 3.15\% |  | 3.14 |

4. 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 performance. We define our efficiency ratio as the ratio of our noninterest expense to our net gross income (which equals our taxequivalent net interest income plus noninterest income, as adjusted). See "Use of Non-GAAP Financial Measures" on page 35 .
5. For the recently-completed quarter, all of the regulatory capital ratios in the table on page 37 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 $9 / 30 / 2016$ that is listed in the tables (i.e., $12.80 \%$ ) not only exceeds the currently required minimum CET1 Ratio of $5.125 \%$, but also exceeds the minimum CET1 Ratio that will be required when the Capital Conservation Buffer is fully phased-in, on January 1, 2019, of $7.00 \%$ (including the ultimate required Capital Conservation Buffer of 2.50\%).

|  | $\underline{9 / 30 / 2016}$ | $\underline{6 / 30 / 2016}$ |  | $\underline{3 / 31 / 2016}$ | $\underline{12 / 31 / 2015}$ | $\underline{9 / 30 / 2015}$ |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Total Risk Weighted Assets | $\$ 1,690,646$ | $\$ 1,662,381$ | $\$ 1,617,957$ | $\$ 1,590,129$ | $\$ 1,574,704$ |  |
| Common Equity Tier 1 Capital | 216,382 | 211,801 |  | 207,777 | 203,848 | 199,377 |
| Common Equity Tier 1 Capital Ratio | $12.80 \%$ | $12.74 \%$ |  | $12.84 \%$ | $12.82 \%$ | $12.66 \%$ |

[^3]Arrow Financial Corporation Selected Year-to-Date Information (Dollars In Thousands, Except Per Share Amounts - Unaudited)

Nine Months Ended
Net Income
Transactions Recorded in Net Income (Net of Tax):
Net Gain on Securities Transactions
Share and Per Share Data: ${ }^{(1)}$
Period End Shares Outstanding
Basic Average Shares Outstanding
Diluted Average Shares Outstanding
Basic Earnings Per Share
Diluted Earnings Per Share
Cash Dividend Per Share
Selected Year-to-Date Average Balances:
Interest-Bearing Deposits at Banks
Investment Securities
Loans
Deposits
Other Borrowed Funds
Shareholders' Equity
Total Assets
Return on Average Assets, annualized
Return on Average Equity, annualized
Return on Tangible Equity, annualized (Non-GAAP) ${ }^{(2)}$
Average Earning Assets

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

| $9 / 30 / 2016$ |  |  | $9 / 30 / 2015$ |
| :---: | :---: | :---: | :---: |
| $\$$ | 19,934 | $\$$ | 18,093 |

$88 \quad 64$

|  | 13,426 |  | 13,292 |
| ---: | ---: | ---: | ---: |
|  | 13,374 |  | 13,273 |
|  | 13,439 |  | 13,314 |
| $\$$ | 1.49 | $\$$ | 1.36 |
|  | 1.48 |  | 1.36 |
|  | 0.73 |  | 0.71 |


| 21,665 | 28,504 |
| ---: | ---: |
| 704,890 | 695,777 |
| $1,641,899$ | $1,460,681$ |
| $2,072,052$ | $1,968,132$ |
| 173,159 | 106,264 |
| 223,214 | 206,263 |
| $2,493,909$ | $2,307,263$ |
| $1.07 \%$ | $1.05 \%$ |
| $11.93 \%$ | $11.73 \%$ |
| $13.42 \%$ | $13.38 \%$ |
| $2,368,454$ | $2,184,962$ |
| $1,883,717$ | $1,752,028$ |
| 60,491 | 55,498 |
| 3,952 | 3,582 |
| 56,539 | 51,916 |
| 3,346 | 3,270 |
| $3.19 \%$ | $3.18 \%$ |


| 44,337 | 43,188 |
| :---: | :---: |
| 223 | 250 |
| 44,114 | 42,938 |
| 56,539 | 51,916 |
| 21,184 | 21,437 |
| 144 | 106 |
| 77,579 | 73,247 |
| 56.86\% | 58.62\% |

# 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.
2. 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 35.

|  | 9/30/2016 |  | 9/30/2015 |  |
| :---: | :---: | :---: | :---: | :---: |
| Total Stockholders' Equity (GAAP) | \$ | 229,208 | \$ | 211,142 |
| Less: Goodwill and Other Intangible assets, net |  | 24,675 |  | 25,266 |
| Tangible Equity (Non-GAAP) | \$ | 204,533 | \$ | 185,876 |
| Period End Shares Outstanding |  | 13,426 |  | 13,292 |
| Tangible Book Value per Share (Non-GAAP) | \$ | 15.23 | \$ | 13.98 |
| Net Income |  | 19,934 |  | 18,093 |
| Return on Tangible Equity (Net Income/Tangible Equity Annualized) |  | 13.42\% |  | 13.38\% |

3. 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 information that is useful in understanding our financial performance. See "Use of NonGAAP Financial Measures" on page 35.

|  | 9/30/2016 |  | 9/30/2015 |  |
| :---: | :---: | :---: | :---: | :---: |
| Net Interest Income (GAAP) | \$ | 57,145 | \$ | 52,228 |
| Add: Tax-Equivalent adjustment (Non-GAAP) | \$ | 3,346 | \$ | 3,270 |
| Net Interest Income - Tax Equivalent (Non-GAAP) | \$ | 60,491 | \$ | 55,498 |
| Net Interest Income (GAAP) | \$ | 53,193 | \$ | 48,646 |
| Add: Tax-Equivalent adjustment (Non-GAAP) |  | 3,346 |  | 3,270 |
| Net Interest Income - Tax Equivalent (Non-GAAP) | \$ | 56,539 | \$ | 51,916 |
| Average Earning Assets | \$ | 2,368,454 | \$ | 2,184,962 |
| Net Interest Margin (Non-GAAP)* |  | 3.19\% |  | 3.18\% |

4. 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 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 35.
[^4]
## Average Consolidated Balance Sheets and Net Interest Income Analysis

(see "Use of Non-GAAP Financial Measures" on page 35)
(Fully Taxable Basis using a marginal tax rate of $35 \%$ )
(Dollars In Thousands)

Quarter Ended September 30:

|  | Balance | Expense | Paid | Balance | Expense | Paid |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Interest-Bearing Deposits at Banks | \$ 21,635 | 34 | 0.63 \% | \$ 17,788 | \$ 13 | 0.29 \% |
| Investment Securities: |  |  |  |  |  |  |
| Fully Taxable | 409,355 | 1,893 | 1.84 | 438,651 | 1,984 | 1.79 |
| Exempt from Federal Taxes | 287,357 | 2,513 | 3.48 | 273,179 | 2,460 | 3.57 |
| Loans | 1,680,850 | 15,963 | 3.78 | 1,502,620 | 14,467 | 3.82 |
| Total Earning Assets | 2,399,197 | 20,403 | 3.38 | 2,232,238 | 18,924 | 3.36 |
| Allowance for Loan Losses | $(16,696)$ |  |  | $(15,513)$ |  |  |
| Cash and Due From Banks | 36,041 |  |  | 31,827 |  |  |
| Other Assets | 109,582 |  |  | 107,569 |  |  |
| Total Assets | \$2,528,124 |  |  | \$2,356,121 |  |  |
| Deposits: |  |  |  |  |  |  |
| NOW Accounts | \$ 869,439 | 320 | 0.15 | \$ 871,839 | 292 | 0.13 |
| Savings Deposits | 607,850 | 231 | 0.15 | 556,144 | 189 | 0.13 |
| Time Deposits of \$100,000 or More | 75,388 | 128 | 0.68 | 59,639 | 89 | 0.59 |
| Other Time Deposits | 129,960 | 164 | 0.50 | 135,647 | 179 | 0.52 |
| Total Interest-Bearing Deposits | 1,682,637 | 843 | 0.20 | 1,623,269 | 749 | 0.18 |
| Short-Term Borrowings | 134,946 | 152 | 0.45 | 73,887 | 55 | 0.30 |
| FHLBNY Term Advances and Other Long-Term Debt | 75,000 | 410 | 2.17 | 75,000 | 449 | 2.38 |
| Total Interest-Bearing Liabilities | 1,892,583 | 1,405 | 0.30 | 1,772,156 | 1,253 | 0.28 |
| Demand Deposits | 381,195 |  |  | 347,469 |  |  |
| Other Liabilities | 26,298 |  |  | 27,162 |  |  |
| Total Liabilities | 2,300,076 |  |  | 2,146,787 |  |  |
| Stockholders' Equity | 228,048 |  |  | 209,334 |  |  |
| Total Liabilities and Stockholders' Equity | \$2,528,124 |  |  | \$2,356,121 |  |  |
| Net Interest Income (Tax-equivalent Basis) $(\text { Non-GAAP })^{(1)}$ |  | 18,998 |  |  | 17,671 |  |
| Reversal of Tax Equivalent Adjustment |  | $(1,121)$ | (0.19)\% |  | $(1,093)$ | (0.19)\% |
| Net Interest Income |  | \$ 17,877 |  |  | \$ 16,578 |  |
| Net Interest Spread (Non-GAAP) ${ }^{(1)}$ |  |  | 3.08 \% |  |  | 3.08 \% |
| Net Interest Margin (Non-GAAP) ${ }^{(1)}$ |  |  | 3.15 \% |  |  | 3.14 \% |

[^5]Average Consolidated Balance Sheets and Net Interest Income Analysis
(see "Use of Non-GAAP Financial Measures" on page 35) (Fully Taxable Basis using a marginal tax rate of $35 \%$ )
(Dollars In Thousands)
Nine-Month Period Ended September 30:

| Interest-Bearing Deposits at Banks | \$ 21,665 | \$ 100 | 0.62 \% | \$ 28,504 | \$ 60 | 0.28 \% |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Investment Securities: |  |  |  |  |  |  |
| Fully Taxable | 427,937 | 6,006 | 1.87 | 426,148 | 5,949 | 1.87 |
| Exempt from Federal Taxes | 276,953 | 7,427 | 3.58 | 269,629 | 7,240 | 3.59 |
| Loans | 1,641,899 | 46,958 | 3.82 | 1,460,681 | 42,249 | 3.87 |
| Total Earning Assets | 2,368,454 | 60,491 | 3.41 | 2,184,962 | 55,498 | 3.40 |
| Allowance for Loan Losses | $(16,316)$ |  |  | $(15,548)$ |  |  |
| Cash and Due From Banks | 32,327 |  |  | 31,234 |  |  |
| Other Assets | 109,444 |  |  | 106,615 |  |  |
| Total Assets | \$2,493,909 |  |  | \$2,307,263 |  |  |
| Deposits: |  |  |  |  |  |  |
| NOW Accounts | \$ 909,268 | 941 | 0.14 | \$ 902,745 | 960 | 0.14 |
| Savings Deposits | 604,886 | 677 | 0.15 | 544,959 | 538 | 0.13 |
| Time Deposits of \$100,000 or More | 66,230 | 313 | 0.63 | 59,857 | 267 | 0.60 |
| Other Time Deposits | 130,174 | 497 | 0.51 | 138,203 | 566 | 0.55 |
| Total Interest-Bearing Deposits | 1,710,558 | 2,428 | 0.19 | 1,645,764 | 2,331 | 0.19 |
| Short-Term Borrowings | 98,159 | 303 | 0.41 | 43,169 | 80 | 0.25 |
| FHLBNY Term Advances and Other Long-Term Debt | 75,000 | 1,221 | 2.17 | 63,095 | 1,171 | 2.48 |
| Total Interest-Bearing Liabilities | 1,883,717 | 3,952 | 0.28 | 1,752,028 | 3,582 | 0.27 |
| Demand Deposits | 361,494 |  |  | 322,368 |  |  |
| Other Liabilities | 25,484 |  |  | 26,604 |  |  |
| Total Liabilities | 2,270,695 |  |  | 2,101,000 |  |  |
| Stockholders' Equity | 223,214 |  |  | 206,263 |  |  |
| Total Liabilities and Stockholders' Equity | \$2,493,909 |  |  | \$2,307,263 |  |  |
| Net Interest Income (Tax-equivalent Basis) (Non-GAAP) |  | 56,539 |  |  | 51,916 |  |
| Reversal of Tax Equivalent Adjustment |  | $(3,346)$ | (0.19)\% |  | $(3,270)$ | (0.20)\% |
| Net Interest Income |  | \$ 53,193 |  |  | \$ 48,646 |  |
| Net Interest Spread (Non-GAAP) ${ }^{(1)}$ |  |  | 3.13 \% |  |  | 3.13 \% |
| Net Interest Margin (Non-GAAP) ${ }^{(1)}$ |  |  | 3.19 \% |  |  | 3.18 \% |

${ }^{1}$ See Note 3 on p. 40

## OVERVIEW

We reported net income for the third quarter of 2016 of $\$ 6.7$ million, an increase of $\$ 805$ thousand, or $13.6 \%$, over our net income for the third quarter of 2015. Diluted earnings per share (EPS) for the quarter were $\$ 0.50$, an increase of $\$ 0.05$, or $11.1 \%$, from the EPS of $\$ 0.45$ reported for the third quarter of 2015. Return on average equity (ROE) for the third quarter of 2016 continued to be strong at $11.75 \%$, up from an ROE of $11.24 \%$ for the quarter ended September 30, 2015. Return on average assets (ROA) for the 2016 third quarter was $1.06 \%$, an increase from an ROA of $1.00 \%$ for the quarter ended September 30, 2015. The increase in net income between the respective periods was largely the result of a significant increase in net interest income, which itself was primarily attributable to an even greater increase in average earning assets, particularly in loans, between the periods. Tax-equivalent net interest income (a non-GAAP measure) increased between the respective quarters by approximately $0.4 \%$, while average earning assets increased by $7.5 \%$. Total loans increased between the respective period ends by $\$ 170$ million, or $11.1 \%$. Since the third quarter of 2015 , we have expanded our smaller subsidiary bank, Saratoga National Bank, deeper into the Capital District, with the opening of a branch location in Rensselaer County. Salaries and employee benefits expenses decreased by $0.1 \%$ in the third quarter of 2016 compared to the 2015 quarter, due at least in part to a small decrease in the number of full-time equivalent employees between the periods. Total assets were $\$ 2.58$ billion at September 30, 2016, which represented an increase of $\$ 134.3$ million, or $5.5 \%$, from the level at December 31, 2015, and an increase of $\$ 160.9$ million, or $6.7 \%$, from the September 30, 2015 level.

The changes in net income, net interest income and net interest margin between the three- and nine-month periods are more fully described under the heading "RESULTS OF OPERATIONS," beginning on page 58.

Stockholders' equity was $\$ 229.2$ million at September 30, 2016, an increase of $\$ 15.2$ million, or $7.1 \%$, from the December 31, 2015 level of $\$ 214.0$ million, and an increase of $\$ 18.1$ million, or $8.6 \%$, from the prior year level (representing, in each case, a higher rate of growth than the growth in total assets). The components of the change in stockholders' equity since year-end 2015 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 September 30, 2016, 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 recently 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, and are well in excess of the currently required minimum levels, which, as a result of the Dodd-Frank Act, have increased and will continue to increase, as a percentage of assets, each year from 2015 to 2019.

At September 30, 2016, our book value per share was $\$ 17.07$, up by $7.5 \%$ over the year earlier level, and our tangible book value per share (a non-GAAP measure that deducts intangible assets from stockholders' equity) was $\$ 15.23$, an increase of $\$ 1.25$, or $8.9 \%$, over the level as of September 30, 2015, and an increase of $\$ 1.05$, or $7.4 \%$, over the December 31, 2015 level. See the disclosure on page 35 related to our use of non-GAAP financial measures generally, and tangible book value, specifically. In the past nine months, total shareholders' equity increased by $7.1 \%$ and our total book value per share increased by $6.4 \%$. The increase in stockholders' equity over the first nine months of 2016 principally reflected the following factors: (i) $\$ 19.9$ million of net income for the period, (ii) $\$ 2.5$ million of other comprehensive income for the period, and (iii) issuance of $\$ 3.1$ million of common stock through our employee benefit and dividend reinvestment plans; reduced by (iii) cash dividends of $\$ 9.7$ million; and (iv) repurchases of our own common stock, principally in connection with stock-for-stock option exercises, of $\$ 1.8$ million. As of September 30, 2016, our closing stock price was $\$ 32.83$, representing a trading multiple of 2.16 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 $\$ 0.238$ per share for each of the first three quarters of 2015, and a cash dividend of $\$ 0.243$ per share for the last quarter of 2015 and the first three quarters of 2016.

Loan Quality: Our net charge-offs for the third quarter of 2016 were $\$ 303$ thousand as compared to $\$ 337$ thousand for the comparable 2015 quarter. Our ratio of net charge-offs to average loans (annualized) was $0.07 \%$ for the third quarter of 2016 compared to $0.09 \%$ for the third quarter of 2015 . Our peer group's weighted average ratio of net charge-offs to average loans was $0.07 \%$ for the period ended June 30, 2016. See page 34 for a discussion of our peer group. At September 30, 2016, our allowance for loan losses was $\$ 17.0$ million representing $0.99 \%$ of total loans, down 3 basis points from the December 31, 2015 ratio. We believe this allowance is appropriate and reflects the continuing strong credit quality in the loan portfolio.

Nonperforming loans were $\$ 6.8$ million at September 30, 2016, representing $0.40 \%$ of period-end loans, a decrease of 19 basis points from our year-earlier ratio. By way of comparison, the weighted average ratio for our peer group was $0.84 \%$ at June 30, 2016, considerably better (lower) than the peer group's ratios at earlier year-ends but still considerably higher than ours on such date. Our ratio has remained quite low and stable from 2008 through the date of this Report.

Loan Growth: During the first nine months of 2016, we experienced increases in outstanding balances in each of the largest segments of our loan portfolio, without any significant deterioration in our credit quality.

Commercial Loans: These loans comprised $6.0 \%$ of our loan portfolio at period-end, and the balance was up slightly (by $0.5 \%$ ), over the year-end 2015 balance. The business sector in our service area, including small- and mid-sized business 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: Commercial property values in our region have remained stable in recent periods, although it should be noted such values did not show significant deterioration even in the worst phases of the financial crisis. 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. CRE loans comprised $25.1 \%$ of our loan portfolio at period-end; the period-end balance of such loans was up significantly (by 11.4\%) over the year-end 2015 balance.
Consumer Loans: These loans (primarily automobile loans) comprised $30.7 \%$ of our loan portfolio at period-end; the balance of these loans also was up significantly (by $12.7 \%$ ) over the year-end level. Consumer automobile loans at September 30, 2016, were $\$ 516$ million, or $98.6 \%$ of this portfolio segment. In the first nine months of 2016, we did not experience any significant increase in our delinquency rate or in the percentage of nonperforming loans in this segment. Employment in our service area continues to expand modestly, and unemployment rates remain low, well off their post-crisis levels.
Residential Real Estate Loans: These loans, including home equity loans, made up $38.2 \%$ of our portfolio at period-end, and the balance was up, if only modestly (by $4.8 \%$ ), over the year-end 2015 balance. The residential real estate market in our service area has been stable in recent periods. During the worst of the financial crisis, we did not experience a notable increase in our foreclosure or loss rates on our residential real estate loans, nor have we in ensuing periods, primarily due to the fact that we have never originated or participated in underwriting high-risk mortgage loans. During 2015 and 2016 refinancings of our own loans represented about $15 \%$ of our total originations. If long-term interest rates, which decreased during the second quarter of 2016 before rebounding modestly during the third quarter, do not increase significantly above their period-end levels, we may continue to experience a modest volume of mortgage refinancings. 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 to the secondary market, although our sales of originations as a portion 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 2016, nor did we in any prior years the back to and during the financial crisis. The terms of our lines of credit with our correspondent banks, the FHLBNY and the Federal Reserve Bank have not changed significantly in recent periods (see our general liquidity discussion on page 56). 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: Our banks, as former member banks of Visa, continue to bear some indirect contingent liability to various third parties who may have certain claims against Visa, including class action claims, to the extent that Visa's direct liabilities resulting from such claims ultimately may exceed the amounts held in a litigation escrow account set up by Visa several years ago to defray such liabilities, using funds which would otherwise have been owed by it to its member banks in redemption of their Class B Visa shares. In July 2012, Visa and MasterCard entered into a Memorandum of Understanding ("MOU") with a class of plaintiffs to settle certain covered antitrust claims against the two card companies involving merchant discounts. In December 2013, a federal judge gave final approval to the class settlement agreement in this litigation. The total cash settlement payment was set at approximately $\$ 6.05$ billion, of which Visa's share represented approximately $\$ 4.4$ billion. Visa has paid its portion of this settlement from the litigation escrow account. However, approximately one hundred merchants have filed a challenge to the settlement based on claims of attorney misconduct causing some uncertainty with respect to the finalization of the settlement. Previously, in the second quarter 2012, in light of the state of covered litigation at Visa at the time and the substantial dollar amount in the litigation escrow fund then remaining, we determined to reverse the entire amount of an earlier VISA litigation-related accrual, which was then $\$ 294$ thousand pre-tax. This reversal reduced our other operating expenses for the year ending December 31, 2012. We believed then, and continue to believe, that the balance that Visa currently maintains in its litigation escrow account is sufficient to satisfy Visa's remaining direct liability to such claims, if any, without further resort to the contingent liability of the former Visa member banks. At September 30, 2016, the Company held 27,771 shares of Visa Class B common stock and we continue not to recognize any economic value for these shares.

Sale of Loomis \& LaPann, Inc.: Effective October 30, 2015, the Company sold $100 \%$ of the stock of one of its wholly-owned subsidiary insurance agencies, Loomis \& LaPann, Inc. ("Loomis"), to a local insurance agency headquartered in Glens Falls, NY. Historically, Loomis had sold as its featured product sports insurance, which was the line of business the buyer was particularly interested in acquiring, but Loomis had also sold property and casualty insurance. Thus, prior to the sale of Loomis to the buyer, the Company transferred Loomis's property and casualty business to another of the Company's wholly-owned subsidiary insurance agencies, the McPhillips Agency, such that the sports insurance business was the primary business line sold to the buyer at closing. The right to use the Loomis name was also transferred to the buyer. The Loomis sports insurance business, while we owned it, was very specialized and the vast majority of the related revenue was generated from customers located outside of our service area in New York State. Three Loomis employees who were principally involved in the sports insurance business remained with Loomis as part of the sale. We will receive post-closing cash payments from the buyer through 2018.

## CHANGE IN FINANCIAL CONDITION

## Summary of Selected Consolidated Balance Sheet Data

(Dollars in Thousands)
Interest-Bearing Bank Balances
Securities Available-for-Sale
Securities Held-to-Maturity
Loans $^{(1)}$
Allowance for Loan Losses
Earning Assets ${ }^{(1)}$
Total Assets
Demand Deposits
NOW Accounts
Savings Deposits
Time Deposits of $\$ 100,000$ or More
Other Time Deposits
Total Deposits
Federal Funds Purchased and
Securities Sold Under Agreements
to Repurchase
FHLB Advances - Overnight
FHLB Advances - Term
Stockholders' Equity
(1) Includes Nonaccrual Loans

Municipal Deposits: Fluctuations in balances of our NOW accounts are largely the result of municipal deposit seasonality factors. Over the past twelve months, municipal deposits on average have ranged from $31 \%$ to $35 \%$ of our total deposits. As of September 30, 2016, municipal deposits represented $32.5 \%$ of total deposits. Municipalities normally utilize NOW accounts and time deposits of short duration. Many of our municipal deposit relationships are subject to annual renewal, by formal or informal agreement.

In general, there is a seasonal pattern to municipal deposits starting with a low point during August. Account balances tend to increase throughout the fall and remain elevated during the winter months, due to tax deposits, and generally receive an additional boost at the end of March from the electronic deposit of state aid to school districts. In addition to these seasonal fluctuations within accounts, the overall level of municipal deposit balances fluctuates from year-to-year as some municipalities move their accounts in or 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.

The financial crisis had a significant negative impact on municipal tax revenues in many regions, and consequently on municipal funds available for deposit in banks. Our banks, however, did not experience and have not experienced sustained decreases in municipal deposit levels in the post-crisis years, other than normal seasonal fluctuations, nor have they experienced municipal client pressure to pay higher than normal rates on such deposits (despite the continuing strong competition for municipal deposits). However, if in the future interest rates begin to rise significantly or the competition for municipal deposits otherwise becomes more intense, we may experience either or both of these adverse developments, i.e., 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 \$182.8 million, or 9.0\%, from December 31, 2015 to September 30, 2016. While our municipal deposits increased significantly during the period, by $14.9 \%$, our consumer and business deposit balances also increased by $6.4 \%$. Like most banks, we continue to experience a general shift in balances from higher rate time deposits to lower rate savings and NOW accounts as well as no-cost demand deposits, a trend that matches the continuing decline in recent years in prevailing interest rates generally. At both September 30, 2016 and September 30, 2015, we had no borrowings of overnight funds from the FHLB. However, while much of our significant loan growth during the first three quarters was funded by our increase in deposits, we also continued to make use of our term borrowing capacity at the FHLB as a supplemental source of funds, as well as occasional use of FHLB overnight advances. At September 30, 2016, our term advances from the FHLB were $\$ 55.0$ million, unchanged from both our year-end 2015 balance and our September 30, 2015 balance.

Changes in Earning Assets: Our loan portfolio at September 30, 2016, was $\$ 1.71$ billion, up by $\$ 133.3$ million, or $8.5 \%$, from the December 31, 2015 level and up by $\$ 170.3$ million, or $11.1 \%$, from the September 30, 2015 level. We experienced the following trends in our four largest segments:

1. Commercial loans. This segment of our portfolio increased by $\$ 0.5$ million, or $0.5 \%$, during the first nine months of 2016 , representing the impact of a steady demand for such loans during the period.
2. Commercial real estate loans. This segment of our portfolio increased significantly, by $\$ 44.1$ million, or $11.4 \%$, during the first nine months of 2016, representing the impact of continued strong demand for such loans offset in part by a few large payoffs during the period.
3. Consumer loans (primarily automobile loans through indirect lending). As of September 30, 2016, these loans, primarily auto loans, had increased by $\$ 59.2$ million, or $12.7 \%$, from the December 31, 2015 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 slightly during the first nine months of 2016 , by $\$ 29.5$ million, or $4.8 \%$. As in prior periods, we elected to sell a substantial portion of our residential mortgage originations during the period to Freddie Mac. However, our gross originations were down slightly during the period, compared to the comparable 2015 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 three quarters, reflecting continuing low rates and a stable local economy with low unemployment.

Most of our incoming cash flows during the first nine months of 2016 came from a combination of increased deposit balances (some of which were seasonal) and from overnight borrowings from the FHLB. We used these positive cash-flows as well as loan amortization payments principally to fund our loan growth during the period. Most of the cash flows from our investment securities portfolios was redeployed back into that portfolio.

## 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 drop-off in time deposits, including time deposits of $\$ 100,000$ or more, versus the steady increase in lower and no-cost deposits, particularly savings and demand 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 still historically low levels (a development that continues to be forecast by many financial commentators), we would expect this trend eventually to reverse itself, i.e., for higher rate time deposits to increase, proportionately, while lower rate demand and savings deposits decrease, with possible heightened pressure on our net interest margin from the liability side.

## Quarterly Average Deposit Balances

(Dollars in Thousands)


Percentage of Total Quarterly Average Deposits

|  | Quarter Ended |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | 9/30/2016 | 6/30/2016 | 3/31/2016 | 12/31/2015 | 9/30/2015 |
| Demand Deposits | 18.5\% | 17.2\% | 16.7\% | 16.8\% | 17.6\% |
| NOW Accounts | 42.1\% | 44.6\% | 44.9\% | 45.9\% | 44.2\% |
| Savings Deposits | 29.5\% | 28.9\% | 29.3\% | 28.1\% | 28.2\% |
| Time Deposits of \$100,000 or More | 3.7\% | 3.0\% | 2.9\% | 2.9\% | 3.0\% |
| Other Time Deposits | 6.3\% | 6.3\% | 6.3\% | 6.3\% | 6.9\% |
| Total Deposits | 100.0\% | 100.0\% | 100.0\% | 100.0\% | 100.0\% |

We typically experience little growth in average deposit balances in the first quarter of each calendar year. However, municipal balances tend to grow sharply at the very end of the first quarter primarily as a result of New York State distributing state aid to local municipalities. The seasonal nature of these municipal balances usually results in little net growth or a small contraction from mid-second quarter through most of the third quarter of the year (when municipal deposits normally drop off), and a return to growth late in the third and in the fourth quarters (when municipal deposits tend to increase, sometimes substantially, to and through year-end). This pattern has held true in recent periods. There was a slight increase in average deposit balances from the first to the second quarter of 2016 followed by a slight decrease in the third quarter, in both municipal and non-municipal deposits. At September 30, 2016, however, in accordance with our historical experience, period-end deposit balances were up over each of the prior two quarter-ends, reflecting a late September surge.

## Quarterly Cost of Deposits

|  | Quarter Ended |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Demand Deposits | -\% | -\% | -\% | -\% | -\% |
| NOW Accounts | 0.15 | 0.13 | 0.13 | 0.13 | 0.13 |
| Savings Deposits | 0.15 | 0.15 | 0.15 | 0.14 | 0.13 |
| Time Deposits of \$100,000 or More | 0.68 | 0.62 | 0.58 | 0.59 | 0.59 |
| Other Time Deposits | 0.50 | 0.51 | 0.52 | 0.53 | 0.52 |
| Total Deposits | 0.16 | 0.15 | 0.15 | 0.15 | 0.15 |

During the quarter ended September 30, 2016, average rates paid by us on deposits generally and on most deposit categories increased slightly due to certain deposit customers shifting funds to higher costing deposit products. It was widely anticipated in late 2015, following the Federal Reserve's 25 basis point hike in the federal funds rate in December of that year, that the Fed would continue to effect additional small increases in short-term rates during 2016 and subsequent years. Through the first 3 quarters of 2016, however, as a result of Brexit and assorted economic "headwinds" encountered by most of the advanced nations, those expectations of meaningful additional monetary tightening in the U.S. were put on hold. The Fed gave strong indications in October 2016 that a second small rate hike in the Fed Funds rate ( 25 basis points) might be expected at or before year-end. However, to the extent that further small increases by the Fed in short-term rates may ultimately take place, at year-end 2016 or later, there also continues to be an expectation in financial markets that any such tightening may not have an equivalent impact on medium- or long-term rates until much later, if at all, and that any future increases in prevailing rates may be, at most, infrequent and relatively small.

## Non-Deposit Sources of Funds

We have several sources of funding other than 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.

In the past (most recently in 2004), we occasionally relied on the issuance of long-term trust preferred securities (or TRUPs) to supplement our funding needs. As a result of the Dodd-Frank Act 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 September 30, 2016 (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 53 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) and similarly we have broken out Other Consumer Loans from Consumer Loans--Automobile (again, these are otherwise reported as a single category in this Report). Over the last five quarters, the average balances for all of the below-listed categories of loans have steadily and significantly increased, except for "Other Consumer Loans" (i.e., non-automobile consumer loans), which represent only a very small portion (1.6\%) of the total portfolio.

## Quarterly Average Loan Balances

(Dollars in Thousands)

|  | 9/30/2016 |  | 6/30/2016 |  | Quarter Ended$3 / 31 / 2016$ |  | 12/31/2015 |  | 9/30/2015 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Commercial and Commercial Real Estate |  | 524,523 | \$ | 519,775 | \$ | 502,392 | \$ | 495,173 | \$ | 466,370 |
| Residential Real Estate |  | 470,865 |  | 462,253 |  | 451,330 |  | 438,987 |  | 421,448 |
| Home Equity |  | 133,009 |  | 131,513 |  | 130,227 |  | 128,085 |  | 123,543 |
| Consumer Loans - Automobile |  | 525,402 |  | 509,180 |  | 484,646 |  | 467,930 |  | 465,726 |
| Other Consumer Loans ${ }^{(1)}$ |  | 27,052 |  | 26,680 |  | 26,423 |  | 26,059 |  | 25,533 |
| Total Loans |  | 1,680,851 |  | 1,649,401 |  | 1,595,018 | \$ | 1,556,234 |  | ,502,620 |

## Percentage of Total Quarterly Average Loans

|  | Quarter Ended |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Commercial and Commercial Real Estate | 31.2\% | 31.5\% | 31.5\% | 31.8\% | 31.0\% |
| Residential Real Estate | 28.0\% | 28.0\% | 28.3\% | 28.2\% | 28.1\% |
| Home Equity | 7.9\% | 8.0\% | 8.2\% | 8.2\% | 8.2\% |
| Consumer Loans - Automobile | 31.3\% | 30.9\% | 30.4\% | 30.1\% | 31.0\% |
| Other Consumer Loans ${ }^{(1)}$ | 1.6\% | 1.6\% | 1.6\% | 1.7\% | 1.7\% |
| Total Loans | 100.0\% | 100.0\% | 100.0\% | 100.0\% | 100.0\% |

${ }^{(1)}$ 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

For many reasons we largely avoided any significant deterioration in asset quality during and after the 2008-2009 financial crisis. We did not at any point during this period 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. In recent periods, 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 $38.2 \%$ of the entire portfolio at September 30, 2016), eclipsing both our commercial and commercial real estate loans, which represented $31.1 \%$ of the portfolio on that date, and our consumer loans (primarily automobile loans), which were $30.7 \%$ of the portfolio. Our gross originations for residential real estate loans (including refinancings of pre-existing mortgage loans) were $\$ 114.2$ million and $\$ 127.0$ million for the first nine months of 2016 and 2015 , respectively. These origination totals exceeded the sum of repayments and prepayments in the respective quarters, but in each period we also sold a portion of these originations on or immediately after origination. In the first nine months of 2016 , we sold $\$ 18.7$ million, or $18.9 \%$, of our originations. In the first nine months of 2015 , we sold a smaller amount, $\$ 15.3$ million, or $14.2 \%$, 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 to the secondary market.

Just as short-term rates in U.S. financial markets fell very quickly at the onset of the 2008-2009 financial crisis and continued to decline thereafter to historically low levels, where they have largely remained, so too did rates on conventional real estate mortgages fall to historically low levels, where they too largely remain with occasional fluctuations, usually in response to monetary steps undertaken by the Federal Reserve to grow or limit the growth of the supply of money. In recent periods, the Fed has moved slowly toward a more restrictive monetary policy, i.e., has curtailed its quantitative easing programs and has started to warn markets that it may seek to raise rates, in very small increments, to head off any incipient inflationary pressures. Nevertheless, U.S. financial markets have yet to exit from the historically unprecedented low-rate environment in which they have remained in recent years, particularly across longer maturities. As long as this condition continues, we believe we likely will continue to see continuing healthy loan demand, especially for residential real estate loans. However, we also expect to continue to sell a portion of our mortgage loan originations and, as a result, may experience flat growth or even a decrease in our outstanding balances in this segment of our portfolio. Moreover, if our local economy suffers a major downturn or prevailing long-term interest rates increase to any meaningful degree, the demand for residential real estate loans in our service area may decrease, which also may negatively impact our real estate portfolio and our financial performance.

Commercial Loans and Commercial Real Estate Loans: Over the last decade, we have experienced moderate and occasionally strong demand in these related segments of our loan portfolio. The combined loan balances have generally increased in dollar amount and have slightly increased as a percentage of the overall loan portfolio. For the first nine months of 2016, combined commercial and commercial real estate loan originations continued to be strong, with an annualized growth rate of $12.1 \%$.

Substantially all commercial and commercial real estate loans in our portfolio were extended to businesses or borrowers located in our regional market. Many 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 loans and/or a weakening in the quality of this segment of the portfolio in upcoming periods. Any significant increase in prevailing interest rates, particularly in medium-or long maturities, may have a negative impact on our origination of such loans, although as mentioned in preceding sections of this Report, we do not currently anticipate any material increases in such rates in the near future. 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 September 30, 2016, 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 nine months of 2016 was strong, at $\$ 218.5$ million, well above the $\$ 172.4$ million originated in first nine months of 2015. As a result, our consumer loan portfolio also grew in the first nine months of 2016 , by $\$ 59.2$ million, or $12.7 \%$, from our December 31, 2015 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 nine months of 2016, 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. If weakness in auto demand returns, however, our portfolio is likely to experience limited, if any, overall growth, either in real terms or as a percentage of the total portfolio, regardless of whether the auto company lending affiliates continue to offer highly-subsidized loans. Of course, if economic conditions in our indirect loan service area should generally weaken in upcoming periods, we would expect some negative impact on the quality of this segment of our portfolio as well as other segments.

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 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | 9/30/2016 | 6/30/2016 | 3/31/2016 | 12/31/2015 | 9/30/2015 |
| Commercial and Commercial Real Estate | 4.28\% | 4.44\% | 4.32\% | 4.37\% | 4.33\% |
| Residential Real Estate | 4.20\% | 4.22\% | 4.22\% | 4.21\% | 4.23\% |
| Home Equity | 3.13\% | 3.08\% | 3.05\% | 2.92\% | 2.94\% |
| Consumer Loans - Automobile | 3.12\% | 3.08\% | 3.07\% | 3.08\% | 3.09\% |
| Other Consumer Loans | 5.17\% | 5.10\% | 5.08\% | 5.16\% | 5.35\% |
| Total Loans | 3.82\% | 3.86\% | 3.82\% | 3.83\% | 3.82\% |

The average yield in our total loan portfolio during the third quarter of 2016 reflected no change from the average yield during the third quarter of 2015, but declined by 4 basis points compared to the average yield in the total portfolio during the immediately preceding quarter. It is too early to conclude that the leveling off of our average yield between the second and third quarters of 2016 represents a turning point in the long-term trend of declining yields in the portfolio. This flattening of yields may not be sustainable if prevailing rates for medium to long maturities should remain at their current historic lows or resume their decline, after temporarily moving upward during the latter half of the third quarter. Moreover, even though the average cost of our deposits has remained essentially unchanged in recent periods, as downward repricing opportunities on retail deposits have become much more limited in the face of an assumed zero-rate floor on such deposits, we also did not experience any notable uptick in average deposit rates in the completed quarter, and any resulting upward pressure on loan rates still appears to be minimal.

Of course, to the extent that the long-term declining rate environment may at some point bottom out and rates may begin to move upward, across all maturities, we would expect to see matching increases in the average yield on our loan portfolio, likely accompanied by corresponding increases in our cost of deposits and other funds (i.e., our margin may not improve if rates begin to move upward).

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. Additionally, there is a significant amount of cash flow from normal amortization and prepayments in all loan categories, and much of this cash flow reprices at current rates for credit, as new loans are generated at current yields. Thus, even if prevailing rates for newly-originated or variable rate loans should stabilize or increase slightly in upcoming periods, our average rate on our portfolio may continue to slowly decline for some period of time thereafter, as older credits in our portfolio bearing generally higher rates continue to mature and either roll over or are redeployed into what will still be lower priced loans.

## Investment Portfolio Trends

The table below presents the changes in the period-end balances for the securities available-for-sale and the securities held-tomaturity investment portfolios from December 31, 2015 to September 30, 2016 (in thousands).

The net reduction in the two portfolios on a combined basis during the period (of $\$ 41.6$ million, or $5.8 \%$ ) reflected our strategy in recent years to reallocate earning assets from investment securities to higher yielding loans to maximize earning asset yields. The principal changes in our securities available-for-sale portfolio over the period were monthly principal paydowns of Mortgage-Backed SecuritiesResidential and, to a lesser degree, maturities of State and Municipal Obligations and Corporate and Other Debt Securities, which together exceeded new purchases. The principal change in our held-to-maturity portfolio over the period was the purchase of State and Municipal Obligations in amounts exceeding the maturities of such securities, offset in part by monthly principal pay-downs of Mortgage-Backed Securities-Residential.

|  |  |  |  | in Thou | nd |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Fair Value at Period-End |  |  |  |  |  | Net Unrealized Gains (Losses) For Period Ended |  |  |  |  |  |
|  | 9/30/2016 |  | 12/31/2015 |  | Change |  | 9/30/2016 |  | 12/31/2015 |  | Change |  |
| Securities Available-for-Sale: |  |  |  |  |  |  |  |  |  |  |  |  |
| U.S. Agency Securities | \$ | 153,926 | \$ | 155,782 | \$ | $(1,856)$ | \$ | 1,415 | \$ | (150) | \$ | 1,565 |
| State and Municipal Obligations |  | 31,628 |  | 52,408 |  | $(20,780)$ |  | 66 |  | 102 |  | (36) |
| Mortgage-Backed Securities-Residential |  | 148,087 |  | 178,588 |  | $(30,501)$ |  | 3,489 |  | 1,212 |  | 2,277 |
| Corporate and Other Debt Securities |  | 4,299 |  | 14,299 |  | $(10,000)$ |  | (201) |  | (245) |  | 44 |
| Mutual Funds and Equity Securities |  | 1,250 |  | 1,232 |  | 18 |  | 130 |  | 112 |  | 18 |
| Total | \$ | 339,190 | \$ | 402,309 | \$ | $(63,119)$ | \$ | 4,899 | \$ | 1,031 | \$ | 3,868 |
| Securities Held-to-Maturity: |  |  |  |  |  |  |  |  |  |  |  |  |
| State and Municipal Obligations | \$ | 263,897 | \$ | 230,621 | \$ | 33,276 | \$ | 6,642 | \$ | 4,568 | \$ | 2,074 |
| Mortgage-Backed Securities-Residential |  | 82,544 |  | 94,309 |  | $(11,765)$ |  | 2,561 |  | 751 |  | 1,810 |
| Corporate and Other Debt Securities |  | 1,000 |  | 1,000 |  | - |  | - |  | - |  | - |
| Total | \$ | 347,441 | \$ | 325,930 | \$ | 21,511 | \$ | 9,203 | \$ | 5,319 | \$ | 3,884 |

At September 30, 2016, 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.

## 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 nine months of 2016.

Increase 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 prevailing rates during the periods in question, with little or no change in the credit-worthiness of the issuers.

## Investment Sales, Purchases and Maturities

(In Thousands)

| Sales | Three Months Ended |  |  |  | Nine Months Ended |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 9/30/2016 |  | 9/30/2015 |  | 9/30/2016 |  | 9/30/2015 |  |
| Available-For-Sale Portfolio: |  |  |  |  |  |  |  |  |
| Mortgage-Backed Securities-Residential | \$ | - | \$ | - | \$ | - | \$ | 2,690 |
| U.S. Agency Securities |  | - |  | - |  | 4,793 |  | 18,618 |
| Corporate Bonds and Other |  | - |  | 11 |  | 5,631 |  | 35 |
| Total |  | - |  | 11 |  | 10,424 |  | 21,343 |
| Net Gains on Securities Transactions |  | - |  | - |  | 144 |  | 106 |
| Proceeds on the Sales of Securities | \$ | - | \$ | 11 | \$ | 10,568 | \$ | 21,449 |
| Held-to-Maturity Portfolio: |  |  |  |  |  |  |  |  |
| State and Municipal Obligations | \$ | - | \$ | - | \$ | 2 | \$ | - |
| Net Gains on Securities Transactions |  | - |  | - |  | - |  | - |
| Proceeds on the Sales of Securities | \$ | - | \$ | - | \$ | 2 | \$ | - |

Investment yields in the debt markets have experienced some volatility thus far in 2016. 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. Such was the case for the securities sales we made from the available-for-sale portfolio in the 2015 period, as listed in the table above. However, repositioning sales diminished in volume in the 2016 period, as the market presented fewer opportunities.

The following table summarizes purchases of investment securities within the available-for-sale and held-to-maturity portfolios for the nine-month periods periods ended September 30, 2016 and 2015, as well as proceeds from the maturity and calls of investment securities within each portfolio for the respective periods presented:

| Purchases: | Three Months Ended |  |  |  | Nine Months Ended |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 9/30/2016 |  | 9/30/2015 |  | 9/30/2016 |  | 9/30/2015 |  |
| Available-for-Sale Portfolio |  |  |  |  |  |  |  |  |
| U.S. Agency Securities | \$ | - | \$ | 4,999 | \$ | - | \$ | 55,308 |
| State and Municipal Obligations |  | - |  | - |  | 10,920 |  | - |
| Mortgage-Backed Securities-Residential |  | - |  | 15,396 |  | - |  | 69,563 |
| Other |  | - |  | 11 |  | - |  | 35 |
| Total Purchases | \$ | - | \$ | 20,406 | \$ | 10,920 | \$ | 124,906 |
| Maturities \& Calls | \$ | 22,185 | \$ | 14,995 | \$ | 65,965 | \$ | 70,971 |
|  |  | hree Mon | hs | ded |  | Nine Mon | s | ded |
| Purchases: |  | /2016 |  | 0/2015 |  | 0/2016 |  | 0/2015 |
| Held-to-Maturity Portfolio |  |  |  |  |  |  |  |  |
| State and Municipal Obligations | \$ | 850 | \$ | 1,248 | \$ | 60,786 | \$ | 54,796 |
| Mortgage-Backed Securities-Residential |  | - |  | - |  | - |  | - |
| Total Purchases | \$ | 850 | \$ | 1,248 | \$ | 60,786 | \$ | 54,796 |
| Maturities \& Calls | \$ | 17,699 | \$ | 8,319 | \$ | 42,295 | \$ | 38,403 |

## 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)

|  | 9/30/2016 |  | 6/30/2016 |  | 3/31/2016 |  | 12/31/2015 |  | 9/30/2015 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Loan Balances: |  |  |  |  |  |  |  |  |  |  |
| Period-End Loans | \$1,707,216 |  | \$ 1,672,490 |  | \$ 1,622,728 |  | \$1,573,952 |  | \$1,536,925 |  |
| Average Loans, Year-to-Date | 1,641,899 |  | 1,622,210 |  | 1,595,018 |  | 1,484,766 |  | 1,460,681 |  |
| Average Loans, Quarter-to-Date | 1,680,850 |  | 1,649,401 |  | 1,595,018 |  | 1,556,234 |  | 1,502,620 |  |
| Period-End Assets | 2,580,485 |  | 2,540,242 |  | 2,478,871 |  | 2,446,188 |  | 2,419,551 |  |
| Allowance for Loan Losses, Year-to-Date: |  |  |  |  |  |  |  |  |  |  |
| Allowance for Loan Losses, Beginning of Period | \$ | 16,038 | \$ | 16,038 | \$ | 16,038 | \$ | 15,570 | \$ | 15,570 |
| Provision for Loan Losses, YTD |  | 1,550 |  | 1,070 |  | 401 |  | 1,347 |  | 882 |
| Loans Charged-off, YTD |  | 784 |  | 417 |  | 217 |  | 1,106 |  | 835 |
| Recoveries of Loans Previously Charged-off |  | 171 |  | 107 |  | 65 |  | 227 |  | 157 |
| Net Charge-offs, YTD |  | 613 |  | 310 |  | 152 |  | 879 |  | 678 |
| Allowance for Loan Losses, End of Period | \$ | 16,975 | \$ | 16,798 | \$ | 16,287 | \$ | 16,038 | \$ | 15,774 |
| Allowance for Loan Losses, Quarter-to-Date: |  |  |  |  |  |  |  |  |  |  |
| Allowance for Loan Losses, Beginning of Period | \$ | 16,798 | \$ | 16,287 | \$ | 16,038 | \$ | 15,774 | \$ | 15,574 |
| Provision for Loan Losses, QTD |  | 480 |  | 669 |  | 401 |  | 465 |  | 537 |
| Loans Charged-off, QTD |  | 367 |  | 201 |  | 217 |  | 271 |  | 380 |
| Recoveries of Loans Previously Charged-off |  | 64 |  | 43 |  | 65 |  | 70 |  | 43 |
| Net Charge-offs, QTD |  | 303 |  | 158 |  | 152 |  | 201 |  | 337 |
| Allowance for Loan Losses, End of Period | \$ | 16,975 | \$ | 16,798 | \$ | 16,287 | \$ | 16,038 | \$ | 15,774 |
| Nonperforming Assets, at Period-End: |  |  |  |  |  |  |  |  |  |  |
| Nonaccrual Loans | \$ | 6,107 | \$ | 6,705 | \$ | 7,445 | \$ | 6,433 | \$ | 7,791 |
| Loans Past Due 90 or More Days and Still Accruing Interest |  | 548 |  | 456 |  | 552 |  | 286 |  | 963 |
| Restructured and in Compliance with Modified Terms |  | 107 |  | 111 |  | 118 |  | 187 |  | 307 |
| Total Nonperforming Loans |  | 6,762 |  | 7,272 |  | 8,115 |  | 6,906 |  | 9,061 |
| Repossessed Assets |  | 149 |  | 47 |  | 165 |  | 140 |  | 61 |
| Other Real Estate Owned |  | 868 |  | 885 |  | 1,846 |  | 1,878 |  | 841 |
| Total Nonperforming Assets | \$ | 7,779 | \$ | 8,204 | \$ | 10,126 | \$ | 8,924 | \$ | 9,963 |
| Asset Quality Ratios: |  |  |  |  |  |  |  |  |  |  |
| Allowance to Nonperforming Loans |  | 251.04\% |  | 231.00\% |  | 200.70\% |  | 232.23\% |  | 174.09\% |
| Allowance to Period-End Loans |  | 0.99\% |  | 1.00\% |  | 1.00\% |  | 1.02\% |  | 1.03\% |
| Provision to Average Loans (Quarter) ${ }^{(1)}$ |  | 0.11\% |  | 0.16\% |  | 0.10\% |  | 0.12\% |  | 0.14\% |
| Provision to Average Loans (YTD) ${ }^{(1)}$ |  | 0.13\% |  | 0.09\% |  | 0.10\% |  | 0.09\% |  | 0.08\% |
| Net Charge-offs to Average Loans (Quarter) ${ }^{(1)}$ |  | 0.07\% |  | 0.04\% |  | 0.04\% |  | 0.05\% |  | 0.09\% |
| Net Charge-offs to Average Loans (YTD) ${ }^{(1)}$ |  | 0.05\% |  | 0.03\% |  | 0.04\% |  | 0.06\% |  | 0.06\% |
| Nonperforming Loans to Total Loans |  | 0.40\% |  | 0.43\% |  | 0.50\% |  | 0.44\% |  | 0.59\% |
| Nonperforming Assets to Total Assets <br> (1) Annualized |  | 0.30\% |  | 0.32\% |  | 0.41\% |  | 0.36\% |  | 0.41\% |

## 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.

In the third quarter of 2016, we made a $\$ 480$ thousand provision for loan losses, compared to a provision of $\$ 537$ thousand for the third quarter of 2015 and a provision of $\$ 669$ thousand for the most recent prior quarter. A variety of factors and events during the most recent quarter dictated the amount of the provision for the quarter, some of which argued for a somewhat higher provision than in certain previous quarters, and others for a somewhat lower provision. Factors suggesting a higher provision included an increase in the level of adversely rated commercial real estate loans, an increase in the level of total loans outstanding, the level of net chargeoffs during the quarter which were slightly higher than in immediately preceding quarters, and a slight increase in concerns over
economic conditions generally. However, several factors dictated a reduction in the provision and these more than offset the aggravating factors. These positive qualitative factors included a general strengthening in the quality of the loan portfolio during the period, including continuing substantial improvements in the already very low levels of our nonperforming loans across all categories and a continued decline in the unallocated portion of the reserve. 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 $0.99 \%$ at September 30, 2016, a decrease of 3 basis points from the $1.02 \%$ ratio at December 31, 2015 and a decrease of 4 basis points from the $1.03 \%$ ratio at September 30, 2015.

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.

## Risk Elements

Our nonperforming assets at September 30, 2016 amounted to $\$ 7.8$ million, a decrease of $\$ 1.1$ million, or $12.8 \%$, from the December 31, 2015 total and a decrease of $\$ 2.2$ million, or $21.9 \%$, from the year earlier total. A portion of this decrease was attributable to one commercial loan previously classified as nonperforming, which was fully paid-off during the second quarter of 2016. However, the decrease in our nonperforming loans over the 9 -month period was significant and broad-based. 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 (and substantially higher than our ratios during such periods). (See page 34 for a discussion of our peer group.) At June 30, 2016, our ratio of loans past due 90 or more days plus nonaccrual loans plus other real estate owned to total assets was $0.32 \%$, well below the $0.82 \%$ ratio of our peer group at such date (the latest date for which peer group information is available). At September 30, 2016 our ratio had fallen further, to $0.30 \%$.

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)


At September 30, 2016, our loans in this category totaled $\$ 6.9$ million, a decrease of $\$ 1.1$ million, or $13.8 \%$, from the $\$ 8.1$ million of such loans at December 31, 2015. The September 30, 2016 total of non-current loans equaled $0.41 \%$ of loans then outstanding, whereas the year-end 2015 total equaled $0.52 \%$ of loans then outstanding. The decrease from December 31, 2015 is primarily attributable to a substantial decrease in delinquent automobile loans, which were at a seasonally elevated level at year-end 2015 but declined (improved) substantially during the first quarter of 2016, to a more normal level, and continued to decline throughout the second and third quarters.

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 September 30, 2016 was $\$ 33.7$ million, up from the dollar amount of such loans at December 31, 2015, when the amount was $\$ 27.3$ million, due primarily to the downgrade of three commercial borrowers. Although the risk rating on these loans has increased, at this time we expect to collect all payments of contractual interest and principal in full on these classified loans. These loans will continued to be closely monitored.

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 September 30, 2016, 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

Please see our discussion in our Form 10-K for December 31, 2015, under the heading "Regulatory Capital Standards" beginning on page 7, on the impact of the Dodd-Frank Act on regulatory capital standards for U.S. insured depository financial institutions such as our banks and our holding company. In essence, Dodd-Frank required the federal bank regulators to impose enhanced bank
regulatory capital standards on banks and their bank holding companies, in an effort to mitigate the negative effects of future financial crises on the U.S. banking system. In July 2013, the federal bank regulators adopted such enhanced standards, which first became effective for our holding company and our banks on January 1, 2015.

Under the new rules, outstanding TRUPs that were issued by small- to medium-sized financial institutions such as Arrow before May 19, 2010, the grandfathering date for TRUPs under Dodd-Frank, will continue to qualify as tier 1 capital, as before Dodd-Frank, up to a limit of $25 \%$ of total tier 1 capital (including, together with such TRUPs, any other grandfathered tier 1 capital components), until the TRUPs mature or are redeemed.

On January 1, 2015, we took the one-time election offered to community banking organization such as ours under the new capital rules to exclude accumulated other comprehensive income (AOCI) from regulatory capital in the calculation of our regulatory capital ratios.

Regulatory capital, although a financial measure that is not provided for or governed by GAAP, nevertheless has been exempted by the SEC from the definition of "non-GAAP financial measures" in the SEC's Regulation G governing disclosure by registered companies of non-GAAP financial measures. Thus, certain information which is generally required to be presented in connection with our disclosure of non-GAAP financial measures need not be provided, and has not been provided, for the regulatory capital measures discussed below.

Risk-Based and Leverage Capital Standards: Under the current rules, our holding company and our subsidiary banks are currently subject to both risk-based capital guidelines and a leverage capital ratio test.

Risk-Based Capital Ratios. The new risk-based capital guidelines (in effect, for us, since January 1, 2015), much like the old riskbased guidelines they replaced, assign risk weightings to all assets and certain off-balance sheet items of financial institutions for purposes of calculating institutions' various risk-based capital ratios. The risk-weightings of various categories of assets under the new capital rules are somewhat different than the risk-weightings under the old rules. The risk-weighting process generally results in a substantial discounting of low-risk or risk-free assets from their GAAP book values on the balance sheet; that is, a significant dollar amount of such assets "disappears" from the balance sheet in the risk-weighting process.

The risk-based guidelines establish three minimum ratios of regulatory capital to total risk-weighted assets. Each of these ratios defines regulatory "capital" to include a different set of capital elements.
(i) CET1 Capital. The first, most basic measure of regulatory capital for purposes of the new risk-based capital guidelines is "Common Equity Tier 1 Capital," or CET1. This definition includes in capital only common equity items, such as common stock, related surplus and retained earnings. The current minimum ratio of Common Equity Tier 1 Capital to risk-adjusted assets equals (A) 4.50\%, plus (B) the currently required portion of the new capital buffer (discussed below), which portion during 2016 is $.6125 \%$, for a total current minimum CET1 ratio of $5.1125 \%$.
(ii) Tier 1 Risk-Based Capital. The second, somewhat less stringent measure of regulatory capital for purposes of the risk-based capital guidelines is "Tier 1 Risk-Based Capital." This definition includes in capital all Common Equity Tier 1 Capital (as defined above), plus a limited amount of eligible permanent preferred stock and (for small- to medium-sized holding companies) a limited amount of grandfathered trust preferred securities (see the discussion below on Trust Preferred Securities under the heading "Capital Components; Stock Repurchases; Dividends"), minus intangible assets, net of associated deferred tax liabilities, and subject to certain other deductions. The current minimum ratio of Tier 1 Risk-Based Capital to risk-adjusted assets equals (A) $6.00 \%$, plus (B) the currently required portion of the new capital buffer (.6125\%), for a total current minimum Tier 1 Risk-Based Capital ratio of $6.6125 \%$.
(iii) Total Risk-Based Capital. The third and most expansive measure of regulatory capital for purposes of the risk-based capital guidelines is "Total Risk-Based Capital." This definition includes in capital all Tier 1 Risk-Based Capital (as defined above), plus Tier 2 Capital, the latter comprising a limited amount of eligible subordinated debt, other eligible preferred stock, certain other qualifying capital instruments, and a limited amount of the allowance for loan losses, subject to deductions. The current minimum ratio of Total Risk-Based Capital to risk-adjusted assets equals (A) $8.00 \%$, plus (B) the currently required portion of the new capital buffer (.6125\%), for a total minimum current Total Risk-Based Capital ratio of 8.6125\%.

New Capital Buffer. The new capital buffer required under the enhanced regulatory capital rules is an additional layer of required regulatory capital for all banks and bank holding companies (the so-called "Capital Conservation Buffer), which is a percentage that must be added to each of the three minimum required risk-based capital ratios discussed above. The total percentage to be added by way of the buffer is $2.50 \%$. This buffer is being phased-in in four installments to be completed January 1, 2019. The capital for purposes of the buffer must consist in its entirety of Common Equity Tier 1 Capital. As of January 1, 2016, this buffer was one-fourth phased-in (i.e., $0.6125 \%$, has been added to each of the three risk-based capital ratios, as noted above). The three remaining increments of the buffer, each in the amount of $0.6125 \%$, will be phased in on January 1 of each of the upcoming three years.

Leverage Ratio. The other regulatory capital standard under the current rules is the leverage ratio. The leverage ratio is the ratio of (a) Tier 1 capital (which is defined differently for this ratio than for the risk-based capital ratios) to (b) total consolidated assets, without any risk weighting (i.e, discounting) of assets, subject to deductions. The minimum leverage ratio under the current rules for banks and bank holding companies is $4.00 \%$. Rapidly expanding companies may be required by bank regulators to meet substantially higher minimum leverage ratios.

Regulatory Capital Classification Scheme for Financial Institutions. Federal banking law mandates that certain actions must be taken by banking regulators ("prompt corrective action") for financial institutions that are deemed undercapitalized as measured under any of these regulatory capital guidelines. Federal banking law establishes five categories of capitalization for financial institutions ranging from "well-capitalized" (the highest ranking) to "critically undercapitalized" (the lowest ranking), with any of the lowest three rankings denoting an "undercapitalized" institution. Essentially, federal banking law ties the ability of banking organizations to engage in certain types of non-banking financial activities and to utilize certain procedures to such organizations' continuing to qualify for one of the two highest-ranking of the five 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 September 30, 2016:

|  | Common Equity Tier 1 Capital Ratio | Tier 1 Risk-Based Capital Ratio | Total Risk-Based Capital Ratio | Tier 1 Leverage Ratio |
| :---: | :---: | :---: | :---: | :---: |
| Arrow Financial Corporation | 12.80\% | 13.98\% | 14.99\% | 9.44\% |
| Glens Falls National Bank \& Trust Co. | 13.85\% | 13.86\% | 14.87\% | 9.02\% |
| Saratoga National Bank \& Trust Co. | 11.67\% | 11.67\% | 12.64\% | 9.26\% |
| Current Regulatory Minimum (2016) | 5.125\% | 6.625\% | 8.625\% | 4.000\% |
| FDICIA's "Well-Capitalized" Standard (2016) | 6.500\% | 8.000\% | 10.000\% | 5.000\% |
| Final Regulatory Minimum (2019) <br> ${ }^{(1)}$ Including the fully phased-in 2.50 \% capital conservation buffer | $7.0 \%{ }^{(1)}$ | 8.5\%(1) | 10.5\%(1) | $4.00 \%{ }^{(1)}$ |

At September 30, 2016, 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.

## Capital Components; Stock Repurchases; Dividends

Stockholders' Equity: Stockholders' equity was $\$ 229.2$ million at September 30, 2016, an increase of $\$ 15.2$ million, or $7.1 \%$, from December 31, 2015. The most significant factors contributing to this increase were net income for the period of $\$ 19.9$ million, an increase in other comprehensive income of $\$ 2.5$ million, and increases in book equity from our various stock-based compensation and dividend reinvestment plans of $\$ 3.1$ million. These equity enhancing developments during the quarter were offset, in part, by cash dividends of $\$ 9.7$ million and purchases of our own common stock of $\$ 1.8$ million. See the Consolidated Statement of Changes in Stockholders' Equity on page 6 of this report for all of the changes in stockholders' equity between December 31, 2015 and September 30, 2016.

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 historical approach to regulatory capital, as in effect prior to the Dodd-Frank Act of 2010, TRUPs typically qualified as Tier 1 capital for all bank holding companies, of any size, but only in amounts of up to $25 \%$ of the institution's Tier 1 capital, net of goodwill less any associated deferred tax liability. After the Dodd-Frank Act, this treatment of TRUPs as eligible for Tier 1 regulatory capital continues to apply, for small- and medium-sized banking organizations like ours, only with respect to TRUPs issued by such organizations before May 19, 2010, Dodd-Frank's grandfathering date for TRUPs. Thus, our outstanding TRUPs were grandfathered under Dodd-Frank, and will continue to qualify as Tier 1 capital, subject to the limits described above, until their maturity or redemption (the two tranches of TRUPs mature in 2028 and 2029, respectively). However, no additional TRUPs that we might issue in the future would qualify as regulatory capital.

Stock Repurchase Program: At its regular meeting in October 2016, the Board of Directors approved a new 12-month stock repurchase program (the "2017 program") authorizing the repurchase, at the discretion of senior management, during calendar year 2017 of up to $\$ 5$ million of Arrow's common stock in open market or privately negotiated transactions. This program replaces a similar $\$ 5$ million stock repurchase program which had been approved by the Board in October 2015 for this calendar year 2016 (the "2016 program"). Under the 2017 program, as under the currently effective 2016 program, management will be authorized to effect stock repurchases from time-to-time, to the extent that it believes the Company's stock is reasonably priced and such repurchases are an appropriate use of available capital and in the best interests of stockholders. Repurchases under the 2016 program during the first three quarters of 2016 amounted to $\$ 495$ thousand. Stock "repurchases" resulting from stock-for-stock exercises of compensatory stock options by Company employees or insiders and purchases of Company stock on behalf of participants in the Company's Dividend Reinvestment and Stock Purchase Plan do not count as purchases under the Company's annual stock repurchase programs. For more information on repurchases, see the table under Item 2 of Section II of this Report, entitled "Issuer Purchase of Equity Securities."

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 27, 2016, our Board of Directors declared a 2016 third quarter cash dividend of $\$ 0.243$ payable on September 2, 2016. Per share amounts in the following table have been restated for our September 29, 2016 3.0\% stock dividend.

|  |  | Marke | Pr |  |  | sh ends |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | gh |  | ared |
| $\underline{2015}$ |  |  |  |  |  |  |
| First Quarter | \$ | 24.32 | \$ | 26.20 | \$ | 0.238 |
| Second Quarter |  | 24.06 |  | 26.65 |  | 0.238 |
| Third Quarter |  | 25.30 |  | 27.18 |  | 0.238 |
| Fourth Quarter |  | 25.07 |  | 28.39 |  | 0.243 |
| $\underline{2016}$ |  |  |  |  |  |  |
| First Quarter | \$ | 23.83 | \$ | 26.74 | \$ | 0.243 |
| Second Quarter |  | 25.16 |  | 29.51 |  | 0.243 |
| Third Quarter |  | 28.62 |  | 34.08 |  | 0.243 |
| Fourth Quarter (dividend payable December 15, 2016) |  |  |  |  |  | 0.250 |



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 demand as well as the need to maximize earnings, we must have available reasonably priced sources of funds, both onand off-balance sheet, that can be accessed quickly in time of need.

Our primary sources of available liquidity are overnight borrowing of federal funds (i.e., investments in federal funds sold), available interest bearing balances at the Federal Reserve Bank, and cash flow from maturing investment securities and loans. In addition, certain investment securities acquired by us 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 $\$ 339.2$ million at September 30, 2016, a decrease of $\$ 63.1$ million, or $15.7 \%$, from the year-end 2015 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, short-term balances at the Federal Reserve Bank, and maturing or marketable 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 Federal Home Loan Bank of New York ("FHLBNY"). Our federal funds lines of credit are with two correspondent banks totaling $\$ 35$ million, but we did not draw on these lines during 2015 or the first nine months of 2016.

To support our borrowing capacity with the FHLBNY, we have pledged certain assets of our bank subsidiaries as available collateral, including mortgage-backed securities, residential mortgage loans and home equity loans. Our unused borrowing capacity at the FHLBNY was approximately $\$ 276.3$ million at September 30, 2016, with approximately $\$ 163.0$ million in encumbered collateral then outstanding. In addition, we have identified brokered deposits 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 September 30, 2016, the amount available under this facility was approximately $\$ 360.8$ million, with no advances then outstanding.

We measure and monitor our basic liquidity as a ratio of liquid assets to total assets, as well as to total short-term liabilities, in each case both with and without the inclusion of certain 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 September 30, 2016, our basic liquidity ratio, determined in accordance with the proposed new liquidity requirements required by the Dodd-Frank Act (which permit inclusion of any FHLB collateralized borrowing capacity as a liquid asset), was $10.7 \%$ of total assets, which was $\$ 169$ million in excess of our internally-set minimum target ratio of $4 \%$ of total assets.

## RESULTS OF OPERATIONS

## Three Months Ended September 30, 2016 Compared With Three Months Ended September 30, 2015

## Summary of Earnings Performance

(Dollars in Thousands, Except Per Share Amounts)

|  | Quarter Ended |  |  |  | Change |  | \% Change |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 30/2016 | 9/30/2015 |  |  |  |  |
| Net Income | \$ | 6,738 | \$ | 5,933 | \$ | 805 | 13.6\% |
| Diluted Earnings Per Share |  | 0.50 |  | 0.45 |  | 0.05 | 11.1 |
| Return on Average Assets |  | 1.06\% |  | 1.00\% |  | 0.06\% | 6.0 |
| Return on Average Equity |  | 11.75\% |  | 11.24\% |  | 0.51\% | 4.5 |

We reported net income of $\$ 6.7$ million and diluted earnings per share (EPS) of $\$ .50$ for the third quarter of 2016, compared to net income of $\$ 5.9$ million and diluted EPS of $\$ .45$ for the third quarter of 2015.

We experienced no gain or loss on the sale of securities in either third quarter of 2016.
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 |  |  |  | Change |  | \% Change |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 9/30/2016 |  |  | /30/2015 |  |  |  |
| Interest and Dividend Income | \$ | 20,403 | \$ | 18,924 | \$ | 1,479 | 7.8\% |
| Interest Expense |  | 1,405 |  | 1,253 |  | 152 | 12.1\% |
| Net Interest Income |  | 18,998 |  | 17,671 |  | 1,327 | 7.5\% |
| Tax-Equivalent Adjustment |  | 1,121 |  | 1,093 |  | 28 | 2.6\% |
| Average Earning Assets ${ }^{(1)}$ |  | 2,399,197 |  | 2,232,238 |  | 166,959 | 7.5\% |
| Average Interest-Bearing Liabilities |  | 1,892,583 |  | 1,772,156 |  | 120,427 | 6.8\% |
| Yield on Earning Assets ${ }^{(1)}$ |  | 3.38\% |  | 3.36\% |  | 0.02\% | 0.6\% |
| Cost of Interest-Bearing Liabilities |  | 0.30 |  | 0.28 |  | 0.02\% | 7.1\% |
| Net Interest Spread |  | 3.08 |  | 3.08 |  | -\% | -\% |
| Net Interest Margin |  | 3.15 |  | 3.14 |  | 0.01\% | 0.3\% |

${ }^{(1)}$ Includes Nonaccrual Loans
Between the third quarter of 2015 and the third quarter of 2016, our net interest margin (which we define as our net interest income on a tax-equivalent basis divided by average earning assets, annualized) increased by 1 basis point, from $3.14 \%$ to $3.15 \%$, representing a $0.3 \%$ increase in our margin. 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 35, and the tabular information and notes on pages 37 through 40, regarding our reasons for using these and other non-GAAP measures and the reconciliation thereof to comparable GAAP measures.) The very slight increase in our interest margin between the comparable quarters was impacted to a degree by the Fed's 25 basis point increase in short-term rates in December of 2015, which, in turn, resulted in a small increase in yields on our overnight funds (held in interest-bearing balances at the Federal Reserve Bank of New York), as well as an increase in yields on short-term maturities in our investment securities portfolios, offset but only in part by an increase in the cost of funds for our overnight advances (from FHLBNY). Otherwise, the yields on our loan portfolio and the cost of funds for our other interest-bearing deposits and liabilities remained virtually unchanged from the third quarter of 2015. Net interest income for the just completed quarter, on a taxable equivalent basis, increased by $\$ 1.3$ million, or $7.5 \%$, from the third quarter of 2015 , as the slight increase in our net interest margin between the periods was enhanced by the positive impact of a $8.4 \%$ 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 52, the provision for loan losses for the third quarter of 2016 was $\$ 480$ thousand, compared to a provision of $\$ 537$ thousand for the 2015 quarter.

## Noninterest Income

## Summary of Noninterest Income

(Dollars in Thousands)

Income From Fiduciary Activities<br>Fees for Other Services to Customers<br>Insurance Commissions<br>Net Gain on Securities Transactions<br>Net Gain on the Sale of Loans<br>Other Operating Income<br>Total Noninterest Income

| Quarter Ended |  |  |  | Change |  | \% Change |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 9/30/2016 |  | 9/30/2015 |  |  |  |  |
| \$ | 1,923 | \$ | 1,923 | \$ | - | - \% |
|  | 2,491 |  | 2,331 |  | 160 | 6.9 \% |
|  | 2,127 |  | 2,343 |  | (216) | (9.2)\% |
|  | - |  | - |  | - | - \% |
|  | 310 |  | 236 |  | 74 | 31.4 \% |
|  | 263 |  | 304 |  | (41) | (13.5)\% |
| \$ | 7,114 | \$ | 7,137 | \$ | (23) | (0.3)\% |

Total noninterest income in the just completed quarter was $\$ 7.1$ million, virtually unchanged from total noninterest income for the third quarter of 2015.

Increases between the two quarters in fees for other services to customers and net gains on the sale of loans were offset in full by decreases in insurance commission income and other operating income. Income from fiduciary activities was essentially unchanged between the two quarters, as the decline in fees from continuing fiduciary accounts was almost exactly offset by a net increase in the number of accounts under administration. The $9.2 \%$ decrease in insurance commissions was primarily attributable to the absence of income during the 2016 quarter related to the line of insurance agency business (youth sports activities) that we sold to an unrelated party in the fourth quarter of 2015. The decrease in other operating income between the periods was due to the fact that we recognized significant income in the 2015 quarter from our investment in regional business incubation enterprises (limited partnerships), which was not recognized by us in the 2016 quarter.

Fees for other services to customers, the largest segment of our noninterest income, increased by $\$ 160$ thousand, or $6.9 \%$ between the third quarter of 2015 and the third 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. The increase in this category in the 2016 period was primarily attributable to income received from a card processor which offset the incremental costs of issuing new debit cards with chip technology to our existing customers. Effective October 1, 2011 Visa announced new, reduced debit interchange rates and related modifications to comply with new debit card interchange fee rules promulgated by the Federal Reserve for large banks under the Dodd-Frank Act. This reduced rate structure has had, and will continue to have, a slight but noticeable negative impact on the debit card interchange income recognized by smaller banks such as ours as well. However, 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. If this usage continues to grow, it should continue to offset the negative impact of the new rate restrictions on interchange fees. Generally, we do not believe that the new 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 increase in the net gain on the sale of loans between the quarters was primarily attributable to an increase in the volume of loan sales in the 2016 period, as opposed to enhanced profitability on such sales.

## Noninterest Expense

## Summary of Noninterest Expense

(Dollars in Thousands)

|  | Quarter Ended |  |  |  | Change |  | \% Change |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 9/30/2016 |  | 9/30/2015 |  |  |  |  |
| Salaries and Employee Benefits | \$ | 8,693 | \$ | 8,699 | \$ | (6) | (0.1)\% |
| Occupancy Expense of Premises, Net |  | 1,257 |  | 1,256 |  | 1 | 0.1 |
| Furniture and Equipment Expense |  | 1,168 |  | 1,019 |  | 149 | 14.6 |
| FDIC and FICO Assessments |  | 217 |  | 297 |  | (80) | (26.9) |
| Amortization |  | 74 |  | 80 |  | (6) | (7.5) |
| Other Operating Expense |  | 3,673 |  | 3,499 |  | 174 | 5.0 |
| Total Noninterest Expense | \$ | 15,082 | \$ | 14,850 | \$ | 232 | 1.6 |
| Efficiency Ratio |  | 57.48\% |  | 59.54\% |  | (2.06)\% | (3.5) |

Noninterest expense for the third quarter of 2016 was $\$ 15.1$ million, an increase of $\$ 232$ thousand, or $1.6 \%$, from the expense for the third quarter of 2015. This increase on a year-over-year basis represents less than half the growth in average total loans or in average total assets between the same two periods. Our enhanced productivity period-to-period was also reflected in our improved efficiency ratio, which was $57.48 \%$ for the third quarter of 2016 , down by 206 basis points (a positive development) from our ratio for the comparable 2015 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 35 of this Report under the heading "Use of NonGAAP Financial Measures" and the related tabular information and notes on pages 37 through 40 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 34 for a discussion of our peer group), even after adjusting for the definitional difference. For the three-month period ended June 30, 2016 (the most recent reporting period for which peer group information is available), the peer group's efficiency ratio was $67.83 \%$, and our ratio was $56.84 \%$ (not adjusted for the definitional difference).

Salaries and employee benefits expense decreased $0.1 \%$ in the third quarter of 2016 compared to the 2015 quarter. The overall decrease was partially attributable to a decrease of 7 in the number of full-time equivalent employees. Although total salaries increased between the period, this was outweighed by a larger decrease in benefits expense. The increase in salary expense reflected normal merit increases. The decrease in our benefit expense was primarily attributable to lower medical claims incurred under the company's minimum premium health insurance plan during the 2016 period.

The 2016 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 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 9/30/2016 |  | 9/30/2015 |  | Change |  | \% Change |
| Provision for Income Taxes | \$ | 2,691 | \$ | 2,395 | \$ | 296 | 12.4\% |
| Effective Tax Rate |  | 28.5\% |  | 28.8\% |  | (0.3) | (1.0) |

The small decrease in the effective tax rate in the third quarter of 2016 over the 2015 quarter, was primarily attributable to the fact that tax-exempt income represented a slightly larger percentage of our total income in the 2016 quarter than in the prior year quarter.

## RESULTS OF OPERATIONS

## Nine Months Ended September 30, 2016 Compared With Nine Months Ended September 30, 2015

## Summary of Earnings Performance

(Dollars in Thousands, Except Per Share Amounts)

|  | Nine Months Ended |  |  |  | Change |  | \% Change |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | 9/30/2016 |  | 3/2015 |  |  |  |
| Net Income | \$ | 19,934 | \$ | 18,093 | \$ | 1,841 | 10.2\% |
| Diluted Earnings Per Share |  | 1.48 |  | 1.36 |  | 0.12 | 8.8 |
| Return on Average Assets |  | 1.07\% |  | 1.05\% |  | 0.02\% | 1.9 |
| Return on Average Equity |  | 11.93\% |  | 11.73\% |  | 0.20\% | 1.7 |

We reported net income of $\$ 19.9$ million and diluted earnings per share (EPS) of $\$ 1.48$ for the first nine months of 2016, compared to net income of $\$ 18.1$ million and diluted EPS of $\$ 1.36$ for the first nine months of 2015.

We experienced net gains of $\$ 88$ thousand, net of tax, on securities sales in the 2016 nine-month period, compared to net gains of $\$ 64$ thousand, net of tax, on the sale of securities in the comparable 2015 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)

|  | Nine Months Ended |  |  |  | Change |  | \% Change |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 9/30/2016 |  |  | 9/30/2015 |  |  |  |
| Interest and Dividend Income | \$ | 60,491 | \$ | 55,498 | \$ | 4,993 | 9.0\% |
| Interest Expense |  | 3,952 |  | 3,582 |  | 370 | 10.3\% |
| Net Interest Income |  | 56,539 |  | 51,916 |  | 4,623 | 8.9\% |
| Tax-Equivalent Adjustment |  | 3,346 |  | 3,270 |  | 76 | 2.3\% |
| Average Earning Assets ${ }^{(1)}$ |  | 2,368,454 |  | 2,184,962 |  | 183,492 | 8.4\% |
| Average Interest-Bearing Liabilities |  | 1,883,717 |  | 1,752,028 |  | 131,689 | 7.5\% |
| Yield on Earning Assets ${ }^{(1)}$ |  | 3.41\% |  | 3.40\% |  | 0.01\% | 0.3\% |
| Cost of Interest-Bearing Liabilities |  | 0.28 |  | 0.27 |  | 0.01\% | 3.7\% |
| Net Interest Spread |  | 3.13 |  | 3.13 |  | -\% | -\% |
| Net Interest Margin |  | 3.19 |  | 3.18 |  | 0.01\% | 0.3\% |

## ${ }^{(1)}$ Includes Nonaccrual Loans

Between the first nine months of 2015 and the first nine months of 2016, our net interest margin (which we define as our net interest income on a tax-equivalent basis divided by average earning assets, annualized) increased by 1 basis point, from $3.18 \%$ to $3.19 \%$, representing an increase of $0.3 \%$ in our margin. 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 35, and the tabular information and notes on pages 37 through 40, regarding our net interest margin and tax-equivalent net interest income, which are commonly used non-GAAP financial measures. Among other things, the slight increase in net interest margin between the respective periods reflected both a continuing modest shift in our asset mix, from investment securities to loans, and a small increase in the 2016 period in the average yields in our short-term investment securities portfolio and our overnight interest-bearing deposits at banks, the result, indirectly, of the Fed's 25 basis point increase in short-term rates in December 2015. Otherwise, the yields on our loan portfolio and the cost of funds for our other interest-bearing deposits and liabilities remained virtually unchanged from the first nine months of 2015 . Net interest income for the just completed nine-month period, on a taxable equivalent basis, increased by $\$ 4.6$ million, or $8.9 \%$, over the 2015 amount, principally due to the positive impact of a $8.4 \%$ 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 52, the provision for loan losses for the first nine months of 2016 was $\$ 1.6$ million, compared to a provision of $\$ 882$ thousand for the 2015 period.

## Noninterest Income

## Summary of Noninterest Income

(Dollars in Thousands)

Income From Fiduciary Activities<br>Fees for Other Services to Customers<br>Insurance Commissions<br>Net Gain on Securities Transactions<br>Net Gain on the Sale of Loans<br>Other Operating Income<br>Total Noninterest Income

| Nine Months Ended |  |  |  | Change |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 9/30/2016 |  | 9/30/2015 |  |  |  | \% Change |
| \$ | 5,854 | \$ | 5,907 | \$ | (53) | (0.9)\% |
|  | 7,144 |  | 6,904 |  | 240 | 3.5 |
|  | 6,468 |  | 6,849 |  | (381) | (5.6) |
|  | 144 |  | 106 |  | 38 | 35.8 |
|  | 649 |  | 488 |  | 161 | 33.0 |
|  | 925 |  | 1,183 |  | (258) | (21.8) |
| \$ | 21,184 | \$ | 21,437 | \$ | $\underline{\text { (253) }}$ | (1.2) |

Total noninterest income in the just completed nine-month period was $\$ 21.2$ million, a small decrease of $\$ 253$ thousand, or $1.2 \%$, from total noninterest income of $\$ 21.4$ million for the first nine months of 2015.

Increases between the two periods in fees for other services to customers, net gains on the sale of loans and net securities gains were more than offset by decreases in insurance commission income, income from fiduciary activities, and other operating income. The $5.6 \%$ decrease in insurance commissions between the periods was primarily attributable to the absence of income in the 2016 period from the line of insurance agency business (youth sports activities) that we sold to a third party in the fourth quarter of 2015. The small (less than 1 percent) decrease in income from fiduciary activities was primarily due to volatility in the equities markets between the the two periods. The decrease in other operating income between the periods was due to the fact that we recognized significant income in the 2015 period from our investment in regional business incubation enterprises (limited partnerships), which was not recognized by us in the 2016 period.

Fees for other services to customers, the largest segment of our noninterest income, increased by $\$ 240$ thousand, or $3.5 \%$ between the first nine months of 2015 and the first nine months 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. The increase in the 2016 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, offseting 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 51 of this Report. The increase in the net gain on the sale of loans was primarily attributable to a corresponding increase in the volume of loan sales in 2016, as opposed to enhanced profitability on such sales.

## Noninterest Expense

## Summary of Noninterest Expense

(Dollars in Thousands)

|  | Nine Months Ended |  |  |  | Change |  | \% Change |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 9/30/2016 |  | 9/30/2015 |  |  |  |  |
| Salaries and Employee Benefits | \$ | 25,223 | \$ | 24,577 | \$ | 646 | 2.6\% |
| Occupancy Expense of Premises, Net |  | 3,819 |  | 3,825 |  | (6) | (0.2) |
| Furniture and Equipment Expense |  | 3,404 |  | 3,281 |  | 123 | 3.7 |
| FDIC and FICO Assessments |  | 844 |  | 873 |  | (29) | (3.3) |
| Amortization |  | 223 |  | 250 |  | (27) | (10.8) |
| Other Operating Expense |  | 10,824 |  | 10,382 |  | 442 | 4.3 |
| Total Noninterest Expense | \$ | 44,337 | \$ | 43,188 | \$ | 1,149 | 2.7 |
| Efficiency Ratio |  | 56.86\% |  | 58.62\% |  | (1.76)\% | (3.0) |

Noninterest expense for the first nine months of 2016 was $\$ 44.3$ million, an increase of $\$ 1,149$ thousand, or $2.7 \%$, from the expense for the first nine months of 2015. This increase on a year-over-year basis represents less than half the growth in average total loans or in average total assets between the same two periods. Our enhanced productivity period-to-period was also reflected in our improved efficiency ratio, which was $56.86 \%$ for the first nine months of 2016 , down by 176 basis points (a positive development) from our ratio for the comparable 2015 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 35 of this Report under the heading "Use of NonGAAP Financial Measures" and the related tabular information and notes on pages 37 through 40 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 34 for a discussion of our peer group), even after adjusting for the definitional difference. For the three-month period ended June 30, 2016 (the most recent reporting period for which peer group information is available), the peer group efficiency ratio was $67.83 \%$, and our ratio was $56.84 \%$ (not adjusted for the definitional difference).

Salaries and employee benefits expense increased $2.6 \%$ in the first nine months of 2016 over the 2015 period, reflecting an increase of $4.0 \%$ in salaries and an increase of $0.9 \%$ in benefits. The overall increase was limited in part by a decrease of 7 full-time equivalent employees. The increase in salary expenses reflected normal merit increases. The increase in our benefit expenses was held down but not eliminated by lower medical claims incurred under the company's minimum premium health insurance plan during the 2016 period.

The 2016 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)

| Nine Months Ended |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 9/30/2016 |  | 9/30/2015 |  | Change |  | \% Change |
| Provision for Income Taxes | \$ | 8,556 | \$ | 7,920 | \$ | 636 | 8.0\% |
| Effective Tax Rate |  | 30.0\% |  | 30.4\% |  | (0.4) | (1.3) |

The small decrease in the effective tax rate in the first nine months of 2016 over the 2015 period, was primarily attributable to the fact that tax-exempt income represented a slightly larger percentage of our total income in the 2016 period than in the prior year period.

Item 3.

## QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

In addition to credit risk in our loan portfolio and liquidity risk, discussed on page 56 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 within a range of 0 to $.50 \%$. The resulting abnormally 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. Thus, while we have applied our usual 100 basis point downward shift in interest rates for liabilities and assets on the long end of the yield curve, we have assumed, 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. We also 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 simulation model analysis as of September 30, 2016, a 200 basis point increase in all interest rates demonstrated a $3.28 \%$ decrease in net interest income over the ensuing 12 month period, and a 100 basis point decrease (adjusted, as described above) demonstrated a $0.94 \%$ decrease 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, may reprice more rapidly in a rising rate environment 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 interestearning assets also have relatively short maturities such that, within a relatively few quarters after the first year period following a general rise in rates, we would expect a corresponding 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 September 30, 2016. 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, 2015, 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, 2015.

## 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 September 30, 2016:

|  |  |  | (D) <br> (D) | Maximum <br> Total Number of |
| :--- | ---: | :---: | :---: | :---: |
| Approximate Dollar |  |  |  |  |

${ }^{1}$ 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 shareholders, under the general supervision of the Board as administrator, or (ii) shares surrendered (or deemed surrendered) to Arrow by holders of Arrow stock options in connection with such holders' stock-forstock exercises of such options. 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 July, DRIP purchases -- 2,570 shares and stock option exercises - 4,397 shares; in August, DRIP purchases -3,529 shares; and in September, DRIP purchases -- 18,396 shares and stock option exercises -- 1,310 shares.
${ }^{2}$ Represents total number of shares repurchased by the Company during the quarter under the publicly-announced 2016 Repurchase Program (i.e., the $\$ 5$ million stock repurchase program authorized by the Board of Directors in October 2015 and effective January 1, 2016).
${ }^{3}$ Represents the maximum dollar amount of repurchase authority remaining at each month-end during the quarter under the 2016 Repurchase Program.

## Item 3.

## Defaults Upon Senior Securities - None

Item 4.

## Mine Safety Disclosures - None

## 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

November 8, 2016
Date

November 8, 2016
Date
/s/Thomas J. Murphy
Thomas J. Murphy, President and Chief Executive Officer
/s/Terry R. Goodemote
Terry R. Goodemote, Executive Vice President,
Treasurer and Chief Financial Officer
(Principal Financial Officer and
Principal Accounting Officer)

## Report of Independent Registered Public Accounting Firm

The Board of Directors and Stockholders
Arrow Financial Corporation
Glens Falls, New York
Re: Registration Statements Forms S-3 (No. 333-197927, and 333-210110) and Forms S-8 (No. 333-62719, No.
333-151550, No. 333-188479, and No. 333-188480)
With respect to the subject registration statements, we acknowledge our awareness of the use therein of our report dated November 8, 2016 related to our review of interim financial information.

Pursuant to Rule 436 under the Securities Act of 1933 (the Act), such report is not considered part of a registration statement prepared or certified by an independent registered public accounting firm, or a report prepared or certified by an independent registered public accounting firm within the meaning of Sections 7 and 11 of the Act.

Very truly yours,
/s/ KPMG LLP

Albany, New York
November 8, 2016

# Certification of the Chief Executive Officer Pursuant to <br> Securities Exchange Act Rules 13a-14 and 15d-14 As Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 

I, Thomas J. Murphy, certify that:

1. I have reviewed the quarterly report on Form 10-Q of Arrow Financial Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officers and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
(c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
(d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting.
5. The registrant's other certifying officers and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 8, 2016
By: $\quad$ /s/ Thomas J. Murphy
Thomas J. Murphy
Chief Executive Officer

# Certification of the Chief Financial Officer Pursuant to Securities Exchange Act Rules 13a-14 and 15d-14 As Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 

I, Terry R. Goodemote, certify that:

1. I have reviewed the quarterly report on Form 10-Q of Arrow Financial Corporation;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officers and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
(a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
(b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
(c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
(d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting.
5. The registrant's other certifying officers and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
(a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
(b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: November 8, 2016
By: /s/ Terry R. Goodemote
Terry R. Goodemote
Chief Financial Officer

# Certification of Chief Executive Officer and Chief Financial Officer <br> Pursuant to 18 U.S.C. Section 1350 <br> As Adopted Pursuant To <br> Section 906 of The Sarbanes-Oxley Act of 2002 

In connection with the quarterly report of Arrow Financial Corporation (the "Company") on Form 10-Q for the period ended September 30, 2016, filed with the Securities and Exchange Commission (the "Report"), we, Thomas J. Murphy, Chief Executive Officer of the Company, and Terry R. Goodemote, Chief Financial Officer of the Company, hereby certify, in accordance with 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that, to the best of our knowledge:
(a) The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended; and
(b) The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

Dated: November 8, 2016

/s/ Thomas J. Murphy<br>Thomas J. Murphy<br>Chief Executive Officer<br>/s/ Terry R. Goodemote<br>Terry R. Goodemote<br>Chief Financial Officer


[^0]:    Share and Per Share Amounts have been restated for the September 29, 2016 3\% stock dividend.
    See Notes to Unaudited Interim Consolidated Financial Statements.

[^1]:    ${ }^{1}$ Cash dividends paid per share have been adjusted for the September 29, 2016 3.0\% stock dividend.
    See Notes to Unaudited Interim Consolidated Financial Statements.

[^2]:    See Notes to Unaudited Interim Consolidated Financial Statements.

[^3]:    * Quarterly ratios have been annualized

[^4]:    * Year-to-date ratios have been annualized

[^5]:    ${ }^{1}$ See Note 3 on p. 40

