ARROW FINANCIAL CORP
Form 10-K
March 08, 2019

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549
FORM 10-K

Annual Report Pursuant to Section 13 or 15(d) of
The Securities Exchange Act of 1934
For the Fiscal Year Ended December 31, 2018
Commission File Number: 0-12507
ARROW FINANCIAL CORPORATION

(Exact name of registrant as specified in its charter)

New York	22-2448962
(State or other jurisdiction of 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
SECURITIES REGISTERED PURSUANT TO SECTION 12(b) OF THE ACT: NONE
SECURITIES REGISTERED PURSUANT TO SECTION 12(g) OF THE ACT:
Common Stock, Par Value $1.00
(Title of Class)
Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes x No
Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes x No
Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. x Yes

No
Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted 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 such files). x Yes No
Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§ 229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

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

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

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act. Yes No
Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Act). Yes x No
State the aggregate market value of the voting and non-voting common equity held by non-affiliates computed by reference to the price at which the common equity was last sold, or the average bid and asked price of such common equity, as of the last business day of the registrant’s most recently completed second fiscal quarter: $510,085,420
Indicate the number of shares outstanding of each of the registrant’s classes of common stock, as of the latest practicable date.

Class	Outstanding as of February 28, 2019
Common Stock, par value $1.00 per share	14,465,928

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Registrant’s Proxy Statement for the Annual Meeting of Stockholders to be held May 8, 2019 (Part III).

ARROW FINANCIAL CORPORATION
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*These items are incorporated by reference to the Corporation’s Proxy Statement for the Annual Meeting of Stockholders to be held May 8, 2019.

NOTE ON TERMINOLOGY

In this Annual Report on Form 10-K, the terms "Arrow," "the registrant," "the Company," "we," "us," and "our," generally ref Arrow Financial Corporation and subsidiaries as a group, except where the context indicates otherwise. At certain points in this Report, our performance is compared with that of our "peer group" of financial institutions. Unless otherwise specifically stated, this peer group is comprised of the group of 68 domestic (U.S.-based) bank holding companies with $1 to $3 billion in total consolidated assets as identified in the Federal Reserve Board's most recent "Bank Holding Company Performance Report" (which is the Performance Report for the most recently available period ending September 30, 2018), and peer group data has been derived from such Report. This peer group is not, however, identical to either of the peer groups comprising the two bank indices included in the stock performance graphs on pages 20 and 21 of this Report.

THE COMPANY AND ITS SUBSIDIARIES

Arrow is a two-bank holding company headquartered in Glens Falls, New York. Our banking subsidiaries are Glens Falls National Bank and Trust Company (Glens Falls National/GFNB) whose main office is located in Glens Falls, New York, and Saratoga National Bank and Trust Company (Saratoga National/SNB) whose main office is located in Saratoga Springs, New York. Active subsidiaries of Glens Falls National include Upstate Agency, LLC (an insurance agency that sells property and casualty insurance agency and also specializes in selling and servicing group health care policies and life insurance), North Country Investment Advisers, Inc. (a registered investment adviser that provides investment advice to our proprietary mutual funds) and Arrow Properties, Inc. (a real estate investment trust, or REIT). Arrow also owns directly two subsidiary business trusts, organized in 2003 and 2004 to issue trust preferred securities (TRUPs), which are still outstanding.

FORWARD-LOOKING STATEMENTS

The information contained in this Annual Report on Form 10-K 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 (the "Exchange Act"), and involve a degree of uncertainty and attendant risk. Words such as "expects," "believes," "anticipates," "estimates" and variations of such words and similar expressions often identify such forward-looking statements. Some of these statements, such as those included in the interest rate sensitivity analysis in Item 7A of this Report, entitled "Quantitative and Qualitative Disclosures About Market Risk," are merely presentations of what future performance or changes in future performance would look like based on hypothetical assumptions and on simulation models. Other forward-looking statements are based on our general perceptions of market conditions and trends in activity, both locally and nationally, as well as current management strategies for future operations and development.

These forward-looking statements may not be exhaustive, are not guarantees of future performance and involve certain risks and uncertainties that are difficult to quantify or, in some cases, to identify. You should not place undue reliance on any such forward-looking statements. In the case of all forward-looking statements, actual outcomes and results may differ materially from what the statements predict or forecast. Factors that could cause or contribute to such differences include, but are not limited to:

- rapid and dramatic changes in economic and market conditions;
- sharp fluctuations in interest rates, economic activity, or consumer spending patterns;
- sudden changes in the market for products we provide, such as real estate loans;
- significant changes in banking or other laws and regulations, including both enactment of new legal or regulatory measures (e.g., the Economic Growth, Regulatory Relief and Consumer Protection Act ("Economic Growth Act"), the Tax Cuts and Jobs Act of 2017 ("Tax Act") and the Dodd-Frank Wall Street Reform and Consumer Protection Act

("Dodd-Frank")) or the modification or elimination of pre-existing measures;

- significant changes in U.S. monetary or fiscal policy, including new or revised monetary programs or targets adopted or announced by the Federal Reserve ("monetary tightening or easing") or significant new federal legislation materially affecting the federal budget ("fiscal tightening or expansion");
- competition from other sources (e.g., non-bank entities);
- similar uncertainties inherent in banking operations or business generally, including technological developments and changes; and
- other risks detailed from time to time within our filings with the Securities and Exchange Commission ("SEC").

We are under no duty to update any of the forward-looking statements after the date of this Annual Report on Form 10-K to conform such statements to actual results. All forward-looking statements, express or implied, included in this Report and the documents we incorporate by reference and that are attributable to the Company are expressly qualified in their entirety by this cautionary statement. This cautionary statement should also be considered in connection with any subsequent written or oral forward-looking statements that the Company or any persons acting on our behalf may issue.

USE OF NON-GAAP FINANCIAL MEASURES

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

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

The Efficiency Ratio: Financial institutions often use an "efficiency ratio" as a measure of expense control. The efficiency ratio typically is defined as the ratio of noninterest expense to net interest income and noninterest income. Net interest income as utilized in calculating the efficiency ratio is typically the same as the net interest income presented in Selected Financial Information table discussed in the preceding paragraph, i.e., it is expressed on a tax-equivalent basis. Moreover, many financial institutions, in calculating the efficiency ratio, also adjust both noninterest expense and noninterest income to exclude from these items (as calculated under GAAP) certain recurring component elements of income and expense, such as intangible asset amortization (which is included in noninterest expense under GAAP but may not be included therein for purposes of calculating the efficiency ratio) and securities gains or losses (which are reflected in the calculation of noninterest income under GAAP but may be ignored for purposes of calculating the efficiency ratio). We make these adjustments.

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

Adjustments for Certain Items of Income or Expense: In addition to our regular utilization in our public filings and disclosures of the various non-GAAP measures commonly utilized by financial institutions discussed above, we also may elect from time to time, in connection with our presentation of various financial measures prepared in accordance with GAAP, such as net income, earnings per share (i.e., EPS), return on average assets (i.e., ROA), and return on average equity (i.e., ROE), to provide as well certain comparative disclosures that adjust these GAAP financial measures, typically by removing therefrom the impact of certain transactions or other material items of income or expense that are unusual or unlikely to be repeated. We do so only if we believe that inclusion of the resulting non-GAAP financial measures may improve the average investor's understanding of our results of operations by separating out items that have a disproportional positive or negative impact on the particular period in question or by otherwise permitting a better comparison from period-to-period in our results of operations with respect to our fundamental lines of business, including the commercial banking business.

We believe that the non-GAAP financial measures disclosed by us from time-to-time are useful in evaluating our performance and that such information should be considered as supplemental in nature, and not as a substitute for or superior to, the related financial information prepared in accordance with GAAP. Our non-GAAP financial measures may differ from similar measures presented by other companies.

PART I
Item 1. Business

A. GENERAL
Our holding company, Arrow Financial Corporation, a New York corporation, was incorporated on March 21, 1983 and is registered as a bank holding company within the meaning of the Bank Holding Company Act of 1956. Arrow owns two nationally- chartered banks in New York (Glens Falls National and Saratoga National), and through such banks indirectly owns various non-

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bank subsidiaries, including an insurance agency, a registered investment adviser and a REIT. See "The Company and Its Subsidiaries," above.

Subsidiary Banks (dollars in thousands)

	Glens Falls National	Saratoga National
Total Assets at Year-End	$ 2,444,624	$ 542,244
Trust Assets Under Administration and Investment Management at Year-End (Not Included in Total Assets)	$ 1,282,364	$ 103,388
Date Organized	1851	1988
Employees (full-time equivalent)	462	54
Offices	30	10
Counties of Operation	Warren, Washington, Saratoga, Essex & Clinton	Saratoga, Albany, Rensselaer, & Schenectady
Main Office	250 Glen Street Glens Falls, NY	171 So. Broadway Saratoga Springs, NY

The holding company's business consists primarily of the ownership, supervision and control of our two banks, including the banks' subsidiaries. The holding company provides various advisory and administrative services and coordinates the general policies and operation of the banks. There were 516 full-time equivalent employees, including 58 employees within our insurance agency affiliate, at December 31, 2018.

We offer a broad range of commercial and consumer banking and financial products. Our deposit base consists of deposits derived principally from the communities we serve. We target our lending activities to consumers and small- and mid-sized companies in our regional geographic area. In addition, through an indirect lending program we acquire consumer loans from an extensive network of automobile dealers that operate in a larger area of upstate New York, and in central and southern Vermont. Through our banks' trust operations, we provide retirement planning, trust and estate administration services for individuals, and pension, profit-sharing and employee benefit plan administration for corporations.

B. LENDING ACTIVITIES

Arrow engages in a wide range of lending activities, including commercial and industrial lending primarily to small and mid-sized companies; mortgage lending for residential and commercial properties; and consumer installment and home equity financing. We also maintain an active indirect lending program through our sponsorship of automobile dealer programs under which we purchase consumer auto loans, primarily from dealers that meet pre-established specifications. From time to time, we sell a portion of our residential real estate loan originations into the secondary market, primarily to the Federal Home Loan Mortgage Corporation ("Freddie Mac") and other governmental agencies. Normally, we retain the servicing rights on mortgage loans originated and sold by us into the secondary markets, subject to our periodic determinations on the continuing profitability of such activity.

Generally, we continue to implement lending strategies and policies that are intended to protect the quality of the loan portfolio, including strong underwriting and collateral control procedures and credit review systems. Loans are placed on nonaccrual status either due to the delinquency status of principal and/or interest or a judgment by management that the full repayment of principal and interest is unlikely. Home equity lines of credit, secured by real property, are systematically placed on nonaccrual status when 120 days past due, and residential real estate loans when 150 days

past due. Commercial and commercial real estate loans are evaluated on a loan-by-loan basis and are placed on nonaccrual status when 90 days past due if the full collection of principal and interest is uncertain. (See Part II, Item 7.C.II.c. "Risk Elements.") Subsequent cash payments on loans classified as nonaccrual may be applied all to principal, although income in some cases may be recognized on a cash basis.

We lend almost exclusively to borrowers within our normal retail service area in northeastern New York State, with the exception of our indirect consumer lending line of business, where we acquire retail paper from an extensive network of automobile dealers that operate in a larger area of upstate New York, and in central and southern Vermont. The loan portfolio does not include any foreign loans or any other significant risk concentrations. We do not generally participate in loan syndications, either as originator or as a participant. However, from time to time, we buy participations in individual loans, typically commercial loans, originated by other financial institutions in New York and adjacent states. In recent periods, the total dollar amount of such participations has fluctuated, but generally represents less than 20% of commercial loans outstanding. Most of the portfolio is fully collateralized, and many commercial loans are further supported by personal guarantees.

We do not engage in subprime mortgage lending as a business line and we do not extend or purchase so-called "Alt A," "negative amortization," "option ARM's" or "negative equity" mortgage loans.

C. SUPERVISION AND REGULATION

The following generally describes the laws and regulations to which we are subject. Bank holding companies, banks and their affiliates are extensively regulated under both federal and state law. To the extent that the following information summarizes statutory or regulatory law, it is qualified in its entirety by reference to the particular provisions of the various statutes and regulations. Any change in applicable law may have a material effect on our business operations, customers, prospects and investors.

Bank Regulatory Authorities with Jurisdiction over Arrow and its Subsidiary Banks

Arrow is a registered bank holding company within the meaning of the Bank Holding Company Act of 1956 ("BHC Act") and as such is subject to regulation by the Board of Governors of the Federal Reserve System ("FRB"). As a "bank holding company" under New York State law, Arrow is also subject to regulation by the New York State Department of Financial Services. Our two subsidiary banks are both national banks and are subject to supervision and examination by the Office of the Comptroller of the Currency ("OCC"). The banks are members of the Federal Reserve System and the deposits of each bank are insured by the Deposit Insurance Fund of the Federal Deposit Insurance Corporation ("FDIC"). The BHC Act generally prohibits Arrow from engaging, directly or indirectly, in activities other than banking, activities closely related to banking, and certain other financial activities. Under the BHC Act, a bank holding company generally must obtain FRB approval before acquiring, directly or indirectly, voting shares of another bank or bank holding company, if after the acquisition the acquiror would own 5 percent or more of a class of the voting shares of that other bank or bank holding company. Bank holding companies are able to acquire banks or other bank holding companies located in all 50 states, subject to certain limitations. Bank holding companies that meet certain qualifications may choose to apply to the FRB for designation as "financial holding companies." If they obtain such designation, they will thereafter be eligible to acquire or otherwise affiliate with a much broader array of other financial institutions than "bank holding companies" are eligible to acquire or affiliate with, including insurance companies, investment banks and merchant banks. Arrow has not attempted to become, and has not been designated as, a financial holding company.

The FRB and the OCC have broad regulatory, examination and enforcement authority. The FRB and the OCC conduct regular examinations of the entities they regulate. In addition, banking organizations are subject to requirements for periodic reporting to the regulatory authorities. The FRB and OCC have the authority to implement various remedies if they determine that the financial condition, capital, asset quality, management, earnings, liquidity or other aspects of a banking organization's operations are unsatisfactory or if they determine the banking organization is violating or has violated any law or regulation. The authority of the federal bank regulators over banking organizations includes, but is not limited to, prohibiting unsafe or unsound practices; requiring affirmative action to correct a violation or unsafe or unsound practice; issuing administrative orders; requiring the organization to increase capital; requiring the organization to sell subsidiaries or other assets; restricting dividends, distributions and repurchases of the organization's stock; restricting the growth of the organization; assessing civil money penalties; removing officers and directors; and terminating deposit insurance. The FDIC may terminate a depository institution's deposit insurance upon a finding that the institution's financial condition is unsafe or unsound or that the institution has engaged in unsafe or unsound practices for certain other reasons.

Regulatory Supervision of Other Arrow Subsidiaries

The insurance agency subsidiary of Glens Falls National is subject to the licensing and other provisions of New York State Insurance Law and is regulated by the New York State Department of Financial Services. Arrow's investment adviser subsidiary is subject to the licensing and other provisions of the federal Investment Advisers Act of 1940 and is regulated by the SEC.

Regulation of Transactions between Banks and their Affiliates

Transactions between banks and their "affiliates" are regulated by Sections 23A and 23B of the Federal Reserve Act (FRA). Each of our organization's non-bank subsidiaries (other than the business trusts we formed to issue our TRUPs) is a subsidiary of one of our banks, and also is an "operating subsidiary" under Sections 23A and 23B. This means the non-bank subsidiary is considered to be part of the bank that owns it and thus is not an affiliate of that bank for purposes of Section 23A and 23B. However, each of our two banks is an affiliate of the other bank, under Section 23A, and Arrow, the holding company, is also an affiliate of each bank under both Sections 23A and 23B. Extensions

of credit that a bank may make to affiliates, or to third parties secured by securities or obligations of the affiliates, are substantially limited by the FRA and the Federal Deposit Insurance Act (FDIA). Such acts further restrict the range of permissible transactions between a bank and any affiliate, including a bank affiliate. Furthermore, under the FRA, a bank may engage in certain transactions, including loans and purchases of assets, with a non-bank affiliate, only if certain special conditions, including collateral requirements for loans, are met and if the other terms and conditions of the transaction, including interest rates and credit standards, are substantially the same as, or at least as favorable to the bank as, those prevailing at the time for comparable transactions by the bank with non-affiliated companies or, in the absence of comparable transactions, on terms and conditions that would be offered by the bank to non-affiliated companies.

Regulatory Capital Standards

An important area of banking regulation is the federal banking system's promulgation and enforcement of minimum capitalization standards for banks and bank holding companies.
Bank Capital Rules. In July 2013, federal bank regulators, including the FRB and the OCC, approved their revised bank capital rules aimed at implementing capital requirements pursuant to Dodd-Frank. These rules were also intended to coordinate U.S. bank capital standards with the then-current drafts of the Basel III proposed bank capital standards for all of the developed world's banking organizations. The federal regulators' revised capital rules (the "Capital Rules"), which impose significantly higher minimum capital ratios on U.S. financial institutions than the rules they replaced, became effective for Arrow and its subsidiary banks on January 1, 2015, with full phase in by 2019.
These Capital Rules consist of two basic types of capital measures, a leverage ratio and set of risk-based capital measures. Within these two broad types of rules, however, significant changes were made in the revised Capital Rules, as discussed as follows.

Leverage Ratio. The Capital Rules increased the minimum required leverage ratio from 3.0% to 4.0%. The leverage ratio continues to be defined as the ratio of the institution's "Tier 1" capital (as defined under the new leverage rule) to total tangible assets (again, as defined under the revised leverage rule).
Risk-Based Capital Measures. Risk-based capital measures assign various risk weightings to all of the institution's assets, by asset type, and to certain off balance sheet items, and then establish minimum levels of capital to the aggregate dollar amount of such risk-weighted assets. Under the risk-based Capital Rules, there are 8 major risk-weighted categories of assets (although there are several additional super-weighted categories for high-risk assets that are generally not held by community banking organizations like Arrow's). The Capital Rules include a measure called the "common equity tier 1 capital ratio" (CET1). For this ratio, only common equity (basically, common stock plus surplus plus retained earnings) qualifies as capital (i.e., CET1). Preferred stock and trust preferred securities, which qualified as Tier 1 capital under the old Tier 1 risk-based capital measure (and continue to qualify as capital under the revised Tier 1 risk-based capital measure), are not included in CET1 capital. Technically, under these rules, CET1 capital also includes most elements of accumulated other comprehensive income (AOCI), including unrealized securities gains and losses, as part of both total regulatory capital (numerator) and total assets (denominator). However, smaller banking organizations like Arrow's were given the opportunity to make a one-time irrevocable election to include or not to include certain elements of AOCI, most notably unrealized securities gains or losses. Arrow made such an election, i.e., not to include unrealized securities gains and losses in calculating our CET1 ratio under the Capital Rules. The minimum CET1 ratio under these rules, effective January 1, 2015, is 4.50%, which will remain constant throughout the phase-in period.
Consistent with the general theme of higher capital levels, the Capital Rules also increased the minimum ratio for Tier 1 risk-based capital from 4.0% to 6.0%, effective January 1, 2015. The minimum level for total risk-based capital under the Capital Rules remained at 8.0%.
The Capital Rules incorporate a capital concept, the so-called "capital conservation buffer" (set at 2.5%, after full phase-in), which must be added to each of the minimum required risk-based capital ratios (i.e., the minimum CET1 ratio, the minimum Tier 1 risk-based capital ratio and the minimum total risk-based capital ratio). The capital conservation buffer is being phased-in over four years beginning January 1, 2016 (see the table below). When, during economic downturns, an institution's capital begins to erode, the first deductions from a regulatory perspective would be taken against the conservation buffer. To the extent that such deductions should erode the buffer below the required level (2.5% of total risk-based assets after full phase-in), the institution will not necessarily be required to replace the buffer deficit immediately, but will face restrictions on paying dividends and other negative consequences until the buffer is fully replenished.
Also under the Capital Rules, and as required under Dodd-Frank, TRUPs issued by small- to medium-sized banking organizations (such as Arrow) that were outstanding on the Dodd-Frank grandfathering date for TRUPS (May 19, 2010) will continue to qualify as tier 1 capital, up to a limit of 25% of tier 1 capital, until the TRUPs mature or are redeemed, subject to certain limitations. See the discussion of grandfathered TRUPs in Section E ("CAPITAL RESOURCES AND DIVIDENDS") of Item 7.

The following is a summary of the definitions of capital under the various risk-based measures in the Capital Rules:

Common Equity Tier 1 Capital (CET1): Equals the sum of common stock instruments and related surplus (net of treasury stock), retained earnings, accumulated other comprehensive income (AOCI), and qualifying minority interests, minus applicable regulatory adjustments and deductions. Such deductions will include AOCI, if the organization has exercised its irrevocable option not to include AOCI in capital (Arrow made such an election). Mortgage-servicing assets, deferred tax assets, and investments in financial institutions are limited to 15% of CET1 in the aggregate and 10% of CET1 for each such item individually.
Additional Tier 1 Capital: Equals the sum of noncumulative perpetual preferred stock, tier 1 minority interests, grandfathered TRUPs, and Troubled Asset Relief Program instruments, minus applicable regulatory adjustments and deductions.

Tier 2 Capital: Equals the sum of subordinated debt and preferred stock, total capital minority interests not included in Tier 1, and allowance for loan and lease losses (not exceeding 1.25% of risk-weighted assets) minus applicable regulatory adjustments and deductions.

The following table presents the transition schedule applicable to Arrow and its subsidiary banks under the Capital Rules:

Year, as of January 1	2016	2017	2018	2019
Minimum CET1 Ratio	4.500 %	4.500 %	4.500 %	4.500 %
Capital Conservation Buffer ("Buffer")	0.625 %	1.250 %	1.875 %	2.500 %
Minimum CET1 Ratio Plus Buffer	5.125 %	5.750 %	6.375 %	7.000 %
Minimum Tier 1 Risk-Based Capital Ratio	6.000 %	6.000 %	6.000 %	6.000 %
Minimum Tier 1 Risk-Based Capital Ratio Plus Buffer	6.625 %	7.250 %	7.875 %	8.500 %
Minimum Total Risk-Based Capital Ratio	8.000 %	8.000 %	8.000 %	8.000 %
Minimum Total Risk-Based Capital Ratio Plus Buffer	8.625 %	9.250 %	9.875 %	10.500 %
Minimum Leverage Ratio	4.000 %	4.000 %	4.000 %	4.000 %

These minimum capital ratios, especially the CET1 ratio (4.5%) and the enhanced Tier 1 risk-based capital ratio (6.0%), which began to apply to the Company on January 1, 2015, represent a heightened and more restrictive capital regime than institutions previously had to meet, and the four year phase-in of the regulatory capital buffer, which began January 1, 2016, will add to the stress on the Company's profitability.

At December 31, 2018, Arrow and its two subsidiary banks exceeded by a substantial amount each of the applicable minimum capital ratios established under the revised Capital Rules, including the minimum CET1 Ratio, the minimum Tier 1 Risk-Based Capital Ratio, the minimum Total Risk-Based Capital Ratio, and the minimum Leverage Ratio, and including in the case of each risk-based ratio, the phased-in portion of the capital buffer. See Note 19, Regulatory Matters, to the notes to our Consolidated Financial Statements for a presentation of our period-end ratios for 2018 and 2017.
In May 2018, the Economic Growth, Regulatory Relief and Consumer Protection Act (the "Economic Growth Act") , was enacted to modify or remove certain legal requirements, including some requirements related to capital standards implemented under Dodd-Frank. While the Economic Growth Act maintains much of the regulatory structure established by Dodd-Frank, it amends certain aspects of that regulatory framework, including certain capital requirements. These Economic Growth Act changes could result in meaningful regulatory relief regarding capital standards for community banking organizations, such as Arrow's. See the discussion of this item under "2018 Regulatory Reform."

Regulatory Capital Classifications. Under applicable banking law, federal banking regulators are required to take prompt corrective action with respect to depository institutions that do not meet minimum capital requirements. The regulators have established five capital classifications for banking institutions, ranging from the highest category of "well-capitalized" to the lowest category of "critically under-capitalized". Under the Capital Rules, a banking institution is considered "well-capitalized" if it meets the following capitalization standards on the date of measurement: a CET1 risk-based capital ratio of 6.50% or greater, a Tier 1 risk-based capital ratio of 8.00% or greater, and a total risk-based capital ratio of 10.00% or greater, provided the institution is not subject to any regulatory order or written directive regarding capital maintenance.
As of December 31, 2018, Arrow and its two subsidiary banks qualified as "well-capitalized" under the revised capital classification scheme.

2018 Regulatory Reform. The Economic Growth Act was signed into law May 24, 2018. Some of its provisions were written to take effect immediately; others have later specified effective dates and still others are open-ended, to be implemented by rule-making. This legislation includes a variety of provisions that are intended to affect community banking institutions such as Arrow, including the following:

- The federal bank regulatory agencies are directed to establish a "community bank leverage ratio" ("CBLR") of between 8% and 10%, calculated by dividing tangible equity capital by average total consolidated assets of "qualifying community banks" that meet certain requirements to be set by those regulatory agencies. A qualifying community bank is a depository institution or bank holding company with less than $10 billion in total assets that meets other requirements to be established by the regulators. If a qualifying community bank exceeds the community bank leverage ratio, it will be deemed to have met all applicable capital and leverage requirements, including the generally applicable leverage capital requirements and risk-based capital requirements and (if the community bank is a depository institution) the "well capitalized" requirement under the federal "prompt corrective action" capital standards. This new community bank leverage ratio is intended to reduce the burden of compliance with regard to regulatory capital adequacy for qualifying community banks. However, this alternative capital standard will not be effective until the federal bank regulatory authorities adopt rules for its implementation.
- The definition of "high volatility commercial real estate" loans that trigger heightened risk-based capital requirements, has been modified and limited to ease the burden of those requirements.
- The total asset threshold for qualifying insured financial institutions eligible for an 18-month examination cycle has been increased from $1 billion to $3 billion.
- The new law provides that reciprocal deposits of certain institutions shall not be considered "brokered deposits," subject to certain limitations.
- Some community banks will be exempt from mortgage escrow requirements, and an expanded "qualified mortgage" exemption for community banks has been implemented to ease the burden of the "ability to repay" requirements in the Truth in Lending Act.

- Financial institutions with less than $10 billion in total assets that meet certain requirements will be exempt from the Volcker Rule proprietary trading requirements implemented under the Dodd Frank Act.

On November 21, 2018, federal banking regulators issued a notice of proposed rulemaking which defines a qualifying “community bank” to include banks or bank holding companies with total consolidated assets of less than $10 billion in addition to other qualifications. The proposed rule would set the threshold for the Community Bank Leverage Ratio (CBLR) at greater than 9 percent, calculated as the ratio of “CBLR tangible equity” divided by “average total consolidated assets.” Based on the parameters of this proposed rulemaking, the CBLR for Arrow and both subsidiary banks is estimated to exceed the 9 percent threshold. However, these proposed rules are not yet final, and the terms of the rules may change before becoming final. Upon effectiveness, the final rules may impact Arrow’s capital options and requirements, although the potential impact of the final rules on Arrow will remain uncertain until those final rules are issued. Until those rules become final, the enhanced bank capital standards promulgated under Dodd-Frank will remain applicable to Arrow.

Dividend Restrictions; Other Regulatory Sanctions

A holding company's ability to pay dividends or repurchase its outstanding stock, as well as its ability to expand its business, including for example, through acquisitions of additional banking organizations or permitted non-bank companies, may be restricted if its capital falls below minimum regulatory capital ratios or fails to meet other informal capital guidelines that the regulators may apply from time to time to specific banking organizations. In addition to these potential regulatory limitations on payment of dividends, our holding company's ability to pay dividends to our shareholders, and our subsidiary banks' ability to pay dividends to our holding

company are also subject to various restrictions under applicable corporate laws, including banking laws (which affect our subsidiary banks) and the New York Business Corporation Law (which affects our holding company). The ability of our holding company and banks to pay dividends or repurchase shares in the future is, and is expected to continue to be, influenced by regulatory policies, the Capital Rules and other applicable law.

In cases where banking regulators have significant concerns regarding the financial condition, assets or operations of a bank holding company or one of its banks, the regulators may take enforcement action or impose enforcement orders, formal or informal, against the holding company or the particular bank. If the ratio of tangible equity to total assets of a bank falls to 2% or below, the bank will likely be closed and placed in receivership, with the FDIC as receiver.

Cybersecurity

In addition to the provisions in the Gramm-Leach-Bliley Act relating to data security (discussed below), Arrow and its subsidiaries are subject to many federal and state laws, regulations and regulatory interpretations which impose standards and requirements related to cybersecurity. For example, in February 2018, the Securities and Exchange Commission ("SEC") issued the "Commission Statement and Guidance on Public Company Cybersecurity Disclosures" to assist public companies in preparing disclosures about cybersecurity risks and incidents. With the increased frequency and magnitude of cybersecurity incidents, the SEC indicated that it is critical that public companies take all required actions to inform investors about material cybersecurity risks and incidents in a timely fashion. Additionally, in October 2018 the SEC issued the "Report of Investigation Pursuant to Section 21(a) of the Securities Exchange Act of 1934 Regarding Certain Cyber-Related Frauds Perpetrated Against Public Companies and Related Internal Controls Requirements" which cited business email compromises that led to the incidents and that internal accounting controls may need to be reassessed in light of these emerging risks.

In March 2015, federal regulators issued related statements regarding cybersecurity. One statement indicates that financial institutions should design multiple layers of security controls to establish lines of defense and to ensure that their risk management processes also address the risk posed by compromised customer credentials, including security measures to reliably authenticate customers accessing internet-based services of the financial institution. The other statement indicates that a financial institution’s management is expected to maintain sufficient business continuity planning processes to ensure the rapid recovery, resumption and maintenance of the institution’s operations after a cyber-attack involving destructive malware. A financial institution is also expected to develop appropriate processes to enable recovery of data and business operations and address rebuilding network capabilities and restoring data if the institution or its critical service providers fall victim to this type of cyber-attack. Financial institutions that fail to observe this regulatory guidance on cybersecurity may be subject to various regulatory sanctions, including financial penalties.

Anti-Money Laundering and OFAC

Under the Patriot Act and other federal anti-money laundering law, financial institutions must maintain anti-money laundering programs that include established internal policies, procedures, and controls. Financial institutions are also prohibited from entering into specified financial transactions and account relationships and must meet enhanced standards for due diligence and customer identification. Financial institutions must take reasonable steps to conduct enhanced scrutiny of account relationships to guard against money laundering and to report any suspicious transactions. Law enforcement authorities have been granted increased access to financial information maintained by financial institutions. Bank regulators routinely examine institutions for compliance with these obligations and they must consider an institution's compliance in connection with the regulatory review of applications, including applications for banking mergers and acquisitions. The U.S. Department of the Treasury's Office of Foreign Assets Control, or "OFAC," is responsible for helping to insure that U.S. entities do not engage in transactions with certain prohibited parties, as defined by various Executive Orders and Acts of Congress. OFAC publishes lists of persons, organizations, and countries suspected of aiding, harboring or engaging in terrorist acts, known as Specially Designated Nationals and Blocked Persons. If Arrow finds a name on any transaction, account or wire transfer that is on an OFAC list, Arrow must freeze or block such account or transaction, file a suspicious activity report and notify the appropriate authorities. The U.S. Treasury Department's Financial Crises Enforcement Network ("FinCEN") issued a final rule in 2016 increasing customer due diligence requirements for banks, including adding a requirement to identify and verify the identity of beneficial owners of customers that are legal entities, subject to certain exclusions

and exemptions. The Company has established procedures for compliance with these requirements.

The USA Patriot Act

The USA Patriot Act, initially adopted in 2001 and re-adopted by the U.S. Congress in 2006 with certain changes (the "Patriot Act"), imposes substantial record-keeping and due diligence obligations on banks and other financial institutions, with a particular focus on detecting and reporting money-laundering transactions involving domestic or international customers. The U.S. Treasury Department has issued and will continue to issue regulations clarifying the Patriot Act's requirements. The Patriot Act requires all financial institutions, including banks, to maintain certain anti-money laundering compliance, customer identification and due diligence programs. Compliance with the provisions of the Patriot Act results in substantial costs on all financial institutions.

Reserve Requirements

Pursuant to regulations of the FRB, all banking organizations are required to maintain average daily reserves at mandated ratios against their transaction accounts and certain other types of deposit accounts. These reserves must be maintained in the form of vault cash or in an account at a Federal Reserve Bank.

Community Reinvestment Act
Arrow's subsidiary banks are subject to the Community Reinvestment Act ("CRA") and implementing regulations. CRA regulations establish the framework and criteria by which the bank regulatory agencies assess an institution's record of helping to meet the credit needs of its community, including low and moderate-income individuals. CRA ratings are taken into account by regulators in reviewing certain applications made by Arrow and its bank subsidiaries.
Privacy and Confidentiality Laws
Arrow and its subsidiaries are subject to a variety of laws that regulate customer privacy and confidentiality. The Gramm-Leach-Bliley Act requires financial institutions to adopt privacy policies, to restrict the sharing of nonpublic customer information with nonaffiliated parties upon the request of the customer, and to implement data security measures to protect customer information. Certain state laws may impose additional privacy and confidentiality restrictions. The Fair Credit Reporting Act, as amended by the Fair and Accurate Credit Transactions Act of 2003, regulates use of credit reports, providing of information to credit reporting agencies and sharing of customer information with affiliates, and sets identity theft prevention standards.

The Dodd-Frank Act

Dodd-Frank significantly changed the regulatory structure for financial institutions and their holding companies, for example, through provisions requiring the Capital Rules. Among other provisions, Dodd-Frank implemented corporate governance revisions that apply to all public companies, not just financial institutions and permanently increased the FDIC’s standard maximum deposit insurance amount to $250,000, changed the FDIC insurance assessment base to assets rather than deposits and increased the reserve ratio for the deposit insurance fund to ensure the future strength of the fund. The federal prohibition on the payment of interest on certain demand deposits was repealed, thereby permitting depository institutions to pay interest on business transaction accounts. Dodd-Frank established a new federal agency, the Consumer Financial Protection Bureau (the “CFPB”), centralizing significant aspects of consumer financial protection under this agency. Limits were imposed for debit card interchange fees for issuers that have assets greater than $10 billion, which also could affect the amount of interchange fees collected by financial institutions with less than $10 billion in assets. Dodd-Frank also imposed new requirements related to mortgage lending, including prohibitions against payment of steering incentives and provisions relating to underwriting standards, disclosures, appraisals and escrows. The Volcker Rule prohibited banks and their affiliates from engaging in proprietary trading and investing in certain unregistered investment companies.
Federal banking regulators and other agencies including, among others, the FRB, the OCC and the CFPB, have been engaged in extensive rule-making efforts under Dodd-Frank, and the 2018 Economic Growth Act has impacted certain Dodd-Frank requirements, as explained above.

Sarbanes-Oxley Act

The Sarbanes-Oxley Act of 2002 implemented a broad range of corporate governance, accounting and reporting requirements for companies that have securities registered under the Exchange Act. These requirements included: (1) requirements for audit committees, including independence and financial expertise; (2) certification of financial statements by the chief executive officer and chief financial officer of the reporting company; (3) standards for auditors and regulation of audits; (4) disclosure and reporting requirements for the reporting company and directors and executive officers; and (5) a range of civil and criminal penalties for fraud and other violations of securities laws.

Incentive Compensation

Dodd-Frank required the federal bank regulatory agencies and the SEC to establish joint regulations or guidelines prohibiting incentive-based payment arrangements at specified regulated entities, such as the Company, having at least $1 billion in total assets that encourage inappropriate risks by providing an executive officer, employee, director or principal shareholder with excessive compensation, fees, or benefits or that could lead to material financial loss to

the entity. In addition, these regulators must establish regulations or guidelines requiring enhanced disclosure to regulators of incentive-based compensation arrangements.

The federal bank regulators issued proposed rules to address incentive-based compensation arrangements in June 2016. Final rules have not yet been issued by the federal bank regulatory agencies under this Dodd-Frank provision.

In 2010, the FRB, OCC and FDIC issued comprehensive final guidance on incentive compensation policies intended to ensure that the incentive compensation policies of banking organizations do not undermine the safety and soundness of such organizations by encouraging excessive risk-taking. The guidance, which covers all employees that have the ability to materially affect the risk profile of an organization, either individually or as part of a group, is based upon the key principles that a banking organization's incentive compensation arrangements should (i) provide incentives that do not encourage risk-taking beyond the organization's ability to effectively identify and manage risks, (ii) be compatible with effective internal controls and risk management, and (iii) be supported by strong corporate governance, including active and effective oversight by the organization's board of directors. Management believes the current and past compensation practices of the Company do not encourage excessive risk taking or undermine the safety and soundness of the organization.

The FRB will review, as part of the regular, risk-focused examination process, the incentive compensation arrangements of banking organizations, such as the Company, that are not "large, complex banking organizations." These reviews will be tailored to each organization based on the scope and complexity of the organization's activities and the prevalence of incentive compensation

arrangements. The findings of the supervisory initiatives will be included in reports of examination. Deficiencies will be incorporated into the organization's supervisory ratings, which can affect the organization's ability to make acquisitions and take other actions. Enforcement actions may be taken against a banking organization if its incentive compensation arrangements, or related risk-management control or governance processes, pose a risk to the organization's safety and soundness and the organization is not taking prompt and effective measures to correct the deficiencies.

Deposit Insurance Laws and Regulations

In February 2011, the FDIC finalized a new assessment system that took effect in the second quarter of 2011. The final rule changed the assessment base from domestic deposits to average assets minus average tangible equity, adopted a new large-bank pricing assessment scheme, and set a target size for the Deposit Insurance Fund. The changes went into effect in the second quarter of 2011. The rule (as mandated by Dodd-Frank) finalizes a target size for the Deposit Insurance Fund Reserve Ratio at 2.0% of insured deposits. It also implements a lower assessment rate schedule when the ratio reaches 1.15% (so that the average rate over time should be about 8.5 basis points) and, in lieu of dividends, provides for a lower rate schedule when the reserve ratio reaches 2.0% and 2.5%.
In August 2016, the FDIC announced that the reserve ratio reached 1.17% at the end of June 2016. This represents the highest level the ratio has reached in more than eight years. The reduction in assessment rates went into effect in the third quarter of 2016. We are unable to predict whether or to what extent the FDIC may elect to impose additional special assessments on insured institutions in upcoming years, if bank failures should once again become a significant problem.
In January 2019, both of the Company's banking subsidiaries received preliminary notification of eligibility for small bank assessment credits. These credits are related to the Deposit Insurance Recovery Fund Reserve Ratio reaching 1.36% and may reduce the banks' future quarterly assessments.

D. RECENT LEGISLATIVE DEVELOPMENTS

Economic Growth, Regulatory Relief and Consumer Protection Act (the "Economic Growth Act")

In May 2018, the Economic Growth Act, was enacted to modify or remove certain legal requirements, including some requirements imposed under Dodd-Frank. While the Economic Growth Act maintains much of the regulatory structure established by Dodd-Frank, it amends certain aspects of that regulatory framework . Many of these changes could result in meaningful regulatory relief for community banking organizations, such as Arrow's.

Health Care Reform

Various proposals have been discussed for consideration that would substantially modify various health care laws. At present, we are not able to estimate the likelihood of adoption of any such provisions or the potential impact thereof if adopted.

The Tax Cuts and Jobs Act of 2017 ("Tax Act")

On December 22, 2017, Tax Act was enacted. A number of provisions have impacted us including the following:

- Tax Rate. The Tax Act replaced the graduated corporate tax rates applicable under prior law, which imposed a maximum tax rate of 35%, with a reduced 21% tax rate. This reduction will generally result in future increased earnings and capital and reduced our net deferred tax liability. Generally accepted accounting principles ("GAAP") requires that the impact of the provisions of the Tax Act be accounted for in the period of enactment. Accordingly, a benefit of $1.1 million was recorded in the fourth quarter of 2017 which represents the impact of the re-measurement of net deferred tax liabilities.

- Employee Compensation. A publicly held corporation is not permitted to deduct compensation in excess of $1 million per year paid to certain employees. The Tax Act eliminates certain exceptions to the $1 million limit applicable under prior law related to performance-based compensation, such as equity grants and cash bonuses that are paid only on the attainment of performance goals. Based on our current compensation plans, we do not expect to be impacted by this limitation.
- Interest Expense. The Tax Act limits a taxpayer's annual deduction of business interest expense to the sum of (i) business interest income and (ii) 30% of "adjusted taxable income," defined as business's taxable income without taking into account business interest income or expense, net operating losses, and, for 2018 through 2021, depreciation, amortization and depletion. Because we generate significant amounts of net interest income, we do not expect to be impacted by this limitation.

The foregoing description of the impact of the Tax Act on us should be read in conjunction with Note 15, Income Taxes, of the notes to our Consolidated Financial Statements.

Other Legislative Initiatives

From time to time, various legislative and regulatory initiatives are introduced in Congress and state legislatures, as well as by regulatory authorities. These initiatives may include proposals to expand or contract the powers of bank holding companies and depository institutions or proposals to change the financial institution regulatory environment. Such legislation could change banking laws and the operating environment of our Company in substantial, but unpredictable ways. We cannot predict whether any such legislation will be enacted, and, if enacted, the effect that it, or any implementing regulations would have on our financial condition or results of operations.

E. STATISTICAL DISCLOSURE – (GUIDE 3)

Set forth below is an index identifying the location in this Report of various items of statistical information required to be included in this Report by the SEC's industry guide for Bank Holding Companies.

Required Information	Location in Report
Distribution of Assets, Liabilities and Stockholders' Equity; Interest Rates and Interest Differential	Part II, Item 7.B.I.
Investment Portfolio	Part II, Item 7.C.I.
Loan Portfolio	Part II, Item 7.C.II.
Summary of Loan Loss Experience	Part II, Item 7.C.III.
Deposits	Part II, Item 7.C.IV.
Return on Equity and Assets	Part II, Item 6.
Short-Term Borrowings	Part II, Item 7.C.V.

F. COMPETITION

We face intense competition in all markets we serve. Competitors include traditional local commercial banks, savings banks and credit unions, non-traditional internet-based lending alternatives, as well as local offices of major regional and money center banks. Like all banks, we encounter strong competition in the mortgage lending space from a wide variety of other mortgage originators, all of whom are principally affected in this business by the rate and terms set, and the lending practices established from time-to-time by the very large government sponsored enterprises ("GSEs") engaged in residential mortgage lending, most importantly, "Fannie Mae" and "Freddie Mac." For many years, these GSEs have purchased and/or guaranteed a very substantial percentage of all newly-originated mortgage loans in the U.S.. Additionally, non-banking financial organizations, such as consumer finance companies, insurance companies, securities firms, money market funds, mutual funds, credit card companies and wealth management enterprises offer substantive equivalents of the various other types of loan and financial products and services and transactional accounts that we offer, even though these non-banking organizations are not subject to the same regulatory restrictions and capital requirements that apply to us. Under federal banking laws, such non-banking financial organizations not only may offer products and services comparable to those offered by commercial banks, but also may establish or acquire their own commercial banks.

G. EXECUTIVE OFFICERS OF THE REGISTRANT

The names and ages of the executive officers of Arrow and positions held by each are presented in the following table. Officers are elected annually by the Board of Directors.

Name	Age	Positions Held and Years from Which Held
Thomas J. Murphy	60	President and Chief Executive Officer of Arrow since January 1, 2013. Mr. Murphy has been a Director of Arrow since July 2012. In addition to his executive leadership role at Arrow, he has been the President of GFNB since July 1, 2011 and Chief Executive Officer of GFNB since January 1, 2013. Prior positions in the Company include: Senior Executive Vice President of Arrow (2011-2012), Vice President of Arrow (2009-2011), Senior Trust Officer of GFNB (2010-2011), Corporate Secretary (2009-2012), Assistant Corporate Secretary of Arrow (2008-2009), Senior Vice President of GFNB (2008-2011) and Manager of the Personal Trust Department of GFNB (2004-2011). Mr. Murphy started with the Company in 2004.
Edward J. Campanella	51	Senior Vice President, Treasurer and Chief Financial Officer of Arrow since September 5, 2017. Mr. Campanella also serves as Executive Vice President, Treasurer and Chief Financial Officer of GFNB. Mr. Campanella joined the Company in 2017. Previously, he served as Chief Financial Officer for National Union Bank of Kinderhook in Kinderhook, NY (2016-2017). He was Senior Vice President, Treasurer and Director of Finance at Opus Bank in Irvine, CA (2013-2016). Prior to that he served as First Vice President and Treasurer of Cambridge Savings Bank in Cambridge, MA (2006-2013).
David S. DeMarco	57	Senior Vice President and Chief Banking Officer of Arrow since February 1, 2018. Mr. DeMarco has been a Senior Vice President of Arrow since May 1, 2009. Additionally, Mr. DeMarco has been President and Chief Executive Officer of SNB since January 1, 2013. He is also Executive Vice President and Chief Banking Officer of GFNB. Previously, Mr. DeMarco served as Executive Vice President and Head of the Branch, Corporate Development, Financial Services & Marketing Division of GFNB (2003-2012). Mr. DeMarco started with the Company as a commercial lender in 1987.
David D. Kaiser	58	Senior Vice President of Arrow since February 1, 2015. Mr. Kaiser has also served as Executive Vice President of GFNB since 2012 and as Chief Credit Officer of GFNB since 2011. Previously, he served as the Corporate Banking Manager for GFNB from 2005 to 2011. Mr. Kaiser started with the Company in 2000.
Andrew J. Wise	52	Senior Vice President and Chief Operating Officer of Arrow Financial Corporation since February 1, 2018. Mr. Wise has also served as Executive Vice President and Chief Operating Officer of GFNB since October 2017. Previously, Mr. Wise served as Chief Administrative Officer of GFNB. He joined GFNB in May 2016 as Senior Vice President of Administration. Prior to that, he worked at Adirondack Trust Company for 12 years where he was Executive Vice President and Chief Operating Officer of the company’s insurance subsidiary.

H. AVAILABLE INFORMATION

Our Internet address is www.arrowfinancial.com. We make available, free of charge on or through our internet website, our annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and amendments to those reports as soon as practicable after we file or furnish them with the SEC pursuant to the Exchange Act. We also make available on our website various other documents related to corporate operations, including our Corporate Governance Guidelines, the charters of our principal board committees, and our codes of

ethics. We have adopted a financial code of ethics that applies to Arrow's chief executive officer, chief financial officer and principal accounting officer and a business code of ethics that applies to all directors, officers and employees of our holding company and its subsidiaries.

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Item 1A. Risk Factors

Our financial results and the market price of our stock are subject to risks arising from many factors, including the risks listed below, as well as other risks and uncertainties. Any of these risks could materially and adversely affect our business, financial condition or results of operations. (Please note that the discussion below regarding the potential impact on Arrow of certain of these factors that may develop in the future is not meant to provide predictions by Arrow's management that such factors will develop, but to acknowledge the possible negative consequences to our Company and business if certain conditions materialize.)

Market conditions could present significant challenges to the U.S. commercial banking industry and its core business of making and servicing loans and any substantial downturn in the regional markets in which we operate or in the U.S. economy generally could adversely affect our ability to maintain steady growth in our loan portfolio and our earnings. Our business is highly dependent on the business environment in the markets in which we operate as well as the United States as a whole. Our business is dependent upon the financial stability of our borrowers, including their ability to pay interest on and repay the principal amount of outstanding loans, the value of the collateral securing those loans, and the overall demand for loans and our other products and services, all of which impact our stability and future growth. Although our market area has experienced a stabilizing of economic conditions in recent years and even periods of modest growth, if unpredictable or unfavorable economic conditions unique to our market area should occur in upcoming periods, these conditions will likely have an adverse effect on the quality of our loan portfolio and financial performance. As a community bank, we are less able than our larger regional competitors to spread the risk of unfavorable local economic conditions over a larger market area. Further, if the overall U.S. economy deteriorates, then our business, results of operations, financial condition and prospects could be adversely affected. In particular, our financial performance may be adversely affected by short-term and long-term interest rates, the prevailing yield curve, inflation, monetary supply, fluctuations in the debt and equity capital markets, and the strength of the domestic economy and the local economies in the markets in which we operate, all of which are beyond our control.

We are subject to interest rate risk, which could adversely affect our profitability. Our profitability, like that of most financial institutions, depends to a large extent on our net interest income, which is the difference between our interest income on interest-earning assets, such as loans and investment securities, and our interest expense on interest-bearing liabilities, such as deposits and borrowings. Changes in monetary policy, including changes in interest rates, could influence not only the interest we receive on loans and securities and the amount of interest we pay on deposits and borrowings, but also (1) our ability to originate loans and obtain deposits, (2) the fair value of our financial assets and liabilities, and (3) the average duration of our mortgage-backed securities portfolio. If the interest rates we pay on deposits and other borrowings increase at a faster rate than the interest rates received on loans, securities and other interest-earning investments, our net interest income, and therefore our earnings, could be adversely affected. Earnings could also be adversely affected if the interest rates received on loans and other investments fall more quickly than the interest rates paid on deposits and other borrowings. Changes in interest rates, whether they are increases or decreases, can also trigger repricing and changes in the pace of payments for both assets and liabilities.
In addition, an increase in interest rates could have a negative impact on our results of operations by reducing the ability of borrowers to repay their current loan obligations. These circumstances could not only result in increased loan defaults, foreclosures and charge-offs, but also necessitate further increases to the allowance for loan losses which may materially and adversely affect our business, results of operations, financial condition and prospects.

Capital and liquidity standards require banks and bank holding companies to maintain more and higher quality capital and greater liquidity than has historically been the case. Capital standards, particularly those adopted as a result of Dodd-Frank, continue to have a significant effect on banks and bank holding companies, including Arrow. The need to maintain more and higher quality capital, as well as greater liquidity, and generally increased regulatory scrutiny with respect to capital levels, may at some point limit our business activities, including lending, and our ability to expand. It could also result in our being required to take steps to increase our regulatory capital and may dilute

shareholder value or limit our ability to pay dividends or otherwise return capital to our investors through stock repurchases.
Certain of the capital requirements of Dodd-Frank and the related regulations will be impacted by the Economic Growth Act, which was enacted in 2018. The Economic Growth Act created a “community bank leverage ratio” standard for qualifying banking organizations as an alternative to the Dodd-Frank risk-based capital regime. However, this alternative capital standard will not be effective until the federal bank regulatory authorities adopt rules for its implementation. Such rules have been proposed, but are not yet final, and the terms of the rules may change before becoming final. Upon effectiveness, the final rules may impact Arrow’s capital options and requirements, although the potential impact of the final rules on Arrow will remain uncertain until those final rules are issued. Until these Economic Growth Act rules become final, the enhanced bank capital standards promulgated under Dodd-Frank will remain applicable to Arrow.

Any future economic or financial downturn, including any significant correction in the equity markets, may negatively affect the volume of income attributable to, and demand for, fee-based services of banks such as ours, including our fiduciary business, which could negatively impact our financial condition and results of operation. Revenues from our trust and wealth management business are dependent on the level of assets under management. Any significant downturn in the equity markets may lead our trust and wealth management customers to liquidate their investments, or may diminish account values for those customers who elect to leave their portfolios with us, in either case reducing our assets under management and thereby decreasing our revenues from this important sector of our business. Our other fee-based businesses are also susceptible to a sudden economic or financial downturn.

In addition, our loan quality is affected by the condition of the economy. Like all financial institutions, we maintain an allowance for loan losses to provide for probable loan losses at the balance sheet date. Our allowance for loan losses is based on our historical loss experience as well as an evaluation of the risks associated with our loan portfolio, including the size and composition of the portfolio, current economic conditions and geographic concentrations within the portfolio and other factors. While we have continued to enjoy a very high level of quality in our loan portfolio generally and very low levels of loan charge-offs and non-performing loans, if the economy in our geographic market area should deteriorate to the point that recessionary conditions return, or if the regional or national economy experiences a protracted period of stagnation, the quality of our loan portfolio may weaken so significantly that our allowance for loan losses may not be adequate to cover actual or expected loan losses. In such events, we may be required to increase our provisions for loan losses and this could materially and adversely affect financial results. Moreover, weak or worsening economic conditions often lead to difficulties in other areas of our business, including growth of our business generally, thereby compounding the negative effects on earnings.

We face continuing and growing security risks to our information base including the information we maintain relating to our customers, and any breaches in the security systems we have implemented to protect this information could have a material negative effect on our business operations and financial condition. In the ordinary course of business, Arrow relies on electronic communications and information systems to conduct our operations and to store sensitive data. Arrow employs an in-depth, layered, defensive approach that leverages people, processes and technology to manage and maintain cybersecurity controls. Arrow employs a variety of preventative and detective tools to monitor, block, and provide alerts regarding suspicious activity, as well as to report on any suspected advanced persistent threats. We have implemented and regularly review and update extensive systems of internal controls and procedures as well as corporate governance policies and procedures intended to protect our business operations, including the security and privacy of all confidential customer information. In addition, we rely on the services of a variety of vendors to meet our data processing and communication needs. No matter how well designed or implemented our controls are, we cannot provide an absolute guarantee to protect our business operations from every type of cybersecurity or other security problem in every situation, whether as a result of systems failures, human error or negligence, cyberattacks, security breaches, fraud or misappropriation. Any failure or circumvention of these controls could have a material adverse effect on our business operations and financial condition. Notwithstanding the strength of our defensive measures, the threat from cyberattacks is severe, attacks are sophisticated and increasing in volume, and attackers respond rapidly to changes in defensive measures. While to date, Arrow has not experienced a significant compromise, significant data loss or any material financial losses related to cybersecurity attacks or other security problems, our systems and those of our customers and third-party service providers are under constant threat. Risks and exposures related to cybersecurity attacks or other security problems are expected to remain high for the foreseeable future due to the rapidly evolving nature and sophistication of these threats and issues, as well as due to the expanding use of Internet banking, mobile banking and other technology-based products and services by us and our customers.
The computer systems and network infrastructure that we use are always vulnerable to unforeseen disruptions, including theft of confidential customer information ("identity theft") and interruption of service as a result of fire, natural disasters, explosion, general infrastructure failure, cyberattacks or other security problems. These disruptions may arise in our internally developed systems, or the systems of our third-party service providers or may originate from the actions of our consumer and business customers who access our systems from their own networks or digital devices to process transactions. Information security and cyber security risks have increased significantly in recent years because of consumer demand to use the Internet and other electronic delivery channels to conduct financial transactions. Cybersecurity risk and other security problems are a major concern to financial services regulators and all financial service providers, including our Company. These risks are further exacerbated due to the increased sophistication and activities of organized crime, hackers, terrorists and other disreputable parties. We regularly assess and test our security systems and disaster preparedness, including back-up systems, but the risks are substantially escalating. As a result, cybersecurity and the continued enhancement of our controls and processes to protect our systems, data and networks from attacks or unauthorized access remain a priority. Accordingly, we may be required to

expend additional resources to enhance our protective measures or to investigate and remediate any information security vulnerabilities or exposures. Any breach of our system security could result in disruption of our operations, unauthorized access to confidential customer information, significant regulatory costs, litigation exposure and other possible damages, loss or liability. Such costs or losses could exceed the amount of available insurance coverage, if any, and would adversely affect our earnings. Also, any failure to prevent a security breach or to quickly and effectively deal with such a breach could negatively impact customer confidence, damaging our reputation and undermining our ability to attract and keep customers. In addition, if we fail to observe any of the cybersecurity requirements in federal or state laws, regulations or regulatory guidance, we could be subject to various sanctions, including financial penalties.

The Company relies on the operations of our banking subsidiaries to provide liquidity which, if limited, could impact our ability to pay dividends to our shareholders or to repurchase our common stock. We are a bank holding company, a separate legal entity from our subsidiaries. Our bank holding company does not have significant operations of its own. The ability of our subsidiaries, including our bank and insurance subsidiaries, to pay dividends is limited by various statutes and regulations. It is possible, depending upon the financial condition of our subsidiaries and other factors, that our subsidiaries might be restricted at some point in their ability to pay dividends to the holding company, including by a bank regulator asserting that the payment of such dividends or other payments would constitute an unsafe or unsound practice. In addition, under federal banking law, we are subject to consolidated capital requirements at the holding company level. If our holding company or its bank subsidiaries are required to retain or increase capital, we may not be able to maintain our cash dividends or pay dividends at all, or to repurchase shares of our common stock.

Changes in federal, state or local tax laws may negatively impact our financial performance. As in the case of the Tax Act, we are subject to changes in tax law that could impact our effective tax rates. These law changes may be retroactive to previous

periods and as a result could negatively affect our current and future financial performance. Similarly, the bank's customers are likely to experience varying effects from both the individual and business tax provisions of changes in tax law and such effects, whether positive or negative, may have a corresponding impact on our business and the economy as a whole.

Changes in accounting standards may materially and negatively impact our financial statements. From time-to-time, the Financial Accounting Standards Board ("FASB") changes the financial accounting and reporting standards that govern the preparation of our financial statements. These changes can be hard to predict and can materially impact how we record and report our financial condition and results of operations. In some cases, we may be required to apply a new or revised standard retroactively, resulting in changes to previously reported financial statements. Specifically, changes in the fair value of our financial assets could have a significant negative impact on our asset portfolios and indirectly on our capital levels.

We rely on other companies to provide key components of our business infrastructure. Third-party vendors provide key components of our business infrastructure such as Internet connections, network access and mutual fund distribution. The financial health and operational capabilities of these third parties are for the most part beyond our control, and any problems experienced by these third parties, such that they may not be able to continue to provide services to us or to perform such services consistent with our expectations, could adversely affect our ability to deliver products and services to our customers and to conduct our business.

We operate in a highly competitive industry and market areas that could negatively affect our growth and profitability. Competition for commercial banking and other financial services is fierce in our market areas. In one or more aspects of business, our subsidiaries compete with other commercial banks, savings and loan associations, credit unions, finance companies, Internet-based financial services companies, mutual funds, insurance companies, brokerage and investment banking companies, and other financial intermediaries. Additionally, due to their size and other factors, many competitors may be able to achieve economies of scale and, as a result, may offer a broader range of products and services, as well as better pricing for those products and services, than we can. Technology has lowered barriers to entry and made it possible for non-banks to offer products and services traditionally provided by banks, such as automatic transfer and automatic payment systems. In addition, many of our competitors are not subject to the same extensive federal regulations that govern bank holding companies and federally insured banks. Failure to offer competitive services in our market areas could significantly weaken our market position, adversely affecting our growth, which, in turn, could have a material adverse effect on our financial condition and results of operations.

If economic conditions worsen and the U.S. financial markets should suffer a downturn, we may experience limited access to credit markets. As discussed under Part I, Item 7.D. "Liquidity," we maintain borrowing relationships with various third parties that enable us to obtain from them, on relatively short notice, overnight and longer-term funds sufficient to enable us to fulfill our obligations to customers, including deposit withdrawals. If, in the context of a downturn in the U.S. economy or financial markets, these third parties should encounter difficulty in accessing their own credit markets, we may, in turn, experience a decrease in our capacity to borrow funds from them or other third parties traditionally relied upon by banks for liquidity.

Our business could suffer if we lose key personnel unexpectedly or if employee wages increase significantly. Our success depends, in large part, on our ability to retain our key personnel for the duration of their expected terms of service. On an ongoing basis, we prepare and review back-up plans, in the event key personnel are unexpectedly rendered incapable of performing or depart or resign from their positions. However, any sudden unexpected change at the senior management level may adversely affect our business. In addition, should our industry begin to experience a shortage of qualified employees, we, like other financial institutions, may have difficulty attracting and retaining entry level or higher bracket personnel and also may experience, as a result of such shortages or the enactment of higher minimum wage laws locally or nationwide, increased salary expense, which would likely negatively impact our results

of operations.

Federal banking statutes and regulations could change in the future, which may adversely affect our Company and certain players in the financial industry as a whole. We are subject to extensive federal and state banking regulations and supervision. Banking laws and regulations are intended primarily to protect bank depositors' funds (and indirectly the Federal Deposit Insurance Fund) as well as bank retail customers, who may lack the sophistication to understand or appreciate bank products and services. These laws and regulations generally are not, however, aimed at protecting or enhancing the returns on investment enjoyed by bank shareholders.

Our depositor/customer awareness of the changing regulatory environment is particularly true of the set of laws and regulations under Dodd-Frank, which were passed in the aftermath of the 2008-09 financial crisis and in large part were intended to better protect bank customers (and to some degree, banks) against a wide variety of lending products and aggressive lending practices that pre-dated the crisis and are seen as having contributed to its severity. Although not all banks offered such products or engaged in such practices, all banks are affected by these laws and regulations to some degree.

Dodd-Frank restricts our lending practices, requires us to expend substantial additional resources to safeguard customers, significantly increases our regulatory burden, and subjects us to significantly higher minimum capital requirements which, in the long run, may serve as a drag on our earnings, growth and ultimately on our dividends and stock price (the Dodd-Frank capital standards are separately addressed in a previous risk factor).

Although the Economic Growth Act and similar initiatives may mitigate the impact of Dodd-Frank, other statutory and regulatory changes could add to the existing regulatory burden imposed on banking organizations like ours resulting in a potential material adverse effect on our financial condition and results of operations.

Non-compliance with the USA PATRIOT Act, Bank Secrecy Act, or other anti-money laundering laws and regulations could result in fines or sanctions and restrictions on conducting acquisitions or establishing new branches. The USA PATRIOT and Bank Secrecy Acts require financial institutions to develop programs to prevent financial institutions from being used for money laundering and terrorist activities. If such activities are suspected, financial institutions are obligated to file suspicious activity reports with the U.S. Treasury's Office of Financial Crimes Enforcement Network. Federal anti-money laundering rules require financial institutions to establish procedures for identifying and verifying the identity of customers seeking to open new financial accounts. Failure to comply with these regulations could result in fines or sanctions, and restrictions on conducting acquisitions or establishing new branches. During the last few years, several banking institutions have received large fines for non-compliance with these laws and regulations. The policies and procedures we have adopted that are designed to assist in compliance with these laws and regulations may not be effective in preventing violations of these laws and regulations.

The Company is subject to the Community Reinvestment Act ("CRA") and fair lending laws, and failure to comply with these laws could lead to material penalties. CRA the Equal Credit Opportunity Act, the Fair Housing Act and other fair lending laws and regulations impose nondiscriminatory lending requirements on financial institutions. A successful regulatory challenge to an institution's performance under the CRA or fair lending laws and regulations could result in a wide variety of sanctions, including the required payment of damages and civil money penalties, injunctive relief, imposition of restrictions on mergers and acquisitions activity and restrictions on expansion. Private parties may also have the ability to challenge an institution's performance under fair lending laws in private class action litigation. Such actions could have a material adverse effect on our business, financial condition and results of operations.

Our industry is faced with technological advances and changes on a continuing basis, and failure to adapt to these advances and changes could have a material adverse impact on our business. Technological advances and changes in the financial services industry are pervasive and constant. The retail financial services sector, like many other retail goods and services sectors, is constantly evolving, involving new delivery and communications systems and technologies that are extraordinarily far-reaching and impactful. For us to remain competitive, we must comprehend and adapt to these systems and technologies. Proper implementation of new technologies can increase efficiency, decrease costs and help to meet customer demand. However, many of our competitors have greater resources to invest in technological advances and changes. We may not always be successful in utilizing the latest technological advances in offering our products and services or in otherwise conducting our business. Failure to identify, consider, adapt to and implement technological advances and changes could have a material adverse effect on our business.

Problems encountered by other financial institutions could adversely affect us. Our ability to engage in routine funding transactions could be adversely affected by financial or commercial problems confronting other financial institutions. Financial services institutions are interrelated as a result of trading, clearing, counterparty and other relationships. We have exposure to many different counterparties in the normal course of our business, and we routinely execute transactions with counterparties in the financial services industry, including brokers and dealers, other commercial banks, investment banks, mutual and hedge funds, and other financial institutions. As a result, defaults by, or even rumors or questions about, one or more financial services institutions, or the financial services industry generally, could lead to market-wide liquidity problems and losses or defaults by us or by other financial institutions on whom we rely or with whom we interact. Some of these transactions expose us to credit and other potential risks in the event of default of our counterparty or client. In addition, credit risk may be exacerbated when the collateral held by us cannot be liquidated or only may be liquidated at prices not sufficient to recover the full amount due us under the underlying financial instrument, held by us. There is no assurance that any such losses would not materially and adversely affect our results of operations.

The Company's allowance for possible loan and lease losses may be insufficient, and an increase in the allowance would reduce earnings. The allowance is established through a provision for loan and lease losses based on

management's evaluation of the risks inherent in our loan portfolio and the general economy. The allowance is based upon a number of factors, including the size of the loan and lease portfolio, asset classifications, economic trends, industry experience and trends, industry and geographic concentrations, estimated collateral values, management's assessment of the credit risk inherent in the portfolio, historical loan and lease loss experience and loan underwriting policies. In addition, we evaluate all loans and leases identified as problem loans and augment the allowance based upon our estimation of the potential loss associated with those problem loans and leases. Additions to our allowance for loan and lease losses decrease our net income. If the evaluation we perform in connection with establishing loan and lease loss reserves is wrong, our allowance for loan and lease losses may not be sufficient to cover our losses, which would have an adverse effect on our operating results. Our regulators, in reviewing our loan and lease portfolio as part of a regulatory examination, may from time to time require us to increase our allowance for loan and lease losses, thereby negatively affecting our earnings, financial condition and capital ratios at that time. Moreover, additions to the allowance may be necessary based on changes in economic and real estate market conditions, new information regarding existing loans and leases, identification of additional problem loans and leases and other factors, both within and outside of our control. Additions to the allowance could have a negative impact on our results of operations.

The increasing complexity of our operations presents varied risks that could affect our earnings and financial condition. We process a large volume of transactions on a daily basis and are exposed to numerous types of risks related to internal processes, people and systems. These risks include, but are not limited to, the risk of fraud by persons inside or outside the Company, the execution of unauthorized transactions by employees, errors relating to transaction processing and systems, breaches of data security, human error or negligence, and our internal control system and compliance with a complex array of consumer and safety and soundness regulations. We could also experience additional loss as a result of potential legal actions that could arise as a result of operational deficiencies or as a result of noncompliance with applicable laws and regulations.

We have established and maintain a system of internal controls that provides management with information on a timely basis and allows for the monitoring of compliance with operational standards. These systems have been designed to manage operational risks at an appropriate, cost effective level. Procedures exist that are designed to ensure that policies relating to conduct, ethics, and business practices are followed. Losses from operational risks may still occur, however, including losses from the effects of operational errors.

Natural disasters, acts of war or terrorism and other external events could negatively impact the Company. Natural disasters, acts of war or terrorism and other adverse external events could have a significant impact on our ability to conduct business. In addition, such events could affect the stability of our deposit base, impair the ability of borrowers to repay outstanding loans, impair the value of collateral securing loans, cause significant property damage, result in loss of revenue and/or cause the Company to incur additional expenses. Our management has established disaster recovery policies and procedures that are expected to mitigate events related to natural or man-made disasters; however, the occurrence of any such event and the impact of an overall economic decline resulting from such a disaster could have a material adverse effect on our financial condition and results of operations.

Item 1B. Unresolved Staff Comments - None

Item 2. Properties

Our main office is at 250 Glen Street, Glens Falls, New York. The building is owned by us and serves as the main office for Arrow and Glens Falls National, our principal subsidiary bank. The main office of our other banking subsidiary, Saratoga National, is in Saratoga Springs, New York. We own twenty-eight branch banking offices, lease twelve branch banking offices and lease two residential loan origination offices, all at market rates. Our insurance agency is co-located in eight bank-owned branches, three leased insurance offices and two owned stand-alone buildings. We also lease office space in buildings and parking lots near our main office in Glens Falls as well as a back-up site for business continuity purposes.
In the opinion of management, the physical properties of our holding company and our various subsidiaries are suitable and adequate. For more information on our properties, see Notes 2, Summary of Significant Accounting Policies, 6, Premises and Equipment, and 18, Leases, in the notes to our Consolidated Financial Statements contained in Part II, Item 8 of this Report.

Item 3. Legal Proceedings

We are not the subject of any material pending legal proceedings, other than ordinary routine litigation occurring in the normal course of our business. On an ongoing basis, we typically are the subject of or a party to various legal claims, which arise in the normal course of our business. Although the outcome of the lawsuits or other proceedings cannot be predicated with certainty and the amount of any liability that may arise therefrom cannot be predicted accurately, in the opinion of management based upon consultation with counsel, the various legal claims currently pending against us will not result in a material adverse effect to our financial condition.

Item 4. Mine Safety Disclosures - None

PART II

Item 5. Market for the Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities

Our common stock is traded on the Global Select Market of the National Association of Securities Dealers, Inc. ("NASDAQ®") Stock Market under the symbol AROW.
Based on information received from our transfer agent and various brokers, custodians and agents, we estimate there were approximately 7,700 beneficial owners of Arrow's common stock at December 31, 2018. Arrow has no other class of stock outstanding.

Equity Compensation Plan Information
The following table sets forth certain information regarding Arrow's equity compensation plans as of December 31, 2018. These equity compensation plans were (i) our 2013 Long-Term Incentive Plan ("LTIP"), and its predecessors, our 2008 Long-Term Incentive Plan and our 1998 Long-Term Incentive Plan; (ii) our 2014 Employee Stock Purchase Plan ("ESPP"); and (iii) our 2013 Directors' Stock Plan ("DSP"). All of these plans have been approved by Arrow's shareholders.

Plan Category	(a) Number of Securities to be Issued Upon Exercise of Outstanding Options, Restricted Stock Units, Warrants and Rights	(b) Weighted-Average Exercise Price of Outstanding Options, Restricted Stock Units, Warrants and Rights	(c) Number of Securities Remaining Available for Future Issuance Under Equity Compensation Plans (Excluding Securities Reflected in Column (a))
Equity Compensation Plans Approved by Security Holders [(1)(2)]	287,899	25.37	370,102
Equity Compensation Plans Not Approved by Security Holders	—		—
Total	287,899		370,102

(1) The total of 287,899 shares listed in column (a) includes 284,522 which are issuable pursuant to outstanding stock options and 3,377 which are issuable pursuant to restricted stock units all granted under the LTIP or its predecessor plans.

(2) The total of 370,102 shares listed in column (c) includes (i) 261,614 shares of common stock available for future award grants under the LTIP, (ii) 91,657 shares of common stock available for future issuance under the ESPP, and (iii) 16,831 shares of common stock available for future issuance under the DSP.

STOCK PERFORMANCE GRAPHS

The following two graphs provide a comparison of the total cumulative return (assuming reinvestment of dividends) for the common stock of Arrow as compared to the Russell 2000 Index, the NASDAQ Banks Index and the Zacks $1B-$5B Bank Assets Index.
The first graph presents comparative stock performance for the five-year period from December 31, 2013 to December 31, 2018 and the second graph presents comparative stock performance for the fifteen-year period from December 31, 2003 to December 31, 2018.
The historical information in the graphs and accompanying tables may not be indicative of future performance of Arrow stock on the various stock indices.

	TOTAL RETURN PERFORMANCE					
	Period Ending					
Index	2013	2014	2015	2016	2017	2018
Arrow Financial Corporation	100.00	109.59	114.57	181.56	161.42	161.33
Russell 2000 Index	100.00	104.89	100.26	121.63	139.44	124.09
NASDAQ Banks Index	100.00	105.08	114.45	154.96	165.08	137.07
Zacks $1B - $5B Bank Assets Index	100.00	108.03	116.76	161.47	174.08	153.75

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TOTAL RETURN PERFORMANCE

	Period Ending							
Index	2003	2004	2005	2006	2007	2008	2009	2010
Arrow Financial Corporation	100.00	118.58	106.58	108.20	101.28	123.94	132.30	156.43
Russell 2000 Index	100.00	118.44	123.78	146.52	144.22	95.49	121.43	154.03
NASDAQ Banks Index	100.00	114.52	111.86	125.60	99.40	72.47	60.30	71.71
Zacks $1B - $5B Bank Assets Index	100.00	116.74	114.01	127.88	107.38	87.68	75.27	85.54

TOTAL RETURN PERFORMANCE (Cont'd.)

	Period Ending							
Index	2011	2012	2013	2014	2015	2016	2017	2018
Arrow Financial Corporation	143.40	162.12	182.92	200.46	209.58	332.12	295.27	295.11
Russell 2000 Index	147.60	171.73	238.39	250.05	239.02	289.96	332.44	295.83
NASDAQ Banks Index	64.14	76.73	109.82	115.40	125.69	170.18	181.29	150.53
Zacks $1B - $5B Bank Assets Index	83.73	98.75	128.58	138.91	150.13	207.62	223.83	197.70

Source: Prepared by Zacks Investment Research, Inc. Used with permission. All rights reserved. Copyright 1980-2019.

The preceding stock performance graphs and tables shall not be deemed incorporated by reference, by virtue of any general statement contained herein or in any other filing incorporated by reference herein, into any other SEC filing by the Company under the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended, except to the extent the Company specifically incorporates this information by reference into such filing, and shall not otherwise be deemed filed as part of any such other filing.

Unregistered Sales of Equity Securities
None.

Issuer Purchases of Equity Securities
The following table presents information about repurchases by Arrow during the three months ended December 31, 2018 of our common stock (our only class of equity securities registered pursuant to Section 12 of the Securities Exchange Act of 1934):

Fourth Quarter 2018 Calendar Month	(a) Total Number of Shares Purchased[1]	(b) Average Price Paid Per Share[1]	(c) Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs[2]	(d) Maximum Approximate Dollar Value of Shares that May Yet be Purchased Under the Plans or Programs[2]
October	1,991	$ 36.78	—	$ 4,404,627
November	10,410	35.03	—	4,404,627
December	14,865	33.00	—	4,404,627
Total	27,266	34.05	—	

[1]The total number of shares purchased and the average price paid per share listed in columns (a) and (b) consist of (i) any shares purchased in such periods in open market or private transactions under the Arrow Financial Corporation Automatic Dividend Reinvestment Plan (the "DRIP") by the administrator of the DRIP, and (ii) shares surrendered or deemed surrendered to Arrow in such periods by holders of options to acquire Arrow common stock received by them under Arrow's long-term incentive plans ("LTIPs") in connection with their stock-for-stock exercise of such options, and shares repurchased by Arrow pursuant to its publicly-announced stock repurchase program. In the months indicated, the listed number of shares purchased included the following numbers of shares purchased by Arrow through such methods: October - DRIP purchases (1,991 shares); November - DRIP purchases (2,580 shares), stock-for-stock option exercises (7,830 shares); and December - DRIP purchases (14,865 shares).
[2]Includes only those shares acquired by Arrow pursuant to its publicly-announced stock repurchase programs. Our only publicly-announced stock repurchase program in effect for the fourth quarter of 2018 was the program approved by the Board of Directors and announced in October 2017, under which the Board authorized management, in its discretion, to repurchase from time to time during 2018, in the open market or in privately negotiated transactions, up to $5 million of Arrow common stock subject to certain exceptions (the "2018 Program"). Arrow had no repurchases of its shares in the fourth quarter of 2018 under the 2018 Program. In January 2019, the Board authorized a repurchase program for the period January 30, 2019 through December 31, 2019 similar to its 2018 program, which also authorizes management to repurchase up to $5 million of stock for the period January 30, 2019 through December 31, 2019.

Item 6. Selected Financial Data

FIVE YEAR SUMMARY OF SELECTED DATA
Arrow Financial Corporation and Subsidiaries
(Dollars In Thousands, Except Per Share Data)

Consolidated Statements of Income Data:	2018	2017	2016	2015	2014
Interest and Dividend Income	96,503	$84,657	$76,915	$70,738	$66,861
Interest Expense	12,485	7,006	5,356	4,813	5,767
Net Interest Income	84,018	77,651	71,559	65,925	61,094
Provision for Loan Losses	2,607	2,736	2,033	1,347	1,848
Net Interest Income After Provision for Loan Losses	81,411	74,915	69,526	64,578	59,246
Noninterest Income	28,736	28,093	27,854	27,995	28,206
Net Gains (Losses) on Securities Transactions	213	(448)	(22)	129	110
Noninterest Expense	(65,055)	(62,705)	(59,609)	(57,430)	(54,028)
Income Before Provision for Income Taxes	45,305	39,855	37,749	35,272	33,534
Provision for Income Taxes	9,026	10,529	11,215	10,610	10,174
Net Income	$36,279	$29,326	$26,534	$24,662	$23,360
Per Common Share: [1]					
Basic Earnings	$2.52	$2.05	$1.87	$1.75	$1.66
Diluted Earnings	2.50	2.04	1.86	1.74	1.66
Per Common Share: [1]					
Cash Dividends	$1.00	$0.95	$0.92	$0.90	$0.88
Book Value	18.63	17.40	16.28	15.13	14.29
Tangible Book Value [2]	16.99	15.71	14.56	13.37	12.46
Consolidated Year-End Balance Sheet Data:					
Total Assets	$2,988,334	$2,760,465	$2,605,242	$2,446,188	$2,217,420
Securities Available-for-Sale	317,535	300,200	346,996	402,309	366,139
Securities Held-to-Maturity	283,476	335,907	345,427	320,611	302,024
Loans	2,196,215	1,950,770	1,753,268	1,573,952	1,413,268
Nonperforming Assets [3]	6,782	7,797	7,186	8,924	8,162
Deposits	2,345,584	2,245,116	2,116,546	2,030,423	1,902,948
Federal Home Loan Bank Advances	279,000	160,000	178,000	137,000	51,000
Other Borrowed Funds	74,659	84,966	55,836	43,173	39,421
Stockholders' Equity	269,584	249,603	232,852	213,971	200,926
Selected Key Ratios:					
Return on Average Assets	1.27 %	1.09 %	1.06 %	1.05 %	1.07 %
Return on Average Equity	13.96	12.14	11.79	11.86	11.79
Dividend Payout Ratio [4]	40.00	46.57	49.46	51.72	53.01
Average Equity to Average Assets	9.10	8.96	8.95	8.88	9.05

[1]Share and per share amounts have been adjusted for subsequent stock splits and dividends, including the most recent September 27, 2018 3% stock dividend.
[2]Tangible book value excludes goodwill and other intangible assets from total equity.
[3]Nonperforming assets consist of nonaccrual loans, loans past due 90 or more days but still accruing interest, repossessed assets, restructured loans, other real estate owned and nonaccrual investments.
[4]Dividend Payout Ratio – cash dividends per share to fully diluted earnings per share.

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Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations
Selected Quarterly Information
Dollars in thousands, except per share amounts
Share and per share amounts have been restated for the September 2018 3% stock dividend

Quarter Ended	12/31/2018	9/30/2018	6/30/2018	3/31/2018	12/31/2017
Net Income	$8,758	$9,260	$9,730	$8,531	$8,071
Transactions Recorded in Net Income (Net of Tax):					
Net (Loss) Gain on Security Transactions	—	—	—	—	(278)
Net Changes in Fair Value of Equity Investments	(106)	85	166	13	—
Tax Benefit from Net Deferred Tax Liability Revaluation	—	—	—	—	1,116
Share and Per Share Data: [1]					
Period End Shares Outstanding	14,472	14,441	14,424	14,368	14,348
Basic Average Shares Outstanding	14,451	14,431	14,394	14,354	14,322
Diluted Average Shares Outstanding	14,514	14,520	14,480	14,436	14,426
Basic Earnings Per Share	$0.61	$0.64	$0.68	$0.59	$0.56
Diluted Earnings Per Share	0.60	0.64	0.67	0.59	0.56
Cash Dividend Per Share	0.260	0.252	0.243	0.243	0.243
Selected Quarterly Average Balances:					
Interest-Bearing Deposits at Banks	$34,782	$30,522	$28,543	$27,978	$27,047
Investment Securities	637,341	636,847	647,913	642,442	660,043
Loans	2,160,435	2,089,651	2,026,598	1,971,240	1,930,590
Deposits	2,347,231	2,279,709	2,325,202	2,305,736	2,284,206
Other Borrowed Funds	315,172	314,304	219,737	184,613	187,366
Shareholders' Equity	268,503	263,139	256,358	251,109	247,253
Total Assets	2,954,031	2,879,854	2,823,061	2,763,706	2,744,180
Return on Average Assets, annualized	1.18%	1.28%	1.38%	1.25%	1.17%
Return on Average Equity, annualized	12.94%	13.96%	15.22%	13.78%	12.95%
Return on Average Tangible Equity, annualized [2]	14.20%	15.36%	16.80%	15.24%	14.36%
Average Earning Assets	2,831,438	2,757,020	2,703,054	2,641,660	2,617,680
Average Paying Liabilities	2,189,233	2,110,924	2,100,085	2,050,661	2,029,811
Interest Income	26,000	24,495	23,590	22,418	22,135
Tax-Equivalent Adjustment [3]	376	376	468	491	980
Interest Income, Tax-Equivalent [3]	26,376	24,871	24,058	22,909	23,115
Interest Expense	4,343	3,498	2,628	2,016	1,821
Net Interest Income	21,657	20,997	20,962	20,402	20,314
Net Interest Income, Tax-Equivalent [3]	22,033	21,373	21,430	20,893	21,294
Net Interest Margin, annualized	3.03%	3.02%	3.11%	3.13%	3.08%
Net Interest Margin, Tax-Equivalent, annualized [3]	3.09%	3.08%	3.18%	3.21%	3.23%
Efficiency Ratio Calculation: [4]					
Noninterest Expense	$16,881	$16,026	$16,192	$15,955	$16,045
Less: Intangible Asset Amortization	65	65	66	67	69
Net Noninterest Expense	$16,816	$15,961	$16,126	$15,888	$15,976
Net Interest Income, Tax-Equivalent	$22,033	$21,373	$21,430	$20,893	$21,294
Noninterest Income	6,799	7,350	7,911	6,888	6,752

Less: Net (Loss) Gain on Security Transactions	—	—	—	—	(458)
Less: Net Changes in Fair Value of Equity Investments	(142)	114	223	18	—
Net Gross Income	28,974	28,609	29,118	27,763	$28,504
Efficiency Ratio	58.04%	55.79%	55.38%	57.23%	56.05%
Period-End Capital Information: [5]					
Total Stockholders' Equity (i.e. Book Value)	$269,584	$264,810	$259,488	$252,734	$249,603
Book Value per Share [1]	18.63	18.34	17.99	17.59	17.40
Goodwill and Other Intangible Assets, net	23,725	23,827	23,933	24,045	24,162
Tangible Book Value per Share [1,2]	16.99	16.69	16.33	15.92	15.71
Tier 1 Leverage Ratio	9.61%	9.67%	9.65%	9.62%	9.49%
Common Equity Tier 1 Capital Ratio	12.89%	12.89%	13.01%	12.97%	12.89%
Tier 1 Risk-Based Capital Ratio	13.87%	13.90%	14.04%	14.03%	13.97%
Total Risk-Based Capital Ratio	14.86%	14.90%	15.06%	15.04%	14.99%
Assets Under Trust Administration & Investment Mgmt	$1,385,752	$1,551,289	$1,479,753	$1,470,191	$1,452,994

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Selected Twelve-Month Information
Dollars in thousands, except per share amounts
Share and per share amounts have been restated for the September 2018 3% stock dividend

	2018	2017	2016
Net Income	$36,279	$29,326	$26,534
Transactions Recorded in Net Income (Net of Tax):			
Net Loss on Security Transactions	$—	$(275)	$(13)
Net Changes in Fair Value of Equity Investments	158	—	—
Period End Shares Outstanding[1]	14,472	14,348	14,304
Basic Average Shares Outstanding[1]	14,408	14,310	14,206
Diluted Average Shares Outstanding[1]	14,488	14,406	14,297
Basic Earnings Per Share[1]	$2.52	$2.05	$1.87
Diluted Earnings Per Share[1]	2.50	2.04	1.86
Cash Dividends Per Share[1]	1.00	0.95	0.92
Average Assets	$2,855,753	$2,693,946	$2,513,645
Average Equity	259,835	241,466	224,969
Return on Average Assets	1.27 %	1.09 %	1.06 %
Return on Average Equity	13.96	12.14	11.79
Average Earning Assets	$2,734,160	$2,567,116	$2,388,042
Average Interest-Bearing Liabilities	2,113,102	2,006,575	1,896,351
Interest Income	96,503	84,657	76,915
Interest Income, Tax-Equivalent*	98,214	88,501	80,636
Interest Expense	12,485	7,006	5,356
Net Interest Income	84,018	77,651	71,559
Net Interest Income, Tax-Equivalent*	85,729	81,495	75,280
Net Interest Margin	3.07 %	3.02 %	3.00 %
Net Interest Margin, Tax-Equivalent*	3.14 %	3.17 %	3.15 %
Efficiency Ratio Calculation*[4]			
Noninterest Expense	65,055	$62,705	$59,609
Less: Intangible Asset Amortization	263	279	297
Net Noninterest Expense	$64,792	$62,426	$59,312
Net Interest Income, Tax-Equivalent	$85,729	$81,495	$75,280
Noninterest Income	28,949	27,645	27,832
Less: Net (Loss) Gain on Security Transactions	—	(448)	(22)
Less: Net Changes in Fair Value of Equity Investments	213	—	—
Net Gross Income, Adjusted	$114,465	$109,588	$103,134
Efficiency Ratio*	56.60 %	56.96 %	57.51 %
Period-End Capital Information:			
Tier 1 Leverage Ratio	9.61 %	9.49 %	9.47 %
Total Stockholders’ Equity (i.e. Book Value)	$269,584	$249,603	$232,852
Book Value per Share	18.63	17.40	16.28
Intangible Assets	23,725	24,162	24,569
Tangible Book Value per Share [2]	16.99	15.71	14.56
Asset Quality Information:			
Net Loans Charged-off as a Percentage of Average Loans	0.05 %	0.06 %	0.06 %
Provision for Loan Losses as a Percentage of Average Loans	0.13 %	0.15 %	0.12 %

Allowance for Loan Losses as a Percentage of Period-End Loans	0.92 %	0.95 %	0.97 %
Allowance for Loan Losses as a Percentage of Nonperforming Loans	365.74 %	312.37 %	309.31 %
Nonperforming Loans as a Percentage of Period-End Loans	0.25 %	0.31 %	0.31 %
Nonperforming Assets as a Percentage of Total Assets	0.23 %	0.28 %	0.28 %

*See "Use of Non-GAAP Financial Measures" on page 4.

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Arrow Financial Corporation
Reconciliation of Non-GAAP Financial Information
(Dollars In Thousands, Except Per Share Amounts)

Footnotes:

1. Share and per share data have been restated for the September 27, 2018, 3% stock dividend.

2. Non-GAAP Financial Measure Reconciliation: 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.

	12/31/2018	9/30/2018	6/30/2018	3/31/2018	12/31/2017
Total Stockholders' Equity (GAAP)	$269,584	$264,810	$259,488	$252,734	$249,603
Less: Goodwill and Other Intangible assets, net	23,725	23,827	23,933	24,045	24,162
Tangible Equity (Non-GAAP)	$245,859	$240,983	$235,555	$228,689	$225,441
Period End Shares Outstanding	14,472	14,441	14,424	14,368	14,348
Tangible Book Value per Share (Non-GAAP)	$16.99	$16.69	$16.33	$15.92	$15.71
Net Income	8,758	9,260	9,730	8,531	8,071
Return on Tangible Equity (Net Income/Tangible Equity - Annualized)	14.20 %	15.36 %	16.80 %	15.24 %	14.36 %

3. Non-GAAP Financial Measure Reconciliation: 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.

	12/31/2018	9/30/2018	6/30/2018	3/31/2018	12/31/2017
Interest Income (GAAP)	$26,000	$24,495	$23,590	$22,418	$22,135
Add: Tax Equivalent Adjustment (Non-GAAP)	376	376	468	491	980
Interest Income - Tax Equivalent (Non-GAAP)	$26,376	$24,871	$24,058	$22,909	$23,115
Net Interest Income (GAAP)	$21,657	$20,997	$20,962	$20,402	$20,314
Add: Tax-Equivalent adjustment (Non-GAAP)	376	376	468	491	980
Net Interest Income - Tax Equivalent (Non-GAAP)	$22,033	$21,373	$21,430	$20,893	$21,294
Average Earning Assets	2,831,438	2,757,020	2,703,054	2,641,660	2,617,680
Net Interest Margin (Non-GAAP)	3.09 %	3.08 %	3.18 %	3.21 %	3.23 %

4. Non-GAAP Financial Measure Reconciliation: 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).

5. For the current quarter, all of the regulatory capital ratios in the table above, 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. All prior quarters reflect actual results. The December 31, 2018 CET1 ratio listed in the tables (i.e., 12.89%) exceeds the sum of the required minimum CET1 ratio plus the fully phased-in Capital Conservation Buffer (i.e., 7.00%).

	12/31/2018	9/30/2018	6/30/2018	3/31/2018	12/31/2017
Total Risk Weighted Assets	2,046,495	1,999,849	1,934,890	1,889,719	1,856,242

Common Equity Tier 1 Capital	283,913	257,852	259,488	265,066	259,378
Common Equity Tier 1 Ratio	12.89 %	12.89 %	13.01 %	12.97 %	12.89 %

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CRITICAL ACCOUNTING ESTIMATES

The significant accounting policies, as described in Note 2 - Summary of Significant Accounting Policies to the notes to the Consolidated Financial Statements are essential in understanding the Management Discussion and Analysis. Many of the significant accounting policies require complex judgments to estimate the values of assets and liabilities. The Company has procedures and processes in place to facilitate making these judgments. The more judgmental estimates are summarized in the following discussion. In many cases, there are numerous alternative judgments that could be used in the process of determining the inputs to the models. Where alternatives exist, the Company has used the factors that are believed to represent the most reasonable value in developing the inputs. Actual performance that differs from our estimates of the key variables could impact the results of operations.

Allowance for loan losses: The allowance for loan losses represents management's estimate of probable losses inherent in the Company's loan portfolio. The process for determining the allowance for loan losses is discussed in Note 2, Summary of Significant Accounting Policies and Note 5, Loans, to the notes to the Consolidated Financial Statements. The Company evaluates the allowance at the portfolio segment level and the portfolio segments are commercial, commercial real estate, residential real estate, and consumer loans. Due to the variability in the drivers of the assumptions used in this process, estimates of the portfolio's inherent risks and overall collectability change with changes in the economy, individual industries, and borrowers' ability and willingness to repay their obligations. The degree to which any particular assumption affects the allowance for loan losses depends on the severity of the change and its relationship to the other assumptions. Key judgments used in determining the allowance for loan losses for individual commercial loans include credit quality indicators, collateral values and estimated cash flows for impaired loans. For pools of loans the Company considers the historical net loss experience, and as necessary, adjustments to address current events and conditions, considerations regarding economic uncertainty, and overall credit conditions. The historical loss factors incorporate a rolling twelve quarter look-back period for each loan segment in order to reduce the volatility associated with improperly weighting short-term fluctuations. The process of determining the level of the allowance for loan losses requires a high degree of judgment. Any downward trend in the economy, regional or national, may require the Company to increase the allowance for loan losses resulting in a negative impact on the results of operations and financial condition.

A. OVERVIEW

The following discussion and analysis focuses on and reviews our results of operations for each of the years in the three-year period ended December 31, 2018 and our financial condition as of December 31, 2018 and 2017. The discussion below should be read in conjunction with the selected quarterly and annual information set forth above and the Consolidated Financial Statements and other financial data presented elsewhere in this Report. When necessary, prior-year financial information has been reclassified to conform to the current-year presentation.

Summary of 2018 Financial Results: Net income for 2018 of $36.3 million increased 23.7% over the results for 2017. Diluted earnings per share ("EPS") for 2018 was $2.50, an increase of $0.46, or 22.5% from EPS in 2017. Financial performance ratios were strong for 2018, including the return on average equity ("ROE") of 13.96%, compared to 12.14% for 2017 year, and return on average assets ("ROA") for 2018 of 1.27% compared to 1.09% for 2017.

Factors contributing to the positive results for the current year compared to the comparable year are as follows:

Net interest income on a GAAP basis increased 8.2% to $84.0 million primarily due to the increase in total interest and dividend income of $11.8 million. Net interest margin on a GAAP basis improved to 3.07% for 2018 as compared to 3.02% for 2017. Interest and fees on loans increased $11.4 million for 2018 mainly due to strong loan growth and higher market rates. Interest expense increased $5.5 million as a result of 4.6% deposit growth, higher market rates and some shifting in the overall funding mix toward higher costing sources. Consistent with prior years, seasonal municipal deposits increased in the fourth quarter. Noninterest income, including net gains on securities, increased $1.3 million in 2018 mainly due to an $838 thousand increase in income from fiduciary activities, an increase of $543 thousand in service fee revenue, and the increase in the net gain on securities. Total noninterest expense increased by $2.4 million, in 2018 primarily due to the $1.1 million increase in salaries and employee benefits and $1.0 million increase in other operating expenses, which included increased loan costs combined with increased spending on technology. In addition to the above, the provision for income taxes decreased $1.5 million, or 14.3%, due to the reduction in tax rates as a result of the Tax Act.

The changes in net income, net interest income and net interest margin between the current and prior year are discussed in detail under the heading "RESULTS OF OPERATIONS," beginning on page 29.

2018 Regulatory Reform: The Economic Growth Act, was signed into law May 24, 2018. Some of its provisions were written to take effect immediately; others have later specified effective dates and still others are open-ended, to be implemented by rule-making. See the discussion of this item under C. SUPERVISION AND REGULATION, "2018 Regulatory Reform" for further details.
The Tax Act was enacted on December 22, 2017. The Company has recorded and reported the effects of the law's impacts in its financial statements for the periods ended December 31, 2018 and December 31, 2017. See Note 15, Income Taxes, to the notes to our Consolidated Financial Statements for more information.

Regulatory Capital and Increase in Stockholders' Equity: As of December 31, 2018,we continued to exceed by a substantial amount all required minimum capital ratios under the 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 capital classification guidelines as defined by the current bank regulatory capital rules. Because of our continued profitability and strong asset quality, our regulatory capital levels throughout recent years have consistently remained well in excess of the various required regulatory minimums in effect from time to time, as they do at present. Pursuant to the Capital Rules under Dodd-Frank, required minimum regulatory capital levels for insured banks and their parent holding companies are scheduled to increase in 2019. As explained above, pursuant to Economic Growth Act, the federal bank regulators are required to implement a simplified community bank leverage ratio capital standard that may be applicable to Arrow and its subsidiary banks to allow them to satisfy all applicable

capital and leverage requirements, including the currently applicable risk-based capital ratio requirements. The implementation of the new community bank leverage ratio standards will be subject to the notice and comment procedures of rulemaking. The Economic Growth Act does not impose a deadline for this rulemaking. The federal bank regulators have issued a proposed rule to implement the "community bank leverage ratio", but that rule is not final, and is subject to change. The Company anticipates that, when this new standard is implemented, it may simplify capital adequacy compliance requirements for community banks and holding companies such as Arrow.

Total Stockholders' equity was $269.6 million at December 31, 2018, an increase of $20.0 million, or 8.0%, from the year earlier level. The components of the change in stockholders' equity since year-end 2017 are presented in the Consolidated Statement of Changes in Stockholders' Equity on page 58. Total book value per share increased by 7.1% over the prior year level. At December 31, 2018, tangible book value per share, a non-GAAP financial measure calculated based on tangible book value (total stockholders' equity minus intangible assets including goodwill) was $16.99, an increase of $1.28, or 8.1%, over the December 31, 2017 amount. This increase in total stockholders' equity during 2018 principally reflected the following factors: (i) $36.3 million of net income for the period, plus (ii) $3.5 million of equity received from various stock-based compensation plans, plus (iii) $1.8 million of equity resulting from the dividend reinvestment plan, reduced by (iv) cash dividends of $14.4 million; (v) other comprehensive loss of $5.0 million and (vi) repurchases of our common stock of $2.1 million. As of December 31, 2018, our closing stock price was $32.02, resulting in a trading multiple of 1.88 to our tangible book value. The Board of Directors declared and the Company paid a cash dividend of $0.243 per share for the first two quarters of 2018 and $0.252 per share for the third quarter of 2018, as adjusted for a 3% stock dividend distributed September 27, 2018, a cash dividend of $0.26 per share for the fourth quarter of 2018, and has declared a $0.26 per share cash dividend for the first quarter of 2019.

Economic trends and loan quality: Economic growth has continued at a modest pace in the Company's market area, while labor markets remained exceptionally tight. Residential real estate revealed mixed results, with the growth in the median sales price slower than the national average. Nonperforming loans were $5.5 million at December 31, 2018, a decrease of $0.4 million, or 7.2%, from year-end 2017. The ratio of nonperforming loans to period-end loans at December 31, 2018 was .25%, a decrease from 0.31% at December 31, 2017 and less than the Company's peer group ratio of 0.61% at September 30, 2018. Loans charged-off (net of recoveries) against the allowance for loan losses was $1.0 million for 2018, a decrease of $165 thousand from 2017. The ratio of net charge-offs to average loans was 0.05% for 2018, compared to the peer group ratio of 0.08% for the period ended September 30, 2018. At December 31, 2018, the allowance for loan losses was $20.2 million, representing 0.92% of total loans, a decrease of 3 basis points from the December 31, 2017 ratio.

The Company's major loan segments are:
Commercial Loans: These loans comprised approximately 6% of the total loan portfolio at period-end. The business sector in the Company's service area, including small- and mid-sized businesses with headquarters in the area, continued to be in reasonably good financial condition at 2018 year-end.
Commercial Real Estate Loans: These loans comprised approximately 22% of the total loan portfolio at period-end. Commercial property values in the Company's region have remained stable in recent periods. Appraisals on nonperforming and watched CRE properties are updated as deemed necessary, usually when the loan was downgraded or when there has been significant market deterioration since the last appraisal.
Residential Real Estate Loans: These loans, including home equity loans, comprised approximately 39% of the total loan portfolio at period-end. The residential real estate market in the Company's service area has been stable in recent periods. The Company originated nearly all of the residential real estate loans currently held in the loan portfolio and applied conservative underwriting standards to loan originations. The Company typically sells a portion of residential real estate mortgage originations into the secondary market. The ratio of the sales of originations to total originations tends to fluctuate from period to period, although this ratio has generally declined somewhat in recent periods.
Consumer Loans (Primarily Indirect Automobile Loans): These loans comprise approximately 33% of the total loan portfolio at period-end. Throughout the past three years, the Company did not experience any significant increase in the delinquency rate or in the percentage of nonperforming loans in this segment.

Liquidity and access to credit markets: The Company did not experience any liquidity problems or special concerns during 2018, nor during the prior two years. The terms of the lines of credit with three correspondent banks, the Federal Home Loan Bank of New York ("FHLBNY") and the Federal Reserve Bank have not changed (see the general liquidity discussion on page 47). In general, the Company principally relies 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. The main liability-based sources are overnight borrowing arrangements with three 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. Regular liquidity stress tests are performed and the Company periodically tests the contingent liquidity plan to ensure that an adequate amount of available funds can be generated to meet a wide variety of potential liquidity crises, including a severe crisis.

Visa Class B Common Stock: Arrow's subsidiary bank, Glens Falls National, like other Visa member banks, bears some indirect contingent liability for Visa's direct liability arising out of certain antitrust claims involving merchant discounts to the extent that Visa's liability might exceed the amount funded in their litigation escrow account. On September 18, 2018, Visa issued a press release announcing that they and other defendants entered into a settlement agreement with class plaintiffs in the related litigation case, and they expect the damage class plaintiffs to file a motion for preliminary approval of the settlement with the court. If the settlement is approved and the balance in the litigation escrow account is sufficient to cover the litigation claims and related expenses, Arrow could potentially realize a gain on the receipt of Visa Class A common stock. At December 31, 2018, Glens Falls National held 27,771

shares of Visa Class B common stock, and utilizing the conversion ratio to Class A common stock at that time, these Class B shares would convert to 45,000 shares of Visa Class A common stock. Since the litigation settlement is not certain, the Company has not recognized any economic value for these shares.

B. RESULTS OF OPERATIONS

The following analysis of net interest income, the provision for loan losses, noninterest income, noninterest expense and income taxes, highlights the factors that had the greatest impact on our results of operations for December 31, 2018 and the prior two years.

I. NET INTEREST INCOME

Net interest income represents the difference between interest, dividends and fees earned on loans, securities and other earning assets and interest paid on deposits and other sources of funds. Changes in net interest income result from changes in the level and mix of earning assets and sources of funds (volume) and changes in the yields earned and interest rates paid (rate). Net interest margin is the ratio of net interest income to average earning assets. Net interest income may also be described as the product of average earning assets and the net interest margin. We will present net interest income in both a GAAP and tax-equivalent basis. As described in the section entitled “Use of Non-GAAP Financial Measures” on page 4 of this Report, for purposes of our presentation of Selected Financial Information in this Report, including in this Item 7, "Management's Discussion and Analysis

of Financial Conditions and Results of Operations," we include a calculation net interest income on a tax-equivalent basis, producing a non-GAAP financial measure. See the discussion and calculation of our 2018 tax equivalent net interest income and net interest margin on page 4 of this Report.

CHANGE IN NET INTEREST INCOME
(Dollars In Thousands) (GAAP Basis)

	Years Ended December 31,			Change From Prior Year			
				2017 to 2018		2016 to 2017	
	2018	2017	2016	Amount	%	Amount	%
Interest and Dividend Income	96,503	84,657	76,915	$11,846	14.0%	$7,742	10.1%
Interest Expense	12,485	7,006	5,356	5,479	78.2	1,650	30.8
Net Interest Income	$84,018	$77,651	$71,559	$6,367	8.2 %	$6,092	8.5 %

CHANGE IN NET INTEREST INCOME
(Dollars In Thousands) (Tax-equivalent Basis)

	Years Ended December 31,			Change From Prior Year			
				2017 to 2018		2016 to 2017	
	2018	2017	2016	Amount	%	Amount	%
Interest and Dividend Income	98,214	88,501	80,636	$9,713	11.0%	$7,865	9.8 %
Interest Expense	12,485	7,006	5,356	5,479	78.2	1,650	30.8
Net Interest Income	$85,729	$81,495	$75,280	$4,234	5.2 %	$6,215	8.3 %

On a GAAP basis, net interest income was $84.0 million in 2018, an increase of $6.4 million, or 8.2%, from the $77.7 million in 2017. This compared to an increase of $6.1 million, or 8.5%, from 2016 to 2017. Factors contributing to the year-to-year changes in net interest income over the three-year period are discussed in the following portions of this Section B.I.

The following tables reflects the components of our net interest income, setting forth, for years ended December 31, 2018, 2017 and 2016: (i) average balances of assets, liabilities and stockholders' equity, (ii) interest and dividend income earned on earning assets and interest expense incurred on interest-bearing liabilities, (iii) average yields earned on earning assets and average rates paid on interest-bearing liabilities, (iv) the net interest spread (average yield less average cost) and (v) the net interest margin (yield) on earning assets. Interest income, net interest income and interest rate information are presented on a GAAP and tax-equivalent basis (see the discussion under "Use of Non-GAAP Financial Measures" on page 4 of this Report). The yield on securities available-for-sale is based on the amortized cost of the securities. Nonaccrual loans are included in average loans.

Average Consolidated Balance Sheets and Net Interest Income Analysis
(GAAP basis)
(Dollars in Thousands)

Years Ended:	2018			2017			2016		
	Average Balance	Interest Income/ Expense	Rate Earned/ Paid	Average Balance	Interest Income/ Expense	Rate Earned/ Paid	Average Balance	Interest Income/ Expense	Rate Earned/ Paid
Interest-Bearing Deposits at Banks	$30,475	$711	2.33 %	$25,573	$348	1.36 %	$24,950	$ 152	0.61 %
Investment Securities:									
Fully Taxable	382,703	8,582	2.24 %	390,641	7,884	2.02 %	420,885	7,934	1.89 %
Exempt from Federal Taxes	258,407	5,563	2.15 %	288,655	6,223	2.16 %	278,982	6,006	2.15 %
Loans	2,062,575	81,647	3.96 %	1,862,247	70,202	3.77 %	1,663,225	62,823	3.78 %
Total Earning Assets	2,734,160	96,503	3.53 %	2,567,116	84,657	3.30 %	2,388,042	76,915	3.22 %
Allowance for Loan Losses	(19,278)			(17,303)			(16,449)		
Cash and Due From Banks	36,360			36,175			33,207		
Other Assets	104,511			107,958			108,845		
Total Assets	$2,855,753			$2,693,946			$2,513,645		
Deposits:									
Interest-Bearing Checking Accounts	$849,626	1,618	0.19 %	$907,113	1,510	0.17 %	$912,461	1,279	0.14 %
Savings Deposits	753,198	3,457	0.46 %	685,782	1,371	0.20 %	616,208	931	0.15 %
Time Deposits of $250,000 Or More	78,159	1,183	1.51 %	32,089	282	0.88 %	69,489	453	0.65 %
Other Time Deposits	173,151	1,420	0.82 %	165,778	950	0.57 %	129,084	658	0.51 %
Total Interest-Bearing Deposits	1,854,134	7,678	0.41 %	1,790,762	4,113	0.23 %	1,727,242	3,321	0.19 %
Short-Term Borrowings	192,050	2,980	1.55 %	140,813	1,148	0.82 %	94,109	393	0.42 %
FHLBNY Term Advances and Other Long-Term Debt	66,918	1,827	2.73 %	75,000	1,745	2.33 %	75,000	1,642	2.19 %
	2,113,102	12,485	0.59 %	2,006,575	7,006	0.35 %	1,896,351	5,356	0.28 %

Total Interest-Bearing Liabilities						
Demand Deposits	460,355		421,061		366,956	
Other Liabilities	22,461		24,844		25,369	
Total Liabilities	2,595,918		2,452,480		2,288,676	
Stockholders' Equity	259,835		241,466		224,969	
Total Liabilities and Stockholders' Equity	$2,855,753		$2,693,946		$2,513,645	
Net Interest Income		$84,018		$77,651		$71,559
Net Interest Spread		2.94 %		2.95 %		2.94 %
Net Interest Margin		3.07 %		3.02 %		3.00 %

Average Consolidated Balance Sheets and Net Interest Income Analysis
(Tax-equivalent basis)
(Dollars in Thousands)

Years Ended:	2018			2017			2016		
	Average Balance	Interest Income/ Expense	Rate Earned/ Paid	Average Balance	Interest Income/ Expense	Rate Earned/ Paid	Average Balance	Interest Income/ Expense	Rate Earned/ Paid
Interest-Bearing Deposits at Banks	$30,475	$ 711	2.33 %	$25,573	$ 348	1.36 %	$24,950	$ 153	0.61 %
Investment Securities:									
Fully Taxable	382,703	8,591	2.24 %	390,641	7,900	2.02 %	420,885	7,950	1.89 %
Exempt from Federal Taxes	258,407	6,948	2.69 %	288,655	9,507	3.29 %	278,982	9,187	3.29 %
Loans	2,062,575	81,964	3.97 %	1,862,247	70,746	3.80 %	1,663,225	63,346	3.81 %
Total Earning Assets	2,734,160	98,214	3.59 %	2,567,116	88,501	3.45 %	2,388,042	80,636	3.38 %
Allowance for Loan Losses	(19,278)			(17,303)			(16,449)		
Cash and Due From Banks	36,360			36,175			33,207		
Other Assets	104,511			107,958			108,845		
Total Assets	$2,855,753			$2,693,946			$2,513,645		
Deposits:									
Interest-Bearing Checking Accounts	$849,626	1,618	0.19 %	$907,113	1,510	0.17 %	$912,461	1,279	0.14 %
Savings Deposits	753,198	3,457	0.46 %	685,782	1,371	0.20 %	616,208	931	0.15 %
Time Deposits of $250,000 Or More	78,159	1,183	1.51 %	32,089	282	0.88 %	69,489	453	0.65 %
Other Time Deposits	173,151	1,420	0.82 %	165,778	950	0.57 %	129,084	658	0.51 %
Total Interest-Bearing Deposits	1,854,134	7,678	0.41 %	1,790,762	4,113	0.23 %	1,727,242	3,321	0.19 %
Short-Term Borrowings	192,050	2,980	1.55 %	140,813	1,148	0.82 %	94,109	393	0.42 %
FHLBNY Term Advances and Other Long-Term Debt	66,918	1,827	2.73 %	75,000	1,745	2.33 %	75,000	1,642	2.19 %
Total Interest-Bearing Liabilities	2,113,102	12,485	0.59 %	2,006,575	7,006	0.35 %	1,896,351	5,356	0.28 %
Demand Deposits	460,355			421,061			366,956		
Other Liabilities	22,461			24,844			25,369		
Total Liabilities	2,595,918			2,452,480			2,288,676		
Stockholders' Equity	259,835			241,466			224,969		
Total Liabilities and Stockholders' Equity	$2,855,753			$2,693,946			$2,513,645		
Net Interest Income		85,729			81,495			75,280	
Net Interest Spread			3.00 %			3.10 %			3.10 %
Net Interest Margin			3.14 %			3.17 %			3.15 %

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In the following tables, net interest income components are presented on both a GAAP and tax-equivalent basis. Changes between periods are attributed to movement in either the average daily balances or average rates for both earning assets and interest-bearing liabilities. Changes attributable to both volume and rate have been allocated proportionately between the categories.

Net Interest Income Rate and Volume Analysis
(Dollars in Thousands) (GAAP basis)

	2018 Compared to 2017 Change in Net Interest Income Due to:			2017 Compared to 2016 Change in Net Interest Income Due to:		
Interest and Dividend Income:	Volume	Rate	Total	Volume	Rate	Total
Interest-Bearing Bank Balances	$118	$245	$363	$4	$191	$195
Investment Securities:						
Fully Taxable	(161)	859	698	(597)	548	(49)
Exempt from Federal Taxes	(631)	(29)	(660)	189	28	217
Loans	7,659	3,786	11,445	7,545	(166)	7,379
Total Interest and Dividend Income	6,985	4,861	11,846	7,141	601	7,742
Interest Expense:						
Deposits:						
Interest-Bearing Checking Accounts	(102)	210	108	(8)	239	231
Savings Deposits	147	1,939	2,086	113	327	440
Time Deposits of $250,000 or More	599	302	901	(295)	124	(171)
Other Time Deposits	44	426	470	203	89	292
Total Deposits	688	2,877	3,565	13	779	792
Short-Term Borrowings	529	1,303	1,832	260	495	755
Long-Term Debt	(201)	283	82	—	103	103
Total Interest Expense	1,016	4,463	5,479	273	1,377	1,650
Net Interest Income	$5,969	$398	$6,367	$6,868	$(776)	$6,092

Net Interest Income Rate and Volume Analysis
(Dollars in Thousands) (Tax-equivalent basis)

	2018 Compared to 2017 Change in Net Interest Income Due to:			2017 Compared to 2016 Change in Net Interest Income Due to:		
Interest and Dividend Income:	Volume	Rate	Total	Volume	Rate	Total
Interest-Bearing Bank Balances	$77	$286	$363	$4	$191	$195
Investment Securities:						
Fully Taxable	(163)	854	691	(592)	542	(50)
Exempt from Federal Taxes	(929)	(1,630)	(2,559)	318	2	320
Loans	7,853	3,365	11,218	7,563	(163)	7,400
Total Interest and Dividend Income	6,838	2,875	9,713	7,293	572	7,865
Interest Expense:						
Deposits:						
Interest-Bearing Checking Accounts	(102)	210	108	(8)	239	231
Savings Deposits	147	1,939	2,086	113	327	440
Time Deposits of $250,000 or More	599	302	901	(295)	124	(171)
Other Time Deposits	44	426	470	203	89	292
Total Deposits	688	2,877	3,565	13	779	792
Short-Term Borrowings	529	1,303	1,832	260	495	755

Long-Term Debt	(201)	283	82	—	103	103
Total Interest Expense	1,016	4,463	5,479	273	1,377	1,650
Net Interest Income	$5,822	$(1,588)	$4,234	$7,020	$(805)	$6,215

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NET INTEREST MARGIN

YIELD ANALYSIS (GAAP Basis)	December 31,		
	2018	2017	2016
Yield on Earning Assets	3.53%	3.30%	3.22%
Cost of Interest-Bearing Liabilities	0.59	0.35	0.28
Net Interest Spread	2.94%	2.95%	2.94%
Net Interest Margin	3.07%	3.02%	3.00%

YIELD ANALYSIS (Tax-equivalent basis)	December 31,		
	2018	2017	2016
Yield on Earning Assets	3.59%	3.45%	3.38%
Cost of Interest-Bearing Liabilities	0.59	0.35	0.28
Net Interest Spread	3.00%	3.10%	3.10%
Net Interest Margin	3.14%	3.17%	3.15%

Our earnings are derived predominantly from net interest income, which is our interest income, net of interest expense. Changes in our balance sheet composition, including interest-earning assets, deposits, and borrowings, combined with changes in market interest rates, impact our net interest income. Net interest margin is net interest income divided by average interest-earning assets. We manage our interest-earning assets and funding sources, including noninterest and interest-bearing liabilities, in order to maximize this margin.

Net interest income increased $6.4 million, or 8.2%, to $84 million for the year ended December 31, 2018 from $77.7 million for the same period in 2017. The net interest margin was 3.07% for the year ended December 31, 2018 as compared to 3.02% for the same period in 2017. When presented on a non-GAAP, tax-equivalent basis, the net interest margin tightened by 3 basis points in 2018 when compared with 2017, from 3.17% to 3.14%. This decrease is attributed to lower effective tax-rates in 2018, a result of the Tax Act, which impacts the tax-equivalent adjustment included in the net interest margin calculation.

Interest income from loans increased $11.4 million, or 16.3%, to $81.6 million for the year ended December 31, 2018 from $70.2 million for the same period in 2017. Loan growth was the largest component contributing to higher interest income. Average loan balances increased by $200.3 million, a 10.8% increase over 2017 average balances. Within the loan portfolio, the three principal segments are residential real estate loans, consumer loans (primarily through the indirect automobile lending program) and commercial loans. In 2018, the Company originated a lower volume of residential mortgages in 2018 than in the prior two years, and sold less of these loans to the secondary market. The average balance of the consumer loan portfolio increased significantly in 2018, reflecting continuing strong demand in automobile sales, competitive pricing and an expanding network of dealers. The commercial and commercial real estate loan portfolio also experienced growth during 2018.

Interest income on investment securities and interest-bearing deposits at banks (cash) increased $0.4 million, or 2.8%, between the years ended December 31, 2018 and December 31, 2017. Throughout the year a portion of cash flow from investments was redirected to fund loan growth. In 2018, the combined average balance of investment securities and cash was $33.3 million, or 4.7%, lower than 2017.

The net interest margin benefited from the shift in earning asset mix summarized above, as average balances on loans increased and the average balances on investment securities decreased in 2018 when compared to 2017.

Total interest expense on interest-bearing liabilities increased $5.5 million, or 78.2%, to $12.5 million for the year ended December 31, 2018 from $7.0 million for the year ended December 31, 2017. Interest expense on deposits increased by $3.6 million, while interest expense on borrowings increased by $1.9 million. The increase in deposit expense is due to growth in the average balance of interest-bearing deposits of $63.4 million as well as higher rates on savings and time deposit accounts. The average balance of all borrowings, including both short-term borrowings and

FHLBNY term advances, increased by $43.2 million in 2018.
2017 Compared to 2016: For 2017, average earning assets increased $179.1 million or 7.5% over 2016, while average interest-bearing liabilities increased $110.2 million, or 5.8%, and non-interest bearing demand deposits increased $54.1 million or 14.7%. The growth in average earning assets and demand deposits were the primary factors in the $6.1 million, or 8.5%, increase in net interest income in 2017. An increase in average loan balances was the largest component of the $179.1 increase in average earning assets. Residential real estate loans, commercial loans and consumer loans all increased from 2016. In addition, the combination of the composition of the average earning assets which included higher yielding loans portfolio and the strategic decision to hold a higher portion of residential real estate loans versus 2016, improved net interest margin from 2016.

II. PROVISION FOR LOAN LOSSES AND ALLOWANCE FOR LOAN LOSSES

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. We recorded a $2.6 million provision for loan losses for 2018, compared to the $2.7 million provision for 2017. The level of the 2018 provision was impacted primarily by the growth in loan balances and the decline in nonperforming loans during 2018. Our analysis of the method we employ for determining the amount of the loan loss provision is explained in detail in Notes 2, Summary of Significant Accounting Policies, and 5, Loans, to the notes to our Consolidated Financial Statements.

SUMMARY OF THE ALLOWANCE AND PROVISION FOR LOAN LOSSES
(Dollars In Thousands) (Loans, Net of Unearned Income)

Years-Ended December 31,	2018	2017	2016	2015	2014
Period-End Loans	$2,196,215	$1,950,770	$1,753,268	$1,573,952	$1,413,268
Average Loans	2,062,575	1,862,247	1,663,225	1,484,766	1,344,427
Period-End Assets	2,988,334	2,760,465	2,605,242	2,446,188	2,217,420
Nonperforming Assets, at Period-End:					
Nonaccrual Loans:					
Commercial Loans	403	588	155	387	473
Commercial Real Estate	789	1,530	875	2,402	2,071
Consumer Loans	658	653	589	449	415
Residential Real Estate Loans	2,309	2,755	2,574	3,195	3,940
Total Nonaccrual Loans	4,159	5,526	4,193	6,433	6,899
Loans Past Due 90 or More Days and Still Accruing Interest	1,225	319	1,201	187	537
Restructured	138	105	106	286	333
Total Nonperforming Loans	5,522	5,950	5,500	6,906	7,769
Repossessed Assets	130	109	101	140	81
Other Real Estate Owned	1,130	1,738	1,585	1,878	312
Total Nonperforming Assets	$6,782	$7,797	$7,186	$8,924	$8,162
Allowance for Loan Losses:					
Balance at Beginning of Period	$18,586	$17,012	$16,038	$15,570	$14,434
Loans Charged-off:					
Commercial Loans	(153)	(2)	(97)	(62)	(212)
Commercial Real Estate	(17)	(380)	(195)	(7)	—
Consumer Loans	(1,246)	(1,101)	(871)	(711)	(718)
Residential Real Estate Loans	(116)	(76)	(107)	(326)	(91)
Total Loans Charged-off	(1,532)	(1,559)	(1,270)	(1,106)	(1,021)
Recoveries of Loans Previously Charged-off:					
Commercial Loans	3	8	23	33	86
Commercial Real Estate	12	—	—	—	—
Consumer Loans	520	389	182	194	223
Residential Real Estate Loans	—	—	6	—	—
Total Recoveries of Loans Previously Charged-off	535	397	211	227	309
Net Loans Charged-off	(997)	(1,162)	(1,059)	(879)	(712)
Provision for Loan Losses					

Charged to Expense	2,607		2,736		2,033		1,347		1,848	
Balance at End of Period	$20,196		$18,586		$17,012		$16,038		$15,570	
Asset Quality Ratios:										
Net Charge-offs to Average Loans	0.05	%	0.06	%	0.06	%	0.06	%	0.05	%
Provision for Loan Losses to Average Loans	0.13	%	0.15	%	0.12	%	0.09	%	0.14	%
Allowance for Loan Losses to Period-end Loans	0.92	%	0.95	%	0.97	%	1.02	%	1.10	%
Allowance for Loan Losses to Nonperforming Loans	365.74	%	312.37	%	309.31	%	232.24	%	200.41	%
Nonperforming Loans to Period-end Loans	0.25	%	0.31	%	0.31	%	0.44	%	0.55	%
Nonperforming Assets to Period-end Assets	0.23	%	0.28	%	0.28	%	0.36	%	0.37	%

ALLOCATION OF THE ALLOWANCE FOR LOAN LOSSES
(Dollars in Thousands)

	2018	2017	2016	2015	2014
Commercial Loans	$1,218	$1,873	$1,017	$1,827	$2,382
Commercial Real Estate	5,644	4,504	5,677	4,520	3,846
Consumer Loans	8,882	7,604	6,120	5,554	5,210
Residential Real Estate Loans	4,452	4,605	4,198	3,790	3,369
Unallocated	—	—	—	347	763
Total	$20,196	$18,586	$17,012	$16,038	$15,570

The allowance for loan losses increased to $20.2 million at year-end 2018 from $18.6 million at year-end 2017, an increase of 8.7%. However, the loan portfolio increased at an even faster rate during 2018 (the portfolio at year-end 2018 was up by 12.6% compared to year-end 2017), with the result that the allowance for loan losses as a percentage of period-end total loans declined to 0.92% at year-end 2018 from 0.95% at year-end 2017, a decrease of 3.16%.
A variety of factors were considered in evaluating the adequacy of the allowance for loan losses at December 31, 2018 and the provision for loan losses for the year, including:

Factors leading to an increase in the provision for loan losses:
- Loan growth in all portfolio segments
- An increase in classified commercial and commercial real estate loans

Factors leading to a decrease in the provision for loan losses:
- A slight decrease in the qualitative loss factor for consumer loans
- A decrease in the qualitative and historical loss factors for residential real estate loans

See Note 5, Loans, to the notes to our Consolidated Financial Statements for a complete list of all the factors used to calculate the provision for loan losses, including the factors that did not change during the year.
Most of our adversely classified loans (special mention and substandard - see our definition for these classifications in Note 5, Loans, to the notes to our Consolidated Financial Statements) continued to perform under their contractual terms.

III. NONINTEREST INCOME
The majority of our noninterest income constitutes fee income from services, principally fees and commissions from fiduciary services, deposit account service charges, insurance commissions, net gains (losses) on securities transactions and other recurring fee income.

ANALYSIS OF NONINTEREST INCOME
(Dollars In Thousands)

	Years Ended December 31,			Change From Prior Year			
				2017 to 2018		2016 to 2017	
	2018	2017	2016	Amount	%	Amount	%
Income from Fiduciary Activities	$9,255	$8,417	$7,783	$838	10.0 %	$634	8.1 %
Fees for Other Services to Customers	10,134	9,591	9,469	543	5.7	122	1.3
Insurance Commissions	7,888	8,612	8,668	(724)	(8.4)	(56)	(0.6)
Net Gain (Loss) on Securities	213	(448)	(22)	661	(147.5)	(426)	1,936.4
Net Gain on Sales of Loans	135	546	821	(411)	(75.3)	(275)	(33.5)
Other Operating Income	1,324	927	1,113	397	42.8	(186)	(16.7)
Total Noninterest Income	$28,949	$27,645	$27,832	$1,304	4.7	$(187)	(0.7)

2018 Compared to 2017: Total noninterest income in 2018 was $28.9 million, an increase of $1.3 million, or 4.7%, from total noninterest income of $27.6 million for 2017. Income from fiduciary activities increased from 2017 to 2018 by $838 thousand due to nonrecurring fee income related to the settlement of estates as well as an increase in wealth management fees related to portfolio valuation as a result of the performance in the equity market. Equity markets performed favorably for the first three quarters of 2018 before the decline experienced in the fourth quarter of 2018. Assets under trust administration and investment management at December 31, 2018 were $1.386 billion,a decrease of $67.2 million, or 4.6%, from the prior year-end balance of $1.453 billion.

Fees for other services to customers (primarily service charges on deposit accounts, revenues related to the sale of mutual funds to our customers by third party providers, income from debit card transactions, and servicing income on sold loans) were $10.1 million for 2018, an increase of $543 thousand, or 5.7%, from 2017. The principal cause of the increase was an increase in income from debit card transactions, offset in part by a decline in fee income from service charges on deposit accounts and overdraft fee income.

Insurance commissions decreased by $724 thousand, or 8.4% from 2017 to 2018 mainly due to the increased competition for commercial clients in the Company's markets.
Net gain on securities in 2018 was the change in the fair value of equity investments of $213 thousand, while the net loss on securities in 2017 was a net loss from securities transactions of $448 thousand.
Net gains on the sales of loans decreased in 2018 to $135 thousand, from $546 thousand in 2017, a decrease of $411 thousand, or 75.3% due to a change in strategy to retain more loans in 2018 as residential real estate market interest rates increased. The reduced gain is consistent with the amount of total loans sold between the two years, which decreased from $17.2 million in 2017 to $4.3 million in 2018, a 75.1% decrease. The rate at which mortgage loan originations are sold in future periods will depend on various circumstances, including prevailing mortgage rates, other lending opportunities, capital and liquidity needs, and the ready availability of a market for such sales. The Company is unable to predict what the retention rate of such loans in future periods may be, although the retention rates have increased in each of the last three years. Servicing rights are generally retained for loans originated and sold, which also generates additional noninterest income in subsequent periods (fees for other services to customers).
Other operating income increased by $397 thousand, or 42.8% between the two years mainly due to the recognition of a small gain from the investment in regional business incubation enterprises (limited partnerships) in 2018, a loss recognized in 2017 and a small gain on the sale of a branch office in the fourth quarter of 2018. There was an additional increase in various credits and fees collected, none of which are individually material.
2017 Compared to 2016: Total noninterest income in 2017 was $27.6 million, a decrease of $187 thousand, or 0.7%, from total noninterest income of $27.8 million for 2016. Sales of securities resulted in a loss of $448 thousand in 2017 compared to a loss of $22 thousand in 2016, resulting in a $426 thousand larger loss. Net gains on the sales of loans decreased in 2017 to $546 thousand, from $821 thousand in 2016, a decrease of $275 thousand, or 33.5%. Income from fiduciary activities increased from 2016 to 2017 by $634 thousand and insurance commissions decreased by $56 thousand, or 0.6% from 2016 to 2017. Other operating income decreased by $186 thousand, or 16.7% between the two years.

IV. NONINTEREST EXPENSE
Noninterest expense is the measure of the delivery cost of services, products and business activities of a company. The key components of noninterest expense are presented in the following table.

ANALYSIS OF NONINTEREST EXPENSE
(Dollars In Thousands)

	Years Ended December 31,			Change From Prior Year			
				2017 to 2018		2016 to 2017	
	2018	2017	2016	Amount	%	Amount	%
Salaries and Employee Benefits	$38,788	$37,677	$34,637	$1,111	2.9 %	$3,040	8.8 %
Occupancy Expense of Premises, Net	5,026	4,911	4,983	115	2.3	(72)	(1.4)
Furniture and Equipment Expense	4,761	4,649	4,419	112	2.4	230	5.2
FDIC Regular Assessment	881	891	1,076	(10)	(1.1)	(185)	(17.2)
Amortization of Intangible Assets	262	279	297	(17)	(6.1)	(18)	(6.1)
Other Operating Expense	15,337	14,298	14,197	1,039	7.3	101	0.7
Total Noninterest Expense	$65,055	$62,705	$59,609	$2,350	3.7	$3,096	5.2
Efficiency Ratio	56.60 %	56.96 %	57.51 %	(0.36)%	(0.6)	(0.55)%	(1.0)

2018 compared to 2017: Noninterest expense for 2018 amounted to $65.1 million, an increase of $2.4 million, or 3.7%, from 2017. For 2018, the efficiency ratio was 56.60%. This ratio, which is a commonly used non-GAAP financial measure in the banking industry, is a comparative measure of a financial institution's operating efficiency. The efficiency ratio (a ratio where lower is better), as defined by the Company, is the ratio of operating noninterest expense (excluding intangible asset amortization and any FHLBNY prepayment penalties) to net interest income (on a tax-equivalent basis) plus operating noninterest income (excluding net securities gains or losses). See the discussion of

the efficiency ratio on page 4 of this Report under the heading "Use of Non-GAAP Financial Measures." Our efficiency ratios in recent periods compared favorably to the ratios of our peer group. For the quarter ended September 30, 2018, the peer group ratio (as calculated by the Federal Reserve Bank's most recently available report) was 65.32%, compared to the Company's ratio (not adjusted) of 55.79%.
Salaries and employee benefits expense, which typically represents between 55% and 60% of total noninterest expense, increased by $1.1 million, or 2.9%, from 2017 to 2018. The net increase reflects a 6.5% increase in employee benefits, including increases in expenses related to our defined benefit pension and post retirement plans, health benefit plans and incentive compensation plans. Salary expenses increased by 1.6% due to normal salary increases offset by a slight decrease in staffing levels.
Other operating expense increased $1.0 million, or 7.3%, from 2017. This was primarily the result of nonrecurring legal and professional fees combined with increased spending on technology.
2017 compared to 2016: Noninterest expense for 2017 amounted to $62.7 million, an increase of $3.1 million, or 5.2%, from 2016. For 2017, the efficiency ratio was 56.96%. Salaries and employee benefits expense increased by $2.8 million, or 8.3%, from 2016 to 2017. Occupancy expense reduced slightly due to the large repair expenses that were reported in 2016. The FDIC regular assessment decreased in 2017 in part due to the FDIC announcing that the reserve ratio reached 1.17% in June 2016.

This represented the highest level the ratio has reached in more than eight years. The reduction in assessment rates went into effect in the third quarter of 2016.

V. INCOME TAXES

The following table sets forth our provision for income taxes and effective tax rates for the periods presented.

INCOME TAXES AND EFFECTIVE RATES
(Dollars In Thousands)

	Years Ended December 31,			Change From Prior Year			
				2017 to 2018		2016 to 2017	
	2018	2017	2016	Amount	%	Amount	%
Provision for Income Taxes	$9,026	$10,529	$11,215	$(1,503)	(14.3)%	$(686)	(6.1)%
Effective Tax Rate	19.9 %	26.4 %	29.7 %	(6.5)%	(24.6)%	(3.3)%	(11.1)%

The provisions for federal and state income taxes amounted to $9.0 million for 2018, $10.5 million for 2017, and $11.2 million for 2016. The effective income tax rates for 2018, 2017 and 2016 were 19.9%, 26.4% and 29.7%, respectively. The reduced rate for 2018 was due to the lower federal tax rate as a result of the Tax Act. The 2017 rate was benefited by 2.80% as a result of the revaluing of our net deferred tax liability pursuant to the Tax Act.
The Tax Act was enacted on December 22, 2017 and required the Company to reflect changes associated with the law's provisions in its 2017 fourth quarter. The law is complex and has extensive implications for the Company's federal and state current and deferred taxes and income tax expense. For the period ended December 31, 2017, the Company remeasured the net deferred tax liability to the lower rate that will apply in future periods. See Note 15, Income Taxes, of the notes to our Consolidated Financial Statements for more information.

C. FINANCIAL CONDITION

I. INVESTMENT PORTFOLIO

Investment securities including debt securities and equity securities prior to January 1, 2018 were classified as held-to-maturity, trading, or available-for-sale depending on the purposes for which such securities are acquired and thereafter held. Securities held-to-maturity are debt securities that we have both the positive intent and ability to hold to maturity; such securities are stated at amortized cost. Debt securities that are bought and held principally for the purpose of sale in the near term are classified as trading securities and are reported at fair value with unrealized gains and losses included in earnings. Debt securities and equity securities prior to January 1, 2018 not classified as either held-to-maturity or trading securities are classified as available-for-sale and are reported at fair value with unrealized gains and losses excluded from earnings and reported net of taxes in accumulated other comprehensive income or loss. Beginning January 1, 2018, upon adoption of Accounting Standards Update ("ASU") 2016-01, equity securities with readily determined fair values are stated at fair value, with realized and unrealized gains and losses reported in income. For periods prior to January 1, 2018, equity securities were classified as available-for-sale. During 2018, 2017 and 2016, the Company held no trading securities. Set forth below is certain information about the securities available-for-sale portfolio, securities held-to-maturity portfolio and the equity securities portfolio as of recent year-ends.

Securities Available-for-Sale:

The following table sets forth the carrying value of our securities available-for-sale portfolio at year-end December 31, 2018, December 31, 2017 and December 31, 2016.

SECURITIES AVAILABLE-FOR-SALE
(Dollars In Thousands)

	December 31,		
	2018	2017	2016
U.S. Government & Agency Obligations	$46,765	$59,894	$147,377
State and Municipal Obligations	1,195	10,349	27,690
Mortgage-Backed Securities	268,775	227,596	167,239
Corporate and Other Debt Securities	800	800	3,308
Mutual Funds and Equity Securities	—	1,561	1,382
Total	$317,535	$300,200	$346,996

In all periods, Mortgage-Backed Securities consisted solely of mortgage pass-through securities and Collateralized Mortgage Obligations ("CMOs") issued or guaranteed by U.S. federal agencies. Mortgage pass-through securities provide to the investor monthly portions of principal and interest pursuant to the contractual obligations of the underlying mortgages. CMOs are pools of mortgage-backed securities, the repayments on which have generally been separated into two or more components (tranches), where each tranche has a separate estimated life and yield. The Company's practice has been to purchase only floating rate

securities, pass-through securities and CMOs that are issued or guaranteed by U.S. federal agencies, and the tranches of CMOs purchased are generally those having shorter average lives and/or durations.

The following table sets forth the maturities of the debt securities in the available-for-sale portfolio as of December 31, 2018. CMOs and other mortgage-backed securities are included in the table based on their expected average lives.

MATURITIES OF DEBT SECURITIES AVAILABLE-FOR-SALE
(Dollars In Thousands)

	Within One Year	After 1 But Within 5 Years	After 5 But Within 10 Years	After 10 Years	Total
U.S. Government & Agency Obligations	41,864	4,901	—	—	46,765
State and Municipal Obligations	204	511	—	480	1,195
Mortgage-Backed Securities	743	142,091	105,902	20,039	268,775
Corporate and Other Debt Securities	—	—	—	800	800
Total	42,811	147,503	105,902	21,319	317,535

The following table sets forth the tax-equivalent yields of the debt securities in the available-for-sale portfolio at December 31, 2018.

YIELDS ON SECURITIES AVAILABLE-FOR-SALE
(Fully Tax-Equivalent Basis)

	Within One Year	After 1 But Within 5 Years	After 5 But Within 10 Years	After 10 Years	Total
U.S. Government & Agency Obligations	1.38 %	1.98 %	— %	— %	1.44 %
State and Municipal Obligations	4.28	6.20	—	6.77	6.11
Mortgage-Backed Securities	3.75	2.29	2.74	2.74	2.50
Corporate and Other Debt Securities	—	—	—	5.55	5.55
Total	1.43	2.29	2.74	2.96	2.37

The yields on obligations of states and municipalities exempt from federal taxation were computed on a tax-equivalent basis. The yields on other debt securities shown in the table above are calculated by dividing annual interest, including accretion of discounts and amortization of premiums, by the amortized cost of the securities at December 31, 2018.
At December 31, 2018 and 2017, the weighted average maturity was 5.0 and 5.9 years, respectively, for debt securities in the available-for-sale portfolio.
At December 31, 2018, the net unrealized losses on securities available-for-sale amounted to $5.0 million. The net unrealized gain or loss on such securities, net of tax, is reflected in accumulated other comprehensive income/loss. The net unrealized losses on securities available-for-sale was $1,676 thousand at December 31, 2017. For both periods, the net unrealized losses were primarily attributable to an average increase in market rates between the date of purchase and the balance sheet date resulting in higher valuations of the portfolio securities.
For further information regarding the portfolio of securities available-for-sale, see Note 4, Investment Securities, to the notes to the Consolidated Financial Statements.

Securities Held-to-Maturity:
The following table sets forth the carrying value of our portfolio of securities held-to-maturity at December 31 of each of the last three years.

SECURITIES HELD-TO-MATURITY
(Dollars In Thousands)

	December 31,		
	2018	2017	2016
State and Municipal Obligations	$235,782	$275,530	$268,892
Mortgage Backed Securities - Residential	47,694	60,377	75,535
Corporate and Other Debt Securities	—	—	1,000
Total	$283,476	$335,907	$345,427

For a description of certain categories of securities held in the securities held-to-maturity portfolio on the reporting dates, as listed in the table above, specifically, "Mortgage-Backed Securities - Residential" and "Corporate and Other Debt Securities," see the paragraph under "SECURITIES AVAILABLE-FOR-SALE" table, above.
For information regarding the fair value of the portfolio of securities held-to-maturity at December 31, 2018, see Note 4, Investment Securities, to the notes to the Consolidated Financial Statements.

The following table sets forth the maturities of our portfolio of securities held-to-maturity as of December 31, 2018.

MATURITIES OF DEBT SECURITIES HELD-TO-MATURITY
(Dollars In Thousands)

	Within One Year	After 1 But Within 5 Years	After 5 But Within 10 Years	After 10 Years	Total
State and Municipal Obligations	$27,426	$93,495	$112,499	$2,362	$235,782
Mortgage Backed Securities - Residential	—	47,694	—	—	47,694
Total	$27,426	$141,189	$112,499	$2,362	$283,476

The following table sets forth the tax-equivalent yields of the portfolio of securities held-to-maturity at December 31, 2018.

YIELDS ON SECURITIES HELD-TO-MATURITY
(Fully Tax-Equivalent Basis)

	Within One Year	After 1 But Within 5 Years	After 5 But Within 10 Years	After 10 Years	Total
State and Municipal Obligations	3.13 %	2.70 %	2.40 %	3.60 %	2.62 %
Mortgage Backed Securities - Residential	—	2.39	—	—	2.39 %
Total	3.13 %	2.60 %	2.40 %	3.60 %	2.58 %

The yields shown in the table above are calculated by dividing annual interest, including accretion of discounts and amortization of premiums, by the amortized cost of the securities at December 31, 2018. Yields on obligations of states and municipalities exempt from federal taxation were computed on a fully tax-equivalent basis.
At December 31, 2018 and 2017, the weighted average maturity was 4.1 and 4.2 years, respectively, for the debt securities in the held-to-maturity portfolio.

EQUITY SECURITIES
(Dollars In Thousands)

The following table is the schedule of Equity Securities at December 31, 2018. Upon the adoption of ASU 2016-01 effective January 1, 2018, Equity Securities are not included in Securities Available-For-Sale since unrealized gains and losses are now recorded in the Consolidated Statements of Income. Prior to January 1, 2018, Equity Securities were included in Securities Available-For-Sale.
Equity Securities

December 31, 2018

Equity Securities, at Fair Value $1,774

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II. LOAN PORTFOLIO

The amounts and respective percentages of loans outstanding represented by each principal category on the dates indicated were as follows:

a. Types of Loans
(Dollars In Thousands)

	December 31,									
	2018		2017		2016		2015		2014	
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
Commercial	$136,890	6	$129,249	7	$105,155	6	$102,587	7	$99,511	7
Commercial Real Estate	484,562	22	444,248	23	431,646	25	384,939	24	340,112	24
Consumer	719,510	33	602,827	31	537,361	30	464,523	31	437,041	31
Residential Real Estate	855,253	39	774,446	39	679,106	39	621,903	38	536,604	38
Total Loans	2,196,215	100	1,950,770	100	1,753,268	100	1,573,952	100	1,413,268	100
Allowance for Loan Losses	(20,196)		(18,586)		(17,012)		(16,038)		(15,570)	
Total Loans, Net	$2,176,019		$1,932,184		$1,736,256		$1,557,914		$1,397,698	

Maintenance of High Quality in the Loan Portfolio: Continuing to have strong credit underwriting standards in addition to market stability, the Company has maintained a high level of asset quality. In general, residential real estate loans are underwritten to secondary market standards for prime loans, and the Company has never engaged in subprime mortgage lending as a business line, nor extended or purchased any so-called "Alt-A", "negative amortization", "option ARM", or "negative equity" mortgage loans. On occasion loans may have been made to borrowers having a FICO score of 650 or below, where special circumstances justified doing so, or have had extensions of credit outstanding to borrowers who developed credit problems after origination resulting in deterioration of their FICO scores.
On occasion, the Company has extended community development loans to borrowers whose creditworthiness is below the normal standards as part of the community support program that has been developed in fulfillment of the statutorily-mandated duty to support low- and moderate-income borrowers within the Company's service area. However, the Company is a prime lender and applies prime lending standards and this, together with the fact that the service area in which most loans are originated did not experience as severe a decline in property values or economic conditions as compared to many other areas of the U.S. during the last economic downturn.
However, like all other banks, the Company operates in an environment in which identifying opportunities for secure and profitable expansion of the loan portfolio remains challenging, competition is intense, and margins are very tight. If the U.S. economy and the regional economy continues to experience only very modest growth, individual borrowers will presumably continue to proceed cautiously in taking on new or additional debt. Many small businesses are operating on very narrow margins and many families continue to live on very tight budgets. If the U.S. economy or the regional economy worsens in upcoming periods, which may be unlikely but possible, elevated charge-offs, higher provisions to the loan loss reserve, and increasing expense related to asset maintenance and supervision may be experienced.

Commercial, Commercial Real Estate and Construction and Land Development Loans: Over the last decade, the Company has experienced moderate and occasionally strong demand for commercial and commercial real estate loans. Particularly over the last three years, commercial and commercial real estate loan growth was significant as outstanding balances increased by $48.0 million, $36.7 million, and $49.3 million in 2018, 2017 and 2016, respectively.
Substantially all commercial and commercial real estate loans were extended to businesses or borrowers located in the Company's regional markets, and many of the loans in the commercial portfolio have variable rates tied to prime or

FHLBNY rates. Although on a national scale the commercial real estate market suffered a major downturn in the 2008-2009 period (from which it has largely recovered), the Company did not experience any significant weakening in the quality of our commercial loan portfolio at that time or in the subsequent years.
However, it is entirely possible that there may be a reduction in the demand for commercial and commercial real estate loans and/or a weakening in the quality of the portfolio in upcoming periods. But at period-end 2018, the business sector, at least in the Company's service area, appeared to be in reasonably good financial condition.

Consumer Loans: At December 31, 2018, consumer loans (primarily auto loans originated through dealerships located primarily in upstate New York and Vermont) represented 33% of loans in the loan portfolio, and continue to be a significant component of the Company's business.
During recent years, including 2018, consumer loan originations have remained strong, with origination volume for the last three years at $391.6 million, $306.6 million and $286.7 million for 2018, 2017 and 2016, respectively.
The consumer loan portfolio reflects a modest shift to a slightly larger (but still very small in absolute terms) percentage of such loans that have been extended to individuals with lower credit scores matching a well-known trend in the auto lending market. In addition, the average maturity for automobile loan originations has expanded in recent years as well, again reflective of a larger market development. In 2018, net charge-offs on consumer loans remained very low at $726 thousand, or 0.11% of average balances compared to net charge-offs of $713 thousand for 2017. The Company's experienced lending staff not only utilizes credit

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evaluation software tools but also reviews and evaluates each loan individually prior to the loan being funded and believe that this disciplined approach to evaluating risk has contributed to maintaining the strong loan quality in this portfolio. However, if weakness in auto demand returns, the portfolio is likely to experience limited, if any, overall growth regardless of whether the auto company affiliates are offering highly-subsidized loans. If demand levels off, or slackens, so will the financial performance in this important loan category.

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 approximately 39% of the entire portfolio at December 31, 2018), slightly higher than the consumer loan portfolio (33% of the portfolio) and the commercial and commercial real estate loans (28%). Our gross originations for residential real estate loans (including refinancings of mortgage loans) were $142.9 million, $202.9 million and $176.5 million for the years 2018, 2017, and 2016, respectively. During each of these years, these gross origination totals have significantly exceeded the sum of repayments and prepayments of such loans previously in the portfolio, and we have also sold portions of these originations in the secondary market, primarily to Freddie Mac. Sales of originations amounted to $4.3 million for 2018, $17.2 million for 2017 and $25.0 million for 2016 which represented the following percentage of the gross originations in each year (3.3%, 9.6% and 16.3%, respectively). The Company expects to continue to sell a portion of the mortgage loan originations in upcoming periods, although perhaps a decreasing percentage of overall originations if rates continue their slow rise across longer maturities. At the same time, if prevailing rates rise substantially, there may be a slowdown in loan growth and perhaps decreasing total originations, particularly if the general economy also falters. At some point, there may be a decrease in outstanding balances in this largest segment of the portfolio. Additionally, if the local economy or real estate market should suffer a major downturn, the quality of the real estate portfolio may also be negatively impacted.

The following table indicates the changing mix in the loan portfolio by including the quarterly average balances for the significant loan segments for the past five quarters. The remaining quarter-by-quarter tables present the percentage of total loans represented by each category and the annualized tax-equivalent yield of each category.

LOAN PORTFOLIO
Quarterly Average Loan Balances
(Dollars In Thousands)

	Quarters Ended				
	12/31/2018	9/30/2018	6/30/2018	3/31/2018	12/31/2017
Commercial and Commercial Real Estate	$595,359	$577,793	$576,311	$569,126	$564,073
Consumer Loans[1]	771,683	736,937	696,585	662,929	643,562
Residential Real Estate	661,423	640,277	616,519	600,076	584,981
Home Equity	131,969	134,644	137,182	139,109	137,975
Total Loans	$2,160,434	$2,089,651	$2,026,597	$1,971,240	$1,930,591

Percentage of Total Quarterly Average Loans

	Quarters Ended									
	12/31/2018		9/30/2018		6/30/2018		3/31/2018		12/31/2017	
Commercial and Commercial Real Estate	27.6	%	27.7	%	28.4	%	28.9	%	29.2	%
Consumer Loans[1]	35.7		35.2		34.3		33.5		33.4	
Residential Real Estate	30.6		30.7		30.5		30.5		30.3	
Home Equity	6.1		6.4		6.8		7.1		7.1	
Total Loans	100.0	%	100.0	%	100.0	%	100.0	%	100.0	%

Quarterly Tax-Equivalent Yield on Loans

Quarters Ended

	12/31/2018	9/30/2018	6/30/2018	3/31/2018	12/31/2017
Commercial and Commercial Real Estate	4.50 %	4.42 %	4.47 %	4.38 %	4.36 %
Consumer Loans[1]	3.64	3.52	3.44	3.34	3.29
Residential Real Estate	4.09	4.05	4.06	4.09	3.99
Home Equity	4.43	4.13	3.93	3.70	3.57
Total Loans	4.05 %	3.97 %	3.96 %	3.90 %	3.83 %

[1] Other Consumer Loans includes certain home improvement loans secured by mortgages. However, these same loan balances are reported as
Residential Real Estate in the table of period-end balances on page 41, captioned “Types of Loans.”

The average yield on our loan portfolio increased from 3.83% for the fourth quarter of 2017 to 4.06% for the fourth quarter of 2018. Market rates increased during 2018 which impacted the new loan yields for fixed rate loans, and variable loan yields as the loans reached their repricing dates. The impact from the higher yields affect each portfolio segment differently, especially based on which point of the yield curve the loan rates are priced from. Loans priced from short-term indices experienced more rapid increases in new loan yields, such as automobile loans, while loans priced from longer-term indices, such as residential real estate

loans, experienced slower increases in new loan yields through the 2018 year. As the market yield curve flattened during 2018, short-term indices rose faster than longer-term indices. We expect that average loan yields will continue to rise if the current rate environment continues, enhancing our ability to improve our average yield on loans, although the timing and degree of responsiveness will be influenced by a variety of other factors, including Federal Reserve actions, the makeup of the loan portfolio, the shape of the yield curve and consumer expectations and preferences. Additionally, there is a significant amount of cash flow from normal amortization and prepayments in all loan categories, and this cash flow reprices at current rates as new loans are generated at the current yields.
The following table indicates the respective maturities and interest rate structure of our commercial loans and commercial real estate construction loans at December 31, 2018. For purposes of determining relevant maturities, loans are assumed to mature at (but not before) their scheduled repayment dates as required by contractual terms. Demand loans and overdrafts are included in the "Within 1 Year" maturity category. Most of the commercial construction loans are made with a commitment for permanent financing, whether extended by us or unrelated third parties. The maturity distribution below reflects the final maturity of the permanent financing.

b. Maturities and Sensitivities of Loans to Changes in Interest Rates
(In Thousands)

	Within 1 Year	After 1 But Within 5 Years	After 5 Years	Total
Commercial	$22,615	$74,614	$39,661	$136,890
Commercial Real Estate - Construction	2,019	27,633	9,091	38,743
Total	$24,634	$102,247	$48,752	$175,633
Fixed Interest Rates	$3,840	$43,941	$27,219	$75,000
Variable Interest Rates	20,794	58,306	21,533	100,633
Total	$24,634	$102,247	$48,752	$175,633

COMMITMENTS AND LINES OF CREDIT

Stand-by letters of credit represent extensions of credit granted in the normal course of business, which are not reflected in the financial statements at a given date because the commitments are not funded at that time. As of December 31, 2018, the total contingent liability for standby letters of credit amounted to $4.5 million. In addition to these instruments, there are lines of credit to customers, including home equity lines of credit, commitments for residential and commercial construction loans and other personal and commercial lines of credit, which also may be unfunded or only partially funded from time-to-time. Commercial lines, generally issued for a period of one year, are usually extended to provide for the working capital requirements of the borrower. At December 31, 2018, outstanding unfunded loan commitments in the aggregate amount were approximately $321.1 million.

c. Risk Elements

1. Nonaccrual, Past Due and Restructured Loans
The amounts of nonaccrual, past due and restructured loans at year-end for each of the past five years are presented in the table on page 35 under the heading "Summary of the Allowance and Provision for Loan Losses."
Loans are placed on nonaccrual status either due to the delinquency status of principal and/or interest or a judgment by management that the full repayment of principal and interest is unlikely. Unless already placed on nonaccrual status, loans secured by home equity lines of credit are put on nonaccrual status when 120 days past due and residential real estate loans are put on nonaccrual status when 150 days past due. Commercial and commercial real estate loans are evaluated on a loan-by-loan basis and are placed on nonaccrual status when 90 days past due if the full collection of principal and interest is uncertain. Under the Uniform Retail Credit Classification and Account Management Policy

established by banking regulators, fixed-maturity consumer loans not secured by real estate must generally be charged-off no later than when 120 days past due. Loans secured with non-real estate collateral in the process of collection are charged-down to the value of the collateral, less cost to sell. Open-end credits, residential real estate loans and commercial loans are evaluated for charge-off on a loan-by-loan basis when placed on nonaccrual status. We had no material commitments to lend additional funds on outstanding nonaccrual loans at December 31, 2018. Loans past due 90 days or more and still accruing interest are those loans which were contractually past due 90 days or more but because of expected repayments, were still accruing interest.

The balance of loans 30-89 days past due and still accruing interest totaled $9.9 million at December 31, 2018 and represented 0.45% of loans outstanding at that date, as compared to approximately $8.9 million, or 0.46% of loans outstanding at December 31, 2017. These non-current loans at December 31, 2018 were composed of approximately $7.4 million of consumer loans (principally indirect automobile loans), $2.2 million of residential real estate loans and $0.3 million of commercial and commercial real estate loans.

We evaluate nonaccrual loans over $250 thousand and all troubled debt restructured loans individually for impairment. All our impaired loans are measured based on either (i) the present value of expected future cash flows discounted at the loan's effective interest rate, (ii) the loan's observable market price or (iii) the fair value of the collateral, less cost to sell, if the loan is collateral dependent. We determine impairment for collateralized loans based on the fair value of the collateral less estimated cost to sell. For other impaired loans, impairment is determined by comparing the recorded value of the loan to the present value of the expected

cash flows, discounted at the loan's effective interest rate. We determine the interest income recognition method for impaired loans on a loan-by-loan basis. Based upon the borrowers' payment histories and cash flow projections, interest recognition methods include full accrual or cash basis. Our method for measuring all other loans is described in detail in Notes 2, Summary of Significant Accounting Policies, and 5, Loans, to the notes to our Consolidated Financial Statements.
Note 5, Loans, to the notes to our Consolidated Financial Statements contains detailed information on modified loans and impaired loans.

2. Potential Problem Loans
On at least a quarterly basis, we re-evaluate our internal credit quality rating for commercial loans that are either past due or fully performing but exhibit certain characteristics that could reflect a potential weakness. Loans are placed on nonaccrual status when the likely amount of future principal and interest payments are expected to be less than the contractual amounts, even if such loans are not past due.
Periodically, we review the loan portfolio for evidence of potential problem loans. Potential problem loans are loans that are currently performing in accordance with contractual terms, but where known information about possible credit problems of the borrower causes doubt about the ability of the borrower to comply with the loan payment terms and may result in disclosure of such loans as nonperforming at some time in the future. In our credit monitoring program, we treat loans that are classified as substandard but continue to accrue interest as potential problem loans. At December 31, 2018, we identified 59 commercial loans totaling $33.8 million as potential problem loans. At December 31, 2017, we identified 62 commercial loans totaling $27.6 million as potential problem loans. For these loans, although positive factors such as payment history, value of supporting collateral, and/or personal or government guarantees led us to conclude that accounting for them as non-performing at year-end was not warranted, other factors, specifically, certain risk factors related to the loan or the borrower justified concerns that they may become nonperforming at some point in the future.
The overall level of our performing loans that demonstrate characteristics of potential weakness from time-to-time is for the most part dependent on economic conditions in northeastern New York State, which in turn are generally impacted at least in part by economic conditions in the U.S. On both the regional and national levels, economic conditions have been healthy in recent periods, although growth in the economy remained slow by comparison to previous historical post-recession recoveries. If growth remains weak, potential problem loans likely will continue at or near their present levels or may even increase.

3. Foreign Outstandings - None

4. Loan Concentrations
The loan portfolio is well diversified. There are no concentrations of credit that exceed 10% of the portfolio, other than the general categories reported in the preceding Section C.II.a. of this Item 7, beginning on page 41. For further discussion, see Note 1, Risks and Uncertainties, to the notes to our Consolidated Financial Statements.

5. Other Real Estate Owned and Repossessed Assets
Other real estate owned ("OREO") primarily consists of real property acquired in foreclosure. OREO is carried at fair value less estimated cost to sell. We establish allowances for OREO losses, which are determined and monitored on a property-by-property basis and reflect our ongoing estimate of the property's estimated fair value less costs to sell. For all periods, all OREO was held for sale. All Repossessed Assets for each of the five years in the table below consist of motor vehicles.

Distribution of OREO and Repossessed Assets (Dollars In Thousands)	December 31,				
	2018	2017	2016	2015	2014
Single Family 1 - 4 Units	$47	$523	$795	$1,357	$—
Commercial Real Estate	1,083	1,215	790	521	312

Other Real Estate Owned, Net	1,130	1,738	1,585	1,878	312
Repossessed Assets	130	109	101	140	81
Total OREO and Repossessed Assets	$1,260	$1,847	$1,686	$2,018	$393

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The following table summarizes changes in the net carrying amount of OREO and the number of properties for each of the periods presented.

Schedule of Changes in OREO (Dollars In Thousands)	2018	2017	2016	2015	2014
Balance at Beginning of Year	$1,738	$1,585	$1,878	$312	$81
Properties Acquired Through Foreclosure	47	778	1,009	1,889	469
Transfer of Bank Property	—	—	—	270	—
Subsequent Write-downs to Fair Value	(195)	(160)	(162)	(9)	—
Sales	(460)	(465)	(1,140)	(584)	(238)
Balance at End of Year	$1,130	$1,738	$1,585	$1,878	$312
Number of Properties, Beginning of Year	6	5	6	1	2
Properties Acquired During the Year	1	4	3	8	2
Properties Sold During the Year	(4)	(3)	(4)	(3)	(3)
Number of Properties, End of Year	3	6	5	6	1

III. SUMMARY OF LOAN LOSS EXPERIENCE

The information required in this section is presented in the discussion of the "Provision for Loan Losses and Allowance for Loan Losses" in Part II Item 7.B.II. beginning on page 35 of this Report, including:

- Charge-offs and Recoveries by loan type
- Factors that led to the amount of the Provision for Loan Losses
- Allocation of the Allowance for Loan Losses by loan type

The percent of loans in each loan category is presented in the table of loan types in the preceding section on page 41 of this Report.

IV. DEPOSITS

The following table sets forth the average balances of and average rates paid on deposits for the periods indicated.

AVERAGE DEPOSIT BALANCES
(Dollars In Thousands)

	Years Ended December 31,					
	12/31/2018		12/31/2017		12/31/2016	
	Average Balance	Rate	Average Balance	Rate	Average Balance	Rate
Demand Deposits	$460,355	— %	$421,061	— %	$366,956	— %
Interest-Bearing Checking Accounts	849,626	0.19%	907,113	0.17	912,461	0.14
Savings Deposits	753,198	0.46%	685,782	0.20	616,208	0.15
Time Deposits of $250,000 or More	78,159	1.51%	32,089	0.88	69,489	0.65
Other Time Deposits	173,151	0.82%	165,778	0.57	129,084	0.51
Total Deposits	$2,314,489	0.33%	$2,211,823	0.19	$2,094,198	0.16

Average total deposit balances increased by $102.7 million, or 4.6% in 2018 , mainly in the demand deposit, savings deposit and time deposit categories. Growth in savings deposits includes $45 million in brokered money market deposits obtained in the first quarter 2018 to provide additional funding to support loan growth. The remainder of the deposit growth was generated from the Company's pre-existing branch network.

The Company did not sell or close any branches during the covered period, 2016-2018. Beginning in 2015, the Company used reciprocal deposits for a select group of municipalities to reduce the amount of investment securities required to be pledged as collateral for municipal deposits where municipal deposits in excess of the FDIC insurance coverage limits were transferred to other participating banks, divided into portions so as to qualify such transferred deposits for FDIC insurance coverage at each transferee bank. In return, reciprocal transfers to the Company in equal amounts of deposits from the participant banks. The balances of reciprocal deposits were $56.6 million and $54.6 million at December 31, 2018 and 2017, respectively.

The following table presents the quarterly average balance by deposit type for each of the most recent five quarters.

DEPOSIT PORTFOLIO
Quarterly Average Deposit Balances
(Dollars In Thousands)

	Quarters Ended				
	12/31/2018	9/30/2018	6/30/2018	3/31/2018	12/31/2017
Demand Deposits	$473,170	$483,089	$444,854	$439,688	$441,761
Interest-Bearing Checking Accounts	817,788	801,193	866,996	914,116	945,414
Savings Deposits	793,299	744,808	750,352	723,660	701,694
Time Deposits of $250,000 or More	76,640	75,888	96,580	63,406	32,430
Other Time Deposits	186,334	174,731	166,420	164,866	162,907
Total Deposits	$2,347,231	$2,279,709	$2,325,202	$2,305,736	$2,284,206

Fluctuations in balances of interest-bearing checking and savings accounts were largely the result of municipal deposit fluctuations. Municipal deposits on average for the above period represented 22% to 31% of total deposits and are typically placed in interest-bearing checking and savings accounts, as well as time deposits of short duration.
In general, there is a seasonal pattern to municipal deposits which dip to a low point in August each year and increase in September and October from tax deposits, and increase again at the end of March from the electronic deposit of NYS Aid payments to school districts. In addition to these seasonal fluctuations within types of accounts, the overall level of municipal deposit balances fluctuates as some municipalities move their accounts in and out of the Company's 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.
As market rates increased during 2018, the competition for deposits intensified. Deposit clients moved funds from low rate interest-bearing checking accounts to products with higher rates, such as money market savings deposits and time deposits. In addition, the Company attracted new deposit relationships in a variety of the Company's product offerings, including demand deposits, money market savings deposits and time deposits.
The savings deposits category includes $45 million in brokered money market deposits obtained in the first quarter of 2018 to provide additional funding to support the Company's loan growth.

The total quarterly average balances as a percentage of total deposits are illustrated in the table below.

Percentage of Total Quarterly Average Deposits	Quarters Ended				
	12/31/2018	9/30/2018	6/30/2018	3/31/2018	12/31/2017
Demand Deposits	20.2 %	21.2 %	19.1 %	19.1 %	19.3 %
Interest-Bearing Checking Accounts	34.8	35.1	37.3	39.6	41.5
Savings Deposits	33.8	32.7	32.2	31.4	30.7
Time Deposits of $250,000 or More	3.3	3.3	4.2	2.7	1.4
Other Time Deposits	7.9	7.7	7.2	7.2	7.1
Total Deposits	100.0 %	100.0 %	100.0 %	100.0 %	100.0 %

Demand deposits as a percentage of total deposits were consistent for the first two quarters of 2018, and favorably grew in the the third quarter. Lower costing interest-bearing checking accounts decreased as a percentage of total deposits during 2018, while money market savings deposits and other time deposits increased as a percentage of total deposits.

The total quarterly interest cost of our deposits, by type of deposit and in total, for each of the most recent five quarters is set forth in the table below:

Quarterly Cost of Deposits	Quarters Ended

	12/31/2018	9/30/2018	6/30/2018	3/31/2018	12/31/2017
Demand Deposits	— %	— %	— %	— %	— %
Interest-Bearing Checking Accounts	0.22%	0.19	0.18	0.17	0.18
Savings Deposits	0.66%	0.48	0.38	0.29	0.23
Time Deposits of $250,000 or More	1.81%	1.57	1.36	1.30	1.17
Other Time Deposits	1.08%	0.84	0.68	0.64	0.60
Total Deposits	0.45%	0.34	0.29	0.24	0.20

In general, Fed funds rate increases influence the rates being offered or paid by competitor institutions, which resulted in a consistent increase in the Company's cost of deposits. There typically is a time lag between the Federal Reserve's actions undertaken to influence rates, and the actual repricing of our deposit liabilities and this lag may be shorter or longer than the lag between Federal Reserve rate actions and the repricing of our loans and other earning assets, depending upon the particular circumstances.

The maturities of time deposits of $250,000 or more at December 31, 2018 are presented below. (Dollars In Thousands)

Maturing in:	
Under Three Months	$27,307
Three to Six Months	15,781
Six to Twelve Months	15,929
2020	11,609
2021	2,685
2022	—
2023	272
Later	—
Total	$73,583

V. SHORT-TERM BORROWINGS (Dollars in Thousands)

	12/31/2018	12/31/2017	12/31/2016
Overnight Advances from the FHLBNY, Federal Funds Purchased and Securities Sold Under Agreements to Repurchase:			
Balance at December 31	$288,659	$169,966	$158,836
Maximum Month-End Balance	288,659	198,382	158,836
Average Balance During the Year	192,047	140,808	94,103
Average Rate During the Year	1.55 %	0.81 %	0.42 %
Rate at December 31	2.13 %	0.98 %	0.59 %

D. LIQUIDITY

The objective of effective liquidity management is to ensure that the Company has the ability to raise cash when needed at a reasonable cost. This includes the capability of meeting expected and unexpected obligations to the Company's customers at any time. Given the uncertain nature of customer demands as well as the need to maximize earnings, the Company must have available reasonably priced sources of funds, both on- and off-balance sheet, that can be accessed quickly in time of need.

The primary sources of available liquidity are overnight investments in federal funds sold, interest bearing bank balances at the Federal Reserve Bank, and cash flow from investment securities and loans. Certain investment securities are selected at purchase as available-for-sale based on their marketability and collateral value, as well as their yield and maturity. The securities available-for-sale portfolio was $317.5 million at year-end 2018, an increase of $17.3 million from the year-end 2017 level. Due to the potential for volatility in market values, the Company is not always able to assume that securities may be sold on short notice at their carrying value, even to provide needed liquidity.

In addition to liquidity from short-term investments, investment securities and loans, the Company has supplemented available operating liquidity with additional off-balance sheet sources such as federal funds lines of credit with correspondent banks and credit lines with the FHLBNY. The federal funds lines of credit are with three correspondent banks totaling $57 million which were not drawn on during 2018, other than to test the facilities.

To support the borrowing relationship with the FHLBNY, the Company has pledged collateral, including residential mortgage and home equity loans. At December 31, 2018, the Company had outstanding collateral obligations with the FHLBNY of $309 million; as of that date, the unused borrowing capacity at the FHLBNY was approximately $242 million. Brokered deposits have also been identified as an available source of funding accessible in a relatively short time period. At December 31, 2018, the balance of outstanding brokered deposits totaled $45 million. Also, the Company's 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 are maintained for contingency liquidity purposes. At December 31, 2018, the amount available under this facility was approximately $490 million, and there were no advances then outstanding.
The Company measures and monitors basic liquidity as a ratio of liquid assets to total short-term liabilities, both with and without the availability of borrowing arrangements. Based on the level of overnight funds investments, available liquidity from the investment securities portfolio, cash flows from the loan portfolio, the stable core deposit base and the significant borrowing capacity, the Company believes that the available liquidity is sufficient to meet all funding needs that may arise in connection with any reasonably likely events or occurrences. At December 31, 2018, our basic liquidity ratio, including our FHLBNY collateralized borrowing capacity, was 8.3% of total assets, or $128 million in excess of our internally-set minimum target ratio of 4%.
Because of its consistently favorable credit quality and strong balance sheet, the Company did not experience any significant liquidity constraints in 2018 and did not experience any such constraints in recent prior years, back to and including the financial crisis years. The Company has not at any time during such period been forced to pay premium rates to obtain retail deposits or other funds from any source.

E. CAPITAL RESOURCES AND DIVIDENDS

Important Regulatory Capital Standards

Dodd-Frank, enacted in 2010, directed U.S. bank regulators to promulgate revised bank organization capital standards, which were required to be at least as strict as the regulatory capital standards for banks then in effect. The Capital Rules under Dodd-Frank were adopted by the Federal bank regulatory agencies in 2013 and became effective for Arrow and its subsidiary banks on January 1, 2015. These Capital Rules are summarized in an earlier section of this Report, "Regulatory Capital Standards," beginning on page 6.
The table below sets forth the various capital ratios achieved by Arrow and its subsidiary banks, Glens Falls National and Saratoga National, as of December 31, 2018, as determined under the bank regulatory capital standards in effect on that date, as well as the minimum levels for such capital ratios that bank holding companies and banks are required to maintain under the Capital Rules (not including the "capital conservation buffer"). As demonstrated in the table, all of Arrow's and the banks' capital ratios at year-end were well in excess of the minimum required levels for such ratios, as established by the regulators. (See Item 1, Section C, under "Regulatory Capital Standards" and Item 8, Note 19 in the Notes to Consolidated Financial Statements, for information regarding the "capital conservation buffer.") In addition, on December 31, 2018, Arrow and each of the banks qualified as "well-capitalized", the highest capital classification category under the revised capital classification scheme recently established by the federal bank regulators, as in effect on that date.

Capital Ratios:	Arrow	GFNB	SNB	Minimum Required Ratio
Tier 1 Leverage Ratio	9.6%	9.1%	9.6%	4.0%
Common Equity Tier 1 Capital Ratio	12.9%	13.4%	13.2%	4.5%
Tier 1 Risk-Based Capital Ratio	13.9%	13.4%	13.2%	6.0%
Total Risk-Based Capital Ratio	14.9%	14.4%	14.2%	8.0%

On November 21, 2018, federal banking regulators issued a notice of proposed rulemaking under the Economic Growth Act that would set the threshold for the Community Bank Leverage Ratio (CBLR) at greater than 9 percent, calculated as the ratio of “CBLR tangible equity” divided by “average total consolidated assets.” Based on the parameters of this proposed rulemaking, the CBLR for Arrow and both subsidiary banks is estimated to exceed the 9 percent threshold. However, these proposed rules are not yet final, and the terms of the rules may change before becoming final. Upon effectiveness, the final rules may impact Arrow’s capital options and requirements, although the potential impact of the final rules on Arrow will remain uncertain until those final rules are issued. Until those rules become final, the enhanced bank capital standards promulgated under Dodd-Frank will remain applicable to Arrow.

Stockholders' Equity at Year-end 2018: Stockholders' equity was $269.6 million at December 31, 2018, an increase of $20.0 million, or 8.0%, from the prior year-end. During 2018 stockholders' equity was positively impacted by (a) net income of $36.3 million for the period, (b) $3.5 million of equity received from various stock-based compensation plans, (c) $1.8 million of equity resulting from the dividend reinvestment plan, while stockholders' equity was reduced by (d) cash dividends of $14.4 million, (e) repurchases of common stock of $2.1 million; and other comprehensive loss of $5.0 million.

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

cutoff date set forth in Dodd-Frank (May 19, 2010) would continue to qualify as Tier 1 capital until maturity or redemption, subject to limitations. Thus, our outstanding TRUPs continue to qualify as Tier 1 regulatory capital, subject to such limitations.

Dividends: The source of funds for the payment by Arrow of cash dividends to stockholders consists primarily of dividends declared and paid to it by our bank subsidiaries. In addition to legal and regulatory limitations on payments of dividends by Arrow (i.e., the need to maintain adequate regulatory capital), there are also legal and regulatory limitations applicable to the payment of dividends by our bank subsidiaries to Arrow. As of December 31, 2018, under the statutory limitations in national banking law, the maximum amount that could have been paid by the bank subsidiaries to Arrow, without special regulatory approval, was approximately $56.1 million The ability of Arrow and our banks to pay dividends in the future is and will continue to be influenced by regulatory policies, capital guidelines and applicable laws.
See Part II, Item 5, "Market for the Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities" for a recent history of our cash dividend payments.

Stock Repurchase Program: In January 2019, the Board of Directors approved a $5.0 million stock repurchase program (the 2019 program), under which management is authorized, in its discretion, to cause the Company to repurchase up to $5 million of shares of Arrow's common stock over the period from January 30, 2019 through December 31, 2019, in the open market or in privately negotiated transactions, to the extent management believes the Company's stock is reasonably priced and such

repurchases appear to be an attractive use of available capital and in the best interests of our shareholders. This 2019 program replaced a similar repurchase program which was in effect during 2018 (the 2018 program), which also authorized the repurchase of up to $5.0 million of shares of Arrow's common stock. As of December 31, 2018 approximately $595 thousand had been used under the 2018 program to repurchase Arrow shares. This total does not include approximately $2.1 million of Arrow's Common Stock that the Company repurchased during 2018 other than through its repurchase program, i.e., repurchases of Arrow shares on the market utilizing funds accumulated under Arrow's Dividend Reinvestment Plan and the surrender or deemed surrender of Arrow stock to the Company in connection with employees' stock-for-stock exercises of compensatory stock options to buy Arrow stock.

F. OFF-BALANCE SHEET ARRANGEMENTS

In the normal course of operations, we may engage in a variety of financial transactions or arrangements, including derivative transactions or arrangements, that in accordance with generally accepted accounting principles are not recorded in the financial statements, or are recorded in amounts that differ from the notional amounts. These transactions or arrangements involve, to varying degrees, elements of credit, interest rate, and liquidity risk. Such transactions or arrangements may be used by us or our customers for general corporate purposes, such as managing credit, interest rate, or liquidity risk or to optimize capital, or may be used by us or our customers to manage funding needs.

We have no off-balance sheet arrangements that are reasonably likely to have a material current or future effect on our financial condition, revenues or expenses, results of operations, liquidity or capital expenditures. As of December 31, 2018, we had no derivative securities, including interest rate swaps, credit default swaps, or equity puts or calls, in our investment portfolio.

G. CONTRACTUAL OBLIGATIONS (Dollars In Thousands)

	Payments Due by Period				
Contractual Obligation	Total	Less Than 1 Year	1-3 Years	3-5 Years	More Than 5 Years
Long-Term Debt Obligations:					
Federal Home Loan Bank Advances [1]	$45,000	$20,000	$25,000	$—	$—
Junior Subordinated Obligations Issued to Unconsolidated Subsidiary Trusts [2]	20,000	—	—	—	20,000
Operating Lease Obligations [3]	5,399	857	1,123	643	2,776
Obligations under Retirement Plans [4]	39,250	3,250	7,386	7,557	21,057
Total	$109,649	$24,107	$33,509	$8,200	$43,833

[1] See Note 10, Debt, to the Consolidated Financial Statements for additional information on Federal Home Loan Bank Advances, including call provisions.

[2] See Note 10, Debt, to the Consolidated Financial Statements for additional information on Junior Subordinated Obligations Issued to Unconsolidated Subsidiary Trusts (trust preferred securities).

[3] See Note 18, Leases, to the Consolidated Financial Statements for additional information on our Operating Lease Obligations.

[4] See Note 13, Retirement Benefit Plans, to the Consolidated Financial Statements for additional information on our Retirement Benefit Plans.

H. FOURTH QUARTER RESULTS

We reported net income of $8.76 million for the fourth quarter of 2018, an increase of $687 thousand, or 8.5%, from the net income of $8.07 million we reported for the fourth quarter of 2017. Diluted earnings per common share for the fourth quarter of 2018 were $0.60, up from $0.56 during the fourth quarter of 2017. The net change in earnings between the two quarters was due to the following: (a) a $1.34 million increase in net interest income, (b) a $47 thousand increase in noninterest income, (c) an $511 thousand decrease in the provision for loan losses, (d) a $838 thousand increase in noninterest expense, and (e) a $376 thousand increase in the provision for income taxes. The principal factors contributing to these quarter-to-quarter changes are included in the discussion of the year-to-year changes in net income set forth elsewhere in this Item 7, specifically, in Section B, "Results of Operations," above, as well as in the Company's Current Report on Form 8-K, as filed with the SEC on January 29, 2019, incorporating by reference the Company's earnings release for the year ended December 31, 2018.

SELECTED FOURTH QUARTER FINANCIAL INFORMATION
(Dollars In Thousands, Except Per Share Amounts)

	For the Quarters Ended December 31,			
	12/31/2018		12/31/2017	
Interest and Dividend Income	$26,000		$22,135	
Interest Expense	4,343		1,821	
Net Interest Income	21,657		20,314	
Provision for Loan Losses	646		1,157	
Net Interest Income after Provision for Loan Losses	21,011		19,157	
Noninterest Income	6,799		6,752	
Noninterest Expense	16,881		16,043	
Income Before Provision for Income Taxes	10,929		9,866	
Provision for Income Taxes	2,171		1,795	
Net Income	$8,758		$8,071	
SHARE AND PER SHARE DATA:				
Weighted Average Number of Shares Outstanding:				
Basic	14,451		14,322	
Diluted	14,514		14,426	
Basic Earnings Per Common Share	$0.61		0.56	
Diluted Earnings Per Common Share	0.60		0.56	
Cash Dividends Per Common Share	0.260		0.243	
AVERAGE BALANCES:				
Assets	$2,954,031		$2,744,180	
Earning Assets	2,831,438		2,617,680	
Loans	2,160,435		1,930,590	
Deposits	2,347,231		2,284,206	
Stockholders’ Equity	268,503		247,253	
SELECTED RATIOS (Annualized):				
Return on Average Assets	1.18	%	1.17	%
Return on Average Equity	12.94	%	12.95	%
Net Interest Margin	3.03	%	3.08	%
Net Charge-offs to Average Loans	0.08	%	0.05	%
Provision for Loan Losses to Average Loans	0.12	%	0.24	%

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SUMMARY OF QUARTERLY FINANCIAL DATA (Unaudited)
The following quarterly financial information for 2018 and 2017 is unaudited, but, in the opinion of management, fairly presents the results of Arrow.

SELECTED QUARTERLY FINANCIAL DATA
(Dollars In Thousands, Except Per Share Amounts)

	2018			
	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
Total Interest and Dividend Income	$22,418	$23,590	$24,495	$26,000
Net Interest Income	20,402	20,962	20,997	21,657
Provision for Loan Losses	746	629	586	646
Net Securities Gains (Losses)	18	223	114	(142)
Income Before Provision for Income Taxes	10,589	12,052	11,735	10,929
Net Income	8,531	9,730	9,260	8,758
Basic Earnings Per Common Share	0.59	0.68	0.64	0.61
Diluted Earnings Per Common Share	0.59	0.67	0.64	0.60
	2017			
	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
Total Interest and Dividend Income	$19,997	$20,926	$21,599	$22,135
Net Interest Income	18,461	19,227	19,650	20,314
Provision for Loan Losses	358	422	800	1,157
Net Securities Gains (Losses)	—	—	10	(458)
Income Before Provision for Income Taxes	9,323	10,225	10,443	9,864
Net Income	6,631	7,208	7,416	8,071
Basic Earnings Per Common Share	0.48	0.50	0.51	0.56
Diluted Earnings Per Common Share	0.47	0.50	0.51	0.56

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

In addition to credit risk in the loan portfolio and liquidity risk, discussed earlier, the Company's business activities also generate market risk. Market risk is the possibility that changes in future market rates (interest rates) or prices (market value of financial instruments) will make the Company's position (i.e. assets and operations) less valuable. The Company's primary market risk is interest rate volatility. The ongoing monitoring and management of interest rate risk is an important component of the 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 the asset/liability profile based upon estimated market risk sensitivity, policy limits and overall market interest rate levels and trends.

Changes in market interest rates, whether increases or decreases, can trigger repricing and changes in the pace of payments for both assets and liabilities (prepayment risk). This may individually or in combination affect net interest income, net interest margin, and ultimately net income, either positively or negatively. ALCO utilizes the results of a detailed and dynamic simulation model to quantify this interest rate risk by projecting net interest income in various interest rate scenarios.

The Company's standard simulation model applies a parallel shift in interest rates, ramped over a 12-month period, to capture the impact of changing interest rates on net interest income. The results are compared to ALCO policy limits which specify a maximum tolerance level for net interest income exposure over one and two year periods, assuming no balance sheet growth and a 200 basis point upward and a 100 basis point downward shift in interest rates. Additional tools to monitor potential longer-term interest rate risk, including periodic stress testing involving hypothetical sudden and significant interest rate spikes are also evaluated.

The following table summarizes the percentage change in net interest income as compared to the base scenario, which assumes no change in market interest rates as generated from the standard simulation model. The results are presented for each of the first two years of the simulation period for the 200 basis point increase in interest rate scenario and the 100 basis point decrease in interest rate scenario. These results are well within the ALCO policy limits as shown.

As of December 31, 2018:

	Change in Interest Rate		Policy Limit
	+ 200 basis points	- 100 basis points	
Calculated change in Net Interest Income - Year 1	(3.29)%	0.70%	(10.00)%
Calculated change in Net Interest Income - Year 2	2.81%	0.40%	(15.00)%

Historically, there has existed an inverse relationship between changes in prevailing rates and the Company's net interest income, suggesting that liabilities and sources of funds generally reprice more quickly than earning assets. (near-term liability sensitivity). However, when net interest income is simulated over a longer time frame, this exposure is limited, and actually reverses, as asset yields continue to reprice while the cost of funding reaches assumed ceilings or floors (long-term asset sensitivity).

The simulated results 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, the Company 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 will differ due to: prepayment/refinancing levels likely 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 actions that ALCO might take in responding to or anticipating changes in interest rates.

Item 8. Financial Statements and Supplementary Data

The following audited Consolidated Financial Statements and unaudited supplementary data are submitted herewith:

Reports of Independent Registered Public Accounting Firm
Consolidated Balance Sheets as of December 31, 2018 and 2017
Consolidated Statements of Income for the Years Ended December 31, 2018, 2017 and 2016
Consolidated Statements of Comprehensive Income for the Years Ended December 31, 2018, 2017 and 2016
Consolidated Statements of Changes in Stockholders' Equity for the Years Ended December 31, 2018, 2017 and 2016
Consolidated Statements of Cash Flows for the Years Ended December 31, 2018, 2017 and 2016
Notes to Consolidated Financial Statements

Report of Independent Registered Public Accounting Firm
To the Stockholders and Board of Directors
Arrow Financial Corporation:
Opinion on the Consolidated Financial Statements
We have audited the accompanying consolidated balance sheets of Arrow Financial Corporation and subsidiaries (the Company) as of December 31, 2018 and 2017, the related consolidated statements of income, comprehensive income, changes in stockholders' equity, and cash flows for each of the years in the three year period ended December 31, 2018, and the related notes (collectively, the consolidated financial statements). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2018 and 2017, and the results of its operations and its cash flows for each of the years in the three year period ended December 31, 2018, in conformity with U.S. generally accepted accounting principles.
We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the Company's internal control over financial reporting as of December 31, 2018, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission, and our report dated March 8, 2019 expressed an unqualified opinion on the effectiveness of the Company's internal control over financial reporting.
Basis for Opinion
These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.
We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

/s/ KPMG LLP

We have served as the Company's auditor since 1990.
Albany, New York
March 8, 2019

Report of Independent Registered Public Accounting Firm

The Stockholders and Board of Directors
Arrow Financial Corporation:

Opinion on Internal Control Over Financial Reporting
We have audited Arrow Financial Corporation and subsidiaries' (the Company) internal control over financial reporting as of December 31, 2018, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission. In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2018, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission.
We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (PCAOB), the consolidated balance sheets of the Company as of December 31, 2018 and 2017, the related consolidated statements of income, comprehensive income, changes in stockholders' equity, and cash flows for each of the years in the three-year period ended December 31, 2018, and the related notes (collectively, the consolidated financial statements), and our report dated March 8, 2019 expressed an unqualified opinion on those consolidated financial statements.
Basis for Opinion
The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management Report on Internal Controls Over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.
We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.
Definition and Limitations of Internal Control Over Financial Reporting
A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.
Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate

/s/ KPMG LLP

Albany, New York
March 8, 2019

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ARROW FINANCIAL CORPORATION AND SUBSIDIARIES
CONSOLIDATED BALANCE SHEETS
(Dollars In Thousands, Except Share and Per Share Amounts)

	December 31, 2018	December 31, 2017
ASSETS		
Cash and Due From Banks	$ 56,529	$ 42,562
Interest-Bearing Deposits at Banks	27,710	30,276
Investment Securities:		
Available-for-Sale	317,535	300,200
Held-to-Maturity (Approximate Fair Value of $280,338 at December 31, 2018, and $335,901 at December 31, 2017)	283,476	335,907
Equity Securities	1,774	—
Other Investments	15,506	9,949
Loans	2,196,215	1,950,770
Allowance for Loan Losses	(20,196)	(18,586)
Net Loans	2,176,019	1,932,184
Premises and Equipment, Net	30,446	27,619
Goodwill	21,873	21,873
Other Intangible Assets, Net	1,852	2,289
Other Assets	55,614	57,606
Total Assets	$ 2,988,334	$ 2,760,465
LIABILITIES		
Noninterest-Bearing Deposits	$ 472,768	$ 441,945
Interest-Bearing Checking Accounts	790,781	907,315
Savings Deposits	818,048	694,573
Time Deposits over $250,000	73,583	38,147
Other Time Deposits	190,404	163,136
Total Deposits	2,345,584	2,245,116
Federal Funds Purchased and Securities Sold Under Agreements to Repurchase	54,659	64,966
Federal Home Loan Bank Overnight Advances	234,000	105,000
Federal Home Loan Bank Term Advances	45,000	55,000
Junior Subordinated Obligations Issued to Unconsolidated Subsidiary Trusts	20,000	20,000
Other Liabilities	19,507	20,780
Total Liabilities	2,718,750	2,510,862
STOCKHOLDERS' EQUITY		
Preferred Stock, $5 Par Value; 1,000,000 Shares Authorized	—	—
Common Stock, $1 Par Value; 20,000,000 Shares Authorized (19,035,565 Shares Issued at December 31, 2018, and 18,481,301 Shares Issued at December 31, 2017)	19,035	18,481
Additional Paid-in Capital	314,533	290,219
Retained Earnings	29,257	28,818
Unallocated ESOP Shares (5,001 Shares at December 31, 2018, and 9,643 Shares at December 31, 2017)	(100)	(200)
Accumulated Other Comprehensive Loss	(13,810)	(8,514)
Treasury Stock, at Cost (4,558,207 Shares at December 31, 2018, and 4,541,524 Shares at December 31, 2017)	(79,331)	(79,201)

Total Stockholders’ Equity	269,584	249,603
Total Liabilities and Stockholders’ Equity	$ 2,988,334	$ 2,760,465

See Notes to Consolidated Financial Statements.

ARROW FINANCIAL CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF INCOME
(Dollars In Thousands, Except Per Share Amounts)

	Years Ended December 31,		
	2018	2017	2016
INTEREST AND DIVIDEND INCOME			
Interest and Fees on Loans	$81,647	$70,202	$62,823
Interest on Deposits at Banks	711	348	152
Interest and Dividends on Investment Securities:			
Fully Taxable	8,582	7,884	7,934
Exempt from Federal Taxes	5,563	6,223	6,006
Total Interest and Dividend Income	96,503	84,657	76,915
INTEREST EXPENSE			
Interest-Bearing Checking Accounts	1,618	1,510	1,280
Savings Deposits	3,457	1,371	932
Time Deposits over $250,000	1,183	282	187
Other Time Deposits	1,420	950	924
Federal Funds Purchased and Securities Sold Under Agreements to Repurchase	62	44	33
Federal Home Loan Bank Advances	3,779	2,083	1,340
Junior Subordinated Obligations Issued to Unconsolidated Subsidiary Trusts	966	766	660
Total Interest Expense	12,485	7,006	5,356
NET INTEREST INCOME	84,018	77,651	71,559
Provision for Loan Losses	2,607	2,736	2,033
NET INTEREST INCOME AFTER PROVISION FOR LOAN LOSSES	81,411	74,915	69,526
NONINTEREST INCOME			
Income From Fiduciary Activities	9,255	8,417	7,783
Fees for Other Services to Customers	10,134	9,591	9,469
Net (Loss) Gain on Securities Transactions	213	(448)	(22)
Insurance Commissions	7,888	8,612	8,668
Net Gain on Sales of Loans	135	546	821
Other Operating Income	1,324	927	1,113
Total Noninterest Income	28,949	27,645	27,832
NONINTEREST EXPENSE			
Salaries and Employee Benefits	38,788	37,677	34,637
Occupancy Expenses, Net	9,787	9,560	9,402
FDIC Assessments	881	891	1,076
Other Operating Expense	15,599	14,577	14,494
Total Noninterest Expense	65,055	62,705	59,609
INCOME BEFORE PROVISION FOR INCOME TAXES	45,305	39,855	37,749
Provision for Income Taxes	9,026	10,529	11,215
NET INCOME	$36,279	$29,326	$26,534
Average Shares Outstanding:			
Basic	14,408	14,310	14,206
Diluted	14,488	14,406	14,297

Per Common Share:			
Basic Earnings	$2.52	$2.05	$1.87
Diluted Earnings	2.50	2.04	1.86

Share and Per Share Amounts have been restated for the September 27, 2018 3% stock dividend.
See Notes to Consolidated Financial Statements.

ARROW FINANCIAL CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME
(Dollars In Thousands)

	Years Ended December 31,		
	2018	2017	2016
Net Income	$36,279	$29,326	$26,534
Other Comprehensive Income (Loss), Net of Tax:			
Unrealized Net Securities Holding Losses Arising During the Year	(2,116)	(940)	(1,024)
Reclassification Adjustment for Net Securities Losses Included in Net Income	—	337	13
Net Retirement Plan (Loss) Gain	(2,833)	214	1,721
Net Retirement Plan Prior Service (Cost) Credit	(338)	—	—
Amortization of Net Retirement Plan Actuarial Loss	242	362	435
Amortization of Net Retirement Plan Prior Service (Credit) Cost	80	(8)	(7)
Other Comprehensive Income (Loss)	(4,965)	(35)	1,138
Comprehensive Income	$31,314	$29,291	$27,672

See Notes to Consolidated Financial Statements.

ARROW FINANCIAL CORPORATION AND SUBSIDIARIES
CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS' EQUITY
(Dollars In Thousands, Except Share and Per Share Amounts)

	Common Stock	Additional Paid-In Capital	Retained Earnings	Unallocated ESOP Shares	Accumulated Other Comprehensive Income (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	—	—	26,534	—	—	—	26,534
Other Comprehensive Loss	—	—	—	—	1,138	—	1,138
3% Stock Dividend (522,425 Shares)	522	16,415	(16,937)	—	—	—	—
Cash Dividends Paid, $.92 per Share [1]	—	—	(13,092)	—	—	—	(13,092)
Shares Issued for Stock Option Exercises, net (109,651 Shares)	—	1,265	—	—	—	1,139	2,404
Shares Issued Under the Directors' Stock Plan (6,005 Shares)	—	138	—	—	—	67	205
Shares Issued Under the Employee Stock Purchase Plan (17,113 Shares)	—	318	—	—	—	175	493
Shares Issued for Dividend Reinvestment Plans (55,432 Shares)	—	1,167	—	—	—	576	1,743
Stock-Based Compensation Expense	—	287	—	—	—	—	287
Tax Benefit for Exercises of Stock Options	—	188	—	—	—	—	188
Purchase of Treasury Stock (72,723 Shares)	—	—	—	—	—	(2,141)	(2,141)
Allocation of ESOP Stock (36,927 Shares)	—	422	—	700	—	—	1,122
Balance at December 31, 2016	$ 17,943	$ 270,880	$ 28,644	$ (400)	$ (6,834)	$ (77,381)	$ 232,852
Balance at December 31, 2016	$ 17,943	$ 270,880	$ 28,644	$ (400)	$ (6,834)	$ (77,381)	$ 232,852
Net Income	—	—	29,326	—	—	—	29,326
Other Comprehensive (Loss) Income	—	—	—	—	(35)	—	(35)
Reclassification due to the adoption of ASU No. 2018-02	—	—	1,645	—	(1,645)	—	—
3% Stock Dividend (538,100 Shares)	538	16,660	(17,198)	—	—	—	—
Cash Dividends Paid, $.95 per Share [1]	—	—	(13,599)	—	—	—	(13,599)
Shares Issued for Stock Option Exercises, net (57,756 Shares)	—	544					