# UNITED STATES <br> SECURITIES AND EXCHANGE COMMISSION WASHINGTON, DC 20549 <br> FORM 10-K 

区 ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE
SECURITIES EXCHANGE ACT OF 1934
FOR THE FISCAL YEAR ENDED DECEMBER 31, 2016
COMMISSION FILE NUMBER: 0-14703

## NBT BANCORP INC.

(Exact name of registrant as specified in its charter)

Delaware<br>(State or other jurisdiction of incorporation or organization)<br>16-1268674<br>(IRS Employer Identification No.)

## 52 SOUTH BROAD STREET

NORWICH, NEW YORK 13815
(Address of principal executive office) (Zip Code)
(607) 337-2265 (Registrant's telephone number, including area code)

## Securities registered pursuant to section 12(b) of the Act:

## Title of each class: <br> Common Stock, par value $\$ 0.01$ per share

Name of each exchange on which registered:
The NASDAQ Stock Market LLC

Securities registered pursuant to section 12(g) of the Act: None
Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes $\boxtimes$ No $\square$
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 $\square$ No $\boxtimes$

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

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§ 232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes $\mathbb{\text { No }} \square$

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (Section 229.405 of this chapter) is not contained herein, and will not be contained, to the best of the registrant's knowledge, in definitive Proxy or information statements incorporated by reference in Part III of this Form $10-\mathrm{K}$ 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 $\boxtimes \quad$ Accelerated filer $\square \quad$ Non-accelerated filer $\square \quad$ Smaller reporting company $\square$
Indicate by check mark whether the registrant is a shell company (as defined in Rule $12 \mathrm{~b}-2$ of the Act). $\square$ Yes $\boxtimes$ No
Based on the closing price of the registrant's common stock as of June 30, 2016, the aggregate market value of the voting stock, common stock, par value, $\$ 0.01$ per share, held by non-affiliates of the registrant is $\$ 1,187,578,681$.

The number of shares of common stock outstanding as of February 10, 2017, was 43,393,972.

Portions of the registrant's definitive Proxy Statement for its Annual Meeting of Stockholders to be held on May 23, 2017 are incorporated by reference into Part III, Items 10, 11, 12, 13 and 14 of this Form 10-K.

## NBT BANCORP INC.

## FORM 10-K - Year Ended December 31, 2016

TABLE OF CONTENTS

## PART I

ITEM 1 BUSINESS 4
ITEM 1A RISK FACTORS $\quad 14$
ITEM 1B UNRESOLVED STAFF COMMENTS 20
ITEM $2 \quad$ PROPERTIES 21
ITEM 3 LEGAL PROCEEDINGS 22
ITEM 4 MINE SAFETY DISCLOSURES 22

PART II

| ITEM 5 | MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER |
| :--- | :--- |
| PURCHASES OF EQUITY SECURITIES | 22 |

ITEM 6 SELECTED FINANCIAL DATA 24
ITEM 7 MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS 26
ITEM 7A QUANTITATIVE AND QUALITATIVE DISCLOSURE ABOUT MARKET RISK 43
ITEM 8 FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA 45
Report of Independent Registered Public Accounting Firm 45
Consolidated Balance Sheets at December 31,2016 and 2015
Consolidated Statements of Income for each of the years in the three-year period ended December 31,2016 47
Consolidated Statements of Comprehensive Income for each of the years in the three-year period ended December 31, 2016
Consolidated Statements of Changes in Stockholders' Equity for each of the years in the three-year period ended December 31,201649
Consolidated Statements of Cash Flows for each of the years in the three-year period ended December 31, 2016 ..... 50
Notes to Consolidated Financial Statements ..... 51
ITEM 9 CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE ..... 92
ITEM 9A CONTROLS AND PROCEDURES ..... 92
ITEM 9B OTHER INFORMATION ..... 95
PART III
ITEM 10 DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE ..... 95
ITEM 11 EXECUTIVE COMPENSATION ..... 95
ITEM 12 SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS ..... 95
ITEM 13 CERTAIN RELATIONSHIPS, RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE ..... 95
ITEM 14 PRINCIPAL ACCOUNTANT FEES AND SERVICES ..... 95
PART IV
ITEM 15 EXHIBITS AND FINANCIAL STATEMENT SCHEDULES ..... 96
ITEM 16 FORM 10-K SUMMARY ..... 98
SIGNATURES ..... 99

## PART I

ITEM 1. Business

NBT Bancorp Inc. (the "Registrant" or the "Company") is a registered financial holding company incorporated in the state of Delaware in 1986, with its principal headquarters located in Norwich, New York. The Company, on a consolidated basis, at December 31, 2016 had assets of $\$ 8.9$ billion and stockholders' equity of $\$ 913.3$ million.

The principal assets of the Registrant consist of all of the outstanding shares of common stock of its subsidiaries, including: NBT Bank, National Association (the "Bank"), NBT Financial Services, Inc. ("NBT Financial"), NBT Holdings, Inc. ("NBT Holdings"), Hathaway Agency, Inc., CNBF Capital Trust I, NBT Statutory Trust I, NBT Statutory Trust II, Alliance Financial Capital Trust I, and Alliance Financial Capital Trust II (collectively, the "Trusts"). The Company's principal sources of revenue are the management fees and dividends it receives from the Bank, NBT Financial and NBT Holdings.

The Company's business, primarily conducted through the Bank but also through its other subsidiaries, consists of providing commercial banking and financial services primarily to customers in its market area, which includes central and upstate New York, northeastern Pennsylvania, southern New Hampshire, western Massachusetts, Vermont, and the greater Portland, Maine area. The Company has been, and intends to continue to be, a communityoriented financial institution offering a variety of financial services. The Company's business philosophy is to operate as a community bank with local decision-making, principally in non-metropolitan markets, providing a broad array of banking and financial services to retail, commercial, and municipal customers. The financial condition and operating results of the Company are dependent on its net interest income which is the difference between the interest and dividend income earned on its earning assets, primarily loans and investments, and the interest expense paid on its interest bearing liabilities, primarily consisting of deposits and borrowings. Among other factors, net income is also affected by provisions for loan losses and noninterest income, such as service charges on deposit accounts, insurance and other financial services fees, trust revenue, and gains/losses on securities sales, bank owned life insurance income, ATM and debit card fees, and retirement plan administration fees as well as noninterest expense, such as salaries and employee benefits, occupancy, equipment, data processing and communications, professional fees and outside services, office supplies and postage, amortization, loan collection and other real estate owned ("OREO") expenses, advertising, FDIC expenses, and other expenses.

Like much of the nation, some of the market areas that the Company serves are still experiencing economic challenges and volatility. A variety of factors (e.g., any substantial rise in inflation or rise in unemployment rates, decrease in consumer confidence, adverse international economic conditions, natural disasters, war, or political instability) may affect both the Company's markets and the national market. The Company will continue to emphasize managing its funding costs and lending and investment rates to effectively maintain profitability. In addition, the Company will continue to seek and maintain relationships that can generate noninterest income. We anticipate that this approach should help mitigate profit fluctuations that are caused by movements in interest rates, business and consumer loan cycles, and local economic factors.

## NBT Bank, N.A.

The Bank is a full service commercial bank formed in 1856, which provides a broad range of financial products to individuals, corporations and municipalities throughout the central and upstate New York, northeastern Pennsylvania, western Massachusetts, southern New Hampshire, Vermont, and the greater Portland, Maine market areas.

Through its network of branch locations, the Bank offers a wide range of products and services tailored to individuals, businesses, and municipalities. Deposit products offered by the Bank include demand deposit accounts, savings accounts, negotiable order of withdrawal ("NOW") accounts, money market deposit accounts ("MMDA"), and certificate of deposit ("CD") accounts. The Bank offers various types of each deposit account to accommodate the needs of its customers with varying rates, terms, and features. Loan products offered by the Bank include consumer loans, home equity loans, mortgages, business banking loans and commercial loans, with varying rates, terms and features to accommodate the needs of its customers. The Bank also offers various other products and services through its branch network such as trust and investment services and financial planning and life insurance services. In addition to its branch network, the Bank also offers access to certain products and services electronically enabling customers to check balances, transfer funds, pay bills, view statements, apply for loans and access various other product and service information. The Bank provides 24 -hour access to an automated telephone line whereby customers can check balances, obtain account information, transfer funds, request statements, and perform various other activities.

## NBT Financial Services, Inc.

Through NBT Financial Services, the Company operates EPIC Advisors, Inc. ("EPIC"), a retirement plan administrator. Through EPIC, the Company offers services including retirement plan consulting and recordkeeping services. EPIC's headquarters are located in Rochester, New York.

## NBT Holdings, Inc.

Through NBT Holdings, the Company operates NBT-Mang Insurance Agency, LLC ("Mang"), a full-service insurance agency acquired by the Company on September 1, 2008. Mang's headquarters are in Norwich, New York. Through Mang, the Company offers a full array of insurance products, including personal property and casualty, business liability and commercial insurance, tailored to serve the specific insurance needs of individuals as well as businesses in a range of industries operating in the markets served by the Company.

## The Trusts

The Trusts were organized to raise additional regulatory capital and to provide funding for certain acquisitions. CNBF Capital Trust I ("Trust I") and NBT Statutory Trust I are Delaware statutory business trusts formed in 1999 and 2005, respectively, for the purpose of issuing trust preferred securities and lending the proceeds to the Company. In connection with the acquisition of CNB Bancorp, Inc., the Company formed NBT Statutory Trust II ("Trust II") in February 2006 to fund the cash portion of the acquisition as well as to provide regulatory capital. In connection with the acquisition of Alliance Financial Corporation ("Alliance"), the Company acquired two statutory trusts, Alliance Financial Capital Trust I and Alliance Financial Capital Trust II, which were formed in 2003 and 2006, respectively. The Company guarantees, on a limited basis, payments of distributions on the trust preferred securities and payments on redemption of the trust preferred securities. The Trusts are variable interest entities for which the Company is not the primary beneficiary, as defined by Financial Accounting Standards Board ("FASB") Accounting Standards Codification ("ASC"). In accordance with ASC, the accounts of the Trusts are not included in the Company's consolidated financial statements.

## Operating Subsidiaries of the Bank

The Bank has seven operating subsidiaries, NBT Capital Corp., Broad Street Property Associates, Inc., NBT Services, Inc., CNB Realty Trust, Alliance Preferred Funding Corp., Alliance Leasing, Inc. and Columbia Ridge Capital Management, Inc. NBT Capital Corp., formed in 1998, is a venture capital corporation formed to assist young businesses to develop and grow primarily in the markets they serve. Broad Street Property Associates, Inc., formed in 2004, is a property management company. NBT Services, Inc., formed in 2004, has a $44 \%$ ownership interest in Land Record Services, LLC. Land Record Services, LLC, a title insurance agency, offers mortgagee and owner’s title insurance coverage to both retail and commercial customers. CNB Realty Trust, formed in 1998, is a real estate investment trust. Alliance Preferred Funding Corp., formed in 1999, is a real estate investment trust. Alliance Leasing, Inc. was formed in 2002 to provide equipment leasing services. Columbia Ridge Capital Management, Inc. was acquired in 2016 and is a registered investment advisor that provides investment advice and financial consulting services.

## Competition

The financial services industry, including commercial banking, is highly competitive, and we encounter strong competition for deposits, loans and other financial products and services in our market area. The increasingly competitive environment is the result of the continued low rate environment, changes in regulation, changes in technology and product delivery systems, additional financial service providers, and the accelerating pace of consolidation among financial services providers. The Company competes for loans, deposits, and customers with other commercial banks, savings and loan associations, securities and brokerage companies, mortgage companies, insurance companies, finance companies, money market funds, credit unions, and other nonbank financial service providers.

The financial services industry could become even more competitive as a result of legislative, regulatory and technological changes and continued consolidation. Banks, securities firms and insurance companies can merge under the umbrella of a financial holding company, which can offer virtually any type of financial service, including banking, securities underwriting, insurance (both agency and underwriting) and merchant banking. Also, 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.

Some of the Company's nonbanking competitors have fewer regulatory constraints and may have lower cost structures. In addition, some of the Company's competitors have assets, capital and lending limits greater than that of the Company, have greater access to capital markets and offer a broader range of products and services than the Company. These institutions may have the ability to finance wide-ranging advertising campaigns and may also be able to offer lower rates on loans and higher rates on deposits than the Company can offer. Some of these institutions offer services, such as credit cards and international banking, which the Company does not directly offer.

Various in-state market competitors and out-of-state banks continue to enter or have announced plans to enter or expand their presence in the market areas in which the Company currently operates. With the addition of new banking presences within our market, the Company expects increased competition for loans, deposits, and other financial products and services.

In order to compete with other financial services providers, the Company stresses the community nature of its banking operations and principally relies upon local promotional activities, personal relationships established by officers, directors, and employees with their customers, and specialized services tailored to meet the needs of the communities served. We also offer certain customer services, such as agricultural lending, that many of our larger competitors do not offer. While the Company's position varies by market, the Company's management believes that it can compete effectively as a result of local market knowledge, local decision making, and awareness of customer needs.

The table below summarizes the Bank’s deposits and market share by the thirty-eight counties of New York, Pennsylvania, New Hampshire, Massachusetts, Vermont, and Maine in which it had customer facilities as of June 30, 2016. Market share is based on deposits of all commercial banks, credit unions, savings and loans associations, and savings banks.

| County |  | Deposits <br> in thousands* | Starket Share | Market <br> Rank | Number of <br> Branches* | Number of ATMs* |
| :--- | :--- | ---: | :--- | ---: | :--- | ---: |

Source: SNL Financial LLC

* Branch and ATM data is as of December 31, 2016.


## Supervision and Regulation

The Company, the Bank and certain of its non-banking subsidiaries are subject to extensive regulation under federal and state laws. The regulatory framework applicable to bank holding companies and their subsidiary banks is intended to protect depositors, federal deposit insurance funds, and the stability of the U.S. banking system. This system is not designed to protect equity investors in bank holding companies, such as the Company.

Set forth below is a summary of the significant laws and regulations applicable to the Company and its subsidiaries. The description that follows is qualified in its entirety by reference to the full text of the statutes, regulations, and policies that are described. Such statutes, regulations, and policies are subject to ongoing review by Congress and state legislatures and federal and state regulatory agencies. A change in any of the statutes, regulations, or regulatory policies applicable to the Company and its subsidiaries could have a material effect on the results of the Company.

## Overview

The Company is a registered bank holding company and financial holding company under the Bank Holding Company Act of 1956, as amended (the "BHC Act"), and is subject to the supervision of and regular examination by the Board of Governors of the Federal Reserve System (the "Federal Reserve Board" or "FRB") as its primary federal regulator. The Company is also subject to the jurisdiction of the Securities and Exchange Commission ("SEC") and is subject to the disclosure and other regulatory requirements of the Securities Act of 1933, as amended, and the Securities Exchange Act of 1934, as amended, as administered by the SEC. The Company's common stock is listed on the NASDAQ Global Select market under the ticker symbol, "NBTB," and the Company is subject to the NASDAQ stock market rules.

The Bank is chartered as a national banking association under the National Bank Act. The Bank is subject to the supervision of, and to regular examination by, the Office of the Comptroller of the Currency ("OCC") as its chartering authority and primary federal regulator. The Bank is also subject to the supervision and regulation, to a limited extent, of the Federal Deposit Insurance Corporation ("FDIC") as its deposit insurer. Financial products and services offered by the Company and the Bank are subject to federal consumer protection laws and implementing regulations promulgated by the Consumer Financial Protection Bureau ("CFPB"). The Company and the Bank are also subject to oversight by state attorneys general for compliance with state consumer protection laws. The Bank's deposits are insured by the FDIC up to the applicable deposit insurance limits in accordance with FDIC laws and regulations. The non-bank subsidiaries of the Company and the Bank are subject to federal and state laws and regulations, including regulations of the FRB and the OCC, respectively.

The Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 (the "Dodd-Frank Act") has significantly changed the financial regulatory landscape in the U.S. Several provisions of the Dodd-Frank Act are subject to further rulemaking, guidance and interpretation by the federal banking agencies. Considering the recent changes in administration and controlling party in the U.S., Congress, state legislatures and financial regulatory agencies may introduce various legislative and regulatory initiatives that are likely to impact the financial services industry, generally. However, it is not clear whether such changes will be introduced at all or will be implemented successfully. As a result, management cannot predict the ultimate impact of the Dodd-Frank Act or potential additional reforms in the regulation of financial institutions, or the extent to which they could affect operations of the Company and the Bank.

## Federal Bank Holding Company Regulation

The Company is a bank holding company as defined by the BHC Act. The BHC Act generally limits the business of the Company to banking, managing or controlling banks, and other activities that the FRB has determined to be so closely related to banking "as to be a proper incident thereto." The Company has also qualified for and elected to be a financial holding company. Financial holding companies may engage in any activity, or acquire and retain the shares of a company engaged in any activity that is either (i) financial in nature or incidental to such financial activity (as determined by the FRB in consultation with the Secretary of the Treasury), or (ii) complementary to a financial activity, and that does not pose a substantial risk to the safety and soundness of depository institutions or the financial system (as solely determined by the FRB). If a bank holding company seeks to engage in the broader range of activities permitted under the BHC Act for financial holding companies, (i) the bank holding company and all of its depository institution subsidiaries must be "well-capitalized" and "well-managed," as defined in the FRB's Regulation Y, and (ii) it must file a declaration with the FRB that it elects to be a "financial holding company." In order for a financial holding company to commence any activity that is financial in nature, incidental thereto, or complementary to a financial activity, or to acquire a company engaged in any such activity permitted by the BHC Act, each insured depository institution subsidiary of the financial holding company must have received a rating of at least "satisfactory" in its most recent examination under the Community Reinvestment Act of 1977 (the "CRA"). See the section titled "Community Reinvestment Act of 1977" for further information relating to the CRA.

## Regulation of Mergers and Acquisitions

The BHC Act, the Bank Merger Act, and other federal and state statutes regulate acquisitions of depository institutions and their holding companies. The BHC Act requires prior FRB approval for a bank holding company to acquire, directly or indirectly, $5 \%$ or more of any class of voting securities of a commercial bank or its parent holding company and for a company, other than a bank holding company, to acquire $25 \%$ or more of any class of voting securities of a bank or bank holding company. Under the Change in Bank Control Act, any person, including a company, may not acquire, directly or indirectly, control of a bank without providing 60 days’ prior notice and receiving a non-objection from the appropriate federal banking agency.

Under the Bank Merger Act, prior approval of the OCC is required for a national bank to merge with another bank where the national bank is the surviving bank or to purchase the assets or assume the deposits of another bank. In reviewing applications seeking approval of merger and acquisition transactions, the federal banking agencies will consider, among other criteria, the competitive effect and public benefits of the transactions, the capital position of the combined banking organization, the applicant's performance record under the CRA, and the effectiveness of the subject organizations in combating money laundering activities.

As a financial holding company, the Company is permitted to acquire control of non-depository institutions engaged in activities that are financial in nature and in activities that are incidental and complementary to financial activities without prior FRB approval. However, the BHC Act, as amended by the DoddFrank Act, requires prior written approval from the FRB or prior written notice to the FRB before a financial holding company may acquire control of a company with consolidated assets of $\$ 10$ billion or more.

## Capital Distributions

The principal source of the Company's liquidity is dividends from the Bank. The OCC oversees the ability of the Bank to make capital distributions, including dividends. The OCC generally prohibits a depository institution from making any capital distributions (including payment of a dividend) or paying any management fee to its parent holding company if the bank would thereafter be undercapitalized. The OCC's prior approval is required if the total of all dividends declared by a national bank in any calendar year would exceed the sum of the bank's net income for that year and its undistributed net income for the preceding two calendar years, less any required transfers to surplus. The National Bank Act also prohibits national banks from paying dividends that would be greater than the bank's undivided profits after deducting statutory bad debt in excess of the bank's allowance for loan losses.

The federal banking agencies have indicated that paying dividends that deplete a bank's capital base to an inadequate level would be an unsafe and unsound banking practice and that banking organizations should generally pay dividends only out of current operating earnings. The appropriate federal regulatory authority is authorized to determine, based on the financial condition of a bank holding company or a bank, that the payment of dividends would be an unsafe or unsound practice and to prohibit such payment.

## Affiliate and Insider Transactions

Transactions between the Bank and its affiliates, including the Company, are governed by sections 23A and 23B of the Federal Reserve Act (the "FRA") and the FRB's implementing Regulation W. An "affiliate" of a bank includes any company or entity that controls, is controlled by, or is under common control with the Bank. In a bank holding company context, at a minimum, the parent holding company of a bank, and any companies which are controlled by such parent holding company, are affiliates of the bank. Generally, sections 23A and 23B of the FRA are intended to protect insured depository institutions from losses in transactions with affiliates. These sections place quantitative and qualitative limitations on covered transactions between the Bank and its affiliates, and require that all transactions between a bank and its affiliates occur on market terms that are consistent with safe and sound banking practices.

Section 22(h) of the FRA and its implementing Regulation O restricts loans to directors, executive officers, and principal stockholders ("Insiders"). Under Section 22(h), loans to Insiders and their related interests may not exceed, together with all other outstanding loans to such persons and affiliated entities, the institution's total capital and surplus. Loans to Insiders above specified amounts must receive the prior approval of the Bank’s board of directors. Further, under Section 22(h) of the FRA, loans to directors, executive officers, and principal stockholders must be made on terms substantially the same as offered in comparable transactions to other persons, except that such insiders may receive preferential loans made under a benefit or compensation program that is widely available to the Bank's employees and does not give preference to the insider over the employees. Section 22(g) of the FRA places additional limitations on loans to executive officers.

## Federal Deposit Insurance and Brokered Deposits

The FDIC's deposit insurance limit is $\$ 250,000$ per depositor, per insured bank, for each account ownership category. The Bank's deposit accounts are fully insured by the FDIC Deposit Insurance Fund (the "DIF") up to the deposit insurance limits in accordance with applicable laws and regulations.

The FDIC uses a risk-based assessment system that imposes insurance premiums based upon a risk matrix that takes into account a bank's capital level and supervisory rating ("CAMELS rating"). The risk matrix uses different risk categories distinguished by capital levels and supervisory ratings. As a result of the Dodd-Frank Act, the base for deposit insurance assessments is now consolidated average assets less average tangible equity. Assessment rates are calculated using formulas that take into account the risk of the institution being assessed. In addition to deposit insurance assessments, the Federal Deposit Insurance Act ("FDIA") provides for additional assessments to be imposed on insured depository institutions to pay for the cost of Financing Corporation funding. Financing Corporation is a mixed-ownership government corporation established by the Competitive Equality Banking Act of 1987 whose sole purpose was to function as a financing vehicle for the now defunct Federal Savings \& Loan Insurance Company. The Financing Corporation assessments are adjusted quarterly to reflect changes in the assessment base of the DIF and do not vary depending upon a depository institution's capitalization or supervisory evaluation.

Under FDIC laws and regulations, no FDIC-insured depository institution can accept brokered deposits unless it is well-capitalized, or unless it is adequately capitalized and receives a waiver from the FDIC. Applicable laws and regulations also prohibit any depository institution that is not well-capitalized from paying an interest rate on brokered deposits in excess of three-quarters of one percentage point over certain prevailing market rates.

The Dodd-Frank Act requires that the FDIC raise the minimum reserve ratio of the DIF from 1.15 percent to 1.35 percent, and that the FDIC offset the effect of this increase on insured depository institutions with total consolidated assets of less than $\$ 10$ billion. In March 2016, the FDIC issued a final rule affecting insured depository institutions with total consolidated assets of more than $\$ 10$ billion. The final rule imposes a surcharge of 4.5 cents per $\$ 100$ of the institution's assessment base on deposit insurance assessment rates paid by these larger institutions. If the reserve ratio does not reach $1.35 \%$ by December 31, 2018, through implementation of the surcharge, the FDIC will impose an additional, one-time shortfall assessment on insured depository institutions with more than $\$ 10$ billion in assets on March 31, 2019, to be paid by June 30, 2019. The FDIC also has authority to further increase deposit insurance assessments. At this time, the Bank is not subject to this surcharge.

Under the FDIA, the FDIC may terminate deposit insurance upon a finding that the institution has engaged in unsafe and unsound practices, is in an unsafe or unsound condition to continue operations, or has violated any applicable law, regulation, rule, order or condition imposed by the FDIC. The Bank's management is not aware of any practice, condition, or violation that might lead to the termination of its deposit insurance.

## Federal Home Loan Bank System

The Bank is also a member of the Federal Home Loan Bank ("FHLB") of New York, which provides a central credit facility primarily for member institutions for home mortgage and neighborhood lending. The Bank is subject to the rules and requirements of the FHLB, including the requirement to acquire and hold shares of capital stock in the FHLB in an amount at least equal to the sum of $0.35 \%$ of the aggregate principal amount of its unpaid residential mortgage loans and similar obligations at the beginning of each year, up to a maximum of $\$ 25.0$ million. The Bank was in compliance with FHLB rules and requirements as of December 31, 2016.

## Debit Card Interchange Fees

The Dodd-Frank Act requires that any interchange transaction fee charged for a debit transaction be reasonable and proportional to the cost incurred by the issuer for the transaction. FRB regulations mandated by the Dodd-Frank Act limit interchange fees on debit cards to a maximum of 21 cents per transaction plus 5 basis points of the transaction amount. The rule also permits a fraud-prevention adjustment of 1 cent per transaction conditioned upon an issuer developing, implementing, and updating reasonably designed fraud-prevention policies and procedures. Issuers that, together with their affiliates, have less than $\$ 10$ billion of assets, such as the Company, are exempt from the debit card interchange fee standards. However, FRB regulations prohibit all issuers, including the Company and the Bank, from restricting the number of networks over which electronic debit transactions may be processed to less than two unaffiliated networks.

## Source of Strength Doctrine

FRB policy requires bank holding companies to act as a source of financial and managerial strength to their subsidiary banks. Section 616 of the Dodd-Frank Act codifies the requirement that bank holding companies serve as a source of financial strength to their subsidiary depository institutions. As a result, the Company is expected to commit resources to support the Bank, including at times when the Company may not be in a financial position to provide such resources. Any capital loan by the Company to the Bank is subordinate in right of payment to deposits and to certain other indebtedness of such subsidiary banks. The U.S. Bankruptcy Code provides that, in the event of a bank holding company's bankruptcy, any commitment by the bank holding company to a federal bank regulatory agency to maintain the capital of a subsidiary bank will be assumed by the bankruptcy trustee and entitled to priority of payment.

In addition, under the National Bank Act, if the Bank's capital stock is impaired by losses or otherwise, the OCC is authorized to require payment of the deficiency by assessment upon the Company. If the assessment is not paid within three months, the OCC could order a sale of Bank stock held by the Company to cover any deficiency.

## Capital Adequacy and Prompt Corrective Action

In July 2013, the FRB, the OCC and the FDIC approved final rules (the "Capital Rules") that established a new capital framework for U.S. banking organizations. The Capital Rules generally implement the Basel Committee on Banking Supervision’s (the "Basel Committee") December 2010 final capital framework referred to as "Basel III" for strengthening international capital standards. The Capital Rules revise the definitions and the components of regulatory capital, as well as address other issues affecting the numerator in banking institutions’ regulatory capital ratios. The Capital Rules also address asset risk weights and other matters affecting the denominator in banking institutions’ regulatory capital ratios and replace the existing general risk-weighting approach with a more risk-sensitive approach.

The Capital Rules: (i) require a capital measure called "Common Equity Tier 1" ("CET1") and related regulatory capital ratio of CET1 to risk-weighted assets; (ii) specify that Tier 1 capital consists of CET1 and "Additional Tier 1 capital" instruments meeting certain revised requirements; (iii) mandate that most deductions/adjustments to regulatory capital measures be made to CET1 and not to the other components of capital; and (iv) expand the scope of the deductions from and adjustments to capital as compared to existing regulations. Under the Capital Rules, for most banking organizations, including the Company, the most common form of Additional Tier 1 capital is non-cumulative perpetual preferred stock and the most common forms of Tier 2 capital are subordinated notes and a portion of the allocation for loan losses, in each case, subject to the Capital Rules' specific requirements.

Pursuant to the Capital Rules, the minimum capital ratios as of January 1, 2015 are:

- $4.5 \%$ CET1 to risk-weighted assets;
- 6.0\% Tier 1 capital (CET1 plus Additional Tier 1 capital) to risk-weighted assets;
- $8.0 \%$ Total capital (Tier 1 capital plus Tier 2 capital) to risk-weighted assets; and
- $4.0 \%$ Tier 1 capital to average consolidated assets as reported on consolidated financial statements (known as the "leverage ratio").

The Capital Rules also require a "capital conservation buffer," composed entirely of CET1, on top of these minimum risk-weighted asset ratios. The capital conservation buffer is designed to absorb losses during periods of economic stress. Banking institutions with a ratio of CET1 to risk-weighted assets above the minimum but below the capital conservation buffer will face constraints on dividends, equity and other capital instrument repurchases and compensation based on the amount of the shortfall. When fully phased-in on January 1, 2019, the capital standards applicable to the Company and the Bank will include an additional capital conservation buffer of $2.5 \%$ of CET1, effectively resulting in minimum ratios inclusive of the capital conservation buffer of (i) CET1 to risk-weighted assets of at least $7 \%$, (ii) Tier 1 capital to risk-weighted assets of at least $8.5 \%$, and (iii) Total capital to risk-weighted assets of at least $10.5 \%$. The risk-weighting categories in the Capital Rules are standardized and include a risk-sensitive number of categories, depending on the nature of the assets, generally ranging from $0 \%$ for U.S. government and agency securities, to $600 \%$ for certain equity exposures, and resulting in higher risk weights for a variety of asset classes.

The Capital Rules provide for a number of deductions from and adjustments to CET1. These include, for example, the requirement that mortgage servicing rights, deferred tax assets arising from temporary differences that could not be realized through net operating loss carrybacks and significant investments in non-consolidated financial entities be deducted from CET1 to the extent that any one such category exceeds 10\% of CET1 or all such items, in the aggregate, exceed $15 \%$ of CET1. The deductions and adjustments will be incrementally phased in between January 1, 2015 and January 1, 2019.

In addition, under the prior general risk-based capital rules, the effects of accumulated other comprehensive income or loss ("AOCI") items included in stockholders' equity (for example, marks-to-market of securities held in the available-for-sale portfolio) under GAAP were excluded for the purposes of determining regulatory capital ratios. Under the Capital Rules, the effects of certain AOCI items are not excluded; however, banking organizations not using the advanced approaches, including the Company, and the Bank, were permitted to make a one-time permanent election to continue to exclude these items in January 2015. The Capital Rules also preclude certain hybrid securities, such as trust preferred securities issued after May 19, 2010, from inclusion in bank holding companies’ Tier 1 capital.

Implementation of the deductions and other adjustments to CET1 began on January 1, 2015, are phased-in over a 4-year period (beginning at 40\% on January 1,2015 and an additional $20 \%$ per year thereafter). The implementation of the capital conservation buffer began on January 1 , 2016 at the $0.625 \%$ level and increase by $0.625 \%$ on each subsequent January 1, until it reaches 2.5\% on January 1, 2019.

Management believes that the Company is in compliance, and will continue to be in compliance, with the targeted capital ratios as such requirements are phased in.

## Prompt Corrective Action and Safety and Soundness

Pursuant to Section 38 of the Federal Deposit Insurance Act ("FDIA"), federal banking agencies are required to take "prompt corrective action" ("PCA") should an insured depository institutions fail to meet certain capital adequacy standards. At each successive lower capital category, an insured depository institution is subject to more restrictions and prohibitions, including restrictions on growth, restrictions on interest rates paid on deposits, restrictions or prohibitions on payment of dividends and restrictions on the acceptance of brokered deposits. Furthermore, if an insured depository institution is classified in one of the undercapitalized categories, it is required to submit a capital restoration plan to the appropriate federal banking agency, and the holding company must guarantee the performance of that plan. Based upon its capital levels, a bank that is classified as well-capitalized, adequately capitalized, or undercapitalized may be treated as though it were in the next lower capital category if the appropriate federal banking agency, after notice and opportunity for hearing, determines that an unsafe or unsound condition, or an unsafe or unsound practice, warrants such treatment.

For purposes of PCA, to be: (i) well-capitalized, an insured depository institution must have a total risk based capital ratio of at least $10 \%$, a Tier 1 risk based capital ratio of at least $8 \%$, a CET1 risk based capital ratio of at least $6.5 \%$, and a Tier 1 leverage ratio of at least $5 \%$; (ii) adequately capitalized, an insured depository institution must have a total risk based capital ratio of at least $8 \%$, a Tier 1 risk based capital ratio of at least $6 \%$, a CET1 risk based capital ratio of at least $4.5 \%$, and a Tier 1 leverage ratio of at least $4 \%$; (iii) undercapitalized, an insured depository institution would have a total risk based capital ratio of less than $8 \%$, a Tier 1 risk based capital ratio of less than $6 \%$, a CET1 risk based capital ratio of less than $4.5 \%$, and a Tier 1 leverage ratio of less than $4 \%$; (iv) significantly undercapitalized, an insured depository institution would have a total risk based capital ratio of less than $6 \%$, a Tier 1 risk based capital ratio of less than $4 \%$, a CET1 risk based capital ratio of less than $3 \%$, and a Tier 1 leverage ratio of less than 3\%.; (v) critically undercapitalized, an insured depository institution would have a ratio of tangible equity to total assets that is less than or equal to $2 \%$.

Bank holding companies and insured depository institutions may also be subject to potential enforcement actions of varying levels of severity for unsafe or unsound practices in conducting their business, or for violation of any law, rule, regulation, condition imposed in writing by the agency or term of a written agreement with the agency. In more serious cases, enforcement actions may include the issuance of directives to increase capital; the issuance of formal and informal agreements; the imposition of civil monetary penalties; the issuance of a cease and desist order that can be judicially enforced; the issuance of removal and prohibition orders against officers, directors, and other institution-affiliated parties; the termination of the insured depository institution's deposit insurance; the appointment of a conservator or receiver for the insured depository institution; and the enforcement of such actions through injunctions or restraining orders based upon a judicial determination that the FDIC, as receiver, would be harmed if such equitable relief was not granted.

## Volcker Rule

Section 619 of the Dodd-Frank Act, commonly known as the Volcker Rule, restricts the ability of banking entities, such as the Company, from: (i) engaging in "proprietary trading" and (ii) investing in or sponsoring certain covered funds, subject to certain limited exceptions. Under the Volcker Rule, the term "covered funds" is defined as any issuer that would be an investment company under the Investment Company Act but for the exemptions in section 3(c)(1) or 3 (c)(7) of that Act, which includes collateralized loan obligation ("CLO") and collateralized debt obligation securities. The regulation also provides an exemption for CLOs meeting certain requirements. Compliance with the Volcker Rule is generally required by July 21, 2017. Given the Company's size and the scope of its activities, the Company does not believe the implementation of the Volcker Rule will have a significant effect on its consolidated financial statements.

## Depositor Preference

The FDIA provides that, in the event of the "liquidation or other resolution" of an insured depository institution, the claims of depositors of the institution, including the claims of the FDIC as subrogee of insured depositors, and certain claims for administrative expenses of the FDIC as a receiver, will have priority over other general unsecured claims against the institution. If an insured depository institution fails, insured and uninsured depositors, along with the FDIC, will have priority in payment ahead of unsecured, non-deposit creditors, including the parent bank holding company, with respect to any extensions of credit they have made to such insured depository institution.

## Consumer Protection and CFPB Supervision

The Dodd-Frank Act centralized responsibility for consumer financial protection by creating the CFPB, an independent agency charged with responsibility for implementing, enforcing, and examining compliance with federal consumer financial laws. The CFPB has examination authority over all banks and savings institutions with more than $\$ 10$ billion in assets. As the Company is below this threshold, the OCC continues to exercise primary examination authority over the Bank with regard to compliance with federal consumer financial laws and regulations. Under the Dodd-Frank Act state attorneys general are empowered to enforce rules issued by the CFPB.

The Company is subject to federal consumer financial statutes and the regulations promulgated thereunder including, but not limited to:

- the Truth-In-Lending Act, governing disclosures of credit terms to consumer borrowers;
- the Equal Credit Opportunity Act ("ECOA"), prohibiting discrimination in connection with the extension of credit;
- the Home Mortgage Disclosure Act ("HMDA"), requiring home mortgage lenders, including the Bank, to make available to the public expanded information regarding the pricing of home mortgage loans, including the "rate spread" between the annual percentage rate and the average prime offer rate for mortgage loans of a comparable type;
- the Fair Credit Reporting Act ("FCRA"), governing the provision of consumer information to credit reporting agencies and the use of consumer information; and
- the Fair Debt Collection Practices Act, governing the manner in which consumer debts may be collected by collection agencies.

The Bank's failure to comply with any of the consumer financial laws can result in civil actions, regulatory enforcement action by the federal banking agencies and the U.S. Department of Justice.

## USA PATRIOT Act

The Bank Secrecy Act ("BSA"), as amended by the Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism Act of 2001 ("USA PATRIOT Act"), imposes obligations on U.S. financial institutions, including banks and broker-dealer subsidiaries, to implement policies, procedures and controls which are reasonably designed to detect and report instances of money laundering and the financing of terrorism. The USA PATRIOT Act requires all financial institutions, including the Company and the Bank, to identify their customers, adopt formal and comprehensive anti-money laundering programs, scrutinize or prohibit altogether certain transactions of special concern, and be prepared to respond to inquiries from U.S. law enforcement agencies concerning their customers and their transactions. The USA PATRIOT Act also encourages information-sharing among financial institutions, regulators, and law enforcement authorities by providing an exemption from the privacy provisions of the GLB Act for financial institutions that comply with this provision. The effectiveness of a financial institution in combating money laundering activities is a factor to be considered in any application submitted by the financial institution under the Bank Merger Act, which applies to the Bank, or the BHC Act, which applies to the Company. Failure of a financial institution to maintain and implement adequate programs to combat money laundering and terrorist financing, or to comply with all of the relevant laws or regulations, could have serious legal, financial and reputational consequences. As of December 31, 2016, the Company and the Bank believe that they are in compliance with the BSA and the USA PATRIOT Act, and implementing regulations thereunder.

## Identity Theft Prevention

The Fair Credit Reporting Act’s ("FCRA") Red Flags Rule requires financial institutions with covered accounts (e.g., consumer bank accounts and loans) to develop, implement, and administer an identity theft prevention program. This program must include reasonable policies and procedures to detect suspicious patterns or practices that indicate the possibility of identity theft, such as inconsistencies in personal information or changes in account activity.

## Office of Foreign Assets Control Regulation

The United States has imposed economic sanctions that affect transactions with designated foreign countries, nationals, and others. These are typically known as the "OFAC" rules based on their administration by the U.S. Treasury Department Office of Foreign Assets Control ("OFAC"). The OFAC-administered sanctions targeting countries take many different forms. Generally, they contain one or more of the following elements: (i) restrictions on trade with or investment in a sanctioned country, including prohibitions against direct or indirect imports from and exports to a sanctioned country and prohibitions on "U.S. persons" engaging in financial transactions relating to making investments in, or providing investment-related advice or assistance to, a sanctioned country; and (ii) a blocking of assets in which the government or specially designated nationals of the sanctioned country have an interest, by prohibiting transfers of property subject to U.S. jurisdiction (including property in the possession or control of U.S. persons). Blocked assets (property and bank deposits) cannot be paid out, withdrawn, set off, or transferred in any manner without a license from OFAC. Failure to comply with these sanctions could have serious legal and reputational consequences.

## Financial Privacy and Data Security

The Company and the Bank are subject to federal laws, including the Gramm-Leach-Bliley Act ("GLBA") and certain state laws containing consumer privacy protection provisions. These provisions limit the ability of banks and other financial institutions to disclose nonpublic information about consumers to affiliated and non-affiliated third parties and limit the reuse of certain consumer information received from nonaffiliated financial institutions. These provisions require notice of privacy policies to clients and, in some circumstances, allow consumers to prevent disclosure of certain nonpublic personal information to affiliates or non-affiliated third parties by means of "opt out" or "opt in" authorizations.

The GLBA requires that financial institutions implement comprehensive written information security programs that include administrative, technical, and physical safeguards to protect consumer information. Further, pursuant to interpretive guidance issued under the GLBA and certain state laws, financial institutions are required to notify clients of security breaches resulting in unauthorized access to their personal information. The Bank believes it is in compliance with all GLBA obligations.

The Bank is also subject to data security standards, privacy and data breach notice requirements, primarily those issued by the OCC.

## Community Reinvestment Act of 1977

The Bank has a responsibility under the CRA, as implemented by OCC regulations, to help meet the credit needs of its communities, including low- and moderate-income neighborhoods. The CRA does not establish specific lending requirements or programs for financial institutions nor does it limit an institution's discretion to develop the types of products and services that it believes are best suited to its particular community, consistent with the CRA. Regulators periodically assess the Bank's record of compliance with the CRA. In addition, the ECOA and the Fair Housing Act prohibit discrimination in lending practices on the basis of characteristics specified in those statutes. The Bank's failure to comply with the CRA could, at a minimum, result in regulatory restrictions on its activities and the activities of the Company. The Bank's latest CRA rating was "Satisfactory."

## Future Legislative Initiatives

Congress, state legislatures, and financial regulatory agencies are expected to introduce various legislative and regulatory initiatives that are likely to impact the financial services industry, generally. Such initiatives may include proposals to expand or contract the powers of bank holding companies and/or depository institutions or proposals to substantially change the financial institution regulatory system. Such legislation could change banking statutes and the operating environment of the Company in substantial and unpredictable ways. If enacted, such legislation could increase or decrease the cost of doing business, limit or expand permissible activities, or affect the competitive balance among banks, savings associations, credit unions, and other financial institutions. The Company cannot predict whether any such legislation will be enacted, and, if enacted, the effect that it or any implementing regulations would have on the financial condition or results of operations of the Company. A change in statutes, regulations, or regulatory policies applicable to the Company or any of its subsidiaries could have a material effect on the business of the Company.

## Employees

At December 31, 2016, the Company had 1,704 full-time equivalent employees. The Company's employees are not presently represented by any collective bargaining group.

## Available Information

The Company's website is http://www.nbtbancorp.com. The Company makes available free of charge through its website its annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and any amendments to those reports as soon as reasonably practicable after such material is electronically filed or furnished with the SEC pursuant to Section 13(a) or 15(d) of the Exchange Act. We also make available through our website other reports filed with or furnished to the SEC under the Exchange Act, including our proxy statements and reports filed by officers and directors under Section 16(a) of that Act, as well as our Code of Business Conduct and Ethics and other codes/committee charters. The references to our website do not constitute incorporation by reference of the information contained in the website and such information should not be considered part of this document.

Any materials we file with the SEC may be read and copied at the SEC's Public Reference Room at 100 F Street, N.E., Washington, DC, 20549. Information on the operation of the Public Reference Room may be obtained by calling the SEC at 1-800-SEC-0330. The SEC maintains an Internet site (http://www.sec.gov) that contains reports, proxy and information statements, and other information regarding issuers that file electronically with the SEC.

There are risks inherent to the Company's business. The material risks and uncertainties that management believes affect the Company are described below. Any of the following risks could affect the Company's financial condition and results of operations and could be material and/or adverse in nature. You should consider all of the following risks together with all of the other information in this Annual Report on Form 10-K.

## Deterioration in local economic conditions may negatively impact our financial performance.

The Company's success depends primarily on the general economic conditions in central and upstate New York, northeastern Pennsylvania, southern New Hampshire, western Massachusetts, Vermont, Maine and the specific local markets in which the Company operates. Unlike larger national or other regional banks that are more geographically diversified, the Company provides banking and financial services to customers primarily in the upstate New York areas of Norwich, Syracuse, Oneonta, Amsterdam-Gloversville, Albany, Binghamton, Utica-Rome, Plattsburgh, Glens Falls and Ogdensburg-Massena, the northeastern Pennsylvania areas of Scranton, Wilkes-Barre and East Stroudsburg, Berkshire County, Massachusetts, southern New Hampshire, Vermont and the greater Portland, Maine area. The local economic conditions in these areas have a significant impact on the demand for the Company's products and services as well as the ability of the Company's customers to repay loans, the value of the collateral securing loans and the stability of the Company's deposit funding sources.

As a lender with the majority of our loans secured by real estate or made to businesses in New York, Pennsylvania, New Hampshire, Massachusetts, Vermont and Maine, a downturn in these local economies could cause significant increases in nonperforming loans, which could negatively impact our earnings. Declines in real estate values in our market areas could cause any of our loans to become inadequately collateralized, which would expose us to greater risk of loss. Additionally, a decline in real estate values could result in the decline of originations of such loans, as most of our loans and the collateral securing our loans, are located in those areas.

## Variations in interest rates may negatively affect our financial performance.

The Company's earnings and financial condition are largely dependent upon net interest income, which is the difference between interest earned from loans and investments and interest paid on deposits and borrowings. The narrowing of interest rate spreads could adversely affect the Company's earnings and financial condition. The Company cannot predict with certainty, or control, changes in interest rates. Regional and local economic conditions and the policies of regulatory authorities, including monetary policies of the FRB, affect interest income and interest expense. High interest rates could also affect the amount of loans that the Company can originate because higher rates could cause customers to apply for fewer mortgages or cause depositors to shift funds from accounts that have a comparatively lower cost to accounts with a higher cost. The Company may also experience customer attrition due to competitor pricing. If the cost of interest-bearing deposits increases at a rate greater than the yields on interest-earning assets increase, net interest income will be negatively affected. Changes in the asset and liability mix may also affect net interest income. Similarly, lower interest rates cause higher yielding assets to prepay and floating or adjustable rate assets to reset to lower rates. If the Company is not able to reduce its funding costs sufficiently, due to either competitive factors or the maturity schedule of existing liabilities, then the Company's net interest margin will decline.

Although management believes it has implemented effective asset and liability management strategies to mitigate the potential adverse effects of changes in interest rates on the Company's results of operations, any substantial or unexpected change in, or prolonged change in market interest rates could have a material adverse effect on the Company's financial condition and results of operations. See the section captioned "Net Interest Income" in Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations and Item 7A. Quantitative and Qualitative Disclosure About Market Risk located elsewhere in this report for further discussion related to the Company's management of interest rate risk.

## Changes in the economy or the financial markets could materially affect our financial performance.

Downturns in the United States or global economies or financial markets could adversely affect the demand for and income received from the Company's feebased services. Revenues from the trust and benefit plan administration businesses depend in large part on the level of assets under management and administration. Market volatility that leads customers to liquidate investments, as well as lower asset values, can reduce our level of assets under management and administration and thereby decrease our investment management and administration revenues.

## Our lending, and particularly our emphasis on commercial lending, exposes us to the risk of losses upon borrower default.

As of December 31, 2016, approximately $45 \%$ of the Company's loan portfolio consisted of commercial and industrial, agricultural, commercial construction and commercial real estate loans. These types of loans generally expose a lender to greater risk of non-payment and loss than residential real estate loans because repayment of the loans often depends on the successful operation of the property, the income stream of the borrowers and, for construction loans, the accuracy of the estimate of the property's value at completion of construction and the estimated cost of construction. Such loans typically involve larger loan balances to single borrowers or groups of related borrowers compared to residential real estate loans. Because the Company's loan portfolio contains a significant number of commercial and industrial, agricultural, construction and commercial real estate loans with relatively large balances, the deterioration of one or a few of these loans could cause a significant increase in nonperforming loans. An increase in nonperforming loans could result in a net loss of earnings from these loans, an increase in the provision for loan losses and/or an increase in loan charge-offs, all of which could have a material adverse effect on the Company's financial condition and results of operations. See the section captioned "Loans" in Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations located elsewhere in this report for further discussion related to commercial and industrial, agricultural, construction and commercial real estate loans.

## If our allowance for loan losses is not sufficient to cover actual loan losses, our earnings will decrease.

The Company maintains an allowance for loan losses, which is an allowance established through a provision for loan losses charged to expense, that represents management's best estimate of probable losses that could be incurred within the existing portfolio of loans. The allowance, in the judgment of management, is necessary to reserve for estimated loan losses and risks inherent in the loan portfolio. The level of the allowance reflects management's continuing evaluation of industry concentrations; specific credit risks; loan loss experience; current loan portfolio quality; present economic, political, environmental and regulatory conditions and unidentified losses inherent in the current loan portfolio. The determination of the appropriate level of the allowance for loan losses inherently involves a high degree of subjectivity and requires the Company to make significant estimates of current credit risks and future trends, all of which may undergo material changes. Changes in economic conditions affecting borrowers, new information regarding existing loans, identification of additional problem loans and other factors, both within and outside of the Company's control, may require an increase in the allowance for loan losses. Bank regulatory agencies periodically review the Company's allowance for loan losses and may require an increase in the provision for loan losses or the recognition of further loan charge-offs, based on judgments different than those of management. In addition, if charge-offs in future periods exceed the allowance for loan losses, the Company may need additional provisions to increase the allowance for loan losses. These potential increases in the allowance for loan losses would result in a decrease in net income and, possibly, capital and may have a material adverse effect on the Company's financial condition and results of operations. See the section captioned "Risk Management - Credit Risk" in Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations located elsewhere in this report for further discussion related to the Company's process for determining the appropriate level of the allowance for loan losses.

## Strong competition within our industry and market area could hurt our performance and slow our growth.

The Company faces substantial competition in all areas of its operations from a variety of different competitors, many of which are larger and may have more financial resources. Such competitors primarily include national, regional and community banks within the various markets in which the Company operates. Additionally, various banks continue to enter or have announced plans to enter the market areas in which the Company currently operates. The Company also faces competition from many other types of financial institutions, including, without limitation, savings and loans, credit unions, finance companies, brokerage firms, insurance companies and other financial intermediaries. The financial services industry could become even more competitive as a result of legislative, regulatory and technological changes and continued consolidation. 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. Many of the Company's competitors have fewer regulatory constraints and may have lower cost structures. Additionally, due to their size, 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 the Company can.

The Company's ability to compete successfully depends on a number of factors, including, among other things:

- the ability to develop, maintain and build upon long-term customer relationships based on top quality service, high ethical standards and safe, sound assets;
- the ability to expand the Company's market position;
- the scope, relevance and pricing of products and services offered to meet customer needs and demands;
- the rate at which the Company introduces new products, services and technologies relative to its competitors;
- customer satisfaction with the Company's level of service;
- industry and general economic trends; and
- the ability to attract and retain talented employees.

Failure to perform in any of these areas could significantly weaken the Company's competitive position, which could adversely affect the Company's growth and profitability, which, in turn, could have a material adverse effect on the Company's financial condition and results of operations.

We are subject to extensive government regulation and supervision, which may interfere with our ability to conduct our business and may negatively impact our financial results.

We, primarily through the Bank and certain non-bank subsidiaries, are subject to extensive federal and state regulation and supervision. Banking regulations are primarily intended to protect depositors' funds, the Federal Deposit Insurance Fund and the safety and soundness of the banking system as a whole, not stockholders. These regulations affect the Company's lending practices, capital structure, investment practices, dividend policy and growth, among other things. Congress and federal regulatory agencies continually review banking laws, regulations and policies for possible changes. Changes to statutes, regulations or regulatory policies, including changes in interpretation or implementation of statutes, regulations or policies, could affect the Company in substantial and unpredictable ways. Such changes could subject the Company to additional costs, limit the types of financial services and products the Company may offer, and/or limit the pricing the Company may charge on certain banking services, among other things. Compliance personnel and resources may increase our costs of operations and adversely impact our earnings.

Failure to comply with laws, regulations or policies could result in sanctions by regulatory agencies, civil money penalties and/or reputation damage, which could have a material adverse effect on our business, financial condition and results of operations. While the Company has policies and procedures designed to prevent any such violations, there can be no assurance that such violations will not occur. See the section captioned "Supervision and Regulation" in Item 1. Business of this report for further information.

## We will be subject to heightened regulatory requirements if we exceed $\$ 10$ billion in total consolidated assets.

Based on our historical growth rates and current size, it is possible that our total assets could exceed $\$ 10$ billion dollars in the near future. The Dodd-Frank Act and its implementing regulations impose enhanced supervisory requirements on bank holding companies with more than $\$ 10$ billion in total consolidated assets. For bank holding companies with more than $\$ 10$ billion but less than $\$ 50$ billion in total consolidated assets such requirements include, among other things:

- compliance with the FRB's annual stress testing requirements;
- increased capital, leverage, liquidity and risk management standards;
- examinations by the CFPB for compliance with federal consumer financial protection laws and regulations;
- limits on interchange fees on debit cards; and
- changes to the FDIC deposit insurance assessments calculation that would increase our insurance premium costs.

Federal financial regulators may require us to take actions to prepare for compliance before we exceed $\$ 10$ billion in total consolidated assets. Our regulators may consider our preparation for compliance with these regulatory requirements when examining our operations or considering any request for regulatory approval. We may, therefore, incur compliance costs before we reach $\$ 10$ billion in total consolidated assets and may be required to maintain the additional compliance procedures even if we do not grow at the anticipated rate or at all.

Failure to comply with these new requirements may negatively impact the results of our operations and financial condition. To ensure compliance, we will be required to investment significant resources, which may necessitate hiring additional personnel and implementing additional internal controls. These additional compliance costs may have a material adverse effect on our business, results of operations and financial condition.

## The Company is subject to liquidity risk which could adversely affect net interest income and earnings

The purpose of the Company's liquidity management is to meet the cash flow obligations of its customers for both deposits and loans. The primary liquidity measurement the Company utilizes is called basic surplus, which captures the adequacy of the Company's access to reliable sources of cash relative to the stability of its funding mix of average liabilities. This approach recognizes the importance of balancing levels of cash flow liquidity from short and long-term securities with the availability of dependable borrowing sources which can be accessed when necessary. However, competitive pressure on deposit pricing could result in a decrease in the Company's deposit base or an increase in funding costs. In addition, liquidity will come under additional pressure if loan growth exceeds deposit growth. These scenarios could lead to a decrease in the Company's basic surplus measure below the minimum policy level of 5\%. To manage this risk, the Company has the ability to purchase brokered time deposits, borrow against established borrowing facilities with other banks (Federal funds) and enter into repurchase agreements with investment companies. Depending on the level of interest rates, the Company's net interest income, and therefore earnings, could be adversely affected. See the section captioned "Liquidity Risk" in Item 7.

Our ability to service our debt, pay dividends and otherwise pay our obligations as they come due is substantially dependent on capital distributions from our subsidiaries.

The Company is a separate and distinct legal entity from its subsidiaries. It receives substantially all of its revenue from dividends from its subsidiaries. These dividends are the principal source of funds to pay dividends on the Company's common stock and interest and principal on the Company's debt. Various federal and/or state laws and regulations limit the amount of dividends that the Bank may pay to the Company. Also, the Company's right to participate in a distribution of assets upon a subsidiary's liquidation or reorganization is subject to the prior claims of the subsidiary's creditors. In the event the Bank is unable to pay dividends to the Company, the Company may not be able to service debt, pay obligations or pay dividends on the Company's common stock. The inability to receive dividends from the Bank could have a material adverse effect on the Company's business, financial condition and results of operations.

## A breach of information security, including as a result of cyber attacks, could disrupt our business and impact our earnings.

We depend upon data processing, communication and information exchange on a variety of computing platforms and networks and over the internet. In addition, we rely on the services of a variety of vendors to meet our data processing and communication needs. Despite existing safeguards, we cannot be certain that all of our systems are free from vulnerability to attack or other technological difficulties or failures. If information security is breached or difficulties or failures occur, despite the controls we and our third party vendors have instituted, information can be lost or misappropriated, resulting in financial loss or costs to us, reputational harm or damages to others. Such costs or losses could exceed the amount of insurance coverage, if any, which would adversely affect our earnings.

## The Company may be adversely affected by fraud.

As a financial institution, the Company is inherently exposed to operational risk in the form of theft and other fraudulent activity by employees, customers, and other third parties targeting the Company and/or the Company's customers or data. Such activity may take many forms, including check fraud, electronic fraud, wire fraud, phishing, social engineering and other dishonest acts.
Although the Company devotes substantial resources to maintaining effective policies and internal controls to identify and prevent such incidents, given the increasing sophistication of possible perpetrators, the Company may experience financial losses or reputational harm as a result of fraud.

## We continually encounter technological change and the failure to understand and adapt to these changes could hurt our business.

The financial services industry is continually undergoing rapid technological change with frequent introductions of new technology-driven products and services. The effective use of technology increases efficiency and enables financial institutions to better serve customers and to reduce costs. The Company's future success depends, in part, upon its ability to address the needs of its customers by using technology to provide products and services that will satisfy customer demands, as well as to create additional efficiencies in the Company's operations. Many of the Company's competitors have substantially greater resources to invest in technological improvements. The Company may not be able to effectively implement new technology-driven products and services or be successful in marketing these products and services to its customers. Failure to successfully keep pace with technological changes affecting the financial services industry could have a material adverse impact on the Company's business and, in turn, the Company's financial condition and results of operations.

## The Company relies on third parties to provide key components of its business infrastructure.

The Company relies on third parties to provide key components for its business operations, such as data processing and storage, recording and monitoring transactions, online banking interfaces and services, internet connections, and network access. While the Company selects these third-party vendors carefully, it does not control their actions. Any problems caused by these third parties, including those resulting from breakdowns or other disruptions in communication services provided by a vendor, failure of a vendor to handle current or higher volumes, cyber-attacks and security breaches at a vendor, failure of a vendor to provide services for any reason, or poor performance of services by a vendor, could adversely affect the Company's ability to deliver products and services to its customers and otherwise conduct its business. Financial or operational difficulties of a third-party vendor could also hurt the Company's operations if those difficulties interfere with the vendor's ability to serve the Company. Replacing these third party vendors also could create significant delays and expense that adversely affect the Company's business and performance.

The possibility of the economy's return to recessionary conditions and the possibility of further turmoil or volatility in the financial markets would likely have an adverse effect on our business, financial position and results of operations.

The economy in the United States and globally has experienced volatility in recent years and may continue to do so for the foreseeable future. There can be no assurance that economic conditions will not worsen. Unfavorable or uncertain economic conditions can be caused by declines in economic growth, business activity or investor or business confidence, limitations on the availability or increases in the cost of credit and capital, increases in inflation or interest rates, the timing and impact of changing governmental policies, natural disasters, terrorist attacks, acts of war or a combination of these or other factors. A worsening of business and economic conditions recovery could have adverse effects on our business, including the following:

- investors may have less confidence in the equity markets in general and in financial services industry stocks in particular, which could place downward pressure on the Company's stock price and resulting market valuation;
- economic and market developments may further affect consumer and business confidence levels and may cause declines in credit usage and adverse changes in payment patterns, causing increases in delinquencies and default rates;
- the Company's ability to assess the creditworthiness of its customers may be impaired if the models and approaches the Company uses to select, manage and underwrite its customers become less predictive of future behaviors;
- the Company could suffer decreases in demand for loans or other financial products and services or decreased deposits or other investments in accounts with the Company;
- customers of the Company's trust and benefit plan administration business may liquidate investments, which together with lower asset values, may reduce the level of assets under management and administration and thereby decrease the Company's investment management and administration revenues;
- competition in the financial services industry could intensify as a result of the increasing consolidation of financial services companies in connection with current market conditions or otherwise; and;
- the value of loans and other assets or collateral securing loans may decrease.


## We are subject to other-than-temporary impairment risk which could negatively impact our financial performance.

The Company recognizes an impairment charge when the decline in the fair value of equity, debt securities and cost-method investments below their cost basis are judged to be other-than-temporary. Significant judgment is used to identify events or circumstances that would likely have a significant adverse effect on the future use of the investment. The Company considers various factors in determining whether an impairment is other-than-temporary, including the severity and duration of the impairment, forecasted recovery, the financial condition and near-term prospects of the investee, whether the Company has the intent to sell and whether it is more likely than not it will be forced to sell the security in question. Information about unrealized gains and losses is subject to changing conditions. The values of securities with unrealized gains and losses will fluctuate, as will the values of securities that we identify as potentially distressed. Our current evaluation of other-than-temporary impairments reflects our intent to hold securities for a reasonable period of time sufficient for a forecasted recovery of fair value. However, our intent to hold certain of these securities may change in future periods as a result of facts and circumstances impacting a specific security. If our intent to hold a security with an unrealized loss changes and we do not expect the security to fully recover prior to the expected time of disposition, we will write down the security to its fair value in the period that our intent to hold the security changes.

The process of evaluating the potential impairment of goodwill and other intangibles is highly subjective and requires significant judgment. The Company estimates the expected future cash flows of its various businesses and determines the carrying value of these businesses. The Company exercises judgment in assigning and allocating certain assets and liabilities to these businesses. The Company then compares the carrying value, including goodwill and other intangibles, to the discounted future cash flows. If the total of future cash flows is less than the carrying amount of the assets, an impairment loss is recognized based on the excess of the carrying amount over the fair value of the assets. Estimates of the future cash flows associated with the assets are critical to these assessments. Changes in these estimates based on changed economic conditions or business strategies could result in material impairment charges and therefore have a material adverse impact on the Company's financial condition and performance.

## The risks presented by acquisitions could adversely affect our financial condition and results of operations.

The business strategy of the Company has included and may continue to include growth through acquisition. Any future acquisitions will be accompanied by the risks commonly encountered in acquisitions. These risks may include, among other things:

- our ability to realize anticipated cost savings;
- the difficulty of integrating operations and personnel, the loss of key employees;
- the potential disruption of our or the acquired company's ongoing business in such a way that could result in decreased revenues, the inability of our management to maximize our financial and strategic position;
- the inability to maintain uniform standards, controls, procedures and policies; and
- the impairment of relationships with the acquired company's employees and customers as a result of changes in ownership and management.

We cannot provide any assurance that we will be successful in overcoming these risks or any other problems encountered in connection with acquisitions. Our inability to overcome these risks could have an adverse effect on the achievement of our business strategy and results of operations.

## There are substantial risks and uncertainties associated with the introduction or expansion of lines of business or new products and services within

 existing lines of business.From time to time, the Company may implement new lines of business or offer new products and services within existing lines of business. There are substantial risks and uncertainties associated with these efforts, particularly in instances where the markets are not fully developed. In developing and marketing new lines of business and/or new products and services, the Company may invest significant time and resources. Initial timetables for the introduction and development of new lines of business and/or new products or services may not be achieved and price and profitability targets may not prove attainable. External factors, such as compliance with regulations, competitive alternatives, and shifting market preferences, may also impact the successful implementation of a new line of business or a new product or service. Furthermore, any new line of business and/or new product or service could have a significant impact on the effectiveness of the Company's system of internal controls. Failure to successfully manage these risks in the development and implementation of new lines of business or new products or services could have a material adverse effect on the Company's business, results of operations, and financial condition.

## Our controls and procedures may fail or be circumvented, which may result in a material adverse effect on our business.

Management regularly reviews and updates our internal controls, disclosure controls and procedures and corporate governance policies and procedures. Any system of controls, however well designed and operated, is based in part on certain assumptions and can provide only reasonable, not absolute, assurances that the objectives of the system are met. Any failure or circumvention of the controls and procedures or failure to comply with regulations related to controls and procedures could have a material adverse effect on our business, results of operations and financial condition.

## We are exposed to risk of environmental liabilities with respect to properties to which we obtain title.

A significant portion of our loan portfolio at December 31, 2016 was secured by real estate. In the course of our business, we may foreclose and take title to real estate and could be subject to environmental liabilities with respect to these properties. We may be held liable to a government entity or to third parties for property damage, personal injury, investigation and clean-up costs incurred by these parties in connection with environmental contamination, or may be required to clean up hazardous or toxic substances, or chemical releases at a property. The costs associated with investigation and remediation activities could be substantial. In addition, if we are the owner or former owner of a contaminated site, we may be subject to common law claims by third parties based on damages and costs resulting from environmental contamination emanating from the property. These costs and claims could adversely affect our business, results of operations and prospects.

## We may be adversely affected by the soundness of other financial institutions including the FHLB of New York.

Our ability to engage in routine funding transactions could be adversely affected by the actions and commercial soundness of other financial institutions. Financial services companies are interrelated as a result of trading, clearing, counterparty or other relationships. We have exposure to many different industries and counterparties, and we routinely execute transactions with counterparties in the financial services industry, including brokers and dealers, commercial banks, investment banks, mutual and hedge funds and other institutional clients. As a result, defaults by, or even rumors or questions about, one or more financial services companies, or the financial services industry generally, have led to market-wide liquidity problems and could lead to losses or defaults by us or by other institutions. Many of these transactions expose us to credit risk in the event of default of our counterparty or client. In addition, our credit risk may be exacerbated if the collateral held by us cannot be realized or is liquidated at prices not sufficient to recover the full amount of the loan or derivative exposure due us. There is no assurance that any such losses would not materially and adversely affect our business, financial condition or results of operations.

The Company owns common stock of FHLB of New York in order to qualify for membership in the FHLB system, which enables it to borrow funds under the FHLB of New York's advance program. The carrying value and fair market value of our FHLB of New York common stock was $\$ 31.8$ million as of December 31, 2016. There are 11 branches of the FHLB, including New York, which are jointly liable for the consolidated obligations of the FHLB system. To the extent that one FHLB branch cannot meet its obligations to pay its share of the system's debt, other FHLB branches can be called upon to make the payment. Any adverse effects on the FHLB of New York could adversely affect the value of our investment in its common stock and negatively impact our results of operations.

Provisions of our certificate of incorporation and bylaws, as well as Delaware law and certain banking laws, could delay or prevent a takeover of us by a third party.

Provisions of the Company's certificate of incorporation and bylaws, the corporate law of the State of Delaware and state and federal banking laws, including regulatory approval requirements, could delay, defer or prevent a third party from acquiring the Company, despite the possible benefit to the Company's stockholders, or otherwise adversely affect the market price of the Company's common stock. These provisions include supermajority voting requirements for certain business combinations and advance notice requirements for nominations for election to the Company's board of directors and for proposing matters that stockholders may act on at stockholder meetings. In addition, the Company is subject to Delaware law, which among other things prohibits the Company from engaging in a business combination with any interested stockholder for a period of three years from the date the person became an interested stockholder unless certain conditions are met. These provisions may discourage potential takeover attempts, discouraging bids for the Company's common stock at a premium over market price or adversely affect the market price of and the voting and other rights of the holders of the Company's common stock. These provisions could also discourage proxy contests and make it more difficult for you and other stockholders to elect directors other than candidates nominated by the Board.

## The Company's common stock price may fluctuate significantly.

The Company's common stock price constantly changes, and has increased substantially since the U.S. Presidential election in November 2016. The market price of the Company's common stock may continue to fluctuate significantly in response to a number of factors including, but not limited to:

- The political climate and whether the proposed policies of the new Presidential administration in the U.S. that have affected market prices for financial institution stocks are successfully implemented;
- Changes in securities analysts' recommendations or expectations of financial performance;
- Volatility of stock market prices and volumes;
- Incorrect information or speculation;
- Changes in industry valuations;
- Variations in operating results from general expectations;
- Actions taken against the Company by various regulatory agencies;
- Changes in authoritative accounting guidance;
- Changes in general domestic economic conditions such as inflation rates, tax rates, unemployment rates, labor and healthcare cost trend rates, recessions and changing government policies, laws and regulations; and
- Severe weather, natural disasters, acts of war or terrorism and other external events.


## There may be future sales or other dilution of the Company's equity, which may adversely affect the market price of the Company's stock.

The Company is not restricted from issuing additional common stock, including any securities that are convertible into or exchangeable for, or that represent the right to receive, common stock. The Company also grants a significant number of shares of common stock to employees and directors under the Company's incentive plan each year. The issuance of any additional shares of the Company's common stock or preferred stock or securities convertible into, exchangeable for or that represent the right to receive common stock, or the exercise of such securities could be substantially dilutive to stockholders of the Company's common stock. Holders of the Company's common stock have no preemptive rights that entitle such holders to purchase their pro rata share of any offering of shares or any class or series. Because the Company's decision to issue securities in any future offering will depend on market conditions, its acquisition activity and other factors, the Company cannot predict or estimate the amount, timing or nature of its future offerings. Thus, the Company's stockholders bear the risk of the Company's future offerings reducing the market price of the Company's common stock and diluting their stock holdings in the Company.

## ITEM 1B. Unresolved Staff Comments

None.

## ITEM 2. Properties

The Company owns its headquarters located at 52 South Broad Street, Norwich, New York 13815. The Company operated the following community banking branches and ATMs as of December 31, 2016:

| County | Branches | ATMs | County | Branches | ATMs |
| :---: | :---: | :---: | :---: | :---: | :---: |
| New York | Pennsylvania |  |  |  |  |
| Albany | 4 | 5 | Lackawanna | 13 | 16 |
| Broome | 8 | 10 | Luzerne | 4 | 6 |
| Chenango | 11 | 13 | Monroe | 4 | 4 |
| Clinton | 3 | 2 | Pike | 2 | 2 |
| Cortland | 5 | 7 | Susquehanna | 5 | 7 |
| Delaware | 5 | 4 | Wayne | 3 | 4 |
| Essex | 3 | 5 |  |  |  |
| Franklin | 1 | 1 | New Hampshire |  |  |
| Fulton | 5 | 6 | Cheshire | 1 | 0 |
| Greene | 2 | 2 | Hillsborough | 2 | 2 |
| Hamilton | 1 | 1 | Rockingham | 1 | 2 |
| Herkimer | 2 | 1 |  |  |  |
| Madison | 4 | 6 | Vermont |  |  |
| Montgomery | 5 | 4 | Chittenden | 3 | 3 |
| Oneida | 7 | 11 | Rutland | 1 | 1 |
| Onondaga | 11 | 13 |  |  |  |
| Oswego | 4 | 6 | Massachusetts |  |  |
| Otsego | 8 | 12 | Berkshire | 6 | 6 |
| Rensselaer | 1 | 1 |  |  |  |
| Saint Lawrence | 5 | 5 | Maine |  |  |
| Saratoga | 4 | 4 | Cumberland | 1 | 0 |
| Schenectady | 2 | 2 |  |  |  |
| Schoharie | 4 | 4 |  |  |  |
| Tioga | 1 | 1 |  |  |  |
| Warren | 2 | 3 |  |  |  |
|  |  |  |  |  |  |
|  |  |  | Total | 154 | 182 |

The Company leases 66 of the above listed branches from third parties. The Company owns all other banking premises. The Company believes that its offices are sufficient for its present operations. All of the above ATMs are owned by the Company.

There are no material legal proceedings, other than ordinary routine litigation incidental to the business, to which the Company or any of its subsidiaries is a party or of which any of their property is subject.

ITEM 4. Mine Safety Disclosures

None.

## PART II

## ITEM 5. Market for Registrant's Common Equity, Related Stockholder matters and Issuer Purchases of Equity Securities

## Market Information

The common stock of the Company, par value $\$ 0.01$ per share (the "Common Stock"), is quoted on the Nasdaq Global Select Market under the symbol "NBTB." The following table sets forth the high and low sales prices and dividends declared for the Common Stock for the periods indicated:

|  | High |  | Low |  | Dividend |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2016 |  |  |  |  |  |  |
| 1st quarter | \$ | 27.50 | \$ | 23.81 | \$ | 0.22 |
| 2nd quarter |  | 29.55 |  | 25.67 |  | 0.22 |
| 3 rd quarter |  | 33.04 |  | 27.31 |  | 0.23 |
| 4th quarter |  | 42.49 |  | 32.26 |  | 0.23 |
| 2015 |  |  |  |  |  |  |
| 1st quarter | \$ | 26.46 | \$ | 22.97 | \$ | 0.21 |
| 2nd quarter |  | 26.89 |  | 23.75 |  | 0.22 |
| 3 rd quarter |  | 27.72 |  | 24.91 |  | 0.22 |
| 4th quarter |  | 30.52 |  | 25.58 |  | 0.22 |

The closing price of the Common Stock on February 10, 2017 was $\$ 40.08$.
As of February 10, 2017, there were 6,412 stockholders of record of Common Stock. No unregistered securities were sold by the Company during the year ended December 31, 2016.

## Stock Performance Graph

The following stock performance graph compares the cumulative total stockholder return (i.e., price change, reinvestment of cash dividends and stock dividends received) on our Common Stock against the cumulative total return of the NASDAQ Stock Market (U.S. Companies) Index and the KBW Regional Bank Index (Peer Group). The stock performance graph assumes that $\$ 100$ was invested on December 31, 2011. The graph further assumes the reinvestment of dividends into additional shares of the same class of equity securities at the frequency with which dividends are paid on such securities during the relevant fiscal year. The yearly points marked on the horizontal axis correspond to December 31 of that year. We calculate each of the referenced indices in the same manner. All are market-capitalization-weighted indices, so companies judged by the market to be more important (i.e., more valuable) count for more in all indices.


|  | Period Ending |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Index | 12/31/11 |  | 12/31/12 |  | 12/31/13 |  | 12/31/14 |  | 12/31/15 |  | 12/31/16 |  |
| NBT Bancorp | \$ | 100.00 | \$ | 95.06 | \$ | 125.80 | \$ | 132.08 | \$ | 144.83 | \$ | 223.79 |
| KBW Regional Bank Index | \$ | 100.00 | \$ | 113.18 | \$ | 166.06 | \$ | 170.01 | \$ | 180.18 | \$ | 250.39 |
| NASDAQ Composite Index | \$ | 100.00 | \$ | 117.70 | \$ | 164.92 | \$ | 189.32 | \$ | 202.81 | \$ | 220.91 |

Source: Bloomberg, L.P.

## Dividends

We depend primarily upon dividends from our subsidiaries for a substantial part of our revenue. Accordingly, our ability to pay dividends to our stockholders depends primarily upon the receipt of dividends or other capital distributions from our subsidiaries. Payment of dividends to the Company from the Bank is subject to certain regulatory and other restrictions. Under OCC regulations, the Bank may pay dividends to the Company without prior regulatory approval so long as it meets its applicable regulatory capital requirements before and after payment of such dividends and its total dividends do not exceed its net income to date over the calendar year plus retained net income over the preceding two years. At December 31, 2016, the Bank was in compliance with all applicable minimum capital requirements and had the ability to pay dividends of $\$ 102.5$ million to the Company without the prior approval of the OCC.

If the capital of the Company is diminished by depreciation in the value of its property or by losses, or otherwise, to an amount less than the aggregate amount of the capital represented by the issued and outstanding stock of all classes having a preference upon the distribution of assets, no dividends may be paid out of net profits until the deficiency in the amount of capital represented by the issued and outstanding stock of all classes having a preference upon the distribution of assets has been repaired. See the section captioned "Supervision and Regulation" in Item 1. Business and Note 15 to the consolidated financial statements is included in Item 8. Financial Statements and Supplementary Data, which are located elsewhere in this report.

## Stock Repurchase

The Company purchased 675,535 shares of its common stock during the year ended December 31, 2016 at an average price of $\$ 25.45$ per share under a previously announced plan that expired on December 31, 2016. On March 28, 2016, the NBT Board of Directors authorized a new repurchase program for NBT to repurchase up to $1,000,000$ shares of its outstanding stock. This plan expires on December 31, 2017. The Company did not purchase any shares of its common stock during the fourth quarter of 2016.

The following summary of financial and other information about the Company is derived from the Company's audited consolidated financial statements for each of the last five fiscal years ended December 31 and should be read in conjunction with Item 7 and the Company's consolidated financial statements and accompanying notes, included elsewhere in this report:

| (In thousands except share and per share data) | Year ended December 31, |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2016 |  | 2015 |  | 2014 |  | 2013(1) |  | 2012(2) |  |
| Interest, fee and dividend income | \$ | 286,947 | \$ | 273,224 | \$ | 275,081 | \$ | 268,723 | \$ | 239,397 |
| Interest expense |  | 22,506 |  | 20,616 |  | 23,203 |  | 30,644 |  | 35,194 |
| Net interest income |  | 264,441 |  | 252,608 |  | 251,878 |  | 238,079 |  | 204,203 |
| Provision for loan losses |  | 25,431 |  | 18,285 |  | 19,539 |  | 22,424 |  | 20,269 |
| Noninterest income excluding securities |  |  |  |  |  |  |  |  |  |  |
| gains |  | 116,357 |  | 115,394 |  | 125,935 |  | 101,789 |  | 86,728 |
| Securities (losses) gains, net |  | (644) |  | 3,087 |  | 92 |  | 1,426 |  | 599 |
| Noninterest expense |  | 235,922 |  | 236,176 |  | 246,063 |  | 228,927 |  | 193,887 |
| Income before income taxes |  | 118,801 |  | 116,628 |  | 112,303 |  | 89,943 |  | 77,374 |
| Net income |  | 78,409 |  | 76,425 |  | 75,074 |  | 61,747 |  | 54,558 |
|  |  |  |  |  |  |  |  |  |  |  |
| Per common share |  |  |  |  |  |  |  |  |  |  |
| Basic earnings | \$ | 1.81 | \$ | 1.74 | \$ | 1.71 | \$ | 1.47 | \$ | 1.63 |
| Diluted earnings |  | 1.80 |  | 1.72 |  | 1.69 |  | 1.46 |  | 1.62 |
| Cash dividends paid |  | 0.90 |  | 0.87 |  | 0.84 |  | 0.81 |  | 0.80 |
| Book value at year-end |  | 21.11 |  | 20.31 |  | 19.69 |  | 18.77 |  | 17.24 |
| Tangible book value at year-end (3) |  | 14.61 |  | 13.79 |  | 13.22 |  | 12.09 |  | 12.23 |
| Average diluted common shares outstanding |  | 43,622 |  | 44,389 |  | 44,395 |  | 42,351 |  | 33,719 |
|  |  |  |  |  |  |  |  |  |  |  |
| Securities available for sale, at fair value | \$ | 1,338,290 | \$ | 1,174,544 | \$ | 1,013,171 | \$ | 1,364,881 | \$ | 1,147,999 |
| Securities held to maturity, at amortized cost |  | 527,948 |  | 471,031 |  | 454,361 |  | 117,283 |  | 60,563 |
| Loans |  | 6,198,057 |  | 5,883,133 |  | 5,595,271 |  | 5,406,795 |  | 4,277,616 |
| Allowance for loan losses |  | 65,200 |  | 63,018 |  | 66,359 |  | 69,434 |  | 69,334 |
| Assets |  | 8,867,268 |  | 8,262,646 |  | 7,807,340 |  | 7,652,175 |  | 6,042,259 |
| Deposits |  | 6,973,688 |  | 6,604,843 |  | 6,299,605 |  | 5,890,224 |  | 4,784,349 |
| Borrowings |  | 886,986 |  | 674,124 |  | 548,943 |  | 866,061 |  | 605,855 |
| Stockholders' equity |  | 913,316 |  | 882,004 |  | 864,181 |  | 816,569 |  | 582,273 |
|  |  |  |  |  |  |  |  |  |  |  |
| Key ratios |  |  |  |  |  |  |  |  |  |  |
| Return on average assets |  | 0.92\% |  | 0.96\% |  | 0.97\% |  | 0.85\% |  | 0.93\% |
| Return on average equity |  | 8.74\% |  | 8.70\% |  | 8.84\% |  | 8.09\% |  | 9.72\% |
| Average equity to average assets |  |  |  |  |  |  |  |  |  |  |
|  |  | 10.49\% |  | 10.98\% |  | 10.95\% |  | 10.50\% |  | 9.55\% |
| Net interest margin |  | 3.43\% |  | 3.50\% |  | 3.61\% |  | 3.66\% |  | 3.86\% |
| Dividend payout ratio |  | 50.00\% |  | 49.92\% |  | 49.16\% |  | 55.48\% |  | 49.38\% |
| Tier 1 leverage |  | 9.11\% |  | 9.44\% |  | 9.39\% |  | 8.93\% |  | 8.54\% |
| Common equity tier 1 capital ratio |  | 9.98\% |  | 10.20\% |  | N/A |  | N/A\% |  | N/A |
| Tier 1 risk-based capital |  | 11.42\% |  | 11.73\% |  | 12.32\% |  | 11.74\% |  | 11.00\% |
| Total risk-based capital |  | 12.39\% |  | 12.74\% |  | 13.50\% |  | 12.99\% |  | 12.25\% |

[^0]| (In thousands except share and per share data) | Year ended December 31, |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2016 |  | 2015 |  | 2014 |  | 2013 |  | 2012 |  |
| Stockholders' equity | \$ | 913,316 | \$ | 882,004 | \$ | 864,181 | \$ | 816,569 | \$ | 582,273 |
| Intangibles |  | 281,254 |  | 283,222 |  | 283,951 |  | 290,554 |  | 169,335 |
| Tangible equity |  | 632,062 |  | 598,782 |  | 580,229 |  | 526,015 |  | 412,938 |
| Diluted common shares outstanding |  | 43,258 |  | 43,431 |  | 43,896 |  | 43,513 |  | 33,775 |
| Tangible book value | \$ | 14.61 | \$ | 13.79 | \$ | 13.22 | \$ | 12.09 | \$ | 12.23 |

## Selected Quarterly Financial Data

| (Dollars in thousands except share and per share data) | 2016 |  |  |  |  |  |  |  | 2015 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Fourth |  | Third |  | Second |  | First |  | Fourth |  | Third |  | Second |  | First |  |
| Interest, fee and dividend income | \$ | 73,109 | \$ | 72,509 | \$ | 71,375 | \$ | 69,954 | \$ | 68,771 | \$ | 69,500 | \$ | 67,727 | \$ | 67,226 |
| Interest expense |  | 5,684 |  | 5,847 |  | 5,598 |  | 5,377 |  | 5,259 |  | 5,255 |  | 5,042 |  | 5,060 |
| Net interest income |  | 67,425 |  | 66,662 |  | 65,777 |  | 64,577 |  | 63,512 |  | 64,245 |  | 62,685 |  | 62,166 |
| Provision for loan losses |  | 8,165 |  | 6,388 |  | 4,780 |  | 6,098 |  | 5,779 |  | 4,966 |  | 3,898 |  | 3,642 |
| Noninterest income excluding net securities gains |  | 28,762 |  | 29,644 |  | 29,613 |  | 28,338 |  | 29,427 |  | 31,258 |  | 28,189 |  | 26,520 |
| Net securities (losses) gains |  | (674) |  | - |  | 1 |  | 29 |  | 3,044 |  | 3 |  | 26 |  | 14 |
| Noninterest expense |  | 57,639 |  | 59,614 |  | 60,445 |  | 58,224 |  | 60,619 |  | 59,891 |  | 57,964 |  | 57,702 |
| Net income |  | 19,608 |  | 20,001 |  | 19,909 |  | 18,891 |  | 19,127 |  | 19,851 |  | 19,281 |  | 18,166 |
| Basic earnings per share | \$ | 0.45 | \$ | 0.46 | \$ | 0.46 | \$ | 0.44 | \$ | 0.44 | \$ | 0.45 | \$ | 0.44 | \$ | 0.41 |
| Diluted earnings per share | \$ | 0.45 | \$ | 0.46 | \$ | 0.46 | \$ | 0.43 | \$ | 0.43 | \$ | 0.45 | \$ | 0.43 | \$ | 0.41 |
| Annualized net interest margin |  | 3.41\% |  | 3.40\% |  | 3.44\% |  | 3.47\% |  | 3.42\% |  | 3.48\% |  | 3.51\% |  | 3.60\% |
| Annualized return on average assets |  | 0.89\% |  | 0.92\% |  | 0.94\% |  | 0.92\% |  | 0.93\% |  | 0.97\% |  | 0.97\% |  | 0.94\% |
| Annualized return on average equity |  | 8.54\% |  | 8.80\% |  | 9.00\% |  | 8.63\% |  | 8.58\% |  | 8.97\% |  | 8.81\% |  | 8.46\% |
| Weighted average diluted common shares outstanding |  | 43,703 |  | 43,562 |  | 43,454 |  | 43,707 |  | 44,072 |  | 44,262 |  | 44,530 |  | 44,642 |

## Forward-Looking Statements

Certain statements in this filing and future filings by the Company with the SEC, in the Company's press releases or other public or shareholder communications, or in oral statements made with the approval of an authorized executive officer, contain forward-looking statements, as defined in the Private Securities Litigation Reform Act. These statements may be identified by the use of phrases such as "anticipate," "believe," "expect," "forecasts," "projects," "will," "can," "would," "should," "could," "may," or other similar terms. There are a number of factors, many of which are beyond the Company's control that could cause actual results to differ materially from those contemplated by the forward-looking statements. Factors that may cause actual results to differ materially from those contemplated by such forward-looking statements include, among others, the following possibilities: (1) local, regional, national and international economic conditions and the impact they may have on the Company and its customers and the Company's assessment of that impact; (2) changes in the level of nonperforming assets and charge-offs; (3) changes in estimates of future reserve requirements based upon the periodic review thereof under relevant regulatory and accounting requirements; (4) the effects of and changes in trade and monetary and fiscal policies and laws, including the interest rate policies of the Federal Reserve Board; (5) inflation, interest rate, securities market and monetary fluctuations; (6) political instability; (7) acts of war or terrorism; (8) the timely development and acceptance of new products and services and perceived overall value of these products and services by users; (9) changes in consumer spending, borrowings and savings habits; (10) changes in the financial performance and/or condition of the Company's borrowers; (11) technological changes; (12) acquisitions and integration of acquired businesses; (13) the ability to increase market share and control expenses; (14) changes in the competitive environment among financial holding companies; (15) the effect of changes in laws and regulations (including laws and regulations concerning taxes, banking, securities and insurance) with which the Company and its subsidiaries must comply including those under the DoddFrank Act; (16) the effect of changes in accounting policies and practices, as may be adopted by the regulatory agencies, as well as the Public Company Accounting Oversight Board, the FASB and other accounting standard setters; (17) changes in the Company's organization, compensation and benefit plans; (18) the costs and effects of legal and regulatory developments including the resolution of legal proceedings or regulatory or other governmental inquiries and the results of regulatory examinations or reviews; (19) greater than expected costs or difficulties related to the integration of new products and lines of business; and (20) the Company's success at managing the risks involved in the foregoing items.

The Company cautions readers not to place undue reliance on any forward-looking statements, which speak only as of the date made, and advises readers that various factors including, but not limited to, those described above, could affect the Company's financial performance and could cause the Company's actual results or circumstances for future periods to differ materially from those anticipated or projected.

Except as required by law, the Company does not undertake, and specifically disclaims any obligations to, publicly release any revisions that may be made to any forward-looking statements to reflect the occurrence of anticipated or unanticipated events or circumstances after the date of such statements.

## General

The financial review which follows focuses on the factors affecting the consolidated financial condition and results of operations of the Company and its wholly-owned subsidiaries, the Bank, NBT Financial Services and NBT Holdings during 2016 and, in summary form, the preceding two years. Collectively, the Registrant and its subsidiaries are referred to herein as "the Company." Net interest margin is presented in this discussion on a fully taxable equivalent ("FTE") basis. Average balances discussed are daily averages unless otherwise described. The audited consolidated financial statements and related notes as of December 31, 2016 and 2015 and for each of the years in the three-year period ended December 31, 2016 should be read in conjunction with this review. Amounts in prior period consolidated financial statements are reclassified whenever necessary to conform to the 2016 presentation.

## Critical Accounting Policies

The Company has identified policies as being critical because they require management to make particularly difficult, subjective and/or complex judgments about matters that are inherently uncertain and because of the likelihood that materially different amounts would be reported under different conditions or using different assumptions. These policies relate to the allowance for loan losses, pension accounting, provision for income taxes and impairment of goodwill and intangible assets.

Management of the Company considers the accounting policy relating to the allowance for loan losses to be a critical accounting policy given the uncertainty in evaluating the level of the allowance required to cover credit losses inherent in the loan portfolio and the material effect that such judgments can have on the results of operations. While management's current evaluation of the allowance for loan losses indicates that the allowance is adequate, under adversely different conditions or assumptions, the allowance may need to be increased. For example, if historical loan loss experience significantly worsened or if current economic conditions significantly deteriorated, additional provision for loan losses would be required to increase the allowance. In addition, the assumptions and estimates used in the internal reviews of the Company's nonperforming loans and potential problem loans have a significant impact on the overall analysis of the adequacy of the allowance for loan losses. While management has concluded that the current evaluation of collateral values is reasonable under the circumstances, if collateral values were significantly lower, the Company's allowance for loan loss policy would also require additional provision for loan losses.

Management is required to make various assumptions in valuing its pension assets and liabilities. These assumptions include the expected rate of return on plan assets, the discount rate, and the rate of increase in future compensation levels. Changes to these assumptions could impact earnings in future periods. The Company takes into account the plan asset mix, funding obligations, and expert opinions in determining the various rates used to estimate pension expense. The Company also considers the Citigroup Pension Liability Index, market interest rates and discounted cash flows in setting the appropriate discount rate. In addition, the Company reviews expected inflationary and merit increases to compensation in determining the rate of increase in future compensation levels.

The Company is subject to examinations from various taxing authorities. Such examinations may result in challenges to the tax return treatment applied by the Company to specific transactions. Management believes that the assumptions and judgments used to record tax-related assets or liabilities have been appropriate. Should tax laws change or the taxing authorities determine that management's assumptions were inappropriate, an adjustment may be required which could have a material effect on the Company's results of operations.

As a result of acquisitions, the Company has acquired goodwill and identifiable intangible assets. Goodwill represents the cost of acquired companies in excess of the fair value of net assets at the acquisition date. Goodwill is evaluated at least annually or when business conditions suggest that an impairment may have occurred. Goodwill will be reduced to its carrying value through a charge to earnings if impairment exists. Core deposits and other identifiable intangible assets are amortized to expense over their estimated useful lives. The determination of whether or not impairment exists is based upon discounted cash flow modeling techniques that require management to make estimates regarding the amount and timing of expected future cash flows. It also requires them to select a discount rate that reflects the current return requirements of the market in relation to present risk-free interest rates, required equity market premiums and Company-specific risk indicators, all of which are susceptible to change based on changes in economic conditions and other factors. Future events or changes in the estimates used to determine the carrying value of goodwill and identifiable intangible assets could have a material impact on the Company's results of operations.

The Company's policies on the allowance for loan losses, pension accounting, provision for income taxes, goodwill and intangible assets are disclosed in Note 1 to the consolidated financial statements. A more detailed description of the allowance for loan losses is included in the section captioned "Risk Management - Credit Risk" in Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations of this Form 10-K. All significant pension accounting assumptions, income tax assumptions, and intangible asset assumptions and detail are disclosed in Notes 13,12 and 7 to the consolidated financial statements, respectively. All accounting policies are important, and as such, the Company encourages the reader to review each of the policies included in Note 1 to obtain a better understanding of how the Company's financial performance is reported.

## Non-GAAP Measures

This Annual Report on Form 10-K contains financial information determined by methods other than in accordance with accounting principles generally accepted in the United States of America ("GAAP"). These measures adjust GAAP measures to exclude the effects of acquisition related intangible amortization expense on earnings and equity as well as providing a fully taxable equivalent yield on securities and loans. Where non-GAAP disclosures are used in this Annual Report on Form 10-K, the comparable GAAP measure, as well as a reconciliation to the comparable GAAP measure, is provided in the accompanying tables. Management believes that these non-GAAP measures provide useful information that is important to an understanding of the operating results of the Company's core business as well as provide information standard in the financial institution industry. Non-GAAP measures should not be considered a substitute for financial measures determined in accordance with GAAP and investors should consider the Company's performance and financial condition as reported under GAAP and all other relevant information when assessing the performance or financial condition of the Company.

## Overview

Significant factors management reviews to evaluate the Company's operating results and financial condition include, but are not limited to: net income and earnings per share, return on assets and equity, net interest margin, noninterest income, operating expenses, asset quality indicators, loan and deposit growth, capital management, liquidity and interest rate sensitivity, enhancements to customer products and services, technology advancements, market share and peer comparisons. The following information should be considered in connection with the Company's results for the fiscal year ended December 31, 2016:

- Net income for 2016 was $\$ 78.4$ million, the highest in the Company's history, and up from $\$ 76.4$ million in 2015.
- Net interest margin for 2016 declined 7 basis points as a result of the continued low rate environment on loans and investments.
- Asset quality indicators showed stability from last year:
- Nonperforming loans were $0.65 \%$ at December 31, 2016 compared to $0.64 \%$ at December 31, 2015;
- Past due loans to total loans increased to $0.64 \%$ at December 31, 2016 from $0.62 \%$ at December 31, 2015; and
- Net charge-offs to average loans were $0.39 \%$ for 2016 compared to $0.38 \%$ in 2015.
- Continued demand deposit growth strategies resulting in 10.1\% growth in average deposits from 2015 to 2016.
- Increased efforts to grow noninterest income with focus on organic growth of our wealth management businesses; and
- Improved operating efficiencies resulting in flat noninterest expense year over year.

The Company reported net income of $\$ 78.4$ million or $\$ 1.80$ per diluted share for 2016 , up $2.6 \%$ from net income of $\$ 76.4$ million or $\$ 1.72$ per diluted share for 2015. Net interest income was $\$ 264.4$ million for the year ended December 31, 2016, up $\$ 11.8$ million, or $4.7 \%$ from $\$ 252.6$ million in 2015 . FTE net interest margin was $3.43 \%$ for the year ended December 31, 2016, down from $3.50 \%$ for the year ended December 31, 2015. Average interest earning assets were up $\$ 510.5$ million, or $7.0 \%$, for the year ended December 31, 2016 as compared to 2015 . The provision for loan losses totaled $\$ 25.4$ million for the year ended December 31, 2016, up $\$ 7.1$ million, or $39.1 \%$, from $\$ 18.3$ million for the year ended December 31, 2015.

## 2017 Outlook

The Company's 2016 earnings reflected the Company's continued ability to manage through the existing economic conditions and challenges in the financial services industry, while investing in the Company's future. Since the 2016 U.S. Presidential election, financial services stock prices have increased substantially based in part on assumptions related to interest rates, deregulation and tax policy, the extent, timing and impact of which remains uncertain. Significant items that may have an impact on 2017 results include:

- Improving economic conditions may cause interest rates to rise. This would result in principal and interest payments on currently outstanding loans and investments being reinvested at higher rates. In addition, rising market rates would likely increase deposit and borrowing costs from current low levels. This could potentially offset or more than offset the benefits of higher rates on our earning assets. The magnitude and timing of interest rate increases, along with the shape of the yield curve, will impact net interest income in 2017.
- The new administration's proposed regulatory relief and income tax reform could have positive impacts on compliance costs and income tax expense for both the Company and our customers. The extent and speed of these potential reforms will determine the significance of the potential benefits in 2017.
- Generally, political turmoil, both in the United States and globally, may give rise to continued market volatility that could impact both the Company's stock price and interest rates.
- The Company's continued focus on long-term strategies including growth in the New England markets, diversification of revenue, improving operating efficiencies and investing in technology.
- The Company's 2017 outlook is subject to factors in addition to those identified above and those risks and uncertainties that could impact the Company’s future results are explained in ITEM 1A. RISK FACTORS.


## Asset/Liability Management

The Company attempts to maximize net interest income and net income, while actively managing its liquidity and interest rate sensitivity through the mix of various core deposit products and other sources of funds, which in turn fund an appropriate mix of earning assets. The changes in the Company's asset mix and sources of funds, and the resulting impact on net interest income, on a fully tax equivalent basis, are discussed below. The following table includes the condensed consolidated average balance sheet, an analysis of interest income/expense and average yield/rate for each major category of earning assets and interest bearing liabilities on a taxable equivalent basis. Interest income for tax-exempt securities and loans has been adjusted to a taxable-equivalent basis using the statutory Federal income tax rate of 35\%.

## Average Balances and Net Interest Income

|  | 2016 |  |  |  | 2015 |  |  |  |  | 2014 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Average |  |  | Yield/ | Average |  |  | Interest | Yield/ <br> Rate | Average |  | Interest |  | Yield/ <br> Rate |
| thousands) | Balance |  | Interest | Rate |  | Balance |  |  |  |  | Balance |  |  |  |
| ASSETS |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Short-term interest bearing accounts | \$ 16,301 | \$ | 95 | 0.58\% | \$ | 10,157 | \$ | 33 | 0.33\% | \$ | 4,344 | \$ | 28 | 0.65\% |
| Securities available for sale (1)(2) | 1,237,930 |  | 24,450 | 1.98\% |  | 1,059,284 |  | 20,888 | 1.97\% |  | 1,258,999 |  | 25,760 | 2.05\% |
| Securities held to maturity (1) | 487,837 |  | 12,255 | 2.51\% |  | 459,589 |  | 11,296 | 2.46\% |  | 233,465 |  | 6,558 | 2.81\% |
| Investment in FRB and |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| FHLB Banks | 38,867 |  | 1,973 | 5.08\% |  | 33,044 |  | 1,712 | 5.18\% |  | 39,290 |  | 2,005 | 5.10\% |
| Loans (3) | 6,035,513 |  | 251,723 | 4.17\% |  | 5,743,860 |  | 242,587 | 4.22\% |  | 5,528,015 |  | 244,162 | 4.42\% |
| Total interest earning assets | \$ 7,816,448 | \$ | 290,496 | 3.72\% | \$ | 7,305,934 | \$ | 276,516 | 3.78\% | \$ | 7,064,113 | \$ | 278,513 | 3.94\% |
| Other assets | 740,506 |  |  |  |  | 691,583 |  |  |  |  | 691,934 |  |  |  |
| Total assets | \$ 8,556,954 |  |  |  | \$ | 7,997,517 |  |  |  | \$ | 7,756,047 |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| LIABILITIES AND STOCKHOLDERS' EQUITY |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Money market deposit accounts | \$ 1,668,555 | \$ | 3,599 | 0.22\% | \$ | 1,582,078 | \$ | 3,351 | 0.21\% | \$ | 1,457,770 | \$ | 2,532 | 0.17\% |
| NOW deposit accounts | 1,077,581 |  | 546 | 0.05\% |  | 987,638 |  | 515 | 0.05\% |  | 949,759 |  | 509 | 0.05\% |
| Savings deposits | 1,135,182 |  | 652 | 0.06\% |  | 1,071,753 |  | 651 | 0.06\% |  | 1,020,974 |  | 760 | 0.07\% |
| Time deposits | 905,126 |  | 9,569 | 1.06\% |  | 960,188 |  | 9,740 | 1.01\% |  | 1,015,748 |  | 9,837 | 0.97\% |
| Total interest bearing deposits | \$ 4,786,444 | \$ | 14,366 | 0.30\% | \$ | 4,601,657 | \$ | 14,257 | 0.31\% | \$ | 4,444,251 | \$ | 13,638 | 0.31\% |
| Short-term borrowings | 497,654 |  | 2,309 | 0.46\% |  | 339,885 |  | 783 | 0.23\% |  | 382,451 |  | 845 | 0.22\% |
| Long-term debt | 118,860 |  | 3,204 | 2.70\% |  | 130,705 |  | 3,355 | 2.57\% |  | 224,556 |  | 6,555 | 2.92\% |
| Junior subordinated debt | 101,196 |  | 2,627 | 2.60\% |  | 101,196 |  | 2,221 | 2.19\% |  | 101,196 |  | 2,165 | 2.14\% |
| Total interest bearing liabilities | \$ 5,504,154 | \$ | 22,506 | 0.41\% | \$ | 5,173,443 | \$ | 20,616 | 0.40\% | \$ | 5,152,454 | \$ | 23,203 | 0.45\% |
| Demand deposits | 2,045,465 |  |  |  |  | 1,857,027 |  |  |  |  | 1,670,188 |  |  |  |
| Other liabilities | 110,105 |  |  |  |  | 88,937 |  |  |  |  | 83,940 |  |  |  |
| Stockholders' equity | 897,230 |  |  |  |  | 878,110 |  |  |  |  | 849,465 |  |  |  |
| Total liabilities and stockholders' equity | \$ 8,556,954 |  |  |  | \$ | 7,997,517 |  |  |  | \$ | 7,756,047 |  |  |  |
| Net interest income (FTE) |  |  | 267,990 |  |  |  |  | 255,900 |  |  |  |  | 255,310 |  |
| Interest rate spread |  |  |  | 3.31\% |  |  |  |  | 3.38\% |  |  |  |  | 3.49\% |
| Net interest margin |  |  |  | 3.43\% |  |  |  |  | 3.50\% |  |  |  |  | 3.61\% |
| Taxable equivalent adjustment |  |  | 3,549 |  |  |  |  | 3,292 |  |  |  |  | 3,432 |  |
| Net interest income |  | \$ | 264,441 |  |  |  | \$ | 252,608 |  |  |  | \$ | 251,878 |  |

(1) Securities are shown at average amortized cost.
(2) Excluding unrealized gains or losses.
(3) For purposes of these computations, nonaccrual loans are included in the average loan balances outstanding.

Note: Interest income for tax-exempt securities and loans has been adjusted to a Fully Taxable-Equivalent ("FTE") basis using the statutory Federal income tax rate of $35 \%$.

## 2016 OPERATING RESULTS AS COMPARED TO 2015 OPERATING RESULTS

## Net Interest Income

Net interest income was $\$ 264.4$ million for the year ended December 31, 2016, up $\$ 11.8$ million from 2015. Fully taxable equivalent ("FTE") net interest margin was $3.43 \%$ for the year ended December 31, 2016, down from $3.50 \%$ for the year ended December 31, 2015. Average interest earning assets were up $\$ 510.5$ million, or $7.0 \%$, for the year ended December 31, 2016 as compared to 2015 . This increase from last year was driven primarily by $\$ 314.9$, or $5.4 \%$, period end loan growth and a $\$ 220.7$ million, or $13.4 \%$, increase in investment securities in 2016 . The benefit of earning asset growth was partially offset by a 6 basis point ("bp") decrease in earning assets yields, driven by a 5 bp decrease in loan yields from 2015 to 2016. Average interest bearing liabilities increased $\$ 330.7$ million, or $6.4 \%$, from the year ended December 31, 2015 to the year ended December 31, 2016. Total average deposits increased $\$ 373.2$ million, or $5.8 \%$, for the year ended December 31, 2016 as compared to the prior year driven primarily by a $10.1 \%$ increase in noninterest bearing demand deposits, as well as increases in money market deposit accounts, NOW and savings deposits in 2016. Average short-term borrowings increased $\$ 157.8$ million for the year ended December 31, 2016 as compared to the prior year funding earning asset growth. The rates paid on interest bearing liabilities increased by 1 bp for the year ended December 31, 2016 as compared to 2015. The following table presents changes in interest income, on a FTE basis, and interest expense attributable to changes in volume (change in average balance multiplied by prior year rate), changes in rate (change in rate multiplied by prior year volume), and the net change in net interest income. The net change attributable to the combined impact of volume and rate has been allocated to each in proportion to the absolute dollar amounts of change.

Analysis of Changes in Fully Taxable Equivalent Net Interest Income

| (In thousands) | Increase (Decrease) 2016 over 2015 |  |  |  |  |  | Increase (Decrease) 2015 over 2014 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Volume |  | Rate |  | Total |  | Volume |  | Rate |  | Total |  |
| Short-term interest-bearing accounts | \$ | 27 | \$ | 35 | \$ | 62 | \$ | 24 | \$ | (19) | \$ | 5 |
| Securities available for sale |  | 3,527 |  | 35 |  | 3,562 |  | $(3,966)$ |  | (906) |  | $(4,872)$ |
| Securities held to maturity |  | 706 |  | 253 |  | 959 |  | 5,649 |  | (911) |  | 4,738 |
| Investment in FRB and FHLB Banks |  | 296 |  | (35) |  | 261 |  | (323) |  | 30 |  | (293) |
| Loans |  | 12,194 |  | $(3,058)$ |  | 9,136 |  | 9,337 |  | $(10,912)$ |  | $(1,575)$ |
| Total interest income |  | 16,750 |  | $(2,770)$ |  | 13,980 |  | 10,721 |  | $(12,718)$ |  | $(1,997)$ |
| Money market deposit accounts |  | 186 |  | 62 |  | 248 |  | 229 |  | 590 |  | 819 |
| NOW deposit accounts |  | 46 |  | (15) |  | 31 |  | 20 |  | (14) |  | 6 |
| Savings deposits |  | 37 |  | (36) |  | 1 |  | 36 |  | (145) |  | (109) |
| Time deposits |  | (572) |  | 401 |  | (171) |  | (552) |  | 455 |  | (97) |
| Short-term borrowings |  | 479 |  | 1,047 |  | 1,526 |  | (97) |  | 35 |  | (62) |
| Long-term debt |  | (314) |  | 163 |  | (151) |  | $(2,483)$ |  | (717) |  | $(3,200)$ |
| Junior subordinated debt |  | - |  | 406 |  | 406 |  | 0 |  | 56 |  | 56 |
| Total interest expense |  | (138) |  | 2,028 |  | 1,890 |  | $(2,847)$ |  | 260 |  | $(2,587)$ |
| Change in FTE net interest income | \$ | 16,888 | \$ | $(4,798)$ | \$ | 12,090 | \$ | 13,568 | \$ | $(12,978)$ | \$ | 590 |

## Loans and Corresponding Interest and Fees on Loans

The average balance of loans increased by approximately $\$ 291.7$ million, or $5.1 \%$, from 2015 to 2016. The yield on average loans decreased from $4.22 \%$ in 2015 to $4.17 \%$ in 2016, as loan rates declined due to the continued low rate environment in 2016. FTE interest income from loans increased $3.8 \%$, from $\$ 242.6$ million in 2015 to $\$ 251.7$ million in 2016. This increase was due to the decrease in yields, offset by the increase in average loan balances.

Total loans increased $\$ 314.9$ million, or $5.4 \%$, from December 31, 2015 to December 31, 2016. Increases in commercial real estate loans and commercial loans were the primary drivers of the increase in total loans from 2015 as the Company experienced strong originations in 2016 in the upstate New York, Pennsylvania and New England markets.

The following table reflects the loan portfolio by major categories as of December 31 for the years indicated:

## Composition of Loan Portfolio

| (In thousands) | December 31, |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2016 |  | 2015 |  | 2014 |  | 2013 |  | 2012 |  |
| Residential real estate mortgages | \$ | 1,262,614 | \$ | 1,196,780 | \$ | 1,115,715 | \$ | 1,041,502 | \$ | 651,105 |
| Commercial |  | 1,242,701 |  | 1,159,089 |  | 1,144,761 |  | 1,180,995 |  | 964,297 |
| Commercial real estate |  | 1,543,301 |  | 1,430,618 |  | 1,334,984 |  | 1,218,988 |  | 1,040,600 |
| Consumer |  | 1,641,657 |  | 1,568,204 |  | 1,430,216 |  | 1,345,395 |  | 1,046,333 |
| Home equity |  | 507,784 |  | 528,442 |  | 569,595 |  | 619,915 |  | 575,281 |
| Total loans | \$ | 6,198,057 | \$ | 5,883,133 | \$ | 5,595,271 | \$ | 5,406,795 | \$ | 4,277,616 |

Residential real estate mortgages consist primarily of loans secured by first or second deeds of trust on primary residences. Loans in the commercial and agricultural categories, including commercial and agricultural real estate mortgages, consist primarily of short-term and/or floating rate loans made to small and medium-sized entities. Consumer loans include $\$ 1.2$ billion of indirect installment loans to individuals which is secured by automobiles and other personal property including marine, recreational vehicles and manufactured housing. Consumer loans also consist of direct installment loans to individuals secured by similar collateral. Although automobile loans have generally been originated through dealers, all applications submitted through dealers are subject to the Company's normal underwriting and loan approval procedures. In addition, the consumer loan portfolio as of December 31 , 2016 includes $\$ 374.9$ million of unsecured consumer loans across a national footprint originated through our relationship with a leading national fintech company that began nine years ago as the result of our investment in Springstone Financial LLC ("Springstone"). Advances of credit through this specialty lending business line are to prime borrowers and are subject to the Company's underwriting standards. Real estate construction and development loans include commercial construction and development and residential construction loans. Commercial construction loans are for small and medium sized office buildings and other commercial properties and residential construction loans are primarily for projects located in upstate New York and northeastern Pennsylvania.

Risks associated with the commercial real estate portfolio include the ability of borrowers to pay interest and principal during the loan's term, as well as the ability of the borrowers to refinance at the end of the loan term.

The following table, Maturities and Sensitivities of Certain Loans to Changes in Interest Rates, summarizes the maturities of the commercial and agricultural and real estate construction and development loan portfolios and the sensitivity of those loans to interest rate fluctuations at December 31, 2016. Scheduled repayments are reported in the maturity category in which the contractual payment is due.

## Maturities and Sensitivities of Certain Loans to Changes in Interest Rates

| (In thousands) | Remaining maturity at December 31, 2016 |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Within One Year |  | After One Year But Within Five Years |  | After Five Years |  | Total |  |
| Floating/adjustable rate |  |  |  |  |  |  |  |  |
| Commercial, commercial real estate, agricultural, and agricultural real estate | \$ | 437,030 | \$ | 366,779 | \$ | 1,199,719 | \$ | 2,003,528 |
| Fixed rate |  |  |  |  |  |  |  |  |
| Commercial, commercial real estate, agricultural, and agricultural real estate |  | 64,730 |  | 366,958 |  | 350,786 |  | 782,474 |
| Total | \$ | 501,760 | \$ | 733,737 | \$ | 1,550,505 | \$ | 2,786,002 |

## Securities and Corresponding Interest and Dividend Income

The average balance of securities available for sale ("AFS") increased \$178.6 million, or 16.9\%, from 2015 to 2016. The yield on average AFS securities was $1.98 \%$ for 2016 compared to $1.97 \%$ in 2015.

The average balance of securities held to maturity ("HTM") increased from \$459.6 million in 2015 to $\$ 487.8$ million in 2016. At December 31, 2016, HTM securities were comprised primarily of tax-exempt municipal securities. The yield on HTM securities increased from $2.46 \%$ in 2015 to $2.51 \%$ in 2016 .

The average balance of FRB and FHLB stock increased to $\$ 38.9$ million in 2016 from $\$ 33.0$ million in 2015. The yield from investments in FRB and FHLB banks decreased from 5.18\% in 2015 to 5.08\% in 2016.

## Securities Portfolio

| (In thousands) | As of December 31, |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2016 |  |  |  | 2015 |  |  |  | 2014 |  |  |  |
|  | Amortized Cost |  | Fair Value |  | Amortized Cost |  | Fair Value |  | Amortized Cost |  | Fair Value |  |
| AFS Securities: |  |  |  |  |  |  |  |  |  |  |  |  |
| U.S. Treasury | \$ | - | \$ | - | \$ | - | \$ | - | \$ | 23,041 | \$ | 23,111 |
| Federal agency |  | 175,135 |  | 174,408 |  | 312,580 |  | 311,272 |  | 332,193 |  | 329,914 |
| State \& Municipal |  | 47,053 |  | 46,726 |  | 31,208 |  | 31,637 |  | 37,035 |  | 37,570 |
| Mortgage-backed |  | 528,769 |  | 529,844 |  | 406,277 |  | 409,896 |  | 356,557 |  | 364,727 |
| Collateralized mortgage obligations |  | 574,253 |  | 566,573 |  | 405,635 |  | 404,971 |  | 240,074 |  | 242,129 |
| Other securities |  | 15,849 |  | 20,739 |  | 13,637 |  | 16,768 |  | 12,818 |  | 15,720 |
| Total AFS securities | \$ | 1,341,059 | \$ | 1,338,290 | \$ | 1,169,337 | \$ | 1,174,544 | \$ | 1,001,718 | \$ | 1,013,171 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| HTM Securities: |  |  |  |  |  |  |  |  |  |  |  |  |
| Mortgage-backed | \$ | 97,201 | \$ | 96,112 | \$ | 10,043 | \$ | 10,031 | \$ | 755 | \$ | 868 |
| Collateralized mortgage obligations |  | 225,213 |  | 224, |  | 272,550 |  | 272,401 |  | 317,628 |  | 317,597 |
| State \& Municipal |  | 205,534 |  | 204,173 |  | 188,438 |  | 190,708 |  | 135,978 |  | 136,529 |
| Total HTM securities | \$ | 527,948 | \$ | 525,050 | \$ | 471,031 | \$ | 473,140 | \$ | 454,361 | \$ | 454,994 |

Our mortgage backed securities, U.S. agency notes, and CMOs are all "prime/conforming" and are guaranteed by Fannie Mae, Freddie Mac, the FHLB, the Federal Farm Credit Banks, or Ginnie Mae ("GNMA"). GNMA securities are considered equivalent to U.S. Treasury securities, as they are backed by the full faith and credit of the U.S. government. Currently, there are no securities backed by subprime mortgages in our investment portfolio.

The following tables set forth information with regard to contractual maturities of debt securities at December 31, 2016:

| (Dollars in thousands) | Amortized cost |  | Estimated fair value |  | Weighted Average Yield |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Debt securities classified as AFS: |  |  |  |  |  |
| Within one year | \$ | 67,803 | \$ | 67,877 | 1.20\% |
| From one to five years |  | 162,913 |  | 162,754 | 2.20\% |
| From five to ten years |  | 144,957 |  | 146,014 | 2.60\% |
| After ten years |  | 949,537 |  | 940,906 | 2.46\% |
|  | \$ | 1,325,210 | \$ | 1,317,551 |  |
| Debt securities classified as HTM: |  |  |  |  |  |
| Within one year | \$ | 37,187 | \$ | 37,199 | 1.62\% |
| From one to five years |  | 27,956 |  | 28,019 | 3.48\% |
| From five to ten years |  | 122,228 |  | 121,697 | 2.88\% |
| After ten years |  | 340,577 |  | 338,135 | 2.09\% |
|  | \$ | 527,948 | \$ | 525,050 |  |

## Funding Sources and Corresponding Interest Expense

The Company utilizes traditional deposit products such as time, savings, NOW, money market, and demand deposits as its primary source for funding. Other sources, such as short-term FHLB advances, federal funds purchased, securities sold under agreements to repurchase, brokered time deposits, and long-term FHLB borrowings are utilized as necessary to support the Company's growth in assets and to achieve interest rate sensitivity objectives. The average balance of interest-bearing liabilities increased $\$ 330.7$ million from 2015, and totaled $\$ 5.5$ billion in 2016. The rate paid on interest-bearing liabilities increased from $0.40 \%$ in 2015 to $0.41 \%$ in 2016. This increase in rates and increase in average balances, caused an increase in interest expense of $\$ 1.9$ million, or $9.2 \%$, from \$20.6 million in 2015 to $\$ 22.5$ million in 2016.

## Deposits

Average interest bearing deposits increased $\$ 184.8$ million, or $4.0 \%$, from 2015 to 2016, due primarily to organic deposit growth. Average money market deposits increased $\$ 86.5$ million or $5.5 \%$ during 2016 when compared to 2015 . Average NOW accounts increased $\$ 89.9$ million or $9.1 \%$ during 2016 as compared to 2015. The average balance of savings accounts increased $\$ 63.4$ million or $5.9 \%$ during 2016 when compared to 2015. These increases were partially offset by a decrease in average time deposits, which decreased $\$ 55.1$ million, or $5.7 \%$, from 2015 to 2016. The average balance of demand deposits increased $\$ 188.4$ million, or $10.1 \%$, during 2016 when compared to 2015. This growth in demand deposits was driven principally by increases in accounts from retail, municipal, and commercial customers.

The rate paid on average interest-bearing deposits was $0.30 \%$ for 2016 and $0.31 \%$ for 2015 . The rate paid for money market deposit accounts increased from $0.21 \%$ during 2015 to $0.22 \%$ during 2016. The rate paid for time deposits increased from $1.01 \%$ during 2015 to $1.06 \%$ during 2016. The rate paid for savings deposits was $0.06 \%$ for 2016 and 2015.

The following table presents the maturity distribution of time deposits of $\$ 100,000$ or more at December 31:

| (In thousands) | $\mathbf{2 0 1 6}$ | $\mathbf{2 0 1 5}$ |
| :--- | :---: | :---: |
| Within three months | $\mathbf{7 1 , 4 5 9}$ | $\$$ |
| After three but within twelve months | $\mathbf{4 6 , 5 7 0}$ |  |
| After one but within three years | $\mathbf{6 9 , 8 1 0}$ | 80,674 |
| Over three years | $\mathbf{7 1 , 2 7 5}$ |  |
| Total | $\mathbf{3 1 , 3 5 6}$ | $\mathbf{2 4 3 , 9 0 0}$ |

## Borrowings

Average short-term borrowings increased to $\$ 497.7$ million in 2016 from $\$ 339.9$ million in 2015 funding earning asset growth. The average rate paid on short-term borrowings increased from $0.23 \%$ in 2015 to $0.46 \%$ in 2016. Average long-term debt decreased from $\$ 130.7$ million in 2015 to $\$ 118.9$ million in 2016.

The average balance of junior subordinated debt remained at $\$ 101.2$ million in 2016. The average rate paid for junior subordinated debt in 2016 was $2.60 \%$, up from 2.19\% in 2015.

Short-term borrowings consist of Federal funds purchased and securities sold under repurchase agreements, which generally represent overnight borrowing transactions, and other short-term borrowings, primarily FHLB advances, with original maturities of one year or less. The Company has unused lines of credit and access to brokered deposits available for short-term financing of approximately $\$ 1.9$ billion and $\$ 2.1$ billion at December 31, 2016 and 2015, respectively. Securities collateralizing repurchase agreements are held in safekeeping by non-affiliated financial institutions and are under the Company's control. Longterm debt, which is comprised primarily of FHLB advances, are collateralized by the FHLB stock owned by the Company, certain of its mortgage-backed securities and a blanket lien on its residential real estate mortgage loans.

## Noninterest Income

Noninterest income is a significant source of revenue for the Company and an important factor in the Company's results of operations. The following table sets forth information by category of noninterest income for the years indicated:

|  | Years ended December 31, |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: |
| (In thousands) | $\mathbf{2 0 1 6}$ | $\mathbf{2 0 1 5}$ | $\mathbf{2 0 1 4}$ |  |  |
| Insurance and other financial services revenue | $\mathbf{2 4 , 3 9 6}$ | $\$$ | 24,211 | $\$$ | 24,517 |
| Service charges on deposit accounts |  | $\mathbf{1 6 , 7 2 9}$ | 17,056 | 17,941 |  |
| ATM and debit card fees | $\mathbf{1 9 , 4 4 8}$ | 18,248 | 17,135 |  |  |
| Retirement plan administration fees | $\mathbf{1 6 , 0 6 3}$ | 14,146 | 12,129 |  |  |
| Trust fees | $\mathbf{1 8 , 5 6 5}$ | 19,026 | 18,950 |  |  |
| Bank owned life insurance income | $\mathbf{5 , 1 9 5}$ | 4,334 | 5,349 |  |  |
| Net securities (losses) gains | $\mathbf{( 6 4 4 )}$ | 3,087 | 92 |  |  |
| Gain on the sale of equity investment | - | 4,179 | 19,401 |  |  |
| Other | $\mathbf{1 5 , 9 6 1}$ | 14,194 | 10,513 |  |  |
| Total noninterest income | $\mathbf{\$}$ | $\mathbf{1 1 5 , 7 1 3}$ | $\$$ | 118,481 | $\$$ |
|  |  |  |  |  |  |

Noninterest income for the year ended December 31, 2016 was $\$ 115.7$ million, down $\$ 2.8$ million, or $2.3 \%$, from the year ended December 31 , 2015. The decrease was primarily due to the $\$ 4.2$ million gain recognized in the third quarter of 2015 from the 2014 sale of Springstone. In addition, net securities income was down $\$ 3.7$ million from 2015 due to a $\$ 0.6$ million securities loss in 2016 versus a net securities gain for $\$ 3.1$ million in 2015 . The decreases were offset by increases in retirement plan administration fees, other noninterest income, ATM and debit card fees, bank owned life insurance income and insurance and other financial services revenue. Retirement plan administration fees were up $\$ 1.9$ million, or $13.6 \%$, from 2015 due primarily to the 2015 fourth quarter acquisition of Third Party Administrators, Inc. and the 2016 third quarter acquisition of Actuarial Designs \& Solutions, Inc. Other noninterest income was up $\$ 1.8$ million, or $12.4 \%$ primarily due to higher swap fee income in 2016 than in 2015, an increase in mortgage banking income and a $\$ 0.9$ million gain on the sale of equity investments for compliance with the Dodd-Frank Wall Street Reform and Consumer Protection Act in the third quarter of 2016. Noninterest income as a percent of total revenue excluding net securities (losses) gains and the gain on the sale of equity investment was $30.6 \%$ for the years ended December 31, 2016 and 2015.

## Noninterest Expense

Noninterest expenses are also an important factor in the Company's results of operations. The following table sets forth the major components of noninterest expense for the years indicated:

| (In thousands) | Years ended December 31, |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2016 |  |  | 2015 |  | 2014 |
| Salaries and employee benefits | \$ | 129,702 | \$ | 124,318 | \$ | 119,667 |
| Occupancy |  | 20,940 |  | 22,095 |  | 22,128 |
| Data processing and communications |  | 16,495 |  | 16,588 |  | 16,137 |
| Professional fees and outside services |  | 13,617 |  | 13,407 |  | 14,426 |
| Equipment |  | 14,295 |  | 13,408 |  | 12,658 |
| Office supplies and postage |  | 6,168 |  | 6,367 |  | 6,983 |
| FDIC expenses |  | 5,111 |  | 5,145 |  | 4,944 |
| Advertising |  | 2,556 |  | 2,654 |  | 2,831 |
| Amortization of intangible assets |  | 3,928 |  | 4,864 |  | 5,047 |
| Loan collection and other real estate owned |  | 3,458 |  | 2,620 |  | 3,248 |
| Prepayment penalties on long-term debt |  | - |  | - |  | 17,902 |
| Other |  | 19,652 |  | 24,710 |  | 20,092 |
| Total noninterest expense | \$ | 235,922 | \$ | 236,176 | \$ | 246,063 |

Noninterest expense for the year ended December 31, 2016 was $\$ 235.9$ million, down $\$ 0.3$ million, or $0.1 \%$ from 2015. This decrease was driven primarily by lower other noninterest expense during 2016 than 2015 primarily due to reorganization expenses incurred during the third quarter of 2015 , offset by higher salaries and employee benefit expenses in 2016. Salaries and employee benefits expense increased $\$ 5.4$ million, or $4.3 \%$ from 2015 to 2016 , due to higher salaries and medical insurance costs that were partially offset by lower pension credit and contract termination costs.

## Income Taxes

Income tax expense for the year ended December 31, 2016 was $\$ 40.4$ million, up from $\$ 40.2$ million for the same period in 2015 . The effective tax rate was $34.0 \%$ for the year ended December 31, 2016, compared to $34.5 \%$ for the same period in 2015 . The decrease in the effective tax rate was due to the higher level of tax-exempt income to total income in 2016 compared to 2015.

We calculate our current and deferred tax provision based on estimates and assumptions that could differ from the actual results reflected in income tax returns filed during the subsequent year. Adjustments based on filed returns are recorded when identified, which is generally in the third quarter of the subsequent year for U.S. federal and state provisions.

The amount of income taxes the Company pays is subject at times to ongoing audits by federal and state tax authorities, which may result in proposed assessments. Future results may include favorable or unfavorable adjustments to the estimated tax liabilities in the period the assessments are proposed or resolved or when statutes of limitation on potential assessments expire. As a result, the Company's effective tax rate may fluctuate significantly on a quarterly or annual basis.

## Risk Management - Credit Risk

Credit risk is managed through a network of loan officers, credit committees, loan policies, and oversight from the senior credit officers and Board of Directors. Management follows a policy of continually identifying, analyzing, and grading credit risk inherent in each loan portfolio. An ongoing independent review, subsequent to management's review, of individual credits in the commercial loan portfolio is performed by the independent loan review function. These components of the Company's underwriting and monitoring functions are critical to the timely identification, classification, and resolution of problem credits.

## Nonperforming Assets

| (Dollars in thousands) | As of December 31, |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2016 | \% | 2015 | \% | 2014 | \% | 2013 | \% | 2012 | \% |
| Nonaccrual loans: |  |  |  |  |  |  |  |  |  |  |
| Commercial, agricultural and real estate loans | \$ 19,351 | 54\% | \$ 14,655 | 43\% | \$ 18,226 | 45\% | \$ 27,033 | 54\% | \$ 20,923 | 53\% |
| Real estate mortgages | 8,027 | 23\% | 8,625 | 26\% | 10,867 | 26\% | 10,296 | 21\% | 8,083 | 20\% |
| Consumer | 4,653 | 13\% | 6,009 | 18\% | 8,086 | 20\% | 7,213 | 14\% | 8,440 | 21\% |
| Troubled debt restructured loans | 3,681 | 10\% | 4,455 | 13\% | 3,895 | 9\% | 5,423 | 11\% | 2,230 | 6\% |
| Total nonaccrual loans | 35,712 | 100\% | 33,744 | 100\% | 41,074 | 100\% | 49,965 | 100\% | 39,676 | 100\% |


| Loans 90 days or more past due and still accruing: |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Commercial, agricultural and real estate loans | - | 0\% | - | 0\% | 84 | 2\% | 105 | 3\% | 148 | 6\% |
| Real estate mortgages | 1,733 | 36\% | 1,022 | 28\% | 1,927 | 39\% | 808 | 22\% | 330 | 13\% |
| Consumer | 3,077 | 64\% | 2,640 | 72\% | 2,930 | 59\% | 2,824 | 75\% | 1,970 | 81\% |
| Total loans 90 days or more past due and still accruing | 4,810 | 100\% | 3,662 | 100\% | 4,941 | 100\% | 3,737 | 100\% | 2,448 | 100\% |
| Total nonperforming loans | 40,522 |  | 37,406 |  | 46,015 |  | 53,702 |  | 42,124 |  |
| Other real estate owned | 5,581 |  | 4,666 |  | 3,964 |  | 2,904 |  | 2,276 |  |
| Total nonperforming assets | \$ 46,103 |  | \$ 42,072 |  | \$ 49,979 |  | \$ 56,606 |  | \$ 44,400 |  |
| Total nonperforming loans to total loans | 0.65\% |  | 0.64\% |  | 0.82\% |  | 0.99\% |  | 0.98\% |  |
| Total nonperforming assets to total assets | 0.52\% |  | 0.51\% |  | 0.64\% |  | 0.74\% |  | 0.73\% |  |
| Total allowance for loan losses to nonperforming loans | 160.90\% |  | 168.47\% |  | 144.21\% |  | 129.29\% |  | 164.60\% |  |

Total nonperforming assets were $\$ 46.1$ million at December 31, 2016, compared to $\$ 42.1$ million at December 31, 2015 primarily due to the increase in nonaccrual commercial, agricultural and real estate loans. Nonperforming loans at December 31, 2016 were $\$ 40.5$ million or $0.65 \%$ of total loans compared with $\$ 37.4$ million or $0.64 \%$ at December 31, 2015. Included in nonperforming loans are $\$ 5.6$ million of nonaccrual loans in the acquired loan portfolio. Excluding nonaccrual acquired loans, originated nonperforming loans to originated loans was $0.61 \%$ at December 31, 2016. The Company recorded a provision for loan losses of $\$ 25.4$ million for the year ended December 31, 2016 compared with $\$ 18.3$ million for the year ended December 31, 2015. Net charge-offs to average loans for the year ended December 31, 2016 were $0.39 \%$, compared with $0.38 \%$ for the year ended December 31, 2015. The allowance for loan losses was $160.90 \%$ of nonperforming loans at December 31, 2016 as compared to $168.47 \%$ at December 31, 2015. The allowance for loan losses as a percentage of loans was $1.05 \%$ ( $1.13 \%$ excluding acquired loans with no related allowance recorded) at December 31, 2016, compared to $1.07 \%(1.15 \%$ excluding acquired loans with no related allowance recorded) at September 30, 2016 and $1.07 \%(1.18 \%$ excluding acquired loans with no related allowance recorded) at December 31, 2015.

Impaired loans, which primarily consist of nonaccruing commercial, commercial real estate, agricultural, and agricultural real estate loans, as well as loans that have been modified in a troubled debt restructuring ("TDR"), increased to $\$ 28.9$ million at December 31, 2016 as compared to $\$ 27.2$ million at December 31, 2015. At December 31, 2016, $\$ 7.0$ million of the total impaired loans had a specific reserve allocation of $\$ 1.5$ million compared to $\$ 5.9$ million of impaired loans at December 31, 2015 which had a specific reserve allocation of $\$ 2.0$ million.

The allowance for loan losses is maintained at a level estimated by management to provide adequately for risk of probable losses inherent in the current loan portfolio. The adequacy of the allowance for loan losses is continuously monitored. It is assessed for adequacy using a methodology designed to ensure the level of the allowance reasonably reflects the loan portfolio's risk profile. It is evaluated to ensure that it is sufficient to absorb all reasonably estimable credit losses inherent in the current loan portfolio.

Management considers the accounting policy relating to the allowance for loan losses to be a critical accounting policy given the inherent uncertainty in evaluating the levels of the allowance required to cover credit losses in the portfolio and the material effect that such judgments can have on the consolidated results of operations.

For purposes of evaluating the adequacy of the allowance, the Company considers a number of significant factors that affect the collectability of the portfolio. For individually analyzed loans, these include estimates of loss exposure, which reflect the facts and circumstances that affect the likelihood of repayment of such loans as of the evaluation date. For homogeneous pools of loans, estimates of the Company's exposure to credit loss reflect a current assessment of a number of factors, which could affect collectability. These factors include: past loss experience; size, trend, composition, and nature of loans; changes in lending policies and procedures, including underwriting standards and collection, charge-offs and recoveries; trends experienced in nonperforming and delinquent loans; current economic conditions in the Company's market; portfolio concentrations that may affect loss experienced across one or more components of the portfolio; the effect of external factors such as competition, legal and regulatory requirements; and the experience, ability, and depth of lending management and staff. In addition, various regulatory agencies, as an integral component of their examination process, periodically review the Company's allowance for loan losses. Such agencies may require the Company to recognize additions to the allowance based on their examinations.

After a thorough consideration of the factors discussed above, any required additions to the allowance for loan losses are made periodically by charges to the provision for loan losses. These charges are necessary to maintain the allowance at a level which management believes is reasonably reflective of overall inherent risk of probable loss in the portfolio. While management uses available information to recognize losses on loans, additions to the allowance may fluctuate from one reporting period to another. These fluctuations are reflective of changes in risk associated with portfolio content and/or changes in management's assessment of any or all of the determining factors discussed above.

Total net charge-offs for 2016 were $\$ 23.2$ million, up from $\$ 21.6$ million in 2015 . Net charge-offs to average loans was $0.39 \%$ for 2016 as compared with $0.38 \%$ for 2015 . For the originated portfolio, net charge-offs to average loans for the year ended December 31, 2016 was $0.39 \%$, compared to $0.38 \%$ for last year. Gross charge-offs were up to $\$ 29.3$ million for 2016 from $\$ 26.1$ million for 2015 . Recoveries increased from $\$ 4.5$ million for the year ended December 31, 2015 to $\$ 6.1$ million for the year ended December 31, 2016.

## Allowance for Loan Losses

| (Dollars in thousands) | 2016 |  | 2015 |  | 2014 |  | 2013 |  | 2012 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Balance at January 1 | \$ | 63,018 | \$ | 66,359 | \$ | 69,434 | \$ | 69,334 | \$ | 71,334 |
| Loans charged-off |  |  |  |  |  |  |  |  |  |  |
| Commercial and agricultural |  | 4,592 |  | 5,718 |  | 9,414 |  | 10,459 |  | 8,750 |
| Residential real estate mortgages |  | 1,343 |  | 2,229 |  | 1,417 |  | 1,771 |  | 1,906 |
| Consumer* |  | 23,364 |  | 18,140 |  | 16,642 |  | 15,459 |  | 15,848 |
| Total loans charged-off |  | 29,299 |  | 26,087 |  | 27,473 |  | 27,689 |  | 26,504 |
| Recoveries |  |  |  |  |  |  |  |  |  |  |
| Commercial and agricultural |  | 1,887 |  | 1,014 |  | 1,774 |  | 1,956 |  | 1,641 |
| Residential real estate mortgages |  | 293 |  | 320 |  | 285 |  | 272 |  | 38 |
| Consumer* |  | 3,870 |  | 3127 |  | 2,800 |  | 3,137 |  | 2,556 |
| Total recoveries |  | 6,050 |  | 4,461 |  | 4,859 |  | 5,365 |  | 4,235 |
| Net loans charged-off |  | 23,249 |  | 21,626 |  | 22,614 |  | 22,324 |  | 22,269 |
|  |  |  |  |  |  |  |  |  |  |  |
| Provision for loan losses |  | 25,431 |  | 18,285 |  | 19,539 |  | 22,424 |  | 20,269 |
| Balance at December 31 | \$ | 65,200 | \$ | 63,018 | \$ | 66,359 | \$ | 69,434 | \$ | 69,334 |
| Allowance for loan losses to loans outstanding at end of year |  |  |  |  |  | 1.19\% |  | 1.28\% |  | 1.62\% |
| Net charge-offs to average loans outstanding |  | 0.39\% |  | 0.38\% |  | 0.41\% |  | 0.44\% |  | 0.55\% |

[^1]In addition to the nonperforming loans discussed above, the Company has also identified approximately $\$ 70.0$ million in potential problem loans at December 31, 2016 as compared to $\$ 73.8$ million at December 31, 2015. Potential problem loans are loans that are currently performing, with a possibility of loss if weaknesses are not corrected. Such loans may need to be disclosed as nonperforming at some time in the future. Potential problem loans are classified by the Company's loan rating system as "substandard." At December 31, 2016, there were 17 potential problem loans exceeding $\$ 1.0$ million, totaling $\$ 34.9$ million in aggregate, compared to 13 potential problem loans exceeding $\$ 1.0$ million, totaling $\$ 25.0$ million at December 31, 2015. Management cannot predict the extent to which economic conditions may worsen or other factors which may impact borrowers and the potential problem loans. Accordingly, there can be no assurance that other loans will not become 90 days or more past due, be placed on nonaccrual, become restructured, or require increased allowance coverage and provision for loan losses. To mitigate this risk, the Company maintains a diversified loan portfolio, has no significant concentration in any particular industry, and originates loans primarily within its footprint.

The following table sets forth the allocation of the allowance for loan losses by category, as well as the percentage of loans in each category to total loans, as prepared by the Company. This allocation is based on management's assessment of the risk characteristics of each of the component parts of the total loan portfolio as of a given point in time and is subject to changes as and when the risk factors of each such component part change. The allocation is not indicative of either the specific amounts of the loan categories in which future charge-offs may be taken, nor should it be taken as an indicator of future loss trends. The allocation of the allowance to each category does not restrict the use of the allowance to absorb losses in any category.

## Allocation of the Allowance for Loan Losses

| (Dollars in thousands) | December 31, |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2016 |  | 2015 |  |  | 2014 |  |  | 2013 |  |  | 2012 |  |  |
|  | Category Percent of |  | Category Percent of |  |  | Category <br> Percent of |  |  | Category Percent of |  |  |  |  | Category Percent of of Loans |
| Commercial and agricultural | \$ 25,444 | 45\% | \$ | 25,545 | 44\% | \$ | 32,433 | 44\% | \$ | 35,090 | 44\% | \$ | 35,624 | 47\% |
| Real estate mortgages | 6,381 | 20\% |  | 7,960 | 20\% |  | 7,130 | 20\% |  | 6,520 | 19\% |  | 6,252 | 15\% |
| Consumer | 33,375 | 35\% |  | 29,253 | 36\% |  | 26,720 | 36\% |  | 27,694 | 37\% |  | 27,162 | 38\% |
| Unallocated | - | 0\% |  | 260 | 0\% |  | 76 | 0\% |  | 130 | 0\% |  | 296 | 0\% |
| Total | \$ 65,200 | 100\% | \$ | 63,018 | 100\% | \$ | 66,359 | 100\% | \$ | 69,434 | 100\% | \$ | 69,334 | 100\% |

The Company's accounting policy relating to the allowance for loan losses requires a review of each significant loan type within the loan portfolio, considering asset quality trends for each type, including, but not limited to, delinquencies, nonaccruals, historical charge-off experience, and specific economic factors (e.g. milk prices are considered when reviewing agricultural loans). Based on this review, management believes the reserve allocations are adequate to address any trends in asset quality indicators. As a result of the general improvement and stabilization of asset quality indicators in 2016, as well as the aforementioned review of the loan portfolio, the allowance for loan losses as a percentage of originated loans decreased from $1.18 \%$ as of December 31, 2015 to $1.13 \%$ as of December 31, 2016. Acquired loans were recorded at fair value on the date of acquisition, with no carryover of the related allowance for loan losses. Generally, the fair value discount represents expected credit losses, net of market interest rate adjustments. The discount on loans receivable will be amortized to interest income over the estimated remaining life of the acquired loans using the level yield method.

At December 31, 2015, approximately $59 \%$ of the Company's loans were secured by real estate located in central and northern New York, northeastern Pennsylvania, western Massachusetts, southern New Hampshire, Vermont, and Maine. Accordingly, the ultimate collectability of a substantial portion of the Company's portfolio is susceptible to changes in market conditions of those areas. Management is not aware of any material concentrations of credit to any industry or individual borrowers.

Subprime mortgage lending, which has been the riskiest sector of the residential housing market, is not a market that the Company has ever actively pursued. The market does not apply a uniform definition of what constitutes "subprime" lending. Our reference to subprime lending relies upon the "Statement on Subprime Mortgage Lending" issued by the OTS and the other federal bank regulatory agencies (the "Agencies"), on June 29, 2007, which further referenced the "Expanded Guidance for Subprime Lending Programs," or the Expanded Guidance, issued by the Agencies by press release dated January 31, 2001. In the Expanded Guidance, the Agencies indicated that subprime lending does not refer to individual subprime loans originated and managed, in the ordinary course of business, as exceptions to prime risk selection standards. The Agencies recognize that many prime loan portfolios will contain such accounts. The Agencies also excluded prime loans that develop credit problems after acquisition and community development loans from the subprime arena. According to the Expanded Guidance, subprime loans are other loans to borrowers which display one or more characteristics of reduced payment capacity. Five specific criteria, which are not intended to be exhaustive and are not meant to define specific parameters for all subprime borrowers and may not match all markets or institutions' specific subprime definitions, are set forth, including having a FICO score of 660 or below. Based upon the definition and exclusions described above, the Company is a prime lender. Within the loan portfolio, there are loans that, at the time of origination, had FICO scores of 660 or below. However, since the Company is a portfolio lender, it reviews all data contained in borrower credit reports and does not base underwriting decisions solely on FICO scores. We believe the aforementioned loans, when made, were amply collateralized and otherwise conformed to our prime lending standards.

For acquired loans that are not deemed to be impaired at acquisition, credit discounts representing the principal losses expected over the life of the loan are a component of the initial fair value and amortized over the life of the asset.

As a result of the application of this accounting methodology, certain credit-related ratios may not necessarily be directly comparable with periods prior to acquisitions, or comparable with other institutions. The credit metrics most impacted by our acquisition of loans related to the acquisition of Alliance Financial Corporation ("Alliance") were the allowance for loans losses to total loans, and total allowance for loan losses to nonperforming loans. As of December 31, 2016, the allowance for loan losses to total originated loans and the total allowance for loan losses to originated nonperforming loans were $1.13 \%$ and $186.82 \%$, respectively.

## Liquidity Risk

Liquidity involves the ability to meet the cash flow requirements of customers who may be depositors wanting to withdraw funds or borrowers needing assurance that sufficient funds will be available to meet their credit needs. The Asset Liability Committee (ALCO) is responsible for liquidity management and has developed guidelines which cover all assets and liabilities, as well as off-balance sheet items that are potential sources or uses of liquidity. Liquidity policies must also provide the flexibility to implement appropriate strategies. Requirements change as loans grow, deposits and securities mature, and payments on borrowings are made. Liquidity management includes a focus on interest rate sensitivity management with a goal of avoiding widely fluctuating net interest margins through periods of changing economic conditions.

The primary liquidity measurement the Company utilizes is called "Basic Surplus," which captures the adequacy of its access to reliable sources of cash relative to the stability of its funding mix of average liabilities. This approach recognizes the importance of balancing levels of cash flow liquidity from short and long-term securities with the availability of dependable borrowing sources which can be accessed when necessary. At December 31, 2016, the Company's Basic Surplus measurement was $13.6 \%$ of total assets, or $\$ 1.2$ billion, which was above the Company's minimum of $5 \%$ (calculated at $\$ 443.4$ million of period end total assets at December 31, 2016) set forth in its liquidity policies.

This Basic Surplus approach enables the Company to adequately manage liquidity from both operational and contingency perspectives. By tempering the need for cash flow liquidity with reliable borrowing facilities, the Company is able to operate with a more fully invested and, therefore, higher interest income generating securities portfolio. The makeup and term structure of the securities portfolio is, in part, impacted by the overall interest rate sensitivity of the balance sheet. Investment decisions and deposit pricing strategies are impacted by the liquidity position. At December 31, 2016, the Company considered its Basic Surplus position to be strong. However, certain events may adversely impact the Company's liquidity position in 2017. Improvement in the economy may increase competitive pressure on deposit pricing, which, in turn, could result in a decrease in the Company's deposit base or increase funding costs. Additionally, liquidity will come under additional pressure if loan growth exceeds deposit growth in 2017. These scenarios could lead to a decrease in the Company's Basic Surplus measure below the minimum policy level of $5 \%$. To manage this risk, the Company has the ability to purchase brokered time deposits, borrow against established borrowing facilities with other banks (Federal funds), and enter into repurchase agreements with investment companies. The additional liquidity that could be provided by these measures was $\$ 1.6$ billion at December 31, 2016. In addition, the Bank has enhanced its "Borrower-in-Custody" program with the FRB with the addition of the ability to pledge automobile loans. At December 31, 2016, the Bank had the capacity to borrow $\$ 832$ million from this program.

At December 31, 2016 and 2015, FHLB advances outstanding totaled $\$ 598$ million and $\$ 432$ million, respectively. The Bank is a member of the FHLB system and had additional borrowing capacity from the FHLB of approximately $\$ 0.8$ billion at December 31, 2016 and $\$ 1.1$ billion at December 31 , 2015 . In addition, unpledged securities could have been used to increase borrowing capacity at the FHLB by an additional \$706 million at December 31 , 2016 or used to collateralize other borrowings, such as repurchase agreements.

At December 31, 2016, a portion of the Company's loans and securities were pledged as collateral on borrowings. Therefore, future growth of earning assets will depend upon the Company's ability to obtain additional funding, through growth of core deposits and collateral management, and may require further use of brokered time deposits, or other higher cost borrowing arrangements.

## Table of Contents

Net cash flows provided by operating activities totaled $\$ 113.5$ million in 2016 and $\$ 124.5$ million in 2015. The critical elements of net operating cash flows include net income, adjusted for non-cash income and expense items such as the provision for loan losses, deferred income tax expense, depreciation and amortization, and cash flows generated through changes in other assets and liabilities.

Net cash flows used by investing activities totaled $\$ 633.9$ million and $\$ 504.0$ million in 2016 and 2015, respectively. Critical elements of investing activities are loan and investment securities transactions.

Net cash flows provided by financing activities totaled $\$ 529.3$ million in 2016 as compared to $\$ 373.1$ million in 2015. The critical elements of financing activities are proceeds from deposits, borrowings, and stock issuances. In addition, financing activities are impacted by dividends and treasury stock transactions.

## Contractual Obligations

In connection with its financing and operating activities, the Company has entered into certain contractual obligations. The Company's future minimum cash payments, excluding interest, associated with its contractual obligations pursuant to its borrowing agreements, operating leases, and other obligations at December 31, 2016 are as follows:

| (In thousands) | Payments Due by Period |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2017 |  | 2018 |  | 2019 |  | 2020 |  | 2021 |  | Thereafter |  | Total |  |
| Long-term debt obligations | \$ | 40,150 | \$ | 40,000 | \$ | 20,000 | \$ | - | \$ | 72 | \$ | 3,865 | \$ | 104,087 |
| Junior subordinated debt |  | - |  | - |  | - |  | - |  | - |  | 101,196 |  | 101,196 |
| Operating lease obligations |  | 7,757 |  | 7,375 |  | 6,858 |  | 6,132 |  | 4,954 |  | 19,890 |  | 52,966 |
| Capital lease obligations |  | 214 |  | 187 |  | 174 |  | 134 |  | 63 |  | - |  | 772 |
| IT/Software obligations |  | 7,437 |  | 2,365 |  | 1,328 |  | 284 |  | 11 |  | - |  | 11,425 |
| Data processing commitments |  | 4,491 |  | 4,425 |  | 4,425 |  | 4,425 |  | 998 |  | 250 |  | 19,014 |
| Total contractual obligations | \$ | 60,049 | \$ | 54,352 | \$ | 32,785 | \$ | 10,975 | \$ | 6,098 | \$ | 125,201 | \$ | 289,460 |

We have obligations under our pension, post-retirement plan, directors' retirement and supplemental executive retirement plans as described in Note 13 to the consolidated financial statements. The supplemental executive retirement, pension and postretirement benefit and directors' retirement payments represent actuarially determined future benefit payments to eligible plan participants.

## Commitments to Extend Credit

The Company makes contractual commitments to extend credit, which include unused lines of credit, which are subject to the Company's credit approval and monitoring procedures. At December 31, 2016 and 2015, commitments to extend credit in the form of loans, including unused lines of credit, amounted to $\$ 1.5$ billion and $\$ 1.3$ billion, respectively. In the opinion of management, there are no material commitments to extend credit, including unused lines of credit that represent unusual risks. All commitments to extend credit in the form of loans, including unused lines of credit, expire within one year.

## Standby Letters of Credit

The Company does not issue any guarantees that would require liability-recognition or disclosure, other than its standby letters of credit. The Company guarantees the obligations or performance of customers by issuing stand-by letters of credit to third parties. These standby letters of credit are frequently issued in support of third party debt, such as corporate debt issuances, industrial revenue bonds, and municipal securities. The risk involved in issuing standby letters of credit is essentially the same as the credit risk involved in extending loan facilities to customers, and they are subject to the same credit origination, portfolio maintenance and management procedures in effect to monitor other credit and off-balance sheet products. Typically, these instruments have terms of five years or less and expire unused; therefore, the total amounts do not necessarily represent future cash requirements. At December 31, 2016 and 2015 , outstanding standby letters of credit were approximately $\$ 36.8$ million and $\$ 31.5$ million, respectively. The fair value of the Company's standby letters of credit at December 31, 2016 and 2015 was not significant. The following table sets forth the commitment expiration period for standby letters of credit at December 31, 2016:

| Within one year | $\mathbf{\$ 1}$ |
| :--- | ---: |
| After one but within three years | $\mathbf{2 7 , 6 6 4}$ |
| After three but within five years | $\mathbf{4 , 5 9 3}$ |
| After five years | $\mathbf{3 , 6 5 7}$ |
| Total | $\mathbf{9 0 1}$ |

## Interest Rate Swaps

The Company records all derivatives on the balance sheet at fair value. The accounting for changes in the fair value of derivatives depends on the intended use of the derivative, whether the Company has elected to designate a derivative in a hedging relationship and apply hedge accounting and whether the hedging relationship has satisfied the criteria necessary to apply hedge accounting. Derivatives designated and qualifying as a hedge of the exposure to changes in the fair value of an asset, liability, or firm commitment attributable to a particular risk, such as interest rate risk, are considered fair value hedges. Derivatives designated and qualifying as a hedge of the exposure to variability in expected future cash flows, or other types of forecasted transactions, are considered cash flow hedges. Hedge accounting generally provides for the matching of the timing of gain or loss recognition on the hedging instrument with the recognition of the changes in the fair value of the hedged asset or liability that are attributable to the hedged risk in a fair value hedge or the earnings effect of the hedged forecasted transactions in a cash flow hedge. The Company may enter into derivative contracts that are intended to economically hedge certain of its risk, even though hedge accounting does not apply or the Company elects not to apply hedge accounting.

For derivatives designated as fair value hedges, changes in the fair value of the derivative and the hedged item related to the hedged risk are recognized in earnings. Any hedge ineffectiveness would be recognized in the income statement line item pertaining to the hedged item. For derivatives designated as cash flow hedges, changes in fair value of the effective portion of the cash flow hedges are reported in OCI. When the cash flows associated with the hedged item are realized, the gain or loss included in OCI is recognized in the Consolidated Statement of Income.

When the Company purchases a portion of a commercial loan that has an existing interest rate swap, it enters a risk participation agreement with the counterparty and assumes the credit risk of the loan customer related to the swap. Any fee paid to the Company under a risk participation agreement is in consideration of the credit risk of the counterparties and is recognized in the income statement. Credit risk on the risk participation agreements is determined after considering the risk rating, probability of default and loss given default of the counterparties.

## Loans Serviced for Others and Loans Sold with Recourse

The total amount of loans serviced by the Company for unrelated third parties was approximately $\$ 604.0$ million and $\$ 616.1$ million at December 31 , 2016 and 2015, respectively. At December 31, 2016 and 2015, the Company had approximately $\$ 0.9$ million and $\$ 1.1$ million, respectively, of mortgage servicing rights. At December 31, 2016 and 2015, the Company serviced $\$ 28.5$ million and $\$ 25.1$ million, respectively, of agricultural loans sold with recourse. Due to sufficient collateral on these loans, no reserve is considered necessary at December 31, 2016 and 2015. As of December 31, 2016 and 2015, the Company serviced $\$ 72.2$ million and $\$ 47.3$ million, respectively, of consumer loans serviced for Springstone.

## Capital Resources

Consistent with its goal to operate a sound and profitable financial institution, the Company actively seeks to maintain a "well-capitalized" institution in accordance with regulatory standards. The principal source of capital to the Company is earnings retention. The Company's capital measurements are in excess of both regulatory minimum guidelines and meet the requirements to be considered well-capitalized.

The Company's principal source of funds to pay interest on trust preferred debentures and pay cash dividends to its shareholders are dividends from its subsidiaries. Various laws and regulations restrict the ability of banks to pay dividends to their shareholders. Generally, the payment of dividends by the Company in the future as well as the payment of interest on the capital securities will require the generation of sufficient future earnings by its subsidiaries.

The Bank also is subject to substantial regulatory restrictions on its ability to pay dividends to the Company. Under OCC regulations, the Bank may not pay a dividend, without prior OCC approval, if the total amount of all dividends declared during the calendar year, including the proposed dividend, exceeds the sum of its retained net income to date during the calendar year and its retained net income over the preceding two years. At December 31, 2016, approximately $\$ 102.5$ million of the total stockholders' equity of the Bank was available for payment of dividends to the Company without approval by the OCC. The Bank's ability to pay dividends also is subject to the Bank being in compliance with regulatory capital requirements. The Bank is currently in compliance with these requirements.

## Stock Repurchase Plan

The Company purchased 675,535 shares of its common stock during the year ended December 31, 2016 at an average price of $\$ 25.45$ per share under a previously announced plan that expired on December 31, 2016. As of December 31, 2016, there were 1,000,000 shares available for repurchase under the repurchase plan that was announced on March 28, 2016, which expires on December 31, 2017.

## Recent Accounting Updates

See Note 24 to the consolidated financial statements for a detailed discussion of new accounting pronouncements.

## 2015 OPERATING RESULTS AS COMPARED TO 2014 OPERATING RESULTS

## Net Interest Income

Net interest income was $\$ 252.6$ million for the year ended December 31, 2015, up $\$ 0.7$ million from 2014. FTE net interest margin was $3.50 \%$ for the year ended December 31, 2015, down from $3.61 \%$ for the year ended December 31, 2014. Average interest earning assets were up $\$ 241.8$ million, or $3.4 \%$, for the year ended December 31, 2015 as compared to 2014. This increase from last year was driven primarily by organic loan growth. Yields on earning assets decreased from $3.94 \%$ during 2014 to $3.78 \%$ for 2015 , more than offsetting the growth in earning assets, resulting in a $0.7 \%$ decrease in interest income for the year ended December 31, 2015 as compared to the year ended December 31, 2014. The yield compression was driven by a 20 basis-point decrease in loan yields from 2014 to 2015. Average interest bearing liabilities increased $\$ 21.0$ million, or $0.4 \%$, from the year ended December 31 , 2014 to the year ended December 31, 2015. Total average deposits increased $\$ 344.2$ million, or $5.6 \%$, for the year ended December 31, 2015 as compared to last year driven primarily by an $11.2 \%$ increase in noninterest bearing demand deposits, as well as increases in money market deposit accounts and savings deposits in 2015. This increase was partially offset by a decrease in average long-term borrowings of $\$ 93.9$ million for the year ended December 31, 2015 as compared to last year due to the debt restructuring completed during the third quarter of 2014 , which resulted in the prepayment of $\$ 165.0$ million of long-term debt. In addition, average short-term borrowings decreased $\$ 42.6$ million for the year ended December 31, 2015 as compared to last year driven by deposit growth. The rates paid on interest bearing liabilities decreased by 5 basis-points for the year ended December 31, 2015 as compared to 2014. This decrease resulted primarily from a shift in deposits into lower cost core deposits as well as the aforementioned debt restructuring.

## Loans and Corresponding Interest and Fees on Loans

The average balance of loans increased by approximately $\$ 215.8$ million, or $3.9 \%$, from 2014 to 2015. The yield on average loans decreased from $4.42 \%$ in 2014 to $4.22 \%$ in 2015 , as loan rates declined due to the continued low rate environment in 2015 . Interest income from loans decreased $0.6 \%$, from $\$ 244.2$ million in 2014 to $\$ 242.6$ million in 2015. This decrease was due to the decrease in yields, partially offset by the increase in average loan balances.

Total loans increased $\$ 287.9$ million, or $5.1 \%$, from December 31, 2014 to December 31, 2015. Increases in residential real estate mortgages, commercial real estate loans, and consumer loans were the primary drivers of the increase in total loans from 2014 as the Company experienced strong originations in 2015 in the upstate New York and Vermont markets.

## Securities and Corresponding Interest and Dividend Income

The average balance of AFS securities decreased $\$ 199.7$ million, or $15.9 \%$, from 2014 to 2015 . The yield on average AFS securities was $1.97 \%$ for 2015 compared to $2.05 \%$ in 2014.

The average balance of HTM securities increased from $\$ 233.5$ million in 2014 to $\$ 459.6$ million in 2015. At December 31, 2015, HTM securities were comprised primarily of tax-exempt municipal securities. The yield on HTM securities decreased from $2.81 \%$ in 2014 to $2.46 \%$ in 2015 .

During the third quarter of 2014, the Company transferred $\$ 340.5$ million in securities from the AFS portfolio to the HTM portfolio to mitigate the impact of volatility of interest rate changes on tangible book value.

The average balance of FRB and FHLB stock decreased to $\$ 33.0$ million in 2015 from $\$ 39.3$ million in 2014. The yield from investments in FRB and FHLB banks increased from 5.10\% in 2014 to 5.18\% in 2015.

## Funding Sources and Corresponding Interest Expense

The Company utilizes traditional deposit products such as time, savings, NOW, money market, and demand deposits as its primary source for funding. Other sources, such as short-term FHLB advances, federal funds purchased, securities sold under agreements to repurchase, brokered time deposits, and long-term FHLB borrowings are utilized as necessary to support the Company's growth in assets and to achieve interest rate sensitivity objectives. The average balance of interest-bearing liabilities increased $\$ 21.0$ million from 2014, and totaled $\$ 5.2$ billion in 2015 . The rate paid on interest-bearing liabilities decreased from $0.45 \%$ in 2014 to $0.40 \%$ in 2015. This decrease in rates, partially offset by an increase in average balances, caused a decrease in interest expense of $\$ 2.6$ million, or 11.1\%, from \$23.2 million in 2014 to \$20.6 million in 2015.

## Deposits

Average interest bearing deposits increased $\$ 157.4$ million, or $3.5 \%$, from 2014 to 2015, due primarily to organic deposit growth. Average money market deposits increased $\$ 124.3$ million or $8.5 \%$ during 2015 when compared to 2014 . Average NOW accounts increased $\$ 37.9$ million or $4.0 \%$ during 2015 as compared to 2014. The average balance of savings accounts increased $\$ 50.8$ million or $5.0 \%$ during 2015 when compared to 2014 . These increases were partially offset by a decrease in average time deposits, which decreased $\$ 55.6$ million, or $5.5 \%$, from 2014 to 2015. The average balance of demand deposits increased $\$ 186.8$ million, or $11.2 \%$, during 2015 when compared to 2014 . This growth in demand deposits was driven principally by increases in accounts from retail, municipal, and commercial customers.

The rate paid on average interest-bearing deposits was $0.31 \%$ for 2015 and 2014 . The rate paid for money market deposit accounts increased from $0.17 \%$ during 2014 to $0.21 \%$ during 2015. The rate paid for time deposits increased from $0.97 \%$ during 2014 to $1.01 \%$ during 2015 . The rate paid for savings deposits decreased from 0.07\% during 2014 to 0.06\% during 2015.

## Borrowings

Average short-term borrowings decreased to $\$ 339.9$ million in 2015 from $\$ 382.5$ million in 2014. The average rate paid on short-term borrowings increased from $0.22 \%$ in 2014 to $0.23 \%$ in 2015. Average long-term debt decreased from $\$ 224.6$ million in 2014 to $\$ 130.7$ million in 2015. This decrease was due to the long-term debt restructure completed in the third quarter of 2014 which resulted in the prepayment of $\$ 165.0$ million of long-term debt.

The average balance of junior subordinated debt remained at $\$ 101.2$ million in 2015. The average rate paid for junior subordinated debt in 2015 was $2.19 \%$, up slightly from $2.14 \%$ in 2014.

Short-term borrowings consist of Federal funds purchased and securities sold under repurchase agreements, which generally represent overnight borrowing transactions, and other short-term borrowings, primarily FHLB advances, with original maturities of one year or less. The Company has unused lines of credit and access to brokered deposits available for short-term financing of approximately $\$ 2.0$ billion and $\$ 1.8$ billion at December 31, 2015 and 2014 , respectively. Securities collateralizing repurchase agreements are held in safekeeping by non-affiliated financial institutions and are under the Company's control. Longterm debt, which is comprised primarily of FHLB advances, are collateralized by the FHLB stock owned by the Company, certain of its mortgage-backed securities and a blanket lien on its residential real estate mortgage loans.

Noninterest income for the year ended December 31, 2015 was $\$ 118.5$ million, down $\$ 7.5$ million, or $6.0 \%$, from the year ended December 31 , 2014 . The decrease from 2014 was primarily driven by a $\$ 19.4$ million gain recognized in 2014 from the previously disclosed sale of our ownership interest in Springstone as compared with the $\$ 4.2$ million gain recognized in 2015 . Excluding the gains recognized from the sale of equity investments, noninterest income was up $\$ 7.7$ million, or $7.2 \%$, from 2014 to 2015 . This increase was driven in part to a gain on the sale of an equity investment totaling $\$ 3.0$ million in the fourth quarter of 2015. In addition, retirement plan administration fees were up $\$ 2.0$ million, or $16.6 \%$, from 2014 to 2015 due to new business generation as well as the 2015 acquisition of Third Party Administrators, Inc.. ATM and debit card fees were up $\$ 1.1$ million, or $6.5 \%$, in 2015 as compared to 2014 due to an increase in debit card activity. Other noninterest income was up $\$ 3.7$ million in 2015 as compared with 2014 due primarily to charge-off recoveries on acquired loans of $\$ 1.5$ million and a favorable settlement of a prior accrual of $\$ 1.6$ million in 2015.

## Noninterest Expense

Noninterest expense for the year ended December 31, 2015 was $\$ 236.2$ million, down $\$ 9.9$ million from 2014. This decrease was driven primarily by $\$ 17.9$ million in prepayment penalties resulting from the debt restructuring in 2014. Excluding these prepayment penalties, noninterest expense was up $\$ 8.0$ million, or $3.5 \%$, from 2014 to 2015 . This increase was due primarily to an increase in salaries and employee benefits of $\$ 4.7$ million, or $3.9 \%$, from 2014 to 2015 . This increase was driven primarily by a $\$ 2.4$ million increase in post-retirement expenses as well as contract termination costs totaling $\$ 1.6$ million accrued in the fourth quarter of 2015 . In addition, other operating expenses were up $\$ 4.6$ million in 2015 as compared with 2014 . This increase was driven primarily by branch reorganization expenses totaling \$3.8 million in 2015.

## Income Taxes

Income tax expense for the year ended December 31, 2015 was $\$ 40.2$ million, up from $\$ 37.2$ million for the same period in 2014 . The effective tax rate was $34.5 \%$ for the year ended December 31, 2015, compared to $33.2 \%$ for the same period in 2014.

The income tax expense on the Company's income was different than the income tax expense at the Federal statutory rate of $35 \%$ due primarily to tax exempt income and, to a lesser extent, the effect of state income taxes and Federal low income housing tax credits.

## Table of Contents

## ITEM 7A. Quantitative and Qualitative Disclosure About Market Risk

Interest rate risk is the most significant market risk affecting the Company. Other types of market risk, such as foreign currency exchange rate risk and commodity price risk, do not arise in the normal course of the Company's business activities or are immaterial to the results of operations.

Interest rate risk is defined as an exposure to a movement in interest rates that could have an adverse effect on the Company's net interest income. Net interest income is susceptible to interest rate risk to the degree that interest-bearing liabilities mature or reprice on a different basis than earning assets. When interest-bearing liabilities mature or reprice more quickly than earning assets in a given period, a significant increase in market rates of interest could adversely affect net interest income. Similarly, when earning assets mature or reprice more quickly than interest-bearing liabilities, falling interest rates could result in a decrease in net interest income.

In an attempt to manage the Company's exposure to changes in interest rates, management monitors the Company's interest rate risk. Management's asset/liability committee ("ALCO") meets monthly to review the Company's interest rate risk position and profitability, and to recommend strategies for consideration by the Board of Directors. Management also reviews loan and deposit pricing, and the Company's securities portfolio, formulates investment and funding strategies, and oversees the timing and implementation of transactions to assure attainment of the Board's objectives in the most effective manner. Notwithstanding the Company's interest rate risk management activities, the potential for changing interest rates is an uncertainty that can have an adverse effect on net income.

In adjusting the Company's asset/liability position, the Board and management attempt to manage the Company's interest rate risk while minimizing the net interest margin compression. At times, depending on the level of general interest rates, the relationship between long and short-term interest rates, market conditions and competitive factors, the Board and management may determine to increase the Company's interest rate risk position somewhat in order to increase its net interest margin. The Company's results of operations and net portfolio values remain vulnerable to changes in interest rates and fluctuations in the difference between long and short-term interest rates.

The primary tool utilized by ALCO to manage interest rate risk is through earnings at risk modeling (interest rate sensitivity analysis). Information such as principal balance, interest rate, maturity date, cash flows, next repricing date (if needed), and current rates is uploaded into the model to create an ending balance sheet. In addition, ALCO makes certain assumptions regarding prepayment speeds for loans and mortgage related investment securities along with any optionality within the deposits and borrowings. The model is first run under an assumption of a flat rate scenario (i.e. no change in current interest rates) with a static balance sheet. Two additional models are run in which a gradual increase of 200 bps and a gradual decrease of 100 bps takes place over a 12 month period with a static balance sheet. Under these scenarios, assets subject to prepayments are adjusted to account for faster or slower prepayment assumptions. Any investment securities or borrowings that have callable options embedded into them are handled accordingly based on the interest rate scenario. The resultant changes in net interest income are then measured against the flat rate scenario.

In the declining rate scenario, net interest income is projected to decrease slightly when compared to the forecasted net interest income in the flat rate scenario through the simulation period. The decrease in net interest income is a result of earning assets repricing downward, given potential higher prepayments and lower reinvestment rates, slightly faster than the interest bearing liabilities that are at or near their floors. In the rising rate scenarios, net interest income is projected to experience a decline from the flat rate scenario; however, the potential impact on earnings is dependent on the ability to lag deposit repricing on NOW, savings, MMDA, and CD accounts. Net interest income for the next twelve months in the $+200 /-100 \mathrm{bp}$ scenarios, as described above, is within the internal policy risk limits of not more than a $7.5 \%$ change in net interest income. The following table summarizes the percentage change in net interest income in the rising and declining rate scenarios over a 12 -month period from the forecasted net interest income in the flat rate scenario using the December 31, 2016 balance sheet position:

## Interest Rate Sensitivity Analysis

| Change in interest rates <br> (In basis points) | Percent change <br> in net interest income |
| :--- | :---: |
| +200 | $(2.60 \%)$ |
| -100 | $(2.50 \%)$ |

The Company anticipates that under the current low rate environment, on a monthly basis, interest income is expected to decrease at a faster rate than interest expense given the potential higher prepayments and reinvestment into lower rates as deposit rates are at or near their respective floors. In order to protect net interest income from anticipated net interest margin compression in 2017, the Company will continue to focus on increasing earning assets while maintaining a balanced asset mix of loans and investments, and focus on funding growth through lower cost core deposits.

Another tool used by ALCO to manage interest rate risk is financial modeling of net portfolio values (discounted present value of assets minus discounted present value of liabilities). The table below represents the percent change in net portfolio values from base case (flat rates) for $+200 /-100$ instantaneous rate shocks:

## Net Portfolio Value Sensitivity Analysis

## ITEM 8. Financial Statements and Supplementary Data

## Report of Independent Registered Public Accounting Firm

The Board of Directors and Stockholders
NBT Bancorp Inc.:
We have audited the accompanying consolidated balance sheets of NBT Bancorp Inc. and subsidiaries (the Company) as of December 31, 2016 and 2015 , and 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, 2016. 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 conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). 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. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the consolidated financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of NBT Bancorp Inc. and subsidiaries as of December 31, 2016 and 2015, and the results of their operations and their cash flows for each of the years in the three-year period ended December 31, 2016, 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), the Company's internal control over financial reporting as of December 31, 2016, 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 1, 2017 expressed an unqualified opinion on the effectiveness of the Company's internal control over financial reporting.
/S/ KPMG LLP
Albany, New York
March 1, 2017

## Consolidated Balance Sheets

| (In thousands except share and per share data) | As of December 31, |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 2016 |  | 2015 |  |
| Assets |  |  |  |  |
| Cash and due from banks | \$ | 147,789 | \$ | 130,593 |
| Short-term interest bearing accounts |  | 1,392 |  | 9,704 |
| Securities available for sale, at fair value |  | 1,338,290 |  | 1,174,544 |
| Securities held to maturity (fair value \$525,050 and \$473,140) |  | 527,948 |  | 471,031 |
| Trading securities |  | 9,259 |  | 8,377 |
| Federal Reserve and Federal Home Loan Bank stock |  | 47,033 |  | 36,673 |
| Loans |  | 6,198,057 |  | 5,883,133 |
| Less allowance for loan losses |  | 65,200 |  | 63,018 |
| Net loans |  | 6,132,857 |  | 5,820,115 |
| Premises and equipment, net |  | 84,187 |  | 88,826 |
| Goodwill |  | 265,439 |  | 265,957 |
| Intangible assets, net |  | 15,815 |  | 17,265 |
| Bank owned life insurance |  | 168,012 |  | 117,044 |
| Other assets |  | 129,247 |  | 122,517 |
| Total assets | \$ | 8,867,268 | \$ | 8,262,646 |
| Liabilities |  |  |  |  |
| Demand (noninterest bearing) | \$ | 2,195,845 | \$ | 1,998,165 |
| Savings, negotiable order withdrawal and money market |  | 3,905,432 |  | 3,697,851 |
| Time |  | 872,411 |  | 908,827 |
| Total deposits |  | 6,973,688 |  | 6,604,843 |
| Short-term borrowings |  | 681,703 |  | 442,481 |
| Long-term debt |  | 104,087 |  | 130,447 |
| Junior subordinated debt |  | 101,196 |  | 101,196 |
| Other liabilities |  | 93,278 |  | 101,675 |
| Total liabilities |  | 7,953,952 |  | 7,380,642 |
| Stockholders' equity |  |  |  |  |
| Preferred stock, \$0.01 par value; authorized 2,500,000 shares at December 31, 2016 and 2015 |  | - |  | - |
| Common stock, $\$ 0.01$ par value; authorized 100,000,000 shares at December 31, 2016 and December 31, 2015; issued 49,651,493 at December 31, 2016 and 2015 |  | 497 |  | 497 |
| Additional paid-in-capital |  | 575,078 |  | 576,726 |
| Retained earnings |  | 501,761 |  | 462,232 |
| Accumulated other comprehensive loss |  | $(21,520)$ |  | $(22,418)$ |
| Common stock in treasury, at cost, 6,393,743 and 6,220,792 shares at December 31, 2016 and 2015, respectively |  | $(142,500)$ |  | $(135,033)$ |
| Total stockholders' equity |  | 913,316 |  | 882,004 |
| Total liabilities and stockholders' equity | \$ | 8,867,268 | \$ | 8,262,646 |

See accompanying notes to consolidated financial statements.

## Consolidated Statements of Income

| (In thousands except per share data) | Years ended December 31, |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2016 |  | 2015 |  | 2014 |  |
| Interest, fee, and dividend income |  |  |  |  |  |  |
| Interest and fees on loans | \$ | 250,994 | \$ | 241,828 | \$ | 243,324 |
| Securities available for sale |  | 24,033 |  | 20,418 |  | 24,464 |
| Securities held to maturity |  | 9,852 |  | 9,233 |  | 5,261 |
| Other |  | 2,068 |  | 1,745 |  | 2,032 |
| Total interest, fee, and dividend income |  | 286,947 |  | 273,224 |  | 275,081 |
| Interest expense |  |  |  |  |  |  |
| Deposits |  | 14,366 |  | 14,257 |  | 13,638 |
| Short-term borrowings |  | 2,309 |  | 783 |  | 845 |
| Long-term debt |  | 3,204 |  | 3,355 |  | 6,555 |
| Junior subordinated debt |  | 2,627 |  | 2,221 |  | 2,165 |
| Total interest expense |  | 22,506 |  | 20,616 |  | 23,203 |
| Net interest income |  | 264,441 |  | 252,608 |  | 251,878 |
| Provision for loan losses |  | 25,431 |  | 18,285 |  | 19,539 |
| Net interest income after provision for loan losses |  | 239,010 |  | 234,323 |  | 232,339 |
| Noninterest income |  |  |  |  |  |  |
| Insurance and other financial services revenue |  | 24,396 |  | 24,211 |  | 24,517 |
| Service charges on deposit accounts |  | 16,729 |  | 17,056 |  | 17,941 |
| ATM and debit card fees |  | 19,448 |  | 18,248 |  | 17,135 |
| Retirement plan administration fees |  | 16,063 |  | 14,146 |  | 12,129 |
| Trust |  | 18,565 |  | 19,026 |  | 18,950 |
| Bank owned life insurance income |  | 5,195 |  | 4,334 |  | 5,349 |
| Net securities (losses) gains |  | (644) |  | 3,087 |  | 92 |
| Gain on the sale of equity investment |  | - |  | 4,179 |  | 19,401 |
| Other |  | 15,961 |  | 14,194 |  | 10,513 |
| Total noninterest income |  | 115,713 |  | 118,481 |  | 126,027 |
| Noninterest expense |  |  |  |  |  |  |
| Salaries and employee benefits |  | 129,702 |  | 124,318 |  | 119,667 |
| Occupancy |  | 20,940 |  | 22,095 |  | 22,128 |
| Data processing and communications |  | 16,495 |  | 16,588 |  | 16,137 |
| Professional fees and outside services |  | 13,617 |  | 13,407 |  | 14,426 |
| Equipment |  | 14,295 |  | 13,408 |  | 12,658 |
| Office supplies and postage |  | 6,168 |  | 6,367 |  | 6,983 |
| FDIC expenses |  | 5,111 |  | 5,145 |  | 4,944 |
| Advertising |  | 2,556 |  | 2,654 |  | 2,831 |
| Amortization of intangible assets |  | 3,928 |  | 4,864 |  | 5,047 |
| Loan collection and other real estate owned |  | 3,458 |  | 2,620 |  | 3,248 |
| Prepayment penalties on long-term debt |  | - |  | - |  | 17,902 |
| Other |  | 19,652 |  | 24,710 |  | 20,092 |
| Total noninterest expense |  | 235,922 |  | 236,176 |  | 246,063 |
| Income before income tax expense |  | 118,801 |  | 116,628 |  | 112,303 |
| Income tax expense |  | 40,392 |  | 40,203 |  | 37,229 |
| Net income | \$ | 78,409 | \$ | 76,425 | \$ | 75,074 |
| Earnings per share |  |  |  |  |  |  |
| Basic | \$ | 1.81 | \$ | 1.74 | \$ | 1.71 |
| Diluted |  | 1.80 |  | 1.72 |  | 1.69 |

See accompanying notes to consolidated financial statements.

## Consolidated Statements of Comprehensive Income

| (In thousands) | Years ended December 31, |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2016 |  |  | 2015 |  | 2014 |
| Net income | \$ | 78,409 | \$ | 76,425 | \$ | 75,074 |
| Other comprehensive income, net of tax: |  |  |  |  |  |  |
| Unrealized net holding (losses) gains arising during the year (pre-tax amounts of $\$(8,618), \$(3,159)$, and $\$ 18,069$ ) |  | $(5,265)$ |  | $(1,930)$ |  | 10,933 |
| Reclassification adjustment for net losses (gains) related to securities available for sale included in net income (pre-tax amounts of $\$ 644, \$(3,087)$, and $\$(92)$ ) |  | 393 |  | $(1,886)$ |  | (56) |
| Unrealized gains on derivatives (cash flow hedges) (pre-tax amounts of \$2,901) |  | 1,772 |  | - |  |  |
| Amortization of unrealized net gains and losses related to the reclassification of available for sale investment securities to held to maturity (pre-tax amounts of \$(1,094), \$(1,311), and \$(421)) |  | 668 |  | 801 |  | 257 |
| Pension and other benefits: |  |  |  |  |  |  |
| Amortization of prior service cost and actuarial gains (pre-tax amounts of \$2,370, \$2,239, and \$75) |  | 1,421 |  | 1,371 |  | 46 |
| Decrease (increase) in unrecognized actuarial loss (pre-tax amounts of $\$ 3,154, \$(6,144)$, and $\$(19,245)$ ) |  | 1,909 |  | $(3,747)$ |  | $(11,442)$ |
| Total other comprehensive income (loss) |  | 898 |  | $(5,391)$ |  | (262) |
| Comprehensive income | \$ | 79,307 | \$ | 71,034 | \$ | 74,812 |

See accompanying notes to consolidated financial statements.

## Consolidated Statements of Changes in Stockholders' Equity

| (In thousands except share and per share data) | Commonstock |  | Additional paid-incapital |  | Retained earnings |  | Accumulated other comprehensive (loss) income |  | Common stock in treasury |  | Total |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Balance at December 31, 2013 | \$ | 497 | \$ | 574,152 | \$ | 385,787 | \$ | $(16,765)$ | \$ | $(127,102)$ | \$ | 816,569 |
| Net income |  |  |  |  |  | 75,074 |  |  |  |  |  | 75,074 |
| Cash dividends - $\$ 0.84$ per share |  | - |  | - |  | $(36,905)$ |  | - |  | - |  | $(36,905)$ |
| Purchase of 3,288 treasury shares |  | - |  | - |  | - |  | - |  | (72) |  | (72) |
| Net issuance of 386,692 shares to employee stock plans, including tax benefit |  | - |  | $(1,169)$ |  | - |  | - |  | 7,425 |  | 6,256 |
| Stock-based compensation |  |  |  | 3,521 |  | - |  | - |  | - |  | 3,521 |
| Other comprehensive loss |  | - |  | - |  | - |  | (262) |  | - |  | (262) |
| Balance at December 31, 2014 | \$ | 497 | \$ | 576,504 | \$ | 423,956 | \$ | $(17,027)$ | \$ | $(119,749)$ | \$ | 864,181 |
| Net income |  |  |  | - |  | 76,425 |  | - |  | - |  | 76,425 |
| Cash dividends - \$0.87 per share |  | - |  | - |  | $(38,149)$ |  | - |  | - |  | $(38,149)$ |
| Purchase of $1,047,152$ treasury shares |  | - |  | - |  | - |  | - |  | $(26,797)$ |  | $(26,797)$ |
| Net issuance of 581,400 shares to employee stock plans, including tax benefit |  | - |  | $(3,864)$ |  | - |  | - |  | 11,513 |  | 7,649 |
| Stock-based compensation |  | - |  | 4,086 |  | - |  | - |  | - |  | 4,086 |
| Other comprehensive loss |  | - |  | - |  | - |  | $(5,391)$ |  | - |  | $(5,391)$ |
| Balance at December 31, 2015 | \$ | 497 | \$ | 576,726 | \$ | 462,232 | \$ | $(22,418)$ | \$ | $(135,033)$ | \$ | 882,004 |
| Net income |  | - |  | - |  | 78,409 |  | - |  | - |  | 78,409 |
| Cash dividends - \$0.90 per share |  | - |  | - |  | $(38,880)$ |  | - |  | (17, - |  | $(38,880)$ |
| Purchase of 675,535 treasury shares |  | - |  | - |  | - |  | - |  | $(17,193)$ |  | $(17,193)$ |
| Net issuance of 502,585 shares to employee stock plans, including tax benefit |  | - |  | $(6,026)$ |  | - |  | - |  | 9,726 |  | 3,700 |
| Stock-based compensation |  | - |  | 4,378 |  | - |  | - |  | - |  | 4,378 |
| Other comprehensive income |  | - |  | - |  | - |  | 898 |  | - |  | 898 |
| Balance at December 31, 2016 | \$ | 497 | \$ | 575,078 | \$ | 501,761 | \$ | $(21,520)$ | \$ | $(142,500)$ | \$ | 913,316 |

See accompanying notes to consolidated financial statements.

## Consolidated Statements of Cash Flows

| (In thousands) | Years ended December 31, |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2016 |  | 2015 |  | 2014 |  |
| Operating activities |  |  |  |  |  |  |
| Net income | \$ | 78,409 | \$ | 76,425 | \$ | 75,074 |
| Adjustments to reconcile net income to net cash provided by operating activities |  |  |  |  |  |  |
| Provision for loan losses |  | 25,431 |  | 18,285 |  | 19,539 |
| Depreciation and amortization of premises and equipment |  | 9,023 |  | 8,646 |  | 8,324 |
| Net accretion on securities |  | 5,278 |  | 2,554 |  | 3,216 |
| Amortization of intangible assets |  | 3,928 |  | 4,864 |  | 5,047 |
| Stock-based compensation |  | 4,378 |  | 4,086 |  | 3,521 |
| Bank owned life insurance income |  | $(5,195)$ |  | $(4,334)$ |  | $(5,349)$ |
| Trading security purchases |  | (287) |  | (810) |  | $(1,626)$ |
| (Gains) losses in trading securities |  | (594) |  | 226 |  | (388) |
| Proceeds from sale of loans held for sale |  | 96,603 |  | 72,498 |  | 7,050 |
| Originations and purchases of loans held for sale |  | $(96,692)$ |  | $(69,677)$ |  | $(10,215)$ |
| Net gains on sales of loans held for sale |  | (499) |  | (239) |  | (17) |
| Net security losses (gains) |  | 644 |  | $(3,087)$ |  | (92) |
| Net gains on sales of other real estate owned |  | (687) |  | $(1,337)$ |  | (459) |
| Gain on sale of equity investment |  | - |  | $(4,179)$ |  | $(19,401)$ |
| Gain on asset sold |  | $(2,462)$ |  | - |  | - |
| Impairment write-down |  | 2,565 |  | - |  |  |
| Prepayment penalties on long-term debt |  | - |  | - |  | 17,902 |
| Net decrease (increase) in other assets |  | 364 |  | 15,386 |  | $(19,601)$ |
| Net (decrease) increase in other liabilities |  | $(10,697)$ |  | 5,236 |  | 5,286 |
| Net cash provided by operating activities |  | 109,510 |  | 124,543 |  | 87,811 |
| Investing activities |  |  |  |  |  |  |
| Net cash (used in) acquisitions |  | $(2,000)$ |  | $(3,100)$ |  | - |
| Securities available for sale: |  |  |  |  |  |  |
| Proceeds from maturities, calls, and principal paydowns |  | 324,781 |  | 299,302 |  | 236,133 |
| Proceeds from sales |  | 98,466 |  | 15,091 |  | 189 |
| Purchases |  | $(597,428)$ |  | $(481,262)$ |  | $(197,652)$ |
| Securities held to maturity: |  |  |  |  |  |  |
| Proceeds from maturities, calls, and principal paydowns |  | 100,893 |  | 79,212 |  | 44,756 |
| Purchases |  | $(157,418)$ |  | $(95,272)$ |  | $(49,479)$ |
| Other: |  |  |  |  |  |  |
| Net increase in loans |  | $(344,448)$ |  | $(315,363)$ |  | $(212,238)$ |
| Proceeds from FHLB stock redemption |  | 158,818 |  | 60,852 |  | 78,441 |
| Purchases of Federal Reserve and FHLB stock |  | $(169,178)$ |  | $(64,899)$ |  | $(64,203)$ |
| Proceeds from settlement of bank owned life insurance |  | 1,477 |  | 1,541 |  | 6,064 |
| Purchase of bank owned life insurance |  | $(47,250)$ |  | - |  | - |
| Purchases of premises and equipment, net |  | $(3,308)$ |  | $(8,193)$ |  | $(9,003)$ |
| Proceeds from sale of equity investment |  | - |  | 4,179 |  | 19,639 |
| Proceeds from sales of other real estate owned |  | 6,635 |  | 3,908 |  | 3,612 |
| Net cash used in investing activities |  | $(629,960)$ |  | $(504,004)$ |  | (143,741) |
| Financing activities |  |  |  |  |  |  |
| Net increase in deposits |  | 368,845 |  | 305,238 |  | 409,381 |
| Net increase (decrease) in short-term borrowings |  | 239,222 |  | 125,679 |  | $(139,240)$ |
| Proceeds from issuance of long-term debt |  | 23,880 |  | - |  | 120,051 |
| Repayments of long-term debt |  | $(50,240)$ |  | (498) |  | $(315,831)$ |
| Proceeds from the issuance of shares to employee benefit plans and other stock plans |  | 3,700 |  | 7,649 |  | 6,256 |
| Purchase of treasury stock |  | $(17,193)$ |  | $(26,797)$ |  | (72) |
| Cash dividends |  | $(38,880)$ |  | $(38,149)$ |  | $(36,905)$ |
| Net cash provided by financing activities |  | 529,334 |  | 373,122 |  | 43,640 |
| Net increase (decrease) in cash and cash equivalents |  | 8,884 |  | $(6,339)$ |  | $(12,290)$ |
| Cash and cash equivalents at beginning of year |  | 140,297 |  | 146,636 |  | 158,926 |
| Cash and cash equivalents at end of year | \$ | 149,181 | \$ | 140,297 | \$ | 146,636 |

## Supplemental disclosure of cash flow information:

| Cash paid during the year for: | Years ended December 31, |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2016 |  | 2015 |  | 2014 |  |
| Interest | \$ | 22,466 | \$ | 20,908 | \$ | 23,387 |
| Income taxes, net of refund |  | 40,879 |  | 28,684 |  | 38,912 |
| Noncash investing activities: |  |  |  |  |  |  |
| Loans transferred to other real estate owned | \$ | 6,863 | \$ | 3,293 | \$ | 4,330 |
| Preferred stock acquired from sale of equity investment |  | - |  | - |  | 2,762 |
| Transfer of available for sale securities to held to maturity portfolio |  | - |  | - |  | 332,115 |
| Acquisitions: |  |  |  |  |  |  |
| Fair value of assets acquired | \$ | 2,584 | \$ | 4,100 | \$ | - |

See accompanying notes to consolidated financial statements.

# NBT BANCORP INC. AND SUBSIDIARIES 

Notes to Consolidated Financial Statements
December 31, 2016 and 2015

## 1. Summary of Significant Accounting Policies

The accounting and reporting policies of NBT Bancorp Inc. ("NBT Bancorp") and its subsidiaries, NBT Bank, National Association ("NBT Bank" or the "Bank"), NBT Holdings, Inc., and NBT Financial Services, Inc., conform, in all material respects, with accounting principles generally accepted in the United States of America ("GAAP") and to general practices within the banking industry. Collectively, NBT Bancorp and its subsidiaries are referred to herein as "the Company."

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from these estimates.

Estimates associated with the allowance for loan losses, income taxes, pension expense, fair values of financial instruments, status of contingencies and other-than-temporary impairment ("OTTI") on investments are particularly susceptible to material change in the near term.

The following is a description of significant policies and practices:

## Consolidation

The accompanying consolidated financial statements include the accounts of NBT Bancorp and its wholly-owned subsidiaries mentioned above. All material intercompany transactions have been eliminated in consolidation. Amounts previously reported in the consolidated financial statements are reclassified whenever necessary to conform to the current year's presentation. In the "Parent Company Financial Information," the investment in subsidiaries is recorded using the equity method of accounting.

The Company determines whether it has a controlling financial interest in an entity by first evaluating whether the entity is a voting interest entity or a variable interest entity under GAAP. Voting interest entities are entities in which the total equity investment at risk is sufficient to enable the entity to finance itself independently and provides the equity holders with the obligation to absorb losses, the right to receive residual returns and the right to make decisions about the entity's activities. The Company consolidates voting interest entities in which it has all, or at least a majority of, the voting interest. As defined in applicable accounting standards, variable interest entities ("VIEs") are entities that lack one or more of the characteristics of a voting interest entity. A controlling financial interest in a VIE is present when the Company has both the power and ability to direct the activities of the VIE that most significantly impact the VIE's economic performance and an obligation to absorb losses or the right to receive benefits that could potentially be significant to the VIE. The Company's wholly-owned subsidiaries CNBF Capital Trust I, NBT Statutory Trust I, NBT Statutory Trust II, Alliance Financial Capital Trust I and Alliance Financial Capital Trust II are VIEs for which the Company is not the primary beneficiary. Accordingly, the accounts of these entities are not included in the Company's consolidated financial statements.

## Segment Reporting

The Company's operations are primarily in the community banking industry and include the provision of traditional banking services. The Company also provides other services through its subsidiaries such as insurance, retirement plan administration, and trust administration. The Company operates solely in the geographical regions of central and upstate New York, northeastern Pennsylvania, western Massachusetts, southern New Hampshire, Vermont, and the greater Portland, Maine area. The Company has no reportable operating segments.

## Cash Equivalents

The Company considers amounts due from correspondent banks, cash items in process of collection, and institutional money market mutual funds to be cash equivalents for purposes of the consolidated statements of cash flows.

## Securities

The Company classifies its securities at date of purchase as either held to maturity ("HTM"), trading or available for sale ("AFS"). HTM debt securities are those that the Company has the ability and intent to hold until maturity. Trading securities are securities purchased with the intent to sell within a short period of time. AFS securities are securities that are not classified as a HTM or trading securities. AFS securities are recorded at fair value. Unrealized holding gains and losses, net of the related tax effect, on AFS securities are excluded from earnings and are reported in the consolidated statements of stockholders' equity and the consolidated statements of comprehensive income as a component of accumulated other comprehensive income or loss. HTM securities are recorded at amortized cost. Trading securities are recorded at fair value, with net unrealized gains and losses recognized in income. Transfers of securities between categories are recorded at fair value at the date of transfer. Declines in the fair value of HTM and AFS securities below their cost that are deemed to be other than temporary are reflected in earnings as realized losses or in other comprehensive income, depending on whether the Company intends to sell the security or more likely than not will be required to sell the security before recovery of its amortized cost basis less any current-period credit loss. If the Company intends to sell the security or more likely than not will be required to sell the security before recovery of its amortized cost basis less any current-period credit loss, the OTTI shall be recognized in earnings equal to the entire difference between the investment's amortized cost basis and its fair value at the balance sheet date. If the Company does not intend to sell the security and it is not more likely than not that the entity will be required to sell the security before recovery of its amortized cost basis less any current-period credit loss, the OTTI shall be separated into (a) the amount representing the credit loss and (b) the amount related to all other factors. The amount of the total OTTI impairment related to the credit loss shall be recognized in earnings. The amount of the total OTTI related to other factors shall be recognized in other comprehensive income, net of applicable taxes.

In estimating OTTI losses, management considers, among other things, (i) the length of time and the extent to which the fair value has been less than cost, (ii) the financial condition and near-term prospects of the issuer, and (iii) the historical and implied volatility of the fair value of the security.

Non-marketable equity securities are carried at cost.
Premiums and discounts are amortized or accreted over the life of the related security as an adjustment to yield using the interest method. Dividend and interest income are recognized when earned. Realized gains and losses on securities sold are derived using the specific identification method for determining the cost of securities sold.

Investments in Federal Reserve Bank ("FRB") and Federal Home Loan Bank ("FHLB") stock are required for membership in those organizations and are carried at cost since there is no market value available. The FHLB New York continues to pay dividends and repurchase stock. As such, the Company has not recognized any impairment on its holdings of FHLB stock.

## Loans

Loans are recorded at their current unpaid principal balance, net of unearned income and unamortized loan fees and expenses, which are amortized under the effective interest method over the estimated lives of the loans. Interest income on loans is accrued based on the principal amount outstanding.

For all loan classes within the Company's loan portfolio, loans are placed on nonaccrual status when timely collection of principal and interest in accordance with contractual terms is doubtful. Loans are transferred to nonaccrual status generally when principal or interest payments become ninety days delinquent, unless the loan is well-secured and in the process of collection, or sooner when management concludes circumstances indicate that borrowers may be unable to meet contractual principal or interest payments. When a loan is transferred to a nonaccrual status, all interest previously accrued in the current period but not collected is reversed against interest income in that period. Interest accrued in a prior period and not collected is charged-off against the allowance for loan losses.

If ultimate repayment of a nonaccrual loan is expected, any payments received are applied in accordance with contractual terms. If ultimate repayment of principal is not expected, any payment received on a nonaccrual loan is applied to principal until ultimate repayment becomes expected. For all loan classes within the Company's loan portfolio, nonaccrual loans are returned to accrual status when they become current as to principal and interest and demonstrate a period of performance under the contractual terms and, in the opinion of management, are fully collectible as to principal and interest. For loans in all portfolios, the principal amount is charged off in full or in part as soon as management determines, based on available facts, that the collection of principal in full is improbable. For commercial loans, management considers specific facts and circumstances relative to individual credits in making such a determination. For consumer and residential loan classes, management uses specific guidance and thresholds from the Federal Financial Institutions Examination Council’s Uniform Retail Credit Classification and Account Management Policy.

Commercial type loans are considered impaired when it is probable that the borrower will not repay the loan according to the original contractual terms of the loan agreement, and all loan types are considered impaired if the loan is restructured in a troubled debt restructuring ("TDR"). In determining that we will be unable to collect all principal and interest payments due in accordance with the contractual terms of the loan agreements, we consider factors such as payment history and changes in the financial condition of individual borrowers, local economic conditions, historical loss experience and the conditions of the various markets in which the collateral may be liquidated.

A loan is considered to be a TDR when the Company grants a concession to the borrower because of the borrower’s financial condition that the Company would not otherwise consider. Such concessions include the reduction of interest rates, forgiveness of all or a portion of principal or interest, or other modifications at interest rates that are less than the current market rate for new obligations with similar risk. TDR loans are nonaccrual loans; however, they can be returned to accrual status after a period of performance, generally evidenced by six months of compliance with their modified terms.

When the Company modifies a loan, management evaluates any possible impairment based on the present value of the expected future cash flows, discounted at the contractual interest rate of the original loan agreement, except when the sole (remaining) source of repayment for the loan is the operation or liquidation of the collateral. In these cases, management uses the current fair value of the collateral, less selling costs, instead of discounted cash flows. If management determines that the value of the modified loan is less than the recorded investment in the loan (net of previous charge-offs, deferred loan fees or costs and unamortized premium or discount), impairment is recognized.

## Acquired Loans

Acquired loans are initially measured at fair value as of the acquisition date without carryover of historical allowance for loan losses.
For loans that meet the criteria stipulated in ASC 310-30 - Receivables - Loans and Debt Securities Acquired with Deteriorated Credit Quality, the Company shall recognize the accretable yield, which is defined as the excess of all cash flows expected at acquisition over the initial fair value of the loan, as interest income on a level-yield basis over the expected remaining life of the loan. The excess of the loan's contractually required payments over the cash flows expected to be collected is the nonaccretable difference. The nonaccretable difference shall not be recognized as an adjustment of yield, a loss accrual, or a valuation allowance. Decreases in the expected cash flows in subsequent periods require the establishment of an allowance for loan losses. Improvements in expected cash flows in future periods result in a reduction of the nonaccretable discount, with such amount reclassified as part of the accretable yield and subsequently recognized in interest income over the remaining lives of the acquired loans on a level-yield basis if the amount and timing of future cash flows is reasonably estimable.

Acquired loans that met the criteria for nonaccrual of interest prior to the acquisition are considered performing upon acquisition, regardless of whether the customer is contractually delinquent, if the Company can reasonably estimate the timing and amount of the expected cash flows on such loans and if the Company expects to fully collect the new carrying value of the loans. As such, the Company may no longer consider the loan to be nonaccrual or nonperforming and may accrue interest on these loans, including the impact of any accretable yield. As such, charge-offs on acquired loans are first applied to the nonaccretable difference and then to any allowance for loan losses recognized subsequent to acquisition.

For loans that meet the criteria stipulated in ASC 310-20 - Receivables - Nonrefundable Fees and Other Costs ("ASC 310-20"), the Company shall amortize/accrete into interest income the premium/discount determined at the date of purchase on a level-yield basis over the life of the loan. Subsequent to the acquisition date, the methods utilized to estimate the required allowance for loan losses are similar to originated loans. Loans accounted for under ASC 310-20 are placed on nonaccrual status when past due in accordance with the Company's nonaccrual policy.

An acquired loan may be resolved either through receipt of payment (in full or in part) from the borrower, the sale of the loan to a third party, or foreclosure of the collateral. In the event of a sale of the loan, a gain or loss on sale is recognized and reported within noninterest income based on the difference between the sales proceeds and the carrying amount of the loan. In other cases, individual loans are removed from the pool based on comparing the amount received from its resolution (fair value of the underlying collateral less costs to sell in the case of a foreclosure) with its outstanding balance. Any difference between these amounts is recorded as a charge-off through the allowance for loan losses. Acquired loans subject to modification are not removed from the pool even if those loans would otherwise be deemed TDRs as the pool, and not the individual loan, represents the unit of account.

## Allowance for Loan Losses

The allowance for loan losses is the amount which, in the opinion of management, is necessary to absorb probable losses inherent in the loan portfolio. The allowance is determined based upon numerous considerations, including local and regional conditions, the growth and composition of the loan portfolio with respect to the mix between the various types of loans and their related risk characteristics, a review of the value of collateral supporting the loans, comprehensive reviews of the loan portfolio by the independent loan review staff and management, as well as consideration of volume and trends of delinquencies, nonperforming loans, and loan charge-offs. Loan losses are charged off against the allowance, while recoveries of amounts previously charged off are credited to the allowance. As a result of tests of adequacy, required additions to the allowance for loan losses are made periodically by charges to the provision for loan losses.

The allowance for loan losses related to impaired loans specifically allocated for impairment is based on discounted expected cash flows using the loan's initial effective interest rate or the fair value of the collateral for certain loans where repayment of the loan is expected to be provided solely by the underlying collateral ("collateral dependent"). The Company's impaired loans are generally collateral dependent. The Company considers the estimated cost to sell, on a discounted basis, when determining the fair value of collateral in the measurement of impairment if those costs are expected to reduce the cash flows available to repay or otherwise satisfy the loans.

## Table of Contents

The allowance for loan losses for homogeneous non impaired loans is calculated using a systematic methodology with both a quantitative and a qualitative analysis that is applied on a quarterly basis. For purposes of our allowance methodology, the loan portfolio is segmented as described in Note 5 . Each segment has a distinct set of risk characteristics monitored by management. We further assess and monitor risk and performance at a more disaggregated level which includes our internal risk grading system for the commercial segments.

We first apply historical loss rates to pools of loans with similar risk characteristics. Loss rates are calculated by historical charge-offs that have occurred within each pool of loans over the lookback period ("LBP"), multiplied by the loss emergence period ("LEP"). The LBP represents the historical data period utilized to calculate loss rates. The LEP is an estimate of the average amount of time from the point at which a loss is incurred on a loan to the point at which the loss is confirmed. In general, the LEP will be shorter in an economic slowdown or recession and longer during times of economic stability or growth, as customers are better able to delay loss confirmation after a potential loss event has occurred. In conjunction with our annual review of the ALL assumptions, we update our study of LEPs for each portfolio segment using our loan charge-off history.

After consideration of the historic loss analysis, management applies additional qualitative adjustments so that the allowance for loan losses is reflective of the inherent losses that exist in the loan portfolio at the balance sheet date. Qualitative adjustments are made based upon size, trend, composition, and nature of loans; changes in lending policies and procedures, including underwriting standards and collection, charge-offs and recoveries; trends experienced in nonperforming and delinquent loans; current economic conditions in the Company's market; portfolio concentrations that may affect loss experience across one of more components of the portfolio; the effect of external factors such as competition, legal and regulatory requirements; and the experience, ability, and depth of lending management and staff. The evaluation of the various components of the allowance for loan losses requires considerable judgment in order to estimate inherent loss exposures. In addition, various regulatory agencies, as an integral component of their examination process, periodically review the Company's allowance for loan losses. Such agencies may require the Company to make loan grade changes as well as recognize additions to the allowance based on their examinations.

Management believes that the allowance for loan losses is adequate. While management uses available information to recognize loan losses, future additions to the allowance for loan losses may be necessary based on changes in economic conditions or changes in the values of properties securing loans in the process of foreclosure. In addition, various regulatory agencies, as an integral part of their examination process, periodically review the Company's allowance for loan losses. Such agencies may require the Company to recognize additions to the allowance for loan losses based on their judgments about information available to them at the time of their examination which may not be currently available to management.

## Premises and Equipment

Premises and equipment are stated at cost, less accumulated depreciation. Depreciation of premises and equipment is determined using the straight-line method over the estimated useful lives of the respective assets. Expenditures for maintenance, repairs, and minor replacements are charged to expense as incurred.

## Other Real Estate Owned

Other real estate owned ("OREO") consists of properties acquired through foreclosure or by acceptance of a deed in lieu of foreclosure. These assets are recorded at the lower of fair value of the asset acquired less estimated costs to sell or "cost" (defined as the fair value at initial foreclosure). At the time of foreclosure, or when foreclosure occurs in-substance, the excess, if any, of the loan over the fair market value of the assets received, less estimated selling costs, is charged to the allowance for loan losses and any subsequent valuation write-downs are charged to other expense. In connection with the determination of the allowance for loan losses and the valuation of OREO, management obtains appraisals for properties. Operating costs associated with the properties are charged to expense as incurred. Gains on the sale of OREO are included in income when title has passed and the sale has met the minimum down payment requirements prescribed by GAAP. The balance of OREO is recorded in other assets on the consolidated balance sheets.

## Goodwill and Other Intangible Assets

Goodwill represents the cost of acquired business in excess of the fair value of the related net assets acquired. Goodwill is not amortized but tested at the reporting unit level for impairment on an annual basis and on an interim basis or when events or circumstances dictate. The Company has elected June 30 as the annual impairment testing date for the insurance and retirement services reporting units and December 31 for the Bank reporting unit.

The Company has the option to first assess qualitative factors, by performing a step zero qualitative analysis, to determine whether the existence of events or circumstances leads to a determination that it is more likely than not that the fair value of a reporting unit is less than its carrying amount. If, after assessing the events or circumstances, the Company determines it is not more likely than not that the fair value of a reporting unit is greater than its carrying amount, the two-step impairment test is not required. If the Company concludes otherwise, the Company is required to perform the first step of the two-step impairment test. In the first step of the goodwill impairment test, the estimated fair value of a reporting unit is compared to the carrying amount in order to determine if impairment is indicated. If the estimated fair value exceeds the carrying amount, the reporting unit is not deemed to be impaired. If the estimated fair value is below the carrying value of the reporting unit, the second step of the goodwill impairment test is required to determine the amount of impairment. The second step of the goodwill impairment test determines the implied fair value of the goodwill that is compared to the carrying value of goodwill for the reporting unit to determine the amount of the impairment.

Intangible assets that have indefinite useful lives are not amortized, but are tested at least annually for impairment. Intangible assets that have finite useful lives are amortized over their useful lives. Core deposit intangibles and trust intangibles at the Company are amortized using the sum-of-the-years'-digits method. Covenants not to compete are amortized on a straight-line basis. Customer lists are amortized using an accelerated method. When facts and circumstances indicate potential impairment of amortizable intangible assets, the Company evaluates the recoverability of the asset carrying value, using estimates of undiscounted future cash flows over the remaining asset life. Any impairment loss is measured by the excess of carrying value over fair value.

Determining the fair value of a reporting unit under the first step of the goodwill impairment testing and determining the fair value of individual assets and liabilities of a reporting unit under the second step of the goodwill impairment test and in determining the fair value of other intangible assets are judgmental and often involve the use of significant estimates and assumptions. Estimates of fair value are primarily determined using the discounted cash flows method, which uses significant estimates and assumptions including projected future cash flows, discount rates reflecting the market rate of return and projected growth rates. Future events may impact such estimates and assumptions and could cause the Company to conclude that our goodwill or intangible assets have become impaired, which would result in recording an impairment loss.

## Bank-Owned Life Insurance

The Bank has purchased life insurance policies on certain employees, key executives and directors. Bank-owned life insurance is recorded at the amount that can be realized under the insurance contract at the balance sheet date, which is the cash surrender value adjusted for other charges or other amounts due that are probable at settlement.

## Treasury Stock

Treasury stock acquisitions are recorded at cost. Subsequent sales of treasury stock are recorded on an average cost basis. Gains on the sale of treasury stock are credited to additional paid-in-capital. Losses on the sale of treasury stock are charged to additional paid-in-capital to the extent of previous gains, otherwise charged to retained earnings.

## Income Taxes

Income taxes are accounted for under the asset and liability method. Deferred income taxes are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect on deferred taxes of a change in tax rates is recognized in income in the period that includes the enactment date. The Company recognizes interest accrued and penalties related to unrecognized tax benefits in income tax expense.

Tax positions are recognized as a benefit only if it is "more likely than not" that the tax position would be sustained in a tax examination, with a tax examination being presumed to occur. The amount recognized is the largest amount of tax benefit that is greater than 50 percent likely of being realized on examination. For tax positions not meeting the "more likely than not" test, no tax benefit is recorded.

## Pension Costs

The Company maintains a noncontributory, defined benefit pension plan covering substantially all employees, as well as supplemental employee retirement plans covering certain executives and a defined benefit postretirement healthcare plan that covers certain employees. Costs associated with these plans, based on actuarial computations of current and future benefits for employees, are charged to current operating expenses.

## Stock-Based Compensation

We maintain various long-term incentive stock benefit plans under which we grant stock options, restricted stock awards, and restricted stock units to certain directors and key employees. We recognize compensation expense in our consolidated statements of income over the requisite service period, based on the grant-date fair value of the award. For restricted stock awards and units, we recognize compensation expense ratably over the vesting period for the fair value of the award, measured at the grant date. The fair values of options are estimated using the Black-Scholes option pricing model.

The Company's stock-based employee compensation plan is described in Note 14.

## Earnings Per Share

Basic earnings per share ("EPS") excludes dilution and is computed by dividing income available to common stockholders by the weighted average number of common shares outstanding for the period. Diluted EPS reflects the potential dilution that could occur if securities or other contracts to issue common stock were exercised or converted into common stock or resulted in the issuance of common stock that then shared in the earnings of the entity (such as the Company's dilutive stock options and restricted stock).

## Comprehensive Income

At the Company, comprehensive income represents net income plus other comprehensive income (loss), which consists primarily of the net change in unrealized gains or losses on securities available for sale for the period and changes in the funded status of employee benefit plans. Accumulated other comprehensive (loss) income represents the net unrealized gains or losses on securities available for sale and the previously unrecognized portion of the funded status of employee benefit plans, net of income taxes, as of the consolidated balance sheet dates.

## Derivative Instruments and Hedging Activities

The Company records all derivatives on the balance sheet at fair value. The accounting for changes in the fair value of derivatives depends on the intended use of the derivative, whether the Company has elected to designate a derivative in a hedging relationship and apply hedge accounting and whether the hedging relationship has satisfied the criteria necessary to apply hedge accounting. Derivatives designated and qualifying as a hedge of the exposure to changes in the fair value of an asset, liability, or firm commitment attributable to a particular risk, such as interest rate risk, are considered fair value hedges. Derivatives designated and qualifying as a hedge of the exposure to variability in expected future cash flows, or other types of forecasted transactions, are considered cash flow hedges. Hedge accounting generally provides for the matching of the timing of gain or loss recognition on the hedging instrument with the recognition of the changes in the fair value of the hedged asset or liability that are attributable to the hedged risk in a fair value hedge or the earnings effect of the hedged forecasted transactions in a cash flow hedge. The Company may enter into derivative contracts that are intended to economically hedge certain of its risk, even though hedge accounting does not apply or the Company elects not to apply hedge accounting.

For derivatives designated as fair value hedges, changes in the fair value of the derivative and the hedged item related to the hedged risk are recognized in earnings. Any hedge ineffectiveness would be recognized in the income statement line item pertaining to the hedged item. For derivatives designated as cash flow hedges, changes in fair value of the effective portion of the cash flow hedges are reported in other comprehensive income. When the cash flows associated with the hedged item are realized, the gain or loss included in other comprehensive income is recognized in the consolidated statements of income.

When the Company purchases a portion of a commercial loan that has an existing interest rate swap, it enters a risk participation agreement with the counterparty and assumes the credit risk of the loan customer related to the swap. Any fee paid to the Company under a risk participation agreement is in consideration of the credit risk of the counterparties and is recognized in the income statement. Credit risk on the risk participation agreements is determined after considering the risk rating, probability of default and loss given default of the counterparties.

## Fair Value Measurements

Fair value is an exit price, representing the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants. Fair value measurements are not adjusted for transaction costs. A fair value hierarchy prioritizes the inputs to valuation techniques used to measure fair value. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurements) and the lowest priority to unobservable inputs (Level 3 measurements). The three levels of the fair value hierarchy are described below:

Level 1 - Unadjusted quoted prices in active markets that are accessible at the measurement date for identical, unrestricted assets or liabilities;

Level 2 - Quoted prices for similar assets or liabilities in active markets, quoted prices in markets that are not active, or inputs that are observable, either directly or indirectly, for substantially the full term of the asset or liability;

Level 3 - Prices or valuation techniques that require inputs that are both significant to the fair value measurement and unobservable (i.e., supported by little or no market activity).

A financial instrument's level within the fair value hierarchy is based on the lowest level of input that is significant to the fair value measurement.
The types of instruments valued based on quoted market prices in active markets include most U.S. government and agency securities, many other sovereign government obligations, liquid mortgage products, active listed equities and most money market securities. Such instruments are generally classified within Level 1 or Level 2 of the fair value hierarchy. The Company does not adjust the quoted price for such instruments.

The types of instruments valued based on quoted prices in markets that are not active, broker or dealer quotations, or alternative pricing sources with reasonable levels of price transparency include most investment-grade and high-yield corporate bonds, less liquid mortgage products, less liquid agency securities, less liquid listed equities, state, municipal and provincial obligations, and certain physical commodities. Such instruments are generally classified within Level 2 of the fair value hierarchy.

Level 3 is for positions that are not traded in active markets or are subject to transfer restrictions, valuations are adjusted to reflect illiquidity and/or nontransferability, and such adjustments are generally based on available market evidence. In the absence of such evidence, management's best estimate will be used. Management's best estimate consists of both internal and external support on certain Level 3 investments. Subsequent to inception, management only changes Level 3 inputs and assumptions when corroborated by evidence such as transactions in similar instruments, completed or pending third-party transactions in the underlying investment or comparable entities, subsequent rounds of financing, recapitalizations and other transactions across the capital structure, offerings in the equity or debt markets, and changes in financial ratios or cash flows.

## Other Financial Instruments

The Company is a party to certain other financial instruments with off-balance-sheet risk such as commitments to extend credit, unused lines of credit, as well as certain mortgage loans sold to investors with recourse. The Company's policy is to record such instruments when funded.

Standby letters of credit are conditional commitments issued to guarantee the performance of a customer to a third party. The credit risk involved in issuing letters of credit is essentially the same as that involved in extending loan facilities to customers. Under the standby letters of credit, the Company is required to make payments to the beneficiary of the letters of credit upon request by the beneficiary contingent upon the customer's failure to perform under the terms of the underlying contract with the beneficiary. Standby letters of credit typically have one year expirations with an option to renew upon annual review. The Company typically receives a fee for these transactions. The fair value of stand-by letters of credit is recorded upon inception.

## Loan Sales and Loan Servicing

Loan sales are recorded when the sales are funded. Mortgage servicing rights are recorded at fair value upon sale of the loan. Loans held for sale are recorded at the lower of cost or market.

## Repurchase Agreements

Repurchase agreements are accounted for as secured financing transactions since the Company maintains effective control over the transferred securities and the transfer meets the other criteria for such accounting. Obligations to repurchase securities sold are reflected as a liability in the consolidated balance sheets. The securities underlying the agreements are delivered to a custodial account for the benefit of the dealer or bank with whom each transaction is executed. The dealers or banks, who may sell, loan or otherwise dispose of such securities to other parties in the normal course of their operations, agree to resell to the Company the same securities at the maturities of the agreements.

## Trust Operations

Assets held by the Company in a fiduciary or agency capacity for its customers are not included in the accompanying consolidated balance sheets, since such assets are not assets of the Company. Trust income is recognized on the accrual method based on contractual rates applied to the balances of trust accounts.

## Reclassifications

Amounts in prior period consolidated financial statements are reclassified whenever necessary to confirm with current period presentation.

## Subsequent Events

The Company has evaluated subsequent events for potential recognition and/or disclosure and there were none identified.

## 2. Acquisitions

In 2016, the Company acquired Actuarial Designs \& Solutions, Inc. for total consideration of $\$ 3.0$ million and Columbia Ridge Capital Management, Inc., for total consideration of $\$ 1.3$ million. As part of the acquisitions, the Company recorded goodwill of $\$ 1.3$ million and $\$ 0.8$ million, respectively.

In 2015, the Company acquired Third Party Administrators, Inc., a retirement plan administration company for total consideration of $\$ 4.1$ million. As part of the acquisition, the Company recorded goodwill of $\$ 2.3$ million.

The amortized cost, estimated fair value, and unrealized gains and losses of AFS securities are as follows:

| (In thousands) | Amortized cost |  | Unrealized gains |  | $\begin{gathered} \text { Unrealized } \\ \text { losses } \end{gathered}$ |  | Estimated fair value |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| December 31, 2016 |  |  |  |  |  |  |  |  |
| Federal agency | \$ | 175,135 | \$ | 78 | \$ | 805 | \$ | 174,408 |
| State \& municipal |  | 47,053 |  | 153 |  | 480 |  | 46,726 |
| Mortgage-backed: |  |  |  |  |  |  |  |  |
| Government-sponsored enterprises |  | 513,814 |  | 3,345 |  | 2,492 |  | 514,667 |
| U.S. government agency securities |  | 14,955 |  | 411 |  | 189 |  | 15,177 |
| Collateralized mortgage obligations: |  |  |  |  |  |  |  |  |
| Government-sponsored enterprises |  | 513,431 |  | 532 |  | 7,688 |  | 506,275 |
| U.S. government agency securities |  | 60,822 |  | 184 |  | 708 |  | 60,298 |
| Other securities |  | 15,849 |  | 6,394 |  | 1,504 |  | 20,739 |
| Total securities AFS | \$ | 1,341,059 | \$ | 11,097 | \$ | 13,866 | \$ | 1,338,290 |
| December 31, 2015 |  |  |  |  |  |  |  |  |
| Federal agency | \$ | 312,580 | \$ | 203 | \$ | 1,511 | \$ | 311,272 |
| State \& municipal |  | 31,208 |  | 446 |  | 17 |  | 31,637 |
| Mortgage-backed: |  |  |  |  |  |  |  |  |
| Government-sponsored enterprises |  | 398,086 |  | 4,141 |  | 1,068 |  | 401,159 |
| U.S. government securities |  | 8,191 |  | 560 |  | 14 |  | 8,737 |
| Collateralized mortgage obligations: |  |  |  |  |  |  |  |  |
| Government-sponsored enterprises |  | 364,936 |  | 931 |  | 1,828 |  | 364,039 |
| U.S. government securities |  | 40,699 |  | 348 |  | 115 |  | 40,932 |
| Other securities |  | 13,637 |  | 3,249 |  | 118 |  | 16,768 |
| Total securities AFS | \$ | 1,169,337 | \$ | 9,878 | \$ | 4,671 | \$ | 1,174,544 |

The components of net realized gains and losses on the sale of AFS securities are as follows. These amounts were reclassified out of accumulated other comprehensive income (loss) and into earnings:

| (In thousands) | Years ended December 31 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2016 |  |  | 2015 |  | 2014 |
| Gross realized gains | \$ | 683 | \$ | 3,099 | \$ | 49 |
| Gross realized (losses) |  | $(1,327)$ |  | (12) |  | - |
| Net AFS realized (losses) gains | \$ | (644) | \$ | 3,087 | \$ | 49 |

In addition to (losses) gains from sales transactions, the Company also recorded gains from calls on AFS securities of approximately $\$ 0.1$ million for each of the years ended December 31, 2016, December 31, 2015, December 31, 2014.

At December 31, 2016 and 2015, AFS and HTM securities with amortized costs totaling $\$ 1.5$ billion and $\$ 1.4$ billion, respectively, were pledged to secure public deposits and for other purposes required or permitted by law. Additionally, at December 31, 2016, AFS and HTM securities with an amortized cost of $\$ 235.6$ million were pledged as collateral for securities sold under the repurchase agreements.

The amortized cost, estimated fair value, and unrealized gains and losses of HTM securities are as follows:

| (In thousands) | Amortized cost |  | Unrealized gains |  | Unrealizedlosses |  | Estimated fair value |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| December 31, 2016 |  |  |  |  |  |  |  |  |
| Mortgage-backed: |  |  |  |  |  |  |  |  |
| Government-sponsored enterprises | \$ | 96,668 |  | - | \$ | 1,176 | \$ | 95,492 |
| U.S. government agency securities |  | 533 |  | 87 |  | - |  | 620 |
| Collateralized mortgage obligations: |  |  |  |  |  |  |  |  |
| Government-sponsored enterprises |  | 225,213 |  | 1,060 |  | 1,508 |  | 224,765 |
| State \& municipal |  | 205,534 |  | 434 |  | 1,795 |  | 204,173 |
| Total HTM securities | \$ | 527,948 | \$ | 1,581 | \$ | 4,479 | \$ | 525,050 |
| December 31, 2015 |  |  |  |  |  |  |  |  |
| Mortgage-backed: |  |  |  |  |  |  |  |  |
| Government-sponsored enterprises | \$ | 9,432 | \$ | - | \$ | 107 | \$ | 9,325 |
| U.S. government agency securities |  | 611 |  | 95 |  | - |  | 706 |
| Collateralized mortgage obligations: |  |  |  |  |  |  |  |  |
| Government-sponsored enterprises |  | 272,550 |  | 1,411 |  | 1,560 |  | 272,401 |
| State \& municipal |  | 188,438 |  | 2,288 |  | 18 |  | 190,708 |
| Total HTM securities | \$ | 471,031 | \$ | 3,794 | \$ | 1,685 | \$ | 473,140 |

At December 31, 2016 and 2015, all of the mortgaged-backed HTM securities were comprised of U.S. government agency securities.

The following table sets forth information with regard to investment securities with unrealized losses at December 31, 2016 and 2015 , segregated according to the length of time the securities had been in a continuous unrealized loss position:

| Less than 12 months |  |  | 12 months or longer |  |  | Total |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Fair <br> Value | Unrealized losses | Number <br> of <br> Positions | Fair <br> Value | Unrealized losses | $\begin{gathered} \hline \begin{array}{c} \text { Number } \\ \text { of } \\ \text { Positions } \end{array} \end{gathered}$ | Fair <br> Value | Unrealized losses | $\begin{gathered} \hline \begin{array}{c} \text { Number } \\ \text { of } \\ \text { Positions } \end{array} \end{gathered}$ |

## December 31,

## 2016

AFS securities:

| Federal agency | \$ | 119,363 | \$ | (805) | 10 | \$ | - | \$ | - | - | \$ | 119,363 | \$ | (805) | 10 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| State \& municipal |  | 31,873 |  | (478) | 55 |  | 483 |  | (2) | 1 |  | 32,356 |  | (480) | 56 |
| Mortgagebacked |  | 277,524 |  | $(2,668)$ | 49 |  | 985 |  | (13) | 4 |  | 278,509 |  | $(2,681)$ | 53 |
| Collateralized mortgage obligations |  | 473,746 |  | $(8,396)$ | 57 |  | - |  | - | - |  | 473,746 |  | $(8,396)$ | 57 |
| Other securities |  | - |  | - | - |  | 4,363 |  | $(1,504)$ | 2 |  | 4,363 |  | $(1,504)$ | 2 |
| Total securities with unrealized losses | \$ | 902,506 | \$ | $(12,347)$ | 171 | \$ | 5,831 | \$ | $(1,519)$ | 7 | \$ | 908,337 | \$ | $(13,866)$ | 178 |

## HTM

## securities:

| Mortgagebacked | \$ | 95,492 | \$ | $(1,176)$ | 5 | \$ | - | \$ | - | - | \$ | 95,492 | \$ | $(1,176)$ | 5 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Collateralized mortgage obligations |  | 108,587 |  | (319) | 12 |  | 35,209 |  | $(1,189)$ | 4 |  | 143,796 |  | $(1,508)$ | 16 |
| State \& municipal |  | 81,984 |  | $(1,795)$ | 155 |  | - |  | - | - |  | 81,984 |  | $(1,795)$ | 155 |
| Total securities with unrealized losses | \$ | 286,063 | \$ | $(3,290)$ | 172 | \$ | 35,209 | \$ | $(1,189)$ | 4 | \$ | 321,272 | \$ | $(4,479)$ | 176 |


| $\begin{aligned} & \text { December 31, } \\ & 2015 \end{aligned}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| AFS securities: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Federal agency | \$ | 186,685 | \$ | $(1,312)$ | 15 | \$ | 19,801 | \$ | (199) | 2 | \$ | 206,486 | \$ | $(1,511)$ | 17 |
| State \& municipal |  | 4,599 |  | (14) | 7 |  | 502 |  | (3) | 1 |  | 5,101 |  | (17) | 8 |
| Mortgagebacked |  | 177,270 |  | $(1,068)$ | 33 |  | 1,066 |  | (14) | 5 |  | 178,336 |  | $(1,082)$ | 38 |
| Collateralized mortgage obligations |  | 256,265 |  | $(1,889)$ | 24 |  | 5,218 |  | (54) | 2 |  | 261,483 |  | $(1,943)$ | 26 |
| Other securities |  | - |  | - | - |  | 3,235 |  | (118) | 2 |  | 3,235 |  | (118) | 2 |
| Total securities with unrealized losses | \$ | 624,819 | \$ | $(4,283)$ | 79 | \$ | 29,822 | \$ | (388) | 12 | \$ | 654,641 | \$ | $(4,671)$ | 91 |

## HTM

securities:

| Mortgagebacked | \$ | 9,325 | \$ | (107) | 1 | \$ | - | \$ | - | - | \$ | 9,325 | \$ | (107) |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Collateralized mortgage obligations |  | 105,604 |  | (281) | 12 |  | 41,523 |  | $(1,279)$ | 4 |  | 147,127 |  | $(1,560)$ |  |
| State \& municipal |  | 2,200 |  | (18) | 3 |  | - |  | - | - |  | 2,200 |  | (18) |  |
| Total securities | \$ | 117,129 | \$ | (406) | 16 | \$ | 41,523 | \$ | $(1,279)$ | 4 | \$ | 158,652 | \$ | $(1,685)$ | 20 |

[^2]Declines in the fair value of HTM and AFS securities below their cost that are deemed to be other-than-temporary are reflected in earnings as realized losses or in other comprehensive income, depending on whether the Company intends to sell the security or more likely than not will be required to sell the security before recovery of its amortized cost basis less any current-period credit loss, the OTTI shall be recognized in earnings equal to the entire difference between the investment's amortized cost basis and its fair value at the balance sheet date. If the Company does not intend to sell the security and it is not more likely than not that the entity will be required to sell the security before recovery of its amortized cost basis less any current-period credit loss, the OTTI shall be separated into (a) the amount representing the credit loss and (b) the amount related to all other factors. The amount of the total OTTI related to the credit loss shall be recognized in earnings. The amount of the total OTTI related to other factors shall be recognized in other comprehensive income, net of applicable taxes.

In estimating OTTI losses, management considers, among other things, (i) the length of time and the extent to which the fair value has been less than cost, (ii) the financial condition and near-term prospects of the issuer and (iii) the historical and implied volatility of the fair value of the security.

Management has the intent to hold the securities classified as HTM until they mature, at which time it is believed the Company will receive full value for the securities. The unrealized losses on HTM debt securities are due to increases in market interest rates over the yields available at the time the underlying securities were purchased. When necessary, the Company has performed a discounted cash flow analysis to determine whether or not it will receive the contractual principal and interest on certain securities. The fair value is expected to recover as the bonds approach their maturity date or repricing date or if market yields for such investments decline.

Management also has the intent to hold and will not be required to sell, the securities classified as AFS for a period of time sufficient for a recovery of cost, which may be until maturity. The unrealized losses on AFS debt securities are due to increases in market interest rates over the yields available at the time the underlying securities were purchased. When necessary, the Company has performed a discounted cash flow analysis to determine whether or not it will receive the contractual principal and interest on certain securities. The unrealized losses on equity securities are due to declines in the fair value below the cost basis of the securities. For AFS debt and equity securities, the Company considers a decline in fair value to be other-than-temporary if it is probable that the Company will not recover its cost basis. For equity securities, OTTI losses are recognized in earnings if the Company intends to sell the security. In other cases the Company considers the relevant factors noted above, as well as the Company's intent and ability to retain its investment for a period of time sufficient to allow for any anticipated recovery in market value, and whether evidence exists to support a realizable value equal to or greater than the cost basis. Any impairment loss on an equity security is equal to the full difference between the cost basis and the fair value of the security.

As of December 31, 2016 and 2015, management believes the impairments detailed in the table above are temporary and no OTTI losses have been realized in the Company's consolidated statements of income.

The following tables set forth information with regard to contractual maturities of debt securities at December 31, 2016:

| (In thousands) | Amortized cost |  | Estimated fair value |  |
| :---: | :---: | :---: | :---: | :---: |
| AFS debt securities: |  |  |  |  |
| Within one year | \$ | 67,803 | \$ | 67,877 |
| From one to five years |  | 162,913 |  | 162,754 |
| From five to ten years |  | 144,957 |  | 146,014 |
| After ten years |  | 949,537 |  | 940,906 |
|  | \$ | 1,325,210 | \$ | 1,317,551 |
| HTM debt securities: |  |  |  |  |
| Within one year | \$ | 37,187 | \$ | 37,199 |
| From one to five years |  | 27,956 |  | 28,019 |
| From five to ten years |  | 122,228 |  | 121,697 |
| After ten years |  | 340,577 |  | 338,135 |
|  | \$ | 527,948 | \$ | 525,050 |

Maturities of mortgage-backed, collateralized mortgage obligations and asset-backed securities are stated based on their estimated average lives. Actual maturities may differ from estimated average lives or contractual maturities because, in certain cases, borrowers have the right to call or prepay obligations with or without call or prepayment penalties.

Except for U.S. Government securities, there were no holdings, when taken in the aggregate, of any single issuer that exceeded $10 \%$ of consolidated stockholders' equity at December 31, 2016 and December 31, 2015.

A summary of loans, net of deferred fees and origination costs, by category is as follows:

|  | At December 31, |  |  |
| :--- | ---: | ---: | ---: |
| (In thousands) | $\mathbf{2 0 1 6}$ | $\mathbf{2 0 1 5}$ |  |
| Residential real estate mortgages | $\mathbf{\$}$ | $\mathbf{1 , 2 6 2 , 6 1 4}$ | $\$$ |
| Commercial | $\mathbf{1 , 2 4 2 , 7 0 1}$ | $1,159,780$ |  |
| Commercial real estate | $\mathbf{1 , 5 4 3 , 3 0 1}$ | $1,430,618$ |  |
| Consumer | $\mathbf{1 , 6 4 1 , 6 5 7}$ | $1,568,204$ |  |
| Home equity | $\mathbf{5 0 7 , 7 8 4}$ | 528,442 |  |
| Total loans | $\mathbf{\$}$ | $\mathbf{6 , 1 9 8 , 0 5 7}$ | $\$$ |

Included in the above loans are net deferred loan origination costs totaling $\$ 40.3$ million and $\$ 38.7$ million at December 31, 2016 and 2015, respectively. The Company had $\$ 0.6$ million residential loans held for sale as of December 31, 2016. The Company had no residential loans held for sale as of December 31, 2015.

The total amount of loans serviced by the Company for unrelated third parties was $\$ 604.0$ million and $\$ 616.1$ million at December 31, 2016 and 2015, respectively. At December 31, 2016 and 2015, the Company had $\$ 0.9$ million and $\$ 1.1$ million, respectively, of mortgage servicing rights.

At December 31, 2016 and 2015, the Company serviced $\$ 28.5$ million and $\$ 25.1$ million, respectively, of agricultural loans sold with recourse. Due to sufficient collateral on these loans, no reserve is considered necessary at December 31, 2016 and 2015.

FHLB advances are collateralized by a blanket lien on the Company's residential real estate mortgages.
In the ordinary course of business, the Company has made loans at prevailing rates and terms to directors, officers, and other related parties. Such loans, in management's opinion, do not present more than the normal risk of collectability or incorporate other unfavorable features. The aggregate amount of loans outstanding to qualifying related parties and changes during the years are summarized as follows:

| (In thousands) | $\mathbf{2 0 1 6}$ |  | $\mathbf{2 0 1 5}$ |
| :--- | :---: | ---: | :---: |
| Balance at January 1 | $\mathbf{2 , 3 4 6}$ | $\$$ | 3,576 |
| New loans | $\mathbf{9 3 6}$ | 390 |  |
| Adjustment due to change in composition of related parties | $\mathbf{( 4 0 6 )}$ | $(265)$ |  |
| Repayments | $\mathbf{( 8 2 6 )}$ | $(1,355)$ |  |
| Balance at December 31 | $\mathbf{\$}$ | $\mathbf{2 , 0 5 0}$ | $\$$ |
|  |  |  |  |

## 5. Allowance for Loan Losses and Credit Quality of Loans

## Allowance for Loan Losses

The allowance for loan losses is maintained at a level estimated by management to provide adequately for risk of probable losses inherent in the current loan portfolio. The adequacy of the allowance for loan losses is continuously monitored. It is assessed for adequacy using a methodology designed to ensure the level of the allowance reasonably reflects the loan portfolio's risk profile. It is evaluated to ensure that it is sufficient to absorb all reasonably estimable credit losses inherent in the current loan portfolio.

To develop and document a systematic methodology for determining the allowance for loan losses, the Company has divided the loan portfolio into three segments, each with different risk characteristics and methodologies for assessing risk. Those segments are further segregated between our loans accounted for under the amortized cost method (referred to as "originated" loans) and loans acquired in a business combination (referred to as "acquired" loans). Each portfolio segment is broken down into class segments where appropriate. Class segments contain unique measurement attributes, risk characteristics and methods for monitoring and assessing risk that are necessary to develop the allowance for loan losses. Unique characteristics such as borrower type, loan type, collateral type, and risk characteristics define each class segment. The following table illustrates the portfolio and class segments for the Company's loan portfolio:

| Portfolio |  |
| :--- | :--- |
| Commercial Loans | Commercial <br> Commercial Real Estate <br> Agricultural <br> Agricultural Real Estate <br> Business Banking |
| Consumer Loans | Indirect <br> Home Equity <br> Direct |
| Residential Real Estate Mortgages |  |

## Table of Contents

## COMMERCIAL LOANS

Commercial - The Company offers a variety of loan options to meet the specific needs of our commercial customers including term loans, time notes and lines of credit. Such loans are made available to businesses for working capital such as inventory and receivables, business expansion and equipment purchases. Generally, a collateral lien is placed on equipment or other assets owned by the borrower. These loans carry a higher risk than commercial real estate loans by the nature of the underlying collateral, which can be business assets such as equipment and accounts receivable and is generally less liquid than real estate. To reduce the risk, management also attempts to secure real estate as collateral and obtain personal guarantees of the borrowers.

Commercial Real Estate - The Company offers commercial real estate loans to finance real estate purchases, refinancings, expansions and improvements to commercial properties. Commercial real estate loans are made to finance the purchases of real property which generally consists of real estate with completed structures. These commercial real estate loans are secured by first liens on the real estate, which may include apartments, commercial structures, housing businesses, healthcare facilities, and other non owner-occupied facilities. These loans are typically less risky than commercial loans, since they are secured by real estate and buildings. The Company's underwriting analysis includes credit verification, independent appraisals, a review of the borrower's financial condition, and a detailed analysis of the borrower's underlying cash flows. These loans are typically originated in amounts of no more than $80 \%$ of the appraised value of the property.

Agricultural - The Company offers a variety of agricultural loans to meet the needs of our agricultural customers including term loans, time notes, and lines of credit. These loans are made to purchase livestock, purchase and modernize equipment, and finance seasonal crop expenses. Generally, a collateral lien is placed on the livestock, equipment, produce inventories, and/or receivables owned by the borrower. These loans may carry a higher risk than commercial and agricultural real estate loans due to the industry price volatility and the perishable nature of the underlying collateral. To reduce these risks, management may attempt to secure these loans with additional real estate collateral, obtain personal guarantees of the borrowers, or obtain government loan guarantees to provide further support.

Agricultural Real Estate - The Company offers real estate loans to our agricultural customers to finance farm related real estate purchases, refinancings, expansions, and improvements to agricultural properties. Agricultural real estate loans are made to finance the purchases and improvements of farm properties that generally consist of barns, production facilities, and land. The agricultural real estate loans are secured by first liens on the farm real estate. Because they are secured by land and buildings, these loans may be less risky than agricultural loans. The Company's underwriting analysis includes credit verification, independent appraisals, a review of the borrower's financial condition, and a detailed analysis of the borrower's underlying cash flows. These loans are typically originated in amounts of no more than $75 \%$ of the appraised value of the property. Government loan guarantees may be obtained to provide further support.

Business Banking - The Company offers a variety of loan options to meet the specific needs of our business banking customers including term loans, business banking mortgages and lines of credit. Such loans are generally less than $\$ 0.8$ million and are made available to businesses for working capital such as inventory and receivables, business expansion, equipment purchases, and agricultural needs. Generally, a collateral lien is placed on equipment or other assets owned by the borrower such as inventory and/or receivables. These loans carry a higher risk than commercial loans due to the smaller size of the borrower and lower levels of capital. To reduce the risk, the Company obtains personal guarantees of the owners for a majority of the loans.

## CONSUMER LOANS

Indirect - The Company maintains relationships with many dealers primarily in the communities that we serve. Through these relationships, the company finances the purchases of automobiles and recreational vehicles (such as campers, boats, etc.) indirectly through dealer relationships. Approximately $70 \%$ of the indirect relationships represent automobile financing. Most of these loans carry a fixed rate of interest with principal repayment terms typically ranging from three to six years, based upon the nature of the collateral and the size of the loan. The majority of indirect consumer loans are underwritten on a secured basis using the underlying collateral being financed.

Home Equity - The Company offers fixed home equity loans as well as home equity lines of credit to consumers to finance home improvements, debt consolidation, education and other uses. Consumers are able to borrower up to $85 \%$ of the equity in their homes. The Company originates home equity lines of credit and second mortgage loans (loans secured by a second lien position on one-to-four-family residential real estate). These loans carry a higher risk than first mortgage residential loans as they are in a second position with respect to collateral. Risk is reduced through underwriting criteria, which include credit verification, appraisals, a review of the borrower's financial condition, and personal cash flows. A security interest, with title insurance when necessary, is taken in the underlying real estate.

Direct - The Company offers a variety of consumer installment loans to finance vehicle purchases, mobile home purchases and personal expenditures. Most of these loans carry a fixed rate of interest with principal repayment terms typically ranging from one to ten years, based upon the nature of the collateral and the size of the loan. The majority of consumer loans are underwritten on a secured basis using the underlying collateral being financed or a customer's deposit account. In addition to installment loans, the Company also offers personal lines of credit and overdraft protection. A minimal amount of loans are unsecured, which carry a higher risk of loss.

## Table of Contents

## RESIDENTIAL REAL ESTATE LOANS

Residential real estate loans consist primarily of loans secured by first or second deeds of trust on primary residences. We originate adjustable-rate and fixedrate, one-to-four-family residential real estate loans for the construction, purchase or refinancing of a mortgage. These loans are collateralized by owneroccupied properties located in the Company's market area. When market conditions are favorable, for longer term, fixed-rate residential mortgages without escrow, the Company retains the servicing, but sells the right to receive principal and interest to Freddie Mac when market conditions are favorable. This practice allows the Company to manage interest rate risk, liquidity risk, and credit risk. Loans on one-to-four-family residential real estate are generally originated in amounts of no more than $85 \%$ of the purchase price or appraised value (whichever is lower), or have private mortgage insurance. Mortgage title insurance and hazard insurance are normally required. Construction loans have a unique risk, because they are secured by an incomplete dwelling. This risk is reduced through periodic site inspections, including one at each loan draw period.

## Allowance for Loan Loss Calculation

Management considers the accounting policy relating to the allowance for loan losses to be a critical accounting policy given the inherent uncertainty in evaluating the levels of the allowance required to cover credit losses in the portfolio and the material effect that such judgments can have on the consolidated results of operations.

In addition, various regulatory agencies, as an integral component of their examination process, periodically review the Company's allowance for loan losses. Such agencies may require the Company to make loan grade changes as well as recognize additions to the allowance based on their examinations.

After a thorough consideration of the factors discussed above, any required additions to the allowance for loan losses are made periodically by charges to the provision for loan losses. These charges are necessary to maintain the allowance at a level which management believes is reasonably reflective of overall inherent risk of probable loss in the portfolio. While management uses available information to recognize losses on loans, additions to the allowance may fluctuate from one reporting period to another. These fluctuations are reflective of changes in risk associated with portfolio content and/or changes in management's assessment of any or all of the determining factors discussed above.

The following table illustrates the changes in the allowance for loan losses by portfolio segment for the years ended December 31, 2016, 2015 and 2014:

| (In thousands) | Commercial Loans |  | Consumer Loans |  | Residential Real Estate Mortgages |  | Unallocated |  | Total |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Balance as of December 31, 2015 | \$ | 25,545 | \$ | 29,253 | \$ | 7,960 | \$ | 260 | \$ | 63,018 |
| Charge-offs |  | $(4,592)$ |  | $(23,364)$ |  | $(1,343)$ |  | - |  | $(29,299)$ |
| Recoveries |  | 1,887 |  | 3,870 |  | 293 |  | - |  | 6,050 |
| Provision |  | 2,604 |  | 23,616 |  | (529) |  | (260) |  | 25,431 |
| Ending Balance as of December 31, 2016 | \$ | 25,444 | \$ | 33,375 | \$ | 6,381 | \$ | - | \$ | 65,200 |
|  |  |  |  |  |  |  |  |  |  |  |
| Balance as of December 31, 2014 | \$ | 32,433 | \$ | 26,720 | \$ | 7,130 | \$ | 76 | \$ | 66,359 |
| Charge-offs |  | $(5,718)$ |  | $(18,140)$ |  | $(2,229)$ |  | - |  | $(26,087)$ |
| Recoveries |  | 1,014 |  | 3,127 |  | 320 |  | - |  | 4,461 |
| Provision |  | $(2,184)$ |  | 17,546 |  | 2,739 |  | 184 |  | 18,285 |
| Ending Balance as of December 31, 2015 | \$ | 25,545 | \$ | 29,253 | \$ | 7,960 | \$ | 260 | \$ | 63,018 |
|  |  |  |  |  |  |  |  |  |  |  |
| Balance as of December 31, 2013 | \$ | 35,090 | \$ | 27,694 | \$ | 6,520 | \$ | 130 | \$ | 69,434 |
| Charge-offs |  | $(9,414)$ |  | $(16,642)$ |  | $(1,417)$ |  | - |  | $(27,473)$ |
| Recoveries |  | 1,774 |  | 2,800 |  | 285 |  | - |  | 4,859 |
| Provision |  | 4,983 |  | 12,868 |  | 1,742 |  | (54) |  | 19,539 |
| Ending Balance as of December 31, 2014 | \$ | 32,433 | \$ | 26,720 | \$ | 7,130 |  | 76 | \$ | 66,359 |

For acquired loans, to the extent that we experience deterioration in borrower credit quality resulting in a decrease in our expected cash flows subsequent to acquisition of the loans, an allowance for loan losses would be established based on our estimate of future credit losses over the remaining life of the loans. The allowance for loan losses for the acquired loan portfolio totaled $\$ 0.7$ million as of December 31, 2016 and December 31, 2015. Net charge-offs related to acquired loans totaled approximately $\$ 0.5$ million, $\$ 2.7$ million, and $\$ 4.8$ million during the years ended December 31, 2016, December 31, 2015 and December 31, 2014, respectively, and are included in the table above.

The following table illustrates the allowance for loan losses and the recorded investment by portfolio segment as of December 31, 2016 and 2015:

| (In thousands) | CommercialLoans |  | ConsumerLoans |  | Residential <br> Real Estate <br> Mortgages |  | Unallocated |  | Total |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| As of December 31, 2016 |  |  |  |  |  |  |  |  |  |  |
| Allowance for loan losses | \$ | 25,444 | \$ | 33,375 | \$ | 6,381 | \$ | - | \$ | 65,200 |
| Allowance for loans individually evaluated for impairment |  | 1,517 |  |  |  | - |  | - |  | 1,517 |
| Allowance for loans collectively evaluated for impairment | \$ | 23,927 | \$ | 33,375 | \$ | 6,381 | \$ | - | \$ | 63,683 |
| Ending balance of loans | \$ | 2,786,002 | \$ | 2,149,441 | \$ | 1,262,614 |  |  | \$ | 6,198,057 |
| Ending balance of originated loans individually evaluated for impairment |  | 13,070 |  | 8,488 |  | 6,111 |  |  |  | 27,669 |
| Ending balance of acquired loans individually evaluated for impairment |  | 1,205 |  | - |  | - |  |  |  | 1,205 |
| Ending balance of acquired loans collectively evaluated for impairment |  | 236,413 |  | 63,005 |  | 199,471 |  |  |  | 498,889 |
| Ending balance of originated loans collectively evaluated for impairment | \$ | 2,535,314 | \$ | 2,077,948 | \$ | 1,057,032 |  |  | \$ | 5,670,294 |
|  |  |  |  |  |  |  |  |  |  |  |
| As of December 31, 2015 |  |  |  |  |  |  |  |  |  |  |
| Allowance for loan losses | \$ | 25,545 | \$ | 29,253 | \$ | 7,960 | \$ | 260 | \$ | 63,018 |
| Allowance for loans individually evaluated for impairment |  | 2,005 |  | - |  | - |  | - |  | 2,005 |
| Allowance for loans collectively evaluated for impairment | \$ | 23,540 | \$ | 29,253 | \$ | 7,960 | \$ | 260 | \$ | 61,013 |
| Ending balance of loans | \$ | 2,589,707 | \$ | 2,096,646 | \$ | 1,196,780 |  |  | \$ | 5,883,133 |
| Ending balance of originated loans individually evaluated for impairment |  | 12,253 |  | 7,693 |  | 6,017 |  |  |  | 25,963 |
| Ending balance of acquired loans individually evaluated for impairment |  | 1,205 |  | - |  | - |  |  |  | 1,205 |
| Ending balance of acquired loans collectively evaluated for impairment |  | 284,524 |  | 95,427 |  | 230,358 |  |  |  | 610,309 |
| Ending balance of originated loans collectively evaluated for impairment | \$ | 2,291,725 | \$ | 1,993,526 | \$ | 960,405 |  |  | \$ | 5,245,656 |

The following table sets forth information with regard to past due and nonperforming loans by loan class as of December 31, 2016 and 2015:

| (In thousands) | 31-60 Days <br> Past Due <br> Accruing |  | 61-90 Days <br> Past Due <br> Accruing |  | Greater <br> Than 90 Days Past Due Accruing |  | Total Past Due Accruing |  | Nonaccrual |  | Current |  | Recorded Total Loans |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ORIGINATED |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Commercial Loans |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Commercial | \$ | 33 | \$ | 5 | \$ | - | \$ | 38 | \$ | 2,964 | \$ | 650,568 | \$ | 653,570 |
| Commercial Real Estate | Commercial Real |  |  |  |  |  |  | - |  | 7,935 |  | 1,343,854 |  | 1,351,789 |
| Agricultural |  | - |  | - |  | - |  | - |  | 730 |  | 37,186 |  | 37,916 |
| Agricultural Real |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Business Banking |  | 1,609 |  | 318 |  | - |  | 1,927 |  | 4,860 |  | 465,900 |  | 472,687 |
| Total Commercial |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Loans |  | 1,642 |  | 323 |  | - |  | 1,965 |  | 18,292 |  | 2,528,127 |  | 2,548,384 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Consumer Loans |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Indirect |  | 19,253 |  | 4,185 |  | 2,499 |  | 25,937 |  | 2,145 |  | 1,538,593 |  | 1,566,675 |
| Home Equity |  | 3,416 |  | 1,065 |  | 528 |  | 5,009 |  | 2,851 |  | 448,797 |  | 456,657 |
| Direct |  | 452 |  | 125 |  | 20 |  | 597 |  | 107 |  | 62,400 |  | 63,104 |
| Total Consumer Loans |  | 23,121 |  | 5,375 |  | 3,047 |  | 31,543 |  | 5,103 |  | 2,049,790 |  | 2,086,436 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Residential Real Estate |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Total Originated |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Loans | \$ | 27,488 | \$ | 5,870 | \$ | 4,453 | \$ | 37,811 | \$ | 30,077 | \$ | 5,630,075 | \$ | 5,697,963 |

## ACQUIRED

| Commercial Loans |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Commercial | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - | \$ | 49,447 | \$ | 49,447 |
| Commercial Real |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Business Banking |  | 236 |  | - |  | - |  | 236 |  | 804 |  | 49,842 |  | 50,882 |
| Total Commercial Loans |  | 236 |  | - |  | - |  | 236 |  | 2,695 |  | 234,687 |  | 237,618 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Consumer Loans |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Indirect |  | 100 |  | 5 |  | - |  | 105 |  | 47 |  | 8,541 |  | 8,693 |
| Home Equity |  | 254 |  | 53 |  | 30 |  | 337 |  | 237 |  | 50,553 |  | 51,127 |
| Direct |  | 30 |  | 2 |  | - |  | 32 |  | 20 |  | 3,133 |  | 3,185 |
| Total Consumer Loans |  | 384 |  | 60 |  | 30 |  | 474 |  | 304 |  | 62,227 |  | 63,005 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Residential Real Estate |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Total Acquired Loans |  | 1,229 |  | 88 |  | 357 |  | 1,674 |  | 5,635 |  | 492,785 |  | 500,094 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Total Loans | \$ | 28,717 | \$ | 5,958 | \$ | 4,810 | \$ | 39,485 | \$ | 35,712 | \$ | 6,122,860 | \$ | 6,198,057 |


| (In thousands) | 31-60 Days Past Due Accruing |  | 61-90 Days <br> Past Due <br> Accruing |  | Greater <br> Than 90 Days Past Due Accruing |  | Total Past Due Accruing |  | Nonaccrual |  | Current |  | Recorded Total Loans |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ORIGINATED $\quad \square$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Commercial Loans |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Commercial | \$ | 782 | \$ | 23 | \$ | - | \$ | 805 | \$ | 2,817 | \$ | 640,696 | \$ | 644,318 |
| Commercial Real \$ $\$$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Agricultural |  | 94 |  | - |  | - |  | 94 |  | 897 |  | 33,633 |  | 34,624 |
| Agricultural Real |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Business Banking |  | 912 |  | 394 |  | - |  | 1,306 |  | 4,247 |  | 395,368 |  | 400,921 |
| Total Commercial Loans |  | 1,827 |  | 449 |  | - |  | 2,276 |  | 14,553 |  | 2,287,149 |  | 2,303,978 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Consumer Loans |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Indirect |  | 15,731 |  | 2,963 |  | 2,271 |  | 20,965 |  | 1,786 |  | 1,454,499 |  | 1,477,250 |
| Home Equity |  | 3,396 |  | 1,671 |  | 340 |  | 5,407 |  | 4,835 |  | 454,473 |  | 464,715 |
| Direct |  | 425 |  | 201 |  | 28 |  | 654 |  | 49 |  | 58,551 |  | 59,254 |
| Total Consumer Loans |  | 19,552 |  | 4,835 |  | 2,639 |  | 27,026 |  | 6,670 |  | 1,967,523 |  | 2,001,219 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Residential Real Estate Mortgages | Residential Real Estate |  |  |  |  |  |  | 4,362 |  | 7,713 |  | 954,347 |  | 966,422 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Total Originated Loans | \$ | 24,680 | \$ | 5,649 | \$ | 3,335 | \$ | 33,664 | \$ | 28,936 | \$ | 5,209,019 | \$ | 5,271,619 |

## ACQUIRED

| Commercial Loans |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Commercial | \$ | - | \$ | - | \$ | - | \$ | - | \$ | - | \$ | 68,991 | \$ | 68,991 |
| Commercial Real |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Business Banking |  | 288 |  | - |  | - |  | 288 |  | 307 |  | 49,200 |  | 49,795 |
| Total Commercial Loans |  | 288 |  | - |  | - |  | 288 |  | 1,620 |  | 283,821 |  | 285,729 |
| Consumer Loans |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Indirect |  | 143 |  | 11 |  | 1 |  | 155 |  | 104 |  | 27,516 |  | 27,775 |
| Home Equity |  | 327 |  | 132 |  | - |  | 459 |  | 457 |  | 62,811 |  | 63,727 |
| Direct |  | 76 |  | 20 |  | - |  | 96 |  | 43 |  | 3,786 |  | 3,925 |
| Total Consumer Loans |  | 546 |  | 163 |  | 1 |  | 710 |  | 604 |  | 94,113 |  | 95,427 |
| Residential Real Estate |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  | 230,358 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Total Acquired Loans |  | $\underline{\text { 2,277 }}$ |  | 456 |  | 327 |  | $\stackrel{3,060}{ }$ |  | 4,808 |  | $\underline{\text { 603,646 }}$ |  | $\underline{611,514}$ |
|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Total Loans | \$ | $\underline{26,957}$ | \$ | 6,105 | \$ | 3,662 | \$ | 36,724 | \$ | 33,744 | \$ | 5,812,665 | \$ | 5,883,133 |

There were no material commitments to extend further credit to borrowers with nonperforming loans as of December 31, 2016 and 2015.
The methodology used to establish the allowance for loan losses on impaired loans incorporates specific allocations on loans analyzed individually. Classified loans, including all TDRs and nonaccrual commercial loans that are graded Substandard or below, with outstanding balances of $\$ 0.8$ million or more are evaluated for impairment through the Company's quarterly status review process. In determining that we will be unable to collect all principal and interest payments due in accordance with the contractual terms of the loan agreements, we consider factors such as payment history and changes in the financial condition of individual borrowers, local economic conditions, historical loss experience and the conditions of the various markets in which the collateral may be liquidated. For loans that are evaluated for impairment, impairment is measured by one of three methods: 1) the fair value of collateral less cost to sell, 2) present value of expected future cash flows or 3) the loan's observable market price. These impaired loans are reviewed on a quarterly basis for changes in the measurement of impairment. For impaired loans measured using the present value of expected cash flow method, any change to the previously recognized impairment loss is recognized as a change to the allowance account and recorded in the consolidated statement of income as a component of the provision for credit losses.

The following provides additional information on loans specifically evaluated for impairment for the years ended December 31, 2016 and 2015:

|  | December 31, 2016 |  |  | December 31, 2015 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (In thousands) | Recorded Investment Balance (Book) | Unpaid Principal Balance (Legal) | Related Allowance | Recorded Investment Balance (Book) | Unpaid <br> Principal <br> Balance <br> (Legal) | Related Allowance |

## ORIGINATED

With no related allowance recorded:

| Commercial Loans |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Commercial | \$ | 1,278 | \$ | 1,697 |  |  | \$ | 2,244 | \$ | 2,490 |  |  |
| Commercial Real Estate |  | 3,816 |  | 3,841 |  |  |  | 3,165 |  | 3,175 |  |  |
| Agricultural |  | 130 |  | 137 |  |  |  | 576 |  | 1,164 |  |  |
| Agricultural Real Estate |  | 1,434 |  | 1,567 |  |  |  | 618 |  | 744 |  |  |
| Business Banking |  | 655 |  | 728 |  |  |  | 983 |  | 1,033 |  |  |
| Total Commercial Loans |  | 7,313 |  | 7,970 |  |  |  | 7,586 |  | 8,606 |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| Consumer Loans |  |  |  |  |  |  |  |  |  |  |  |  |
| Indirect |  | 5 |  | 16 |  |  |  | 12 |  | 21 |  |  |
| Home Equity |  | 8,483 |  | 9,429 |  |  |  | 7,681 |  | 8,574 |  |  |
| Total Consumer Loans |  | 8,488 |  | 9,445 |  |  |  | 7,693 |  | 8,595 |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| Residential Real Estate Mortgages |  | 6,111 |  | 6,906 |  |  |  | 6,017 |  | 6,627 |  |  |
| Total |  | 21,912 |  | 24,321 |  |  |  | 21,296 |  | 23,828 |  |  |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| With an allowance recorded: |  |  |  |  |  |  |  |  |  |  |  |  |
| Commercial Loans |  |  |  |  |  |  |  |  |  |  |  |  |
| Commercial |  | - |  | - |  | - |  | 457 |  | 457 |  | 300 |
| Commercial Real Estate |  | 5,553 |  | 5,736 |  | 735 |  | 4,210 |  | 6,059 |  | 970 |
| Agricultural |  | 49 |  | 49 |  | 37 |  | - |  | - |  | - |
| Agricultural Real Estate |  | 155 |  | 155 |  | 54 |  | - |  | - |  | - |
| Total Commercial Loans |  | 5,757 |  | 5,940 |  | 826 |  | 4,667 |  | 6,516 |  | 1,270 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| ACQUIRED |  |  |  |  |  |  |  |  |  |  |  |  |
| With an allowance recorded: |  |  |  |  |  |  |  |  |  |  |  |  |
| Commercial Loans |  |  |  |  |  |  |  |  |  |  |  |  |
| Commercial Real Estate |  | 1,205 |  | 1,321 |  | 691 |  | 1,205 |  | 1,321 |  | 735 |
| Total Commercial Loans |  | 1,205 |  | 1,321 |  | 691 |  | 1,205 |  | 1,321 |  | 735 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| Total | \$ | 28,874 | \$ | 31,582 | \$ | 1,517 | \$ | 27,168 | \$ | 31,665 | \$ | 2,005 |

The following table summarizes the average recorded investments on loans specifically evaluated for impairment and the interest income recognized for the years ended December 31, 2016, 2015 and 2014:

| (In thousands) | December 31, 2016 |  |  |  | December 31, 2015 |  |  |  | December 31, 2014 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Average Recorded Investment |  | Interest Income Recognized Accrual |  | Average Recorded Investment |  | Interest Income Recognized Accrual |  | Average Recorded Investment |  | Interest Income Recognized Accrual |  |
| ORIGINATED |  |  |  |  |  |  |  |  |  |  |  |  |
| Commercial Loans |  |  |  |  |  |  |  |  |  |  |  |  |
| Commercial | \$ | 6,217 | \$ | - | \$ | 2,219 | \$ | 71 | \$ | 1,954 | \$ | 115 |
| Commercial Real Estate |  | 5,828 |  | 167 |  | 8,538 |  | 164 |  | 9,679 |  | 169 |
| Agricultural |  | 715 |  | 1 |  | 148 |  | 1 |  | 91 |  | 1 |
| Agricultural Real Estate |  | 908 |  | 44 |  | 628 |  | 45 |  | 1,346 |  | 46 |
| Business Banking |  | 830 |  | 9 |  | 960 |  | 21 |  | 610 |  | 55 |
| Consumer Loans |  |  |  |  |  |  |  |  |  |  |  |  |
| Indirect |  | 8 |  | - |  | - |  | - |  | - |  | - |
| Home Equity |  | 8,278 |  | 480 |  | 7,070 |  | 374 |  | 5,198 |  | 267 |
| Residential Real Estate Mortgages |  | 6,143 |  | 269 |  | 5,128 |  | 219 |  | 3,039 |  | 119 |
|  |  |  |  |  |  |  |  |  |  |  |  |  |
| ACQUIRED |  |  |  |  |  |  |  |  |  |  |  |  |
| Commercial Loans |  |  |  |  |  |  |  |  |  |  |  |  |
| Commercial |  | - |  | - |  | 2,045 |  | - |  | 5,756 |  | - |
| Commercial Real Estate |  | 1,205 |  | - |  | 5,734 |  | - |  | 3,386 |  | - |
| Total | \$ | 30,132 | \$ | 970 | \$ | 32,470 | \$ | 895 | \$ | 31,059 | \$ | 772 |

While we continue to adhere to prudent underwriting standards, as a lender we may be adversely impacted by general economic weaknesses and, in particular, a sharp downturn in the housing market nationally. Decreases in real estate values could adversely affect the value of property used as collateral for our loans. Adverse changes in the economy may have a negative effect on the ability of our borrowers to make timely loan payments, which would have an adverse impact on our earnings. A further increase in loan delinquencies would decrease our net interest income and adversely impact our loan loss experience, causing increases in our provision and allowance for loan losses.

The Company has developed an internal loan grading system to evaluate and quantify the Bank's loan portfolio with respect to quality and risk. The system focuses on, among other things, financial strength of borrowers, experience and depth of management, primary and secondary sources of repayment, payment history, nature of the business, outlook on particular industries. The internal grading system enables the Company to monitor the quality of the entire loan portfolio on a continuous basis and provide management with an early warning system, enabling recognition and response to problem loans and potential problem loans.

## Commercial Grading System

For commercial and agricultural loans, the Company uses a grading system that relies on quantifiable and measurable characteristics when available. This would include comparison of financial strength to available industry averages, comparison of transaction factors (loan terms and conditions) to loan policy, and comparison of credit history to stated repayment terms and industry averages. Some grading factors are necessarily more subjective such as economic and industry factors, regulatory environment, and management. Commercial loans are graded as Doubtful, Substandard, Special Mention and Pass.

## - Doubtful

A Doubtful loan has a high probability of total or substantial loss, but because of specific pending events that may strengthen the asset, its classification as loss is deferred. Doubtful borrowers are usually in default, lack adequate liquidity or capital, and lack the resources necessary to remain an operating entity. Pending events can include mergers, acquisitions, liquidations, capital injections, the perfection of liens on additional collateral, the valuation of collateral, and refinancing. Generally, pending events should be resolved within a relatively short period and the ratings will be adjusted based on the new information. Because of high probability of loss, nonaccrual treatment is required for Doubtful assets.

- Substandard

Substandard loans have a high probability of payment default, or they have other well-defined weaknesses. They require more intensive supervision by bank management. Substandard loans are generally characterized by current or expected unprofitable operations, inadequate debt service coverage, inadequate liquidity, or marginal capitalization. Repayment may depend on collateral or other credit risk mitigants. For some Substandard loans, the likelihood of full collection of interest and principal may be in doubt and should be placed on nonaccrual. Although Substandard assets in the aggregate will have a distinct potential for loss, an individual asset's loss potential does not have to be distinct for the asset to be rated Substandard.

## - Special Mention

Special Mention loans have potential weaknesses that may, if not checked or corrected, weaken the asset or inadequately protect the Company's position at some future date. These loans pose elevated risk, but their weakness does not yet justify a Substandard classification. Borrowers may be experiencing adverse operating trends (declining revenues or margins) or may be struggling with an ill-proportioned balance sheet (e.g., increasing inventory without an increase in sales, high leverage, tight liquidity). Adverse economic or market conditions, such as interest rate increases or the entry of a new competitor, may also support a special mention rating. Although a Special Mention loan has a higher probability of default than a pass asset, its default is not imminent.

- Pass

Loans graded as Pass encompass all loans not graded as Doubtful, Substandard, or Special Mention. Pass loans are in compliance with loan covenants, and payments are generally made as agreed. Pass loans range from superior quality to fair quality.

## Table of Contents

## Business Banking Grading System

Business Banking loans are graded as either Classified or Non-classified:

- Classified

Classified loans are inadequately protected by the current worth and paying capacity of the obligor or, if applicable, the collateral pledged.
These loans have a well-defined weakness, or weaknesses, that jeopardize the liquidation of the debt, or in some cases make collection or liquidation in full, on the basis of currently existing facts, conditions, and values, highly questionable and improbable. They are characterized by the distinct possibility that the Company will sustain some loss if the deficiencies are not corrected. Classified loans have a high probability of payment default, or a high probability of total or substantial loss. These loans require more intensive supervision by management and are generally characterized by current or expected unprofitable operations, inadequate debt service coverage, inadequate liquidity, or marginal capitalization. Repayment may depend on collateral or other credit risk mitigants. When the likelihood of full collection of interest and principal may be in doubt; classified loans are considered to have a nonaccrual status. In some cases, Classified loans are considered uncollectible and of such little value that their continuance as assets is not warranted.

- Non-classified

Loans graded as Non-classified encompass all loans not graded as Classified. Non-classified loans are in compliance with loan covenants, and payments are generally made as agreed.

## Consumer and Residential Mortgage Grading System

Consumer and Residential Mortgage loans are graded as either Nonperforming or Performing.

- Nonperforming

Nonperforming loans are loans that are 1 ) over 90 days past due and interest is still accruing or 2 ) on nonaccrual status.

- Performing

All loans not meeting any of these three criteria are considered Performing.
The following tables illustrate the Company's credit quality by loan class for the years ended December 31, 2016 and 2015:

## Credit Quality Indicators <br> December 31, 2016

(In thousands)

## ORIGINATED

Commercial Credit Exposure

| By Internally Assigned Grade: | Commercial |  | Commercial Real Estate |  | Agricultural |  | Agricultural Real Estate |  | Total |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Pass | \$ | 616,829 | \$ | 1,288,409 | \$ | 36,762 | \$ | 28,912 | \$ | 1,970,912 |
| Special Mention |  | 7,750 |  | 31,053 |  | 25 |  | 1,896 |  | 40,724 |
| Substandard |  | 28,991 |  | 32,327 |  | 1,124 |  | 1,614 |  | 64,056 |
| Doubtful |  | - |  | - |  | 5 |  | - |  | 5 |
| Total | \$ | 653,570 | \$ | 1,351,789 | \$ | 37,916 | \$ | 32,422 | \$ | 2,075,697 |

## Business Banking Credit Exposure

| By Internally Assigned Grade: | Business Banking |  | Total |  |
| :---: | :---: | :---: | :---: | :---: |
| Non-classified | \$ | 458,864 | \$ | 458,864 |
| Classified |  | 13,823 |  | 13,823 |
| Total | \$ | 472,687 | \$ | 472,687 |

## Consumer Credit Exposure

| By Payment Activity: | Indirect |  | Home Equity |  | Direct |  | Total |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Performing | \$ | 1,562,031 | \$ | 453,278 | \$ | 62,977 | \$ | 2,078,286 |
| Nonperforming |  | 4,644 |  | 3,379 |  | 127 |  | 8,150 |
| Total | \$ | 1,566,675 | \$ | 456,657 | \$ | 63,104 | \$ | 2,086,436 |

## Residential Mortgage Credit Exposure

| By Payment Activity: | Residential Mortgage |  | Total |  |
| :---: | :---: | :---: | :---: | :---: |
| Performing | \$ | 1,055,055 | \$ | 1,055,055 |
| Nonperforming |  | 8,088 |  | 8,088 |
| Total | \$ | 1,063,143 | \$ | 1,063,143 |

(In thousands)
ACQUIRED
Commercial Credit Exposure

| By Internally Assigned Grade: | Commercial |  | Commercial Real Estate |  | Total |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Pass | \$ | 48,194 | \$ | 127,660 | \$ | 175,854 |
| Special Mention |  | 76 |  | 1,231 |  | 1,307 |
| Substandard |  | 1,177 |  | 7,193 |  | 8,370 |
| Doubtful |  | - |  | 1,205 |  | 1,205 |
| Total | \$ | 49,447 | \$ | 137,289 | \$ | 186,736 |

## Business Banking Credit Exposure

| By Internally Assigned Grade: | Business Banking |  | Total |  |
| :---: | :---: | :---: | :---: | :---: |
| Non-classified | \$ | 47,347 | \$ | 47,347 |
| Classified |  | 3,535 |  | 3,535 |
| Total | \$ | 50,882 | \$ | 50,882 |


| Consumer Credit Exposure By Payment Activity: | Indirect |  | Home Equity |  | Direct |  | Total |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Performing | \$ | 8,646 | \$ | 50,860 | \$ | 3,165 | \$ | 62,671 |
| Nonperforming |  | 47 |  | 267 |  | 20 |  | 334 |
| Total | \$ | 8,693 | \$ | 51,127 | \$ | 3,185 | \$ | 63,005 |

## Residential Mortgage Credit Exposure

| By Payment Activity: | Residential <br> Mortgage |  | Total |  |
| :---: | :---: | :---: | :---: | :---: |
| Performing | \$ | 196,508 | \$ | 196,508 |
| Nonperforming |  | 2,963 |  | 2,963 |
| Total | \$ | 199,471 | \$ | 199,471 |

## Credit Quality Indicators

December 31, 2015
(In thousands)

## ORIGINATED

## Commercial Credit Exposure

| By Internally Assigned Grade: | Commercial |  | Commercial Real Estate |  | Agricultural |  | Agricultural Real Estate |  | Total |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Pass | \$ | 604,405 | \$ | 1,144,832 | \$ | 33,565 | \$ | 27,320 | \$ | 1,810,122 |
| Special Mention |  | 9,726 |  | 21,587 |  | 311 |  | 429 |  | 32,053 |
| Substandard |  | 30,187 |  | 28,478 |  | 740 |  | 1,469 |  | 60,874 |
| Doubtful |  | - |  | - |  | 8 |  | - |  | 8 |
| Total | \$ | 644,318 | \$ | 1,194,897 | \$ | 34,624 | \$ | 29,218 | \$ | 1,903,057 |

## Business Banking Credit Exposure

| By Internally Assigned Grade: | Business Banking |  | Total |  |
| :---: | :---: | :---: | :---: | :---: |
| Non-classified | \$ | 386,397 | \$ | 386,397 |
| Classified |  | 14,524 |  | 14,524 |
| Total | \$ | 400,921 | \$ | 400,921 |


| Consumer Credit Exposure |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| By Payment Activity: | Indirect |  | Home Equity |  | Direct |  | Total |  |
| Performing | \$ | 1,473,193 | \$ | 459,540 | \$ | 59,177 | \$ | 1,991,910 |
| Nonperforming |  | 4,057 |  | 5,175 |  | 77 |  | 9,309 |
| Total | \$ | 1,477,250 | \$ | 464,715 | \$ | 59,254 | \$ | 2,001,219 |

## Residential Mortgage Credit Exposure

| By Payment Activity: | Residential <br> Mortgage |  | Total |  |
| :---: | :---: | :---: | :---: | :---: |
| Performing | \$ | 958,013 | \$ | 958,013 |
| Nonperforming |  | 8,409 |  | 8,409 |
| Total | \$ | 966,422 | \$ | 966,422 |

(In thousands)
ACQUIRED

## Commercial Credit Exposure

| By Internally Assigned Grade: | Commercial |  | Commercial Real Estate |  | Total |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Pass | \$ | 67,241 | \$ | 154,871 | \$ | 222,112 |
| Special Mention |  | 802 |  | 2,174 |  | 2,976 |
| Substandard |  | 948 |  | 9,898 |  | 10,846 |
| Doubtful |  | - |  | - |  |  |
| Total | \$ | 68,991 | \$ | 166,943 | \$ | 235,934 |

## Business Banking Credit Exposure

| By Internally Assigned Grade: |  |  |  |  | Business Banking |  | Total |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Non-classified |  |  |  |  | \$ | 46,032 | \$ | 46,032 |
| Classified |  |  |  |  |  | 3,763 |  | 3,763 |
| Total |  |  |  |  | \$ | 49,795 | \$ | 49,795 |
| Consumer Credit Exposure |  |  | Home Equity |  | Direct |  |  | Total |
| By Payment Activity: |  |  |  |  |  |  |
| Performing | \$ | 27,670 | \$ | 63,270 |  |  | \$ | 3,882 |  | 94,822 |
| Nonperforming |  | 105 |  | 457 |  | 43 |  | 605 |
| Total | \$ | 27,775 | \$ | 63,727 | \$ | 3,925 |  | 95,427 |

## Residential Mortgage Credit Exposure

| By Payment Activity: | Residential <br> Mortgage |  | Total |  |
| :---: | :---: | :---: | :---: | :---: |
| Performing | \$ | 227,448 | \$ | 227,448 |
| Nonperforming |  | 2,910 |  | 2,910 |
| Total | \$ | $\underline{230,358}$ | \$ | $\underline{230,358}$ |

## Troubled Debt Restructuring

Substantially all modifications include one or a combination of the following: an extension of the maturity date at a stated rate of interest lower than the current market rate for new debt with similar risk; temporary reduction in the interest rate; or change in scheduled payment amount. Residential and home equity TDRs occurring during 2016 and 2015 were due to the reduction in the interest rate or extension of the term. In 2015, commercial and business banking TDRs were both a reduction of the interest rate and change in terms.

The following tables illustrate the recorded investment and number of modifications for modified loans, including the recorded investment in the loans prior to a modification and the recorded investment in the loans after restructuring that occurred during the years ended December 31, 2016 and 2015:

|  | Year ended December 31, 2016 |
| :--- | ---: | ---: | ---: | ---: |


|  | Year ended December 31, 2015 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Number of contracts | Pre- <br> Modification Outstanding Recorded Investment |  | Post- <br> Modification Outstanding Recorded Investment |  |
| Commercial |  |  |  |  |  |
| Commercial | 1 | \$ | 186 | \$ | 186 |
| Business Banking | 1 |  | 220 |  | 171 |
| Total Commercial | 2 |  | 406 |  | 357 |
|  |  |  |  |  |  |
| Consumer |  |  |  |  |  |
| Home Equity | 50 |  | 3,664 |  | 3,261 |
| Total Consumer | 50 |  | 3,664 |  | 3,261 |
|  |  |  |  |  |  |
| Residential Real Estate | 37 |  | 3,085 |  | 3,085 |
|  |  |  |  |  |  |
| Total Troubled Debt Restructurings | 89 | \$ | 7,155 | \$ | 6,703 |

The following table illustrates the recorded investment and number of modifications for TDRs within the years ended December 31, 2016 and 2015 where a concession has been made and subsequently defaulted during the period:

|  | Year ended December 31, 2016 |  |  | Year ended December 31, 2015 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Number of contracts | Recorded Investment |  | Number of contracts | Recorded Investment |  |
| Consumer |  |  |  |  |  |  |
| Home Equity | 2 | \$ | 121 | 4 | \$ | 344 |
| Total Consumer | 2 |  | 121 | 4 |  | 344 |
|  |  |  |  |  |  |  |
| Residential Real Estate | 2 |  | 296 | 3 |  | 208 |
|  |  |  |  |  |  |  |
| Total Troubled Debt Restructurings | 4 | \$ | 417 | 7 | \$ | 552 |

## 6. Premises and Equipment, Net

A summary of premises and equipment follows as of December 31, 2016 and 2015:

|  | December 31, |  |  |
| :--- | ---: | ---: | ---: |
| (In thousands) | $\mathbf{2 0 1 6}$ | $\mathbf{2 0 1 5}$ |  |
| Land, buildings, and improvements | $\mathbf{\$ 1 2 1 , 0 3 7}$ | $\$$ | 125,428 |
| Equipment | $\mathbf{5 6 , 2 4 3}$ | 59,574 |  |
| $\quad$ Premises and equipment before accumulated depreciation | $\mathbf{1 7 7 , 2 8 0}$ | 185,002 |  |
| Accumulated depreciation | $\mathbf{9 3 , 0 9 3}$ | 96,176 |  |
| $\quad$Total premises and equipment | $\mathbf{8 4 , 1 8 7}$ | $\$$ | 88,826 |

Buildings and improvements are depreciated based on useful lives of 15 to 40 years. Equipment is depreciated based on useful lives of three to ten years.
Rental expense included in occupancy expense amounted to $\$ 7.8$ million in 2016, $\$ 7.9$ million in 2015, and $\$ 8.0$ million in 2014. The future minimum rental payments related to non-cancelable operating leases with original terms of one year or more are as follows at December 31, 2016:

| (In thousands) | $\mathbf{7 , 7 5 7}$ |  |
| :--- | ---: | ---: |
| 2017 | $\mathbf{7 , 3 7 5}$ |  |
| 2018 | $\mathbf{6 , 8 5 8}$ |  |
| 2019 | $\mathbf{6 , 1 3 2}$ |  |
| 2020 | $\mathbf{4 , 9 5 4}$ |  |
| 2021 | $\mathbf{1 9 , 5 9 0}$ |  |
| Thereafter | $\mathbf{5 2 , 9 6 6}$ |  |
| Total | $\mathbf{\$}$ | $\mathbf{5 2}$ |

A summary of goodwill is as follows as of December 31, 2016 and 2015:

| (In thousands) |  |  |
| :--- | :---: | :---: |
| January 1, 2016 | $\mathbf{2 6 5 , 9 5 7}$ |  |
| Goodwill Acquired | $\mathbf{2 , 0 4 7}$ |  |
| Goodwill Adjustments | $\mathbf{( 2 , 5 6 5 )}$ |  |
| December 31, 2016 | $\mathbf{2 6 5 , 4 3 9}$ |  |
| January 1, 2015 | $\$$ | 263,634 |
| Goodwill Acquired | $\$$ | $\mathbf{2 , 3 2 3}$ |
| December 31, 2015 | $\$$ | 265,957 |

The Company has intangible assets with definite useful lives capitalized on its consolidated balance sheet in the form of core deposit and other identified intangible assets. These intangible assets are amortized over their estimated useful lives, which range primarily from one to twenty years.

During the twelve month period ended December 31, 2016, as a result of the disposition of a line of business in the Company's insurance agency subsidiary, the Company performed a goodwill impairment test that resulted in an impairment charge of $\$ 2.6$ million.

A summary of core deposit and other intangible assets follows as of December 31, 2016 and 2015:

| (In thousands) | December 31, |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 2016 |  |  | 2015 |
| Core deposit intangibles: |  |  |  |  |
| Gross carrying amount | \$ | 8,975 | \$ | 19,401 |
| Less: accumulated amortization |  | 5,626 |  | 14,800 |
| Net carrying amount |  | 3,349 |  | 4,601 |
|  |  |  |  |  |
| Identified intangible assets: |  |  |  |  |
| Gross carrying amount |  | 32,338 |  | 29,525 |
| Less: accumulated amortization |  | 19,872 |  | 16,861 |
| Net carrying amount |  | 12,466 |  | 12,664 |
|  |  |  |  |  |
| Total intangibles: |  |  |  |  |
| Gross carrying amount |  | 41,312 |  | 48,926 |
| Less: accumulated amortization |  | 25,497 |  | 31,661 |
| Net carrying amount | \$ | 15,815 | \$ | 17,265 |

Amortization expense on intangible assets with definite useful lives totaled $\$ 3.9$ million for 2016, $\$ 4.9$ million for 2015 and $\$ 5.0$ million for 2014. Amortization expense on intangible assets with definite useful lives is expected to total $\$ 3.3$ million for 2017, $\$ 2.6$ million for 2018, $\$ 1.9$ million for 2019, $\$ 1.5$ million for 2020, $\$ 1.1$ million for 2021 and $\$ 3.9$ million thereafter. Other identified intangible assets include customer lists, non-competes, and trademark intangibles.

## 8. Deposits

The following table sets forth the maturity distribution of time deposits at December 31, 2016:

| (In thousands) |  |
| :--- | ---: |
| Within one year | $\mathbf{4 0 5 , 3 2 7}$ |
| After one but within two years | $\mathbf{1 4 3 , 4 0 1}$ |
| After two but within three years | $\mathbf{2 3 1 , 4 1 7}$ |
| After three but within four years | $\mathbf{3 7 , 0 3 0}$ |
| After four but within five years | $\mathbf{3 5 , 0 2 8}$ |
| After five years | $\mathbf{2 0 , 2 0 8}$ |
| Total | $\mathbf{\$ 8 7 2 , 4 1 1}$ |

Time deposits of $\$ 250,000$ or more aggregated $\$ 84.3$ million and $\$ 84.9$ million December 31, 2016 and 2015, respectively.

## 9. Short-Term Borrowings

In addition to the liquidity provided by balance sheet cash flows, liquidity must also be supplemented with additional sources such as credit lines from correspondent banks as well as borrowings from the FHLB and the Federal Reserve Bank. Other funding alternatives may also be appropriate from time to time, including wholesale and retail repurchase agreements and brokered certificate of deposit ("CD") accounts.

Short-term borrowings totaled $\$ 681.7$ million and $\$ 442.5$ million at December 31, 2016 and 2015, respectively, and consist of Federal funds purchased and securities sold under repurchase agreements, which generally represent overnight borrowing transactions, and other short-term borrowings, primarily FHLB advances, with original maturities of one year or less.

The Company has unused lines of credit with the FHLB and access to brokered deposits available for short-term financing of approximately $\$ 1.9$ billion and $\$ 2.1$ billion at December 31, 2016 and 2015, respectively. Borrowings on the FHLB lines are secured by FHLB stock, certain securities and one-to-four family first lien mortgage loans. Securities collateralizing repurchase agreements are held in safekeeping by nonaffiliated financial institutions and are under the Company's control.

Information related to short-term borrowings is summarized as follows as of December 31, 2016, 2015 and 2014:

| (In thousands) | 2016 |  | 2015 |  | 2014 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Federal funds purchased: |  |  |  |  |  |  |
| Balance at year-end | \$ | 50,000 | \$ | 99,500 | \$ | 68,000 |
| Average during the year |  | 65,257 |  | 97,424 |  | 110,154 |
| Maximum month end balance |  | 85,000 |  | 159,000 |  | 183,000 |
| Weighted average rate during the year |  | 0.98\% |  | 0.36\% |  | 0.29\% |
| Weighted average rate at December 31 |  | 1.19\% |  | 0.51\% |  | 0.34\% |
|  |  |  |  |  |  |  |
| Securities sold under repurchase agreements: |  |  |  |  |  |  |
| Balance at year-end | \$ | 173,703 | \$ | 167,981 | \$ | 148,802 |
| Average during the year |  | 168,821 |  | 162,201 |  | 165,858 |
| Maximum month end balance |  | 189,875 |  | 178,326 |  | 182,861 |
| Weighted average rate during the year |  | 0.06\% |  | 0.06\% |  | 0.06\% |


| Other short-term borrowings: |  |  |  |  |
| :--- | :---: | :---: | :---: | :---: |
| Balance at year-end | $\mathbf{4 5 8 , 0 0 0}$ | $\mathbf{\$}$ | 175,000 | $\$$ |
| Average during the year | $\mathbf{2 6 3 , 5 7 5}$ | 80,260 | 100,000 |  |
| Maximum month end balance | $\mathbf{4 2 4 , 0 0 0}$ | 175,000 | $\mathbf{3 2 0 , 4 3 8}$ |  |
| Weighted average rate during the year | $\mathbf{0 . 5 9 \%}$ | $0.42 \%$ | $0.40 \%$ |  |
| Weighted average rate at December 31 | $\mathbf{0 . 7 0 \%}$ | $0.56 \%$ |  | $0.36 \%$ |

See Note 3 for additional information regarding securities pledged as collateral for securities sold under the repurchase agreements.

Long-term debt consists of obligations having an original maturity at issuance of more than one year. A majority of the Company's long-term debt is comprised of FHLB advances collateralized by the FHLB stock owned by the Company, certain of its mortgage-backed securities and a blanket lien on its residential real estate mortgage loans. A summary as of December 31, 2016 and 2015 is as follows (dollars in thousands):

|  | As of December 31, 2016 |  |  |  |  |  | As of December 31, 2015 |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Maturity | Amount |  | Weighted Average Rate | Callable <br> Amount |  | Weighted Average Rate | Amount |  | Weighted Average Rate | Callable <br> Amount |  | Weighted Average Rate |
| 2016 | \$ | - | - | \$ |  |  | \$ | 50,360 | 2.92\% | \$ | 30,000 | 4.15\% |
| 2017 |  | 40,150 | 2.67\% |  | 25,000 | 3.48\% |  | 40,000 | 2.68\% |  | 25,000 | 3.48\% |
| 2018 |  | 40,000 | 2.57\% |  | 25,000 | 3.15\% |  | 40,000 | 2.57\% |  | 25,000 | 3.15\% |
| 2019 |  | 20,000 | 1.96\% |  |  | - |  | - | - |  | - | - |
| 2021 |  | 72 | 4.00\% |  | - | - |  | 87 | 4.00\% |  | - | - |
| 2031 |  | 3,865 | 2.45\% |  | - | - |  | - | - |  | - | - |
|  | \$ | 104,087 |  | \$ | 50,000 |  | \$ | 130,447 |  | \$ | 80,000 |  |

## 11. Junior Subordinated Debt

The Company sponsors five business trusts, CNBF Capital Trust I, NBT Statutory Trust I, NBT Statutory Trust II, Alliance Financial Capital Trust I and Alliance Financial Capital Trust II (collectively, the "Trusts"). The Company's junior subordinated debentures include amounts related to the Company's NBT Statutory Trust I and II as well as junior subordinated debentures associated with one statutory trust affiliate that was acquired from our merger with CNB Financial Corp. and two statutory trusts that were acquired from our acquisition of Alliance Financial Corporation ("Alliance"). The Trusts were formed for the purpose of issuing company-obligated mandatorily redeemable trust preferred securities to third-party investors and investing in the proceeds from the sale of such preferred securities solely in junior subordinated debt securities of the Company for general corporate purposes. The Company guarantees, on a limited basis, payments of distributions on the trust preferred securities and payments on redemption of the trust preferred securities. The Trusts are VIEs for which the Company is not the primary beneficiary, as defined by GAAP. In accordance with GAAP, the accounts of the Trusts are not included in the Company's consolidated financial statements. See Note 1 for additional information about the Company's consolidation policy.

The debentures held by each trust are the sole assets of that trust. The Trusts hold, as their sole assets, junior subordinated debentures of the Company with face amounts totaling $\$ 98.0$ million at December 31, 2016. The Company owns all of the common securities of the Trusts and has accordingly recorded $\$ 3.2$ million in equity method investments classified as other assets in our consolidated balance sheets at December 31, 2016. The Company owns all of the common stock of the Trusts, which have issued trust preferred securities in conjunction with the Company issuing trust preferred debentures to the Trusts. The terms of the trust preferred debentures are substantially the same as the terms of the trust preferred securities.

As of December 31, 2016, the Trusts had the following trust preferred securities outstanding and held the following junior subordinated debentures of the Company (dollars in thousands):

| Description | Issuance Date | Trust <br> Preferred <br> Securities Outstanding | Interest Rate | Trust <br> Preferred <br> Debt Owed To Trust |  | Final Maturity Date |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| CNBF Capital Trust I | August 1999 | \$ 18,000 | 3-month LIBOR plus 2.75\% | \$ | 18,720 | August 2029 |
| NBT Statutory Trust I | November 2005 | 5,000 | 3-month LIBOR plus 1.40\% |  | 5,155 | December 2035 |
| NBT Statutory Trust II | February 2006 | 50,000 | $\begin{aligned} & \text { 3-month LIBOR } \\ & \text { plus 1.40\% } \end{aligned}$ |  | 51,547 | March 2036 |
| Alliance Financial Capital Trust I | December 2003 | 10,000 | 3-month LIBOR plus 2.85\% |  | 10,310 | January 2034 |
| Alliance Financial Capital Trust II | September 2006 | 15,000 | 3-month LIBOR plus 1.65\% |  | 15,464 | September 2036 |

The Company's junior subordinated debentures are redeemable prior to the maturity date at our option upon each trust's stated option repurchase dates, and from time to time thereafter. These debentures are also redeemable in whole at any time upon the occurrence of specific events defined within the trust indenture. Our obligations under the debentures and related documents, taken together, constitute a full and unconditional guarantee by the Company of the issuers' obligations under the trust preferred securities. The Company owns all of the common stock of the Trusts, which have issued trust preferred securities in conjunction with the Company issuing trust preferred debentures to the Trusts. The terms of the trust preferred debentures are substantially the same as the terms of the trust preferred securities.

With respect to the Trusts, the Company has the right to defer payments of interest on the debentures issued to the Trusts at any time or from time to time for a period of up to ten consecutive semi-annual periods with respect to each deferral period. Under the terms of the debentures, if in certain circumstances there is an event of default under the debentures or the Company elects to defer interest on the debentures, the Company may not, with certain exceptions, declare or pay any dividends or distributions on its capital stock or purchase or acquire any of its capital stock.

Despite the fact that the Trusts are not included in the Company's consolidated financial statements, $\$ 97$ million of the $\$ 101$ million in trust preferred securities issued by these subsidiary trusts is included in the Tier 1 capital of the Company for regulatory capital purposes as allowed by the Federal Reserve Board (NBT Bank owns $\$ 1.0$ million of CNBF Trust I securities). The Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 requires bank holding companies with assets greater than $\$ 500$ million to be subject to the same capital requirements as insured depository institutions, meaning, for instance, that such bank holding companies will not be able to count trust preferred securities issued after May 19 , 2010 as Tier 1 capital. The aforementioned Trusts are grandfathered with respect to this enactment based on their date of issuance.

## 12. Income Taxes

The significant components of income tax expense attributable to operations are as of December 31, 2016, 2015 and 2014:

| (In thousands) | Years ended December 31, |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2016 |  | 2015 |  | 2014 |  |
| Current |  |  |  |  |  |  |
| Federal | \$ | 30,492 | \$ | 32,871 | \$ | 26,059 |
| State |  | 5,628 |  | 4,329 |  | 2,823 |
|  |  | 36,120 |  | 37,200 |  | 28,882 |
|  |  |  |  |  |  |  |
| Deferred |  |  |  |  |  |  |
| Federal |  | 3,994 |  | 2,521 |  | 6,648 |
| State |  | 278 |  | 482 |  | 1,699 |
|  |  | 4,272 |  | 3,003 |  | 8,347 |
| Total income tax expense | \$ | 40,392 | \$ | 40,203 | \$ | 37,229 |

Not included in the above table are items that were recorded to stockholders' equity of approximately $\$ 0.4$ million, $\$ 3.4$ million, and $\$(1.1)$ million for 2016 , 2015, and 2014, respectively, relating to deferred taxes on the unrealized (gain) loss on available for sale securities, tax benefits recognized with respect to stock options exercised, pension plans and cash flow hedges.

The tax effects of temporary differences that give rise to significant portions of the deferred tax assets and deferred tax liabilities are as follows as of December 31, 2016 and 2015:

| (In thousands) | December 31, |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 2016 |  |  | 2015 |
| Deferred tax assets |  |  |  |  |
| Allowance for loan losses | \$ | 24,925 | \$ | 24,090 |
| Deferred compensation |  | 11,578 |  | 10,023 |
| Postretirement benefit obligation |  | 2,929 |  | 2,988 |
| Fair value adjustments from acquisitions |  | 1,883 |  | 2,543 |
| Unrealized losses on securities |  | 3,259 |  | 589 |
| Accrued liabilities |  | 1,775 |  | 2,889 |
| Stock-based compensation expense |  | 4,817 |  | 5,394 |
| Equipment leasing |  | 256 |  | 476 |
| Other |  | 892 |  | 1,477 |
| Total deferred tax assets |  | 52,314 |  | 50,469 |
| Deferred tax liabilities |  |  |  |  |
| Pension benefits |  | 17,303 |  | 11,908 |
| Amortization of intangible assets |  | 17,557 |  | 19,082 |
| Premises and equipment, primarily due to accelerated depreciation |  | 4,375 |  | 2,444 |
| Deferred loan costs |  | 1,759 |  | 1,591 |
| Cash flow hedges |  | 1,129 |  | - |
| Other |  | 501 |  | 504 |
| Total deferred tax liabilities |  | 42,624 |  | 35,529 |
| Net deferred tax asset at year-end |  | 9,690 |  | 14,940 |
| Net deferred tax asset at beginning of year |  | 14,940 |  | 14,517 |
| (Decrease) increase in net deferred tax asset | \$ | $(5,250)$ | \$ | 423 |

Realization of deferred tax assets is dependent upon the generation of future taxable income or the existence of sufficient taxable income within the available carryback period. A valuation allowance is provided when it is more likely than not that some portion of the deferred tax asset will not be realized. Based on available evidence, gross deferred tax assets will ultimately be realized and a valuation allowance was not deemed necessary at December 31, 2016 and 2015.

The following is a reconciliation of the provision for income taxes to the amount computed by applying the applicable Federal statutory rate of $35 \%$ to income before taxes:

|  | Years ended December 31 |  |  |  |
| :--- | ---: | ---: | ---: | ---: |
| (In thousands) | $\mathbf{2 0 1 6}$ | $\mathbf{2 0 1 5}$ | $\mathbf{2 0 1 4}$ |  |
| Federal income tax at statutory rate | $\mathbf{\$ 1 , 5 8 1}$ | $\$$ | 40,820 | $\$$ |
| Tax exempt income | $\mathbf{4 1 , 3 0 6}$ |  |  |  |
| Net increase in CSV of life insurance | $\mathbf{( 2 , 2 0 5 )}$ | $(2,037)$ | $(2,250)$ |  |
| Federal tax credit | $\mathbf{( 1 , 7 1 2 )}$ | $(1,373)$ | $(1,734)$ |  |
| State taxes, net of federal tax benefit | $\mathbf{( 1 , 3 2 3 )}$ | $(939)$ | $(880)$ |  |
| Other, net | $\mathbf{3 , 8 3 8}$ | 2,939 |  |  |
| Income tax expense | $\mathbf{2 1 3}$ | $\mathbf{3}$ | 605 | $(152)$ |

A reconciliation of the beginning and ending balance of Federal and State gross unrecognized tax benefits ("UTBs") is as follows:

| (In thousands) | $\mathbf{2 0 1 6}$ |
| :--- | ---: |
| Balance at January 1 | $\mathbf{-}$ |
| Additions for tax positions of prior years | $\mathbf{4 2 5}$ |
| Current period tax positions | $\mathbf{1 3 4}$ |
| Balance at December 31 | $\mathbf{5 5 9}$ |
| Amount that would affect the effective tax rate if recognized | $\mathbf{3 6 3}$ |

At December 31, 2015 and 2014 the Company had no UTBs. We recognize interest and penalties on the income tax expense line in the accompanying consolidated statements of income. We monitor changes in tax statutes and regulations to determine if significant changes will occur over the next 12 months. As of December 31, 2016, no significant changes to UTBs are projected; however, tax audit examinations are possible. The Company recognized an insignificant amount of interest expense related to UTBs in the consolidated statement of income for the year ended December 31, 2016.

The Company is no longer subject to U.S. Federal tax examination by tax authorities for years prior to 2013 and New York State for years prior to 2011. The Company is currently under audit in the state of New York for tax years 2011, 2012 and 2013.

## 13. Employee Benefit Plans

## Defined Benefit Post-retirement Plans

The Company has a qualified, noncontributory, defined benefit pension plan ("the Plan") covering substantially all of its employees at December 31 , 2016. Benefits paid from the plan are based on age, years of service, compensation, social security benefits, and are determined in accordance with defined formulas. The Company's policy is to fund the Plan in accordance with Employee Retirement Income Security Act of 1974 standards. Assets of the Plan are invested in bonds and publicly traded stocks and mutual funds. Prior to January 1, 2000, the Plan was a traditional defined benefit plan based on final average compensation. On January 1, 2000, the Plan was converted to a cash balance plan with grandfathering provisions for existing participants. Effective March 1, 2013, the Plan was amended. Benefit accruals for participants who, as of January 1, 2000, elected to continue participating in the traditional defined benefit plan design were frozen as of March 1, 2013.

In May 2013, the noncontributory, frozen, defined benefit pension plan assumed from Alliance in the acquisition was merged into the Plan.
In addition to the Plan, the Company provides supplemental employee retirement plans to certain current and former executives. The Company also assumed supplemental retirement plans for certain current and former executives in the Alliance acquisition.

The supplemental employee retirement plans and the defined benefit pension plan are collectively referred to herein as "Pension Benefits."
Also, the Company provides certain health care benefits for retired employees. Benefits are accrued over the employees’ active service period. Only employees that were employed by NBT Bank on or before January 1, 2000 are eligible to receive post-retirement health care benefits. The Plan is contributory for participating retirees, requiring participants to absorb certain deductibles and coinsurance amounts with contributions adjusted annually to reflect cost sharing provisions and benefit limitations called for in the Plan. Employees become eligible for these benefits if they reach normal retirement age while working for the Company. For eligible employees described above, the Company funds the cost of post-retirement health care as benefits are paid. The Company elected to recognize the transition obligation on a delayed basis over twenty years. In addition, the Company assumed post-retirement medical life insurance benefits for certain Alliance employees, retirees and their spouses, if applicable, in the Alliance acquisition. These post-retirement benefits are referred to herein as "Other Benefits."

Accounting standards require an employer to: (1) recognize the overfunded or underfunded status of defined benefit post-retirement plans, which is measured as the difference between plan assets at fair value and the benefit obligation, as an asset or liability in its balance sheet; (2) recognize changes in that funded status in the year in which the changes occur through comprehensive income; and (3) measure the defined benefit plan assets and obligations as of the date of its year-end balance sheet.

The components of accumulated other comprehensive loss, which have not yet been recognized as components of net periodic benefit cost, related to pensions and other post-retirement benefits at December 31, 2016 and 2015 are summarized below:

| (In thousands) | Pension Benefits |  |  |  | Other Benefits |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2016 |  | 2015 |  | 2016 |  | 2015 |  |
| Net actuarial loss | \$ | 28,328 | \$ | 33,070 | \$ | 1,430 | \$ | 2,333 |
| Prior service cost (credit) |  | 140 |  | 76 |  | (38) |  | (95) |
| Total amounts recognized in accumulated other comprehensive income (loss) (pre-tax) | \$ | 28,468 | \$ | 33,146 | \$ | 1,392 | \$ | 2,238 |

## Table of Contents

A December 31 measurement date is used for the pension, supplemental pension and post-retirement benefit plans. The following table sets forth changes in benefit obligations, changes in plan assets, and the funded status of the pension plans and other post-retirement benefits:

| (In thousands) | Pension Benefits |  |  |  | Other Benefits |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2016 |  | 2015 |  | 2016 |  | 2015 |  |
| Change in benefit obligation |  |  |  |  |  |  |  |  |
| Benefit obligation at beginning of year | \$ | 92,445 | \$ | 98,556 | \$ | 8,322 | \$ | 8,710 |
| Service cost |  | 2,162 |  | 2,677 |  | 14 |  | 17 |
| Interest cost |  | 4,223 |  | 3,977 |  | 353 |  | 374 |
| Plan participants' contributions |  | - |  | - |  | 234 |  | 263 |
| Actuarial (gain) |  | $(1,635)$ |  | $(5,225)$ |  | (786) |  | (333) |
| Curtailment/ settlement |  | (715) |  | (200) |  | - |  | - |
| Benefits paid |  | $(6,003)$ |  | $(7,340)$ |  | (659) |  | (709) |
| Projected benefit obligation at end of year |  | 90,477 |  | 92,445 |  | 7,478 |  | 8,322 |
| Change in plan assets |  |  |  |  |  |  |  |  |
| Fair value of plan assets at beginning of year |  | 107,529 |  | 117,232 |  | - |  | - |
| Actual return (loss) on plan assets |  | 8,259 |  | $(3,159)$ |  | - |  | - |
| Employer contributions |  | 6,431 |  | 796 |  | 425 |  | 446 |
| Plan participants' contributions |  | - |  | - |  | 234 |  | 263 |
| Benefits paid |  | $(6,003)$ |  | $(7,340)$ |  | (659) |  | (709) |
| Fair value of plan assets at end of year |  | 116,216 |  | 107,529 |  | - |  | - |
|  |  |  |  |  |  |  |  |  |
| Funded status at year end | \$ | 25,739 | \$ | 15,084 | \$ | $(7,478)$ | \$ | $(8,322)$ |

An asset is recognized for an overfunded plan and a liability is recognized for an underfunded plan. The accumulated benefit obligation for pension benefits was $\$ 90.5$ million and $\$ 92.4$ million at December 31, 2016 and 2015, respectively. The accumulated benefit obligation for other post-retirement benefits was $\$ 7.5$ million and $\$ 8.3$ million at December 31, 2016 and 2015, respectively. The funded status of the pension and other post-retirement benefit plans has been recognized as follows in the consolidated balance sheets at December 31, 2016 and 2015.

|  | Pension Benefits |  |  |  | Other Benefits |  |  |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (In thousands) |  | $\mathbf{2 0 1 6}$ |  | $\mathbf{2 0 1 5}$ | $\mathbf{2 0 1 6}$ | $\mathbf{2 0 1 5}$ |  |  |
| Other assets | $\$$ | $\mathbf{4 5 , 3 4 4}$ | $\$$ | 34,965 | $\$$ | - | $\$$ | - |
| Other liabilities |  | $\mathbf{( 1 9 , 6 0 5 )}$ |  | $(19,881)$ | $\mathbf{( 7 , 4 7 8 )}$ | $(8,322)$ |  |  |
| Funded status | $\mathbf{\$}$ | $\mathbf{2 5 , 7 3 9}$ | $\$$ | 15,084 | $\$$ | $\mathbf{( 7 , 4 7 8 )}$ | $\$$ | $(8,322)$ |

The following assumptions were used to determine the benefit obligation and the net periodic pension cost for the years indicated:

|  | Years ended December 31, |  |  |
| :---: | :---: | :---: | :---: |
|  | 2016 | 2015 | 2014 |
| Weighted average assumptions: |  |  |  |
| The following assumptions were used to determine benefit obligations: |  |  |  |
| Discount rate | 4.76\%-4.84\% | 4.69\%-4.71\% | 4.19\%-4.30\% |
| Expected long-term return on plan assets | 7.00\% | 7.00\% | 7.50\% |
| Rate of compensation increase | 3.00\% | 3.00\% | 3.00\%-3.75\% |
|  |  |  |  |
| The following assumptions were used to determine net periodic pension cost: |  |  |  |
| Discount rate | 4.69\%-4.71\% | 4.19\%-4.30\% | 4.90\%-5.05\% |
| Expected long-term return on plan assets | 7.00\% | 7.50\% | 7.50\% |
| Rate of compensation increase | 3.00\% | 3.00\%-3.75\% | 3.00\%-3.75\% |

Net periodic benefit cost and other amounts recognized in other comprehensive income (loss) for the years ended December 31 included the following components:

| (In thousands) | Pension Benefits |  |  |  |  |  | Other Benefits |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2016 |  | 2015 |  | 2014 |  | 2016 |  | 2015 |  | 2014 |  |
| Components of net periodic benefit cost |  |  |  |  |  |  |  |  |  |  |  |  |
| Service cost | \$ | 2,162 | \$ | 2,677 | \$ | 2,290 | \$ | 14 | \$ | 17 | \$ | 16 |
| Interest cost |  | 4,223 |  | 3,977 |  | 4,142 |  | 353 |  | 374 |  | 347 |
| Expected return on plan assets |  | $(7,430)$ |  | $(8,589)$ |  | $(8,681)$ |  | - |  | - |  | - |
| Amortization of gain due to curtailment |  | (768) |  | (154) |  | - |  | - |  | - |  | - |
| Amortization of prior service cost (credit) |  | 32 |  | 21 |  | 23 |  | (57) |  | (219) |  | (206) |
| Amortization of unrecognized net loss |  | 2,235 |  | 2,174 |  | 79 |  | 117 |  | 263 |  | 151 |
| Net periodic pension cost | \$ | 454 | \$ | 106 | \$ | $(2,147)$ | \$ | 427 | \$ | 435 | \$ | 308 |
| Other changes in plan assets and benefit obligations recognized in other comprehensive income (pre-tax) |  |  |  |  |  |  |  |  |  |  |  |  |
| Net (gain) loss | \$ | $(2,464)$ | \$ | 6,523 | \$ | 17,233 | \$ | (786) | \$ | (333) | \$ | 1,452 |
| Prior service cost |  | 96 |  | - |  | - |  | - |  | - |  | - |
| Amortization of gain due to settlement |  | (43) |  | (46) |  | - |  | - |  | - |  | - |
| Amortization of prior service (cost) credit |  | (32) |  | (21) |  | (23) |  | 57 |  | 219 |  | 206 |
| Amortization of unrecognized net (loss) |  | $(2,235)$ |  | $(2,174)$ |  | (79) |  | (117) |  | (263) |  | (151) |


| Total recognized in other comprehensive income | $(4,678)$ |  | 4,282 |  | 17,131 |  | (846) |  | (377) |  | 1,507 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Total recognized in net periodic benefit cost and other comprehensive income, pre-tax | \$ | $(4,224)$ | \$ | 4,388 | \$ | 14,984 | \$ | (419) | \$ | 58 | \$ | 1,815 |

## Table of Contents

The Company expects that $\$ 1.7$ million in net actuarial loss and nominal prior service costs will be recognized as components of net periodic benefit cost in 2017.

The following table sets forth estimated future benefit payments for the pension plans and other post-retirement benefit plans as of December 31, 2016:

| (In thousands) | Pension <br> Benefits |  | Other <br> Benefits |  |
| :---: | :---: | :---: | :---: | :---: |
| 2017 | \$ | 7,876 | \$ | 551 |
| 2018 |  | 7,169 |  | 572 |
| 2019 |  | 7,042 |  | 559 |
| 2020 |  | 6,884 |  | 572 |
| 2021 |  | 6,725 |  | 546 |
| 2022-2026 | \$ | 36,011 | \$ | 2,724 |

The Company made contributions to the plan totaling $\$ 5.6$ million during the twelve months ended December 31, 2016. The Company did not make any contributions to the plan during the twelve months ended December 31, 2015 and 2014.

For measurement purposes, the annual rates of increase in the per capita cost of covered medical and prescription drug benefits for fiscal year 2016 were assumed to be $6.5 \%$ to $10.5 \%$ percent. The rates were assumed to decrease gradually to $3.9 \%$ for fiscal year 2075 and remain at that level thereafter. Assumed health care cost trend rates have a significant effect on amounts reported for health care plans. A one-percentage point change in the health care trend rates would have the following effects as of and for the year ended December 31, 2016 :

|  | One <br> Percentage <br> point increase | One <br> Percentage <br> point decrease |  |
| :--- | ---: | ---: | ---: |
| In thousands) | $\$$ | 34 | $\$$ |
| Increase (decrease) on total service and interest cost components | 667 | $(576)$ |  |
| Increase (decrease) on post-retirement accumulated benefit obligation |  |  |  |

## Plan Investment Policy

The Company's key investment objectives in managing its defined benefit plan assets are to ensure that present and future benefit obligations to all participants and beneficiaries are met as they become due; to provide a total return that, over the long-term, maximizes the ratio of the plan assets to liabilities, while minimizing the present value of required Company contributions, at the appropriate levels of risk; to meet statutory requirements and regulatory agencies' requirements; and to satisfy applicable accounting standards. The Company periodically evaluates the asset allocations, funded status, rate of return assumption and contribution strategy for satisfaction of our investment objectives.

The target and actual allocations expressed as a percentage of the defined benefit pension plan's assets are as follows:

|  | Target 2016 | $\mathbf{2 0 1 6}$ | 2015 |
| :--- | ---: | ---: | ---: |
| Cash and cash equivalents | $0-20 \%$ | $2 \%$ | $2 \%$ |
| Fixed income securities | $25-55 \%$ | $46 \%$ | $42 \%$ |
| Equities | $40-65 \%$ | $52 \%$ | $56 \%$ |
| Total |  | $100 \%$ | $100 \%$ |

Only high-quality bonds are to be included in the portfolio. All issues that are rated lower than A by Standard and Poor's are to be excluded. Equity securities at December 31, 2016 and 2015 do not include any Company common stock.

The following table presents the financial instruments recorded at fair value on a recurring basis by the Plan as of December 31, 2016 and 2015 :

| (In thousands) | Level 1 |  | Level 2 |  | $\begin{gathered} \text { December 31, } \\ 2016 \end{gathered}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Cash and cash equivalents | \$ | 3,500 | \$ | - | \$ | 3,500 |
| Foreign equity mutual funds |  | 33,687 |  | - |  | 33,687 |
| Equity mutual funds |  | 28,256 |  | - |  | 28,256 |
| U.S. government bonds |  | - |  | 1,283 |  | 1,283 |
| Corporate bonds |  | - |  | 49,490 |  | 49,490 |
| Totals | \$ | 65,443 | \$ | 50,773 | \$ | 116,216 |


| (In thousands) | Level 1 |  | Level 2 |  | $\begin{gathered} \text { December 31, } \\ 2015 \\ \hline \end{gathered}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Cash and cash equivalents | \$ | 2,513 | \$ | - | \$ | 2,513 |
| Foreign equity mutual funds |  | 33,342 |  | - |  | 33,342 |
| Equity mutual funds |  | 26,993 |  | - |  | 26,993 |
| U.S. government bonds |  | - |  | 3,410 |  | 3,410 |
| Corporate bonds |  | - |  | 41,271 |  | 41,271 |
| Totals | \$ | 62,848 | \$ | 44,681 | \$ | 107,529 |

The plan had no financial instruments recorded at fair value on a non-recurring basis as of December 31, 2016 and 2015.

## Determination of Assumed Rate of Return

The expected long-term rate-of-return on assets was $7.0 \%$ at December 31, 2016 and December 31, 2015. This assumption represents the rate of return on plan assets reflecting the average rate of earnings expected on the funds invested or to be invested to provide for the benefits included in the projected benefit obligation. The assumption has been determined by reflecting expectations regarding future rates of return for the portfolio considering the asset distribution and related historical rates of return. The appropriateness of the assumption is reviewed annually.

## Employee 401(k) and Employee Stock Ownership Plans

The Company maintains a 401(k) and employee stock ownership plan (the "401(k) Plan"). The Company contributes to the 401(k) Plan based on employees’ contributions out of their annual salaries. In addition, the Company may also make discretionary contributions to the $401(\mathrm{k})$ Plan based on profitability. Participation in the $401(\mathrm{k})$ Plan is contingent upon certain age and service requirements. The employer contributions associated with the $401(\mathrm{k})$ Plan were \$2.7 million in 2016, \$2.5 million in 2015, and \$2.8 million in 2014.

## Other Retirement Benefits

Included in other liabilities is $\$ 2.6$ million and $\$ 2.8$ million at December 31, 2016 and December 31, 2015, respectively, for supplemental retirement benefits for retired executives from legacy plans assumed in acquisitions. The Company recognized $\$ 0.2, \$ 0.3$ and $\$ 0.1$ million in expense for the years ended December 31, 2016, December 31, 2015, and December 31, 2014, respectively, related to these plans.

## 14. Stock-Based Compensation

In April 2008, the Company adopted the NBT Bancorp Inc. 2008 Omnibus Incentive Plan (the "Stock Plan"). Under the terms of the Stock Plan, options and other equity-based awards are granted to directors and employees to increase their direct proprietary interest in the operations and success of the Company. The Stock Plan assumed all prior equity-based incentive plans and any new equity-based awards are granted under the terms of the Stock Plan. Under terms of the Stock Plan, stock options are granted to purchase shares of the Company's common stock at a price equal to the fair market value of the common stock on the date of the grant. Options granted have a vesting period of four years and terminate ten years from the date of the grant. Shares issued as a result of stock option exercises and vesting of restricted shares and stock unit awards are funded from the Company's treasury stock. Restricted shares granted under the Plan vest after five years for employees and three years for non-employee directors. Restricted stock units granted under the Stock Plan may have different terms and conditions. Performance shares and units granted under the Stock Plan for executives may have different terms and conditions. Since 2011, the Company primarily grants restricted stock unit awards. Stock option grants since that time were reloads of existing grants.

The following table summarizes information concerning stock options outstanding at December 31, 2016:

|  | Number of Shares | Weighted average exercise price |  | Weighted Average Remaining Contractual Term (in years) | Aggregate Intrinsic Value |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Outstanding at January 1, 2016 | 541,564 | \$ | 23.23 |  |  |  |
| Granted | 50,508 |  | 28.95 |  |  |  |
| Exercised | $(360,147)$ |  | 23.32 |  |  |  |
| Forfeited | - |  | - |  |  |  |
| Expired | $(1,750)$ |  | 22.93 |  |  |  |
| Outstanding at December 31, 2016 | 230,175 | \$ | 24.35 | 4.43 | \$ | 4,035,063 |
|  |  |  |  |  |  |  |
| Exercisable at December 31, 2016 | 163,925 | \$ | 22.70 | 2.47 | \$ | 3,144,022 |
|  |  |  |  |  |  |  |
| Expected to Vest | 66,249 | \$ | 28.43 | 9.28 | \$ | 891,041 |

Total stock-based compensation expense for stock option awards totaled $\$ 0.2$ million, $\$ 0.2$ million, and $\$ 0.1$ million for the years ended December 31, 2016, 2015, and 2014, respectively. Cash proceeds, tax benefits and intrinsic value related to total stock options exercised is as follows:

| (In thousands) | Years ended December 31, |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2016 |  | 2015 |  | 2014 |  |
| Proceeds from stock options exercised | \$ | 8,398 | \$ | 12,044 | \$ | 6,554 |
| Tax benefits related to stock options exercised |  | 1,223 |  | 952 |  | 307 |
| Intrinsic value of stock options exercised |  | 3,143 |  | 2,446 |  | 789 |
| Fair value of shares vested during the year |  | 105 |  | 63 |  | 393 |

The Company has outstanding restricted and deferred stock awards granted from various plans at December 31, 2016. The Company recognized $\$ 4.2$ million, $\$ 3.9$ million, and $\$ 3.4$ million in stock-based compensation expense related to these stock awards for the years ended December 31, 2016, 2015, and 2014, respectively. Tax benefits recognized with respect to restricted stock awards and stock units were $\$ 2.9$ million, $\$ 1.5$ million and $\$ 1.1$ million for the years ended December 31, 2016, 2015 and 2014, respectively. Unrecognized compensation cost related to restricted stock awards and stock units totaled $\$ 4.5$ million at December 31, 2016 and will be recognized over 2.8 years on a weighted average basis. Shares issued are funded from the Company's treasury stock. The following table summarizes information for unvested restricted stock awards outstanding as of December 31, 2016:
$\left.\begin{array}{llrl} & \begin{array}{c}\text { Neighted- } \\ \text { Average }\end{array} \\ \text { Number } \\ \text { of } \\ \text { Grant Date Fair } \\ \text { Value }\end{array}\right]$

The following table summarizes information for unvested restricted stock units outstanding as of December 31, 2016:

|  | Number <br> of <br> Shares | Weighted- <br> Average <br> Grant Date Fair <br> Value |  |
| :--- | :--- | ---: | ---: |
| Unvested at January 1, 2016 | $\mathbf{6 6 5 , 0 0 8}$ | $\$$ | $\mathbf{2 1 . 4 5}$ |
| Forfeited | $\mathbf{( 2 0 , 9 6 9 )}$ | $\mathbf{2 0 . 9 2}$ |  |
| Vested | $\mathbf{( 2 5 4 , 4 4 5 )}$ | $\mathbf{2 1 . 3 2}$ |  |
| Granted | $\mathbf{2 2 3 , 5 6 9}$ | $\mathbf{2 4 . 4 7}$ |  |
| Unvested at December 31, 2016 | $\mathbf{6 1 3 , 1 6 3}$ | $\$$ | $\mathbf{2 2 . 6 2}$ |

The Company has 2,994,517 securities remaining available to be granted as part of the Plan at December 31, 2016.

In accordance with GAAP, unrealized gains on available for sale securities and unrecognized actuarial gains or losses and prior service costs associated with the Company's pension and postretirement benefit plans are included in accumulated other comprehensive loss, net of tax. For the years ended December 31, components of accumulated other comprehensive loss are:

| (In thousands) | $\mathbf{2 0 1 6}$ | $\mathbf{2 0 1 5}$ |  |
| :--- | :---: | :---: | :---: |
| Unrecognized prior service cost and net actuarial loss on pension plans | $\mathbf{( 1 8 , 2 2 7 )}$ | $\mathbf{( 2 1 , 5 5 7 )}$ |  |
| Unrealized losses on derivatives (cash flow hedges) | $\mathbf{1 , 7 7 2}$ | - |  |
| Unrealized net holding (losses) gains on AFS securities | $\mathbf{( 5 , 0 6 5 )}$ | $(861)$ |  |
| Accumulated other comprehensive loss | $\mathbf{( 2 1 , 5 2 0 )}$ | $\$$ | $(\mathbf{2 2 , 4 1 8 )}$ |

Certain restrictions exist regarding the ability of the subsidiary bank to transfer funds to the Company in the form of cash dividends. The approval of the Office of Comptroller of the Currency (the "OCC") is required to pay dividends when a bank fails to meet certain minimum regulatory capital standards or when such dividends are in excess of a subsidiary bank's earnings retained in the current year plus retained net profits for the preceding two years as specified in applicable OCC regulations. At December 31, 2016, approximately $\$ 102.5$ million of the total stockholders' equity of the Bank was available for payment of dividends to the Company without approval by the OCC. The Bank's ability to pay dividends also is subject to the Bank being in compliance with regulatory capital requirements. The Bank is currently in compliance with these requirements. Under the State of Delaware General Corporation Law, the Company may declare and pay dividends either out of accumulated net retained earnings or capital surplus.

Under a previously disclosed stock repurchase plan, the Company purchased 675,535 shares of its common stock during the twelve month period ended December 31, 2016, for a total of $\$ 17.2$ million at an average price of $\$ 25.45$ per share. There are $1,000,000$ shares available for repurchase under this plan, which expires on December 31, 2017.

## 16. Regulatory Capital Requirements

The Company and the Bank are subject to various regulatory capital requirements administered by the federal banking agencies. Failure to meet minimum capital requirements can initiate certain mandatory and possibly additional discretionary actions by regulators that, if undertaken, could have a direct material effect on the consolidated financial statements. Under capital adequacy guidelines and the regulatory framework for prompt corrective action, the Bank must meet specific capital guidelines that involve quantitative measures of NBT Bank's assets, liabilities, and certain off-balance sheet items as calculated under regulatory accounting practices. The capital amounts and classifications are also subject to qualitative judgments by the regulators about components, risk weightings, and other factors.

Quantitative measures established by regulation to ensure capital adequacy require the Company and the Bank to maintain minimum amounts and ratios (set forth in the table below) of total and Tier 1 Capital to risk-weighted assets and of Tier 1 capital to average assets. As of December 31, 2016 and 2015, the Company and the Bank meet all capital adequacy requirements to which they were subject.

Under their prompt corrective action regulations, regulatory authorities are required to take certain supervisory actions (and may take additional discretionary actions) with respect to an undercapitalized institution. Such actions could have a direct material effect on an institution's financial statements. The regulations establish a framework for the classification of banks into five categories: well-capitalized, adequately capitalized, under capitalized, significantly under capitalized, and critically under capitalized. As of December 31, 2016, the most recent notification from the Bank's regulators categorized the Bank as well-capitalized under the regulatory framework for prompt corrective action. To be categorized as well-capitalized the Bank must maintain minimum total risk-based, Tier 1 risk-based, and Tier 1 Capital to Average Asset ratios as set forth in the table below. There are no conditions or events since that notification that management believes have changed the Bank's category.

Beginning in 2016, in addition to maintaining minimum capital ratios, the Company is subject to a capital conservation buffer ("Buffer") above the minimum to avoid restriction on capital distributions and discretionary bonus paychecks to officers. At December 31, 2016 the Buffer was $0.625 \%$. The Buffer regulatory minimum ratio will be phased in over four years starting in 2016 with minimum requirement of $0.625 \%$ until fully phased in for fiscal year 2019 at 2.5\%.

The Company and NBT Bank's actual capital amounts and ratios are presented as follows as of December 31, 2016 and 2015:

| (Dollars in thousands) | Actual |  |  | Regulatory ratio requirements |  |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Amount |  | Ratio | Minimum <br> capital <br> adequacy | For classification as wellcapitalized |
| As of December 31, 2016 |  |  |  |  |  |
| Total Capital (to risk weighted assets) |  |  |  |  |  |
| Company | \$ | 839,152 | 12.39\% | 8.00\% | 10.00\% |
| NBT Bank |  | 790,034 | 11.75\% | 8.00\% | 10.00\% |
| Tier I Capital (to risk weighted assets) |  |  |  |  |  |
| Company |  | 773,111 | 11.42\% | 4.00\% | 6.00\% |
| NBT Bank |  | 723,992 | 10.76\% | 4.00\% | 6.00\% |
| Tier I Capital (to average assets) |  |  |  |  |  |
| Company |  | 773,111 | 9.11\% | 4.00\% | 5.00\% |
| NBT Bank |  | 723,992 | 8.59\% | 4.00\% | 5.00\% |
| Common Equity Tier 1 Capital |  |  |  |  |  |
| Company |  | 676,111 | 9.98\% | 4.50\% | 6.50\% |
| NBT Bank |  | 723,992 | 10.76\% | 4.50\% | 6.50\% |
|  |  |  |  |  |  |
| As of December 31, 2015 |  |  |  |  |  |
| Total Capital (to risk weighted assets) |  |  |  |  |  |
| Company | \$ | 809,685 | 12.74\% | 8.00\% | 10.00\% |
| NBT Bank |  | 724,238 | 11.47\% | 8.00\% | 10.00\% |
| Tier I Capital (to risk weighted assets) |  |  |  |  |  |
| Company |  | 745,341 | 11.73\% | 4.00\% | 6.00\% |
| NBT Bank |  | 659,894 | 10.45\% | 4.00\% | 6.00\% |
| Tier I Capital (to average assets) |  |  |  |  |  |
| Company |  | 745,341 | 9.44\% | 4.00\% | 5.00\% |
| NBT Bank |  | 659,894 | 8.41\% | 4.00\% | 5.00\% |
| Common Equity Tier 1 Capital |  |  |  |  |  |
| Company |  | 648,341 | 10.20\% | 4.50\% | 6.50\% |
| NBT Bank |  | 659,894 | 10.45\% | 4.50\% | 6.50\% |

## 17. Earnings Per Share

The following is a reconciliation of basic and diluted EPS for the years presented in the consolidated statements of income:

| (In thousands except share and per share data) | Years ended December 31, |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2016 |  |  |  |  | 2015 |  |  |  |  | 2014 |  |  |  |
|  | Net income |  | Weighted average shares | Per share amount |  | Netincome |  | $\begin{gathered} \begin{array}{c} \text { Weighted } \\ \text { average } \\ \text { shares } \end{array} \\ \hline 43.836 \end{gathered}$ | Per share amount |  | Net income | Weighted average shares |  |  |
| Basic EPS | \$ | 78,409 | 43,244 | \$ | 1.81 | \$ | 76,425 |  | \$ | 1.74 | 75,074 | 43,877 | \$ | 1.71 |
| Effect of dilutive securities: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Stock-based compensation |  |  | 378 |  |  |  |  | 553 |  |  |  | 518 |  |  |
| Diluted EPS | \$ | 78,409 | 43,622 | \$ | 1.80 | \$ | 76,425 | 44,389 | \$ | 1.72 | 75,074 | 44,395 | \$ | 1.69 |

There was a nominal number of weighted average stock options outstanding for the years ended December 31, 2016, 2015, and 2014, respectively, that were not considered in the calculation of diluted EPS since the stock options' exercise prices were greater than the average market price during these periods.

The following table summarizes the reclassification adjustments out of accumulated other comprehensive income (loss) (in thousands):


## 19. Commitments and Contingent Liabilities

The Company's concentrations of credit risk are reflected in the consolidated balance sheets. The concentrations of credit risk with standby letters of credit, unused lines of credit, commitments to originate new loans and loans sold with recourse generally follow the loan classifications.

At December 31, 2016, approximately $59 \%$ of the Company's loans were secured by real estate located in central and upstate New York, northeastern Pennsylvania, western Massachusetts, southern New Hampshire, and Vermont. Accordingly, the ultimate collectability of a substantial portion of the Company's portfolio is susceptible to changes in market conditions of those areas. Management is not aware of any material concentrations of credit to any industry or individual borrowers.

The Company is a party to certain financial instruments with off-balance sheet risk in the normal course of business to meet the financing needs of its customers. These financial instruments include commitments to extend credit, unused lines of credit, standby letters of credit, and certain mortgage loans sold to investors with recourse. The Company's exposure to credit loss in the event of nonperformance by the other party to the commitments to extend credit, unused lines of credit, standby letters of credit, and loans sold with recourse is represented by the contractual amount of those instruments. The credit risk associated with commitments to extend credit and standby and commercial letters of credit is essentially the same as that involved with extending loans to customers and is subject to normal credit policies. Collateral may be obtained based on management's assessment of the customer's creditworthiness.

|  | At December 31, |  |  |
| :--- | ---: | ---: | ---: |
| (In thousands) | $\mathbf{2 0 1 6}$ | $\mathbf{2 0 1 5}$ |  |
| Unused lines of credit | $\mathbf{2 9 2 , 1 4 0}$ | $\$$ | 252,953 |
| Commitments to extend credits, primarily variable rate | $\mathbf{1 , 1 7 7 , 8 4 2}$ | $1,062,425$ |  |
| Standby letters of credit | $\mathbf{3 6 , 8 1 5}$ | 31,503 |  |
| Commercial letters of credit | $\mathbf{-}$ | 11,332 |  |
| Loans sold with recourse | $\mathbf{2 8 , 4 6 3}$ | 25,122 |  |

Since many loan commitments, standby letters of credit, and guarantees and indemnification contracts expire without being funded in whole or in part, the contract amounts are not necessarily indicative of future cash flows. The Company does not issue any guarantees that would require liability-recognition or disclosure, other than its standby letters of credit.

The Company guarantees the obligations or performance of customers by issuing stand-by letters of credit to third parties. These stand-by letters of credit are frequently issued in support of third party debt, such as corporate debt issuances, industrial revenue bonds, and municipal securities. The risk involved in issuing stand-by letters of credit is essentially the same as the credit risk involved in extending loan facilities to customers, and letters of credit are subject to the same credit origination, portfolio maintenance and management procedures in effect to monitor other credit and off-balance sheet products. Typically, these instruments have terms of five years or less and expire unused; therefore, the total amounts do not necessarily represent future cash requirements. The fair value of the Company's stand-by letters of credit at December 31, 2016 and 2015 was not significant.

In the normal course of business there are various outstanding legal proceedings. If legal costs are deemed material by management, the Company accrues for the estimated loss from a loss contingency if the information available indicates that it is probable that a liability had been incurred at the date of the financial statements, and the amount of loss can be reasonably estimated.

The Company is required to maintain reserve balances with the FRB. The required average total reserve for NBT Bank for the 14-day maintenance period ending December 21, 2016 was $\$ 56.2$ million.

## 20. Derivative Instruments and Hedging Activities

The Company is exposed to certain risks arising from both its business operations and economic conditions. The Company principally manages its exposures to a wide variety of business and operational risks through management of its core business activities. The Company manages economic risks, including interest rate, primarily by managing the amount, sources, and duration of its assets and liabilities, and through the use of derivative instruments. Specifically, the Company enters into derivative financial instruments to manage exposures that arise from business activities that result in the receipt or payment of future known and uncertain cash amounts, the value of which are determined by interest rates. The Company's derivative financial instruments are used to manage differences in the amount, timing, and duration of the Company's known or expected cash receipts and its known or expected cash payments principally related to certain fixed rate borrowings. The Company also has interest rate derivatives that result from a service provided to certain qualifying customers and, therefore, are not used to manage interest rate risk in the Company's assets or liabilities. The Company manages a matched book with respect to its derivative instruments in order to minimize its net risk exposure resulting from such transactions.

## Derivatives Not Designated as Hedging Instruments

The Company enters into interest rate swaps to facilitate customer transactions and meet their financing needs. These swaps are considered derivatives, but are not designated in hedging relationships. These instruments have interest rate and credit risk associated with them. To mitigate the interest rate risk, the Company enters into offsetting interest rate swaps with counterparties. The counterparty swaps are also considered derivatives and are also not designated in hedging relationships. Interest rate swaps are recorded within other assets or other liabilities on the consolidated balance sheet at their estimated fair value. Changes to the fair value of assets and liabilities arising from these derivatives are included, net, in other operating income in the consolidated statement of income.

The Company has two risk participation agreements with financial institution counterparties for interest rate swaps related to loans in which we are a participant. The risk participation agreement provides credit protection to the financial institution should the borrower fail to perform on its interest rate derivative contract with the financial institution.

## Derivatives Designated as Hedging Instruments

In 2016, the Company entered into interest rate swaps to modify the interest rate characteristics of certain short-term FHLB advances from variable rate to fixed rate in order to reduce the impact of changes in future cash flows due to market interest rate changes. These agreements are designated as cash flow hedges. Fair values included in other assets and other liabilities on the consolidated balance sheet applicable to these agreements amounted to $\$ 2.9$ million and $\$ 0.2$ million respectively at December 31, 2016. For the year ended December 31, 2016 the amount included in other comprehensive income totaled $\$ 1.8$ million net of tax.

The following table depicts the fair value adjustment recorded related to the notional amount of derivatives outstanding as well as the notional amount of risk participation agreements as December 31:

| (In thousands) | $\underline{2016}$ |  | $\underline{2015}$ |  |
| :---: | :---: | :---: | :---: | :---: |
| Derivatives Not Designated as Hedging Instruments: |  |  |  |  |
| Fair value adjustment | \$ | 309 | \$ | 6,224 |
| Notional amount |  |  |  |  |
| Interest rate derivatives |  | 371,101 |  | 192,625 |
| Risk participation agreements |  | 11,421 |  | - |
| Derivatives Designated as Hedging Instruments: |  |  |  |  |
| Fair value adjustment - interest rate derivatives |  | 2,704 |  | - |
| Notional amount - interest rate derivatives |  | 250,000 |  | - |

The following table indicates the gain or loss recognized in income on derivatives for the years ended December 31:

| (In thousands) | 2016 |  | 2015 |  | 2014 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Non-hedging interest rate derivatives: |  |  |  |  |  |  |
| Increase in interest income | \$ | 95 | \$ | 33 | \$ | 88 |
| Increase in other income |  | 3,480 |  | 684 |  | 59 |
| Hedging interest rate derivatives: |  |  |  |  |  |  |
| (Decrease) in interest expense |  | (70) |  |  |  | - |

## 21. Fair Values of Financial Instruments

GAAP states that fair value is an exit price, representing the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants. Fair value measurements are not adjusted for transaction costs. A fair value hierarchy exists within GAAP that prioritizes the inputs to valuation techniques used to measure fair value. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurements) and the lowest priority to unobservable inputs (Level 3 measurements). The three levels of the fair value hierarchy are described below:

Level 1 - Unadjusted quoted prices in active markets that are accessible at the measurement date for identical, unrestricted assets or liabilities;

Level 2 - Quoted prices for similar assets or liabilities in active markets, quoted prices in markets that are not active, or inputs that are observable, either directly or indirectly, for substantially the full term of the asset or liability;

Level 3 - Prices or valuation techniques that require inputs that are both significant to the fair value measurement an unobservable (i.e., supported by little or no market activity).

A financial instrument's level within the fair value hierarchy is based on the lowest level of input that is significant to the fair value measurement.

The types of instruments valued based on quoted market prices in active markets includes most U.S. government and agency securities, many other sovereign government obligations, liquid mortgage products, active listed equities and most money market securities. Such instruments are generally classified within Level 1 or Level 2 of the fair value hierarchy. The Company does not adjust the quoted prices for such instruments.

The types of instruments valued based on quoted prices in markets that are not active, broker or dealer quotations, or alternative pricing sources with reasonable levels of price transparency include most investment-grade and high-yield corporate bonds, less liquid mortgage products, less liquid agency securities, less liquid listed equities, state, municipal and provincial obligations and certain physical commodities. Such instruments are generally classified within Level 2 of the fair value hierarchy.

Level 3 is for positions that are not traded in active markets or are subject to transfer restrictions, valuations are adjusted to reflect illiquidity and/or nontransferability and such adjustments are generally based on available market evidence. In the absence of such evidence, management's best estimate will be used. Management's best estimate consists of both internal and external support on certain Level 3 investments. Subsequent to inception, management only changes Level 3 inputs and assumptions when corroborated by evidence such as transactions in similar instruments, completed or pending third-party transactions in the underlying investment or comparable entities, subsequent rounds of financing, recapitalizations and other transactions across the capital structure, offerings in the equity or debt markets and changes in financial ratios or cash flows.

For the years ended December 31, 2016 and 2015, the Company has made no transfers of assets between Level 1 and Level 2 or Level 3.

The following table sets forth the Company's financial assets and liabilities measured on a recurring basis that were accounted for at fair value as of December 31, 2016 and December 31, 2015. Assets and liabilities are classified in their entirety based on the lowest level of input that is significant to the fair value measurement:

| (In thousands) | Level 1 |  | Level 2 |  | Level 3 |  | $\begin{gathered} \text { December 31, } \\ 2016 \\ \hline \end{gathered}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assets: |  |  |  |  |  |  |  |  |
| AFS securities: |  |  |  |  |  |  |  |  |
| Federal agency | \$ | - | \$ | 174,408 | \$ | - | \$ | 174,408 |
| State \& municipal |  | - |  | 46,726 |  | - |  | 46,726 |
| Mortgage-backed |  | - |  | 529,844 |  | - |  | 529,844 |
| Collateralized mortgage obligations |  | - |  | 566,573 |  | - |  | 566,573 |
| Other securities |  | 11,493 |  | 9,246 |  | - |  | 20,739 |
| Total AFS securities | \$ | 11,493 | \$ | 1,326,797 | \$ | - | \$ | 1,338,290 |
| Trading securities |  | 9,259 |  | - |  | - |  | 9,259 |
| Interest rate swaps |  | - |  | 3,210 |  | - |  | 3,210 |
| Total | \$ | 20,752 | \$ | 1,330,007 | \$ | - | \$ | 1,350,759 |
|  |  |  |  |  |  |  |  |  |
| Liabilities: |  |  |  |  |  |  |  |  |
| Interest rate swaps | \$ | - | \$ | 506 | \$ | - | \$ | 506 |
| Total | \$ | - | \$ | 506 | \$ | - | \$ | 506 |


| (In thousands) | Level 1 |  | Level 2 |  | Level 3 |  | $\begin{gathered} \text { December 31, } \\ 2015 \\ \hline \end{gathered}$ |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Assets: |  |  |  |  |  |  |  |  |
| AFS securities: |  |  |  |  |  |  |  |  |
| Federal agency | \$ | - | \$ | 311,272 | \$ | - | \$ | 311,272 |
| State \& municipal |  | - |  | 31,637 |  | - |  | 31,637 |
| Mortgage-backed |  | - |  | 409,896 |  | - |  | 409,896 |
| Collateralized mortgage obligations |  | - |  | 404,971 |  | - |  | 404,971 |
| Other securities |  | 7,526 |  | 9,242 |  | - |  | 16,768 |
| Total AFS securities | \$ | 7,526 | \$ | 1,167,018 | \$ | - | \$ | 1,174,544 |
| Trading securities |  | 8,377 |  | - |  | - |  | 8,377 |
| Interest rate swaps |  | - |  | 6,224 |  | - |  | 6,224 |
| Total | \$ | 15,903 | \$ | 1,173,242 | \$ | - | \$ | 1,189,145 |
|  |  |  |  |  |  |  |  |  |
| Liabilities: |  |  |  |  |  |  |  |  |
| Interest rate swaps | \$ | - | \$ | 6,224 | \$ | - | \$ | 6,224 |
| Total | \$ | - | \$ | 6,224 | \$ | - | \$ | 6,224 |

Certain common equity securities are reported at fair value utilizing Level 1 inputs (exchange quoted prices). The majority of the other investment securities are reported at fair value utilizing Level 2 inputs. The prices for these instruments are obtained through an independent pricing service or dealer market participants with whom the Company has historically transacted both purchases and sales of investment securities. Prices obtained from these sources include prices derived from market quotations and matrix pricing. The fair value measurements consider observable data that may include dealer quotes, market spreads, cash flows, the U.S. Treasury yield curve, live trading levels, trade execution data, market consensus prepayment speeds, credit information, and the bond's terms and conditions, among other things. Management reviews the methodologies used in pricing the securities by its third party providers.

GAAP requires disclosure of assets and liabilities measured and recorded at fair value on a non-recurring basis such as goodwill, loans held for sale, OREO, collateral-dependent impaired loans, mortgage servicing rights and held to maturity securities.

The Company had collateral dependent impaired loans with a carrying value of $\$ 7.0$ million, which had specific reserves included in the allowance for loan losses of $\$ 1.5$ million at December 31, 2016. The Company uses the fair value of underlying collateral to estimate the specific reserves for collateral dependent impaired loans. The fair value of underlying collateral is generally determined through independent appraisals, which generally include various Level 3 inputs which are not identifiable. The appraisals may be adjusted by management for qualitative factors such as economic conditions and estimated liquidation expenses ranging from $10 \%$ to $35 \%$. Based on the valuation techniques used, the fair value measurements for collateral dependent impaired loans are classified as Level 3.

The following table sets forth information with regard to estimated fair values of financial instruments at December 31, 2016 and December 31, 2015. This table excludes financial instruments for which the carrying amount approximates fair value. Financial instruments for which the fair value approximates carrying value include cash and cash equivalents, securities available for sale, trading securities, accrued interest receivable, non-maturity deposits, short-term borrowings, accrued interest payable, and interest rate swaps.

| (In thousands) | Fair Value Hierarchy | December 31, 2016 |  |  |  | December 31, 2015 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Carrying amount |  | Estimated fair value |  | Carrying amount |  | Estimated fair value |  |
| Financial assets: |  |  |  |  |  |  |  |  |  |
| HTM securities | 2 | \$ | 527,948 | \$ | 525,050 | \$ | 471,031 | \$ | 473,140 |
| Net loans | 3 |  | 6,132,857 |  | 6,273,233 |  | 5,820,115 |  | 5,958,427 |
| Financial liabilities: |  |  |  |  |  |  |  |  |  |
| Time deposits | 2 | \$ | 872,411 | \$ | 868,153 | \$ | 908,827 | \$ | 903,501 |
| Long-term debt | 2 |  | 104,087 |  | 104,113 |  | 130,447 |  | 131,268 |
| Junior subordinated debt | 2 |  | 101,196 |  | 102,262 |  | 101,196 |  | 97,346 |

Fair value estimates are made at a specific point in time, based on relevant market information and information about the financial instrument. These estimates do not reflect any premium or discount that could result from offering for sale at one time the Company's entire holdings of a particular financial instrument. Because no market exists for a significant portion of the Company’s financial instruments, fair value estimates are based on judgments regarding future expected loss experience, current economic conditions, risk characteristics of various financial instruments, and other factors. These estimates are subjective in nature and involve uncertainties and matters of significant judgment and therefore cannot be determined with precision. Changes in assumptions could significantly affect the estimates.

Fair value estimates are based on existing on and off-balance sheet financial instruments without attempting to estimate the value of anticipated future business and the value of assets and liabilities that are not considered financial instruments. For example, the Company has a substantial trust and investment management operation that contributes net fee income annually. The trust and investment management operation is not considered a financial instrument, and its value has not been incorporated into the fair value estimates. Other significant assets and liabilities include the benefits resulting from the low-cost funding of deposit liabilities as compared to the cost of borrowing funds in the market, and premises and equipment. In addition, the tax ramifications related to the realization of the unrealized gains and losses can have a significant effect on fair value estimates and have not been considered in the estimate of fair value.

Fair values for securities are based on quoted market prices or dealer quotes, where available. Where quoted market prices are not available, fair values are based on quoted market prices of comparable instruments. When necessary, the Company utilizes matrix pricing from a third party pricing vendor to determine fair value pricing. Matrix prices are based on quoted prices for securities with similar coupons, ratings, and maturities, rather than on specific bids and offers for the designated security.

GAAP gives entities the option to measure eligible financial assets, financial liabilities and Company commitments at fair value (i.e., the fair value option), on an instrument-by-instrument basis, that are otherwise not permitted to be accounted for at fair value under other accounting standards. The election to use the fair value option is available when an entity first recognizes a financial asset or financial liability or upon entering into a Company commitment. Subsequent changes in fair value must be recorded in earnings. As of December 31, 2016 and 2015, the Company did not elect the fair value option for any eligible items.

## Securities Held to Maturity

The fair value of the Company's investment securities held to maturity is primarily measured using information from a third party pricing service. The fair value measurements consider observable data that may include dealer quotes, market spreads, cash flows, the U.S. Treasury yield curve, live trading levels, trade execution data, market consensus prepayment speeds, credit information and the bond's terms and conditions, among other things.

## Net Loans

The fair value of the Company's loans was estimated by discounting the expected future cash flows using the current interest rates at which similar loans would be made for the same remaining maturities. Loans were first segregated by type, and then further segmented into fixed and variable rate and loan quality categories. Expected future cash flows were projected based on contractual cash flows, adjusted for estimated prepayments.

## Time Deposits

The fair value of time deposits was estimated using a discounted cash flow approach that applies prevailing market interest rates for similar maturity instruments. The fair values of the Company's time deposit liabilities do not take into consideration the value of the Company's long-term relationships with depositors, which may have significant value.

## Long-Term Debt

The fair value of long-term debt was estimated using a discounted cash flow approach that applies prevailing market interest rates for similar maturity instruments.

## Junior Subordinated Debt

The fair value of trust preferred debentures has been estimated using a discounted cash flow analysis.

## Interest Rate Swaps

The Company enters into interest rate swaps to facilitate customer transactions and meet their financing needs. These swaps are considered derivatives, but are not designated in hedging relationships. These instruments have interest rate and credit risk associated with them. To mitigate the interest rate risk, the Company enters into offsetting interest rate swaps with counterparties. The counterparty swaps are also considered derivatives and are also not designated in hedging relationships. Interest rate swaps are recorded within other assets or other liabilities on the consolidated balance sheet at their estimated fair value. Changes to the fair value of assets and liabilities arising from these derivatives are included, net, in other operating income in the consolidated statement of income.

## Table of Contents

In 2016, the Company entered into interest rate swaps to modify the interest rate characteristics of certain short-term FHLB advances from variable rate to fixed rate in order to reduce the impact of changes in future cash flows due to market interest rate changes. These agreements are designated as cash flow hedges.

## 22. Sale of Equity Investment

On April 17, 2014, NBT Capital Corp., a wholly-owned subsidiary of NBT, sold to LendingClub Corporation ("LendingClub"), its 20\% ownership interest in Springstone Financial, LLC ("Springstone"), which NBT originally acquired in exchange for a $\$ 3.0$ million investment, as part of LendingClub's acquisition of all of the outstanding equity in Springstone. In total, LendingClub paid the group of selling equity holders a purchase price equal to $\$ 140.0$ million in cash and preferred stock. As a result of this sale, the Company recognized a gain of $\$ 19.4$ million in 2014 and a gain of $\$ 4.2$ million in 2015. There is $\$ 0.9$ million in proceeds being held in escrow for indemnification provisions of the sale contract which will be recognized into income when the conditions of the contract have been deemed to be satisfied.

## 23. Parent Company Financial Information

## Condensed Balance Sheets

| (In thousands) | December 31, |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 2016 |  | 2015 |  |
| Assets |  |  |  |  |
| Cash and cash equivalents | \$ | 4,152 | \$ | 28,682 |
| Securities available for sale, at estimated fair value |  | 15,273 |  | 12,711 |
| Trading securities |  | 8,968 |  | 8,042 |
| Investment in subsidiaries, on equity basis |  | 1,006,444 |  | 941,731 |
| Other assets |  | 44,178 |  | 65,133 |
| Total assets | \$ | 1,079,015 | \$ | 1,056,299 |
| Liabilities and Stockholders' Equity |  |  |  |  |
| Total liabilities | \$ | 165,699 | \$ | 174,295 |
| Stockholders' equity |  | 913,316 |  | 882,004 |
| Total liabilities and stockholders' equity | \$ | 1,079,015 | \$ | 1,056,299 |

## Condensed Income Statements

| (In thousands) | Years ended December 31, |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2016 |  | 2015 |  | 2014 |  |
| Dividends from subsidiaries | \$ | 10,200 | \$ | 78,200 | \$ | 35,400 |
| Management fee from subsidiaries |  | 95,244 |  | 92,629 |  | 87,116 |
| Securities gains |  | 652 |  | 3,034 |  | 49 |
| Interest, dividend and other income |  | 976 |  | 693 |  | 800 |
| Total revenue |  | 107,072 |  | 174,556 |  | 123,365 |
| Operating expense |  | 97,977 |  | 94,332 |  | 89,834 |
| Income before income tax benefit and equity in undistributed income of subsidiaries |  | 9,095 |  | 80,224 |  | 33,531 |
| Income tax benefit (expense) |  | 321 |  | (515) |  | 631 |
| Dividends in excess of income (equity in undistributed income) of subsidiaries |  | 68,993 |  | $(3,284)$ |  | 40,912 |
| Net income | \$ | 78,409 | \$ | 76,425 | \$ | 75,074 |

## Condensed Statements of Cash Flow

| (In thousands) | Years ended December 31, |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2016 |  | 2015 |  | 2014 |  |
| Operating activities |  |  |  |  |  |  |
| Net income | \$ | 78,409 | \$ | 76,425 | \$ | 75,074 |
| Adjustments to reconcile net income to net cash provided by operating activities |  |  |  |  |  |  |
| Stock-based compensation |  | 4,378 |  | 4,086 |  | 3,521 |
| (Losses) gains on sales of available-for-sale securities |  | (652) |  | $(3,034)$ |  | 49 |
| Equity in undistributed income of subsidiaries |  | $(79,193)$ |  | $(74,916)$ |  | $(75,824)$ |
| Cash dividend from subsidiaries |  | 10,200 |  | 78,200 |  | 35,400 |
| Net change in other liabilities |  | $(8,596)$ |  | 6,770 |  | 18,594 |
| Net change in other assets |  | 22,372 |  | $(6,944)$ |  | $(25,151)$ |
| Net cash provided by operating activities |  | 26,918 |  | 80,587 |  | 31,663 |
| Investing activities |  |  |  |  |  |  |
| Purchases of available-for-sale securities |  | (580) |  | $(3,083)$ |  | (597) |
| Sales and maturities of available-for-sale securities |  | 1,783 |  | 5,297 |  | 140 |
| Purchases of premises and equipment |  | (278) |  | (408) |  | (640) |
| Net cash provided by (used in) investing activities |  | 925 |  | 1,806 |  | $(1,097)$ |
| Financing activities |  |  |  |  |  |  |
| Proceeds from the issuance of shares to employee benefit plans and other stock plans |  | 2,645 |  | 7,692 |  | 5,943 |
| Purchases of treasury shares |  | $(17,193)$ |  | $(26,797)$ |  | (72) |
| Cash dividends and payments for fractional shares |  | $(38,880)$ |  | $(38,149)$ |  | $(36,905)$ |


| Net tax benefit (expense) from stock-based compensation | $\mathbf{1 , 0 5 5}$ | $\mathbf{( 4 3 )}$ |  |  |
| :--- | ---: | ---: | ---: | ---: |
| Net cash used in financing activities | $\mathbf{( 5 2 , 3 7 3 )}$ | $(57,297)$ | $(30,721)$ |  |
| Net (decrease) increase in cash and cash equivalents | $\mathbf{( 2 4 , 5 3 0 )}$ | 25,096 | $(155)$ |  |
| Cash and cash equivalents at beginning of year | $\mathbf{2 8 , 6 8 2}$ | 3,586 | 3,741 |  |
| Cash and cash equivalents at end of year | $\mathbf{4 , 1 5 2}$ | $\$$ | 28,682 | $\$$ |

A statement of changes in stockholders' equity has not been presented since it is the same as the consolidated statement of changes in stockholders' equity previously presented.

In February 2017, the FASB issued Accounting Standards Update ("ASU") No. 2017-05, Other Income - Gains and Losses from the Derecognition of Nonfinancial Assets (Subtopic 610-20). ASU 2017-05 will clarify the scope of Subtopic 610-20 and add guidance for partial sales of nonfinancial assets. The amendments define the term in substance nonfinancial assets, and clarify that a nonfinancial asset within the scope may include nonfinancial assets transferred within a legal entity to a counterparty, in part, as a financial asset promised to a counterparty in a contract. Additionally, the amendments in ASU clarify that an entity should identify each distinct nonfinancial asset or in substance nonfinancial assets and allocate consideration to each distinct asset. The amendments should be applied either on retrospectively to each period presented or with a modified retrospective approach. ASU 2017-05 is effective for the Company on January 1, 2018 and the Company is required to apply the amendment at the same time that is applies the amendments in 2014-09. Early adoption is permitted but only as of annual reporting period beginning after December 15, 2016. Management is evaluating the effect that this guidance will have on the consolidated financial statements and related disclosures.

In January 2017, the FASB issued ASU No. 2017-04, Intangibles - Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment. ASU 2017-04 will amend and simplify the subsequent measurement of goodwill, the amendments eliminate Step 2 from the goodwill impairment test. The amendments also eliminate the requirements for any reporting unit with a zero or negative carrying amount to perform Step 2 of the goodwill impairment test. An entity still has the option to perform the qualitative assessment for a reporting unit to determine if the qualitative impairment test is necessary. The amendments should be applied on a prospective basis. The nature of and reason for the change in accounting principle should be disclosed upon transition. ASU 2017-04 is effective for the Company on January 1, 2020. Early adoption is permitted on testing dates after January 1, 2017. Management is evaluating the effect that this guidance will have on the consolidated financial statements and related disclosures.

In January 2017, the FASB issued ASU No. 2017-01, Business Combinations (Topic 805): Clarifying the Definition of a Business. ASU 2017-01 provides a more robust framework to use in determining when a set of assets and activities ("set") is a business and to address stakeholder feedback that the definition of a business in current GAAP is applied too broadly. The primary amendments in the ASU provide a screen to exclude transactions where substantially all of the fair value of the transferred set is concentrated in a single asset, or group of similar assets, from being evaluated as a business. ASU 2017-01 is effective for the Company on January 1, 2018 using the prospective method. Early adoption is permitted. Management is evaluating the effect that this guidance will have on the consolidated financial statements and related disclosures.

In November 2016, the FASB issued ASU No. 2016-18, Statement of Cash Flows (Topic 230): Restricted Cash. ASU 2016-18 address diversity in practice from entities classifying and presenting transfers between cash and restricted cash as operating, investing, or financing activities, or as a combination of those activities in the Statement of Cash Flows. The ASU requires entities to show the changes in the total of cash, cash equivalents, restricted cash, and restricted cash equivalents in the Statement of Cash Flows. As a result, transfers between such categories will no longer be presented in the Statement of Cash Flows. ASU 2016-18 is effective for the Company on January 1, 2018 using the retrospective method. Early adoption is permitted provided that all amendments are adopted in the same period. Management is evaluating the effect that this guidance will have on the consolidated financial statements and related disclosures.

In August 2016, the FASB issued Accounting Standards Update ("ASU") No. 2016-15, Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments). ASU 2016-15 addresses diversity in practice in how certain cash receipts and cash payments are presented and classified in the statement of cash flows. This standard addresses the following eight specific cash flow issues: Debt prepayment or debt extinguishment costs; settlement of zero-coupon debt instruments or other debt instruments with coupon interest rates that are insignificant in relation to the effective interest rate of the borrowing; contingent consideration payments made after a business combination; proceeds from the settlement of insurance claims; proceeds from the settlement of corporate-owned life insurance policies; distributions received from equity method investees; beneficial interests in securitization transactions; and separately identifiable cash flows and application of the predominance principle. ASU 2016-15 is effective for the Company on January 1 , 2018. Early adoption is permitted, including adoption in an interim period. Management is evaluating the effect that this guidance will have on the consolidated financial statements and related disclosures.

In June 2016, the FASB issued Accounting Standards Update No. 2016-13, Financial Instruments - Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments. ASU 2016-13 requires the measurement of all expected credit losses for financial assets held at the reporting date based on historical experience, current conditions and reasonable and supportable forecasts. Financial institutions and other organizations will now use forward-looking information to better inform their credit loss estimates. Many of the loss estimation techniques applied today will still be permitted, although the inputs to those techniques will change to reflect the full amount of expected credit losses. In addition, ASU 2016-16 amends the accounting for credit losses on available for sale debt securities and purchased financial assets with credit deterioration. ASU 2016-13 is effective for the Company on January 1, 2020. Early adoption is permitted for all organizations for fiscal years and interim periods within those fiscal years, beginning after December 15, 2019. Management is evaluating the effect that this guidance will have on the consolidated financial statements and related disclosures.

In March 2016, the FASB issued ASU No. 2016-09, Compensation - Stock Compensation (Topic 718): Improvements to Employee Share-Based Payment Accounting. ASU 2016-09 simplifies the accounting for stock-based payment transactions, including the income tax consequences, classification of awards as either equity or liabilities and classification on the statement of cash flows. ASU 2016-09 is effective for the Company on January 1, 2017. Early adoption is permitted in any interim or annual period. Management is evaluating the effect that this guidance will have on the consolidated financial statements and related disclosures. Effective January 1, 2017, the Company adopted ASU 2016-09. As a result of the adoption of this new guidance, the Company made an accounting policy election to account for forfeitures when they occur. The guidance was required to be applied with a modified retrospective approach, and, accordingly, the Company made a cumulative effect adjustment recorded to opening retained earnings as of January 1 , 2017 which was not material to the Company's consolidated financial statements.

## Table of Contents

In March 2016, the FASB issued ASU No. 2016-07, Investments - Equity Method and Joint Ventures (Topic 323): Simplifying the Transition to the Equity Method of Accounting. ASU 2016-07 eliminates the requirement for an investor to adjust an equity method investment, results of operations and retained earnings retroactively on a step-by-step basis as if the equity method had been in effect during all previous periods that the investment had been held as a result of an increase in the level of ownership interest or degree of influence. Additionally, an entity that has an available for sale equity security that becomes qualified for the equity method of accounting must recognize through earnings the unrealized holding gain or loss in accumulated other comprehensive income at the date the investment becomes qualified for use of the equity method. ASU 2016-07 is effective for the Company on January 1, 2017. Early adoption is permitted in any interim or annual period. Management does not believe the guidance will have a material impact on the consolidated financial statements and related disclosures.

In March 2016, the FASB issued ASU No. 2016-06, Derivatives and Hedging (Topic 815): Contingent Put and Call Options in Debt Instruments. ASU 201606 clarifies the requirements for assessing whether contingent call (put) options that can accelerate the payment of principal on debt instruments are clearly and closely related to their debt hosts. An entity performing the assessment under the amendments in this Update is required to assess the embedded call (put) options solely in accordance with the four-step decision sequence. The amendments in this ASU clarify what steps are required when assessing whether the economic characteristics and risks of call (put) options are clearly and closely related to the economic characteristics and risks of their debt hosts, which is one of the criteria for bifurcating an embedded derivative. Consequently, when a call (put) option is contingently exercisable, an entity does not have to assess whether the event that triggers the ability to exercise a call (put) option is related to interest rates or credit risks. The amendments are an improvement to GAAP because they eliminate diversity in practice in assessing embedded contingent call (put) options in debt instruments. ASU 2016-07 is effective for the Company on January 1, 2017. Early adoption is permitted in any interim or annual period. Management does not believe this guidance will have a material impact on the consolidated financial statements and related disclosures.

In March 2016, the FASB issued ASU No. 2016-05, Derivatives and Hedging (Topic 815): Effect of Derivative Contract Novations on Existing Hedge Accounting Relationships. ASU 2016-05 clarifies that a change in the counterparty to a derivative instrument that has been designated as a hedging instrument does not in and of itself, require de-designation of that hedging relationship provided that all other hedge accounting criteria continue to be met. ASU 2016-05 is effective for the Company on January 1, 2017. Early adoption is permitted in any interim or annual period. Management does not believe this guidance will have a material impact on the consolidated financial statements and related disclosures.

In February 2016, the FASB issued ASU No. 2016-02, Leases (Topic 842). ASU 2016-02 requires lessees to recognize right of use assets and lease liabilities on the balance sheet for all leases with terms longer than 12 months. For leases with a term of 12 months or less, a lessee is permitted to make an accounting policy election by class of underlying asset not to recognize a right of use asset and lease liability. Additionally, when measuring assets and liabilities arising from a lease, optional payments should be included only if the lessee is reasonable certain to exercise an option to extend the lease, exercise a purchase option or not exercise an option to terminate the lease. ASU 2016-07 is effective for the Company on January 1, 2019. Early adoption is permitted in any interim or annual period. Management is evaluating the effect that this guidance will have on the consolidated financial statements and related disclosures.

In January 2016, the FASB issued ASU No. 2016-01, Financial Instruments - Overall (Subtopic 825-10) - Recognition and Measurement of Financial Assets and Financial Liabilities. ASU 2016-01 addresses certain aspects of recognition, measurement, presentation and disclosure of financial instruments and requires entities to measure equity investments that do not result in consolidation and are not accounted for under the equity method at fair value. Any changes in fair value will be recognized in net income unless the investments qualify for a new practicability exception. This ASU also requires entities to recognize changes in instrument-specific credit risk related to financial liabilities measured under the fair value option in other comprehensive income. No changes were made to the guidance for classifying and measuring investments in debt securities and loans. ASU 2016-01 is effective for the Company on January 1, 2018. Early adoption is permitted in any interim or annual period. Management is evaluating the effect that this guidance will have on the consolidated financial statements and related disclosures.

In May 2014, the FASB issued ASU No. 2014-09 - Revenue from Contracts with Customers (Topic 606). ASU 2014-09 is a comprehensive new revenue recognition standard that will supersede nearly all existing revenue recognition guidance under GAAP and is based on the principle that revenue is recognized to depict the transfer of goods or services to customers in an amount that reflects consideration to which the entity expects to be entitled in exchange for those goods and services. The ASU also requires additional disclosure about the nature, amount, timing and uncertainty of revenue and cash flows arising from customer contracts, including significant judgments and changes in judgments and assets recognized from costs incurred to obtain or fulfill a contract. For financial reporting purposes, the standard allows for either full retrospective adoption, meaning the standard is applied to all of the periods presented, or modified retrospective adoption, meaning the standard is applied only to the most current period presented in the financial statements with the cumulative effect of initially applying the standard recognized at the date of initial application. ASU 2014-09 was initially effective for the Company on January 1, 2017; however, in August 2015, the FASB issued ASU No. 2015-14 - Revenue from Contracts with Customers - Deferral of the Effective Date, which deferred the effective date to January 1, 2018. Early adoption is not permitted. In addition, the FASB has begun to issue targeted updates to clarify specific implementation issues of ASU 2014-09. These updates include ASU No. 2016-08 - Principal versus Agent Considerations (Reporting Revenue Gross versus Net), ASU No. 2016-10 - Identifying Performance Obligations and Licensing, ASU No. 2016-12 - Narrow-Scope Improvements and Practical Expedients, and ASU No. 2016-20-Technical Corrections and Improvements to Top 606-Revenue from Contract with Customers. Management is evaluating the effect that this guidance will have on the consolidated financial statements and related disclosures.

## ITEM 9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure

## None.

## ITEM 9A. Controls and Procedures

As of the end of the period covered by this Annual Report on Form 10-K, an evaluation was carried out by the Company's management, with the participation of its Chief Executive Officer and Chief Financial Officer, of the effectiveness of the Company's disclosure controls and procedures (as defined in Rule 13a15(e) under the Securities Exchange Act of 1934). Based upon that evaluation, the Chief Executive Officer and Chief Financial Officer concluded that the disclosure controls and procedures were effective as of the end of the period covered by this report. No changes were made to the Company's internal control over financial reporting (as defined in Rule 13a-15(f) under the Securities Exchange Act of 1934) during the last fiscal quarter that materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

## Management Report on Internal Controls Over Financial Reporting

The management of NBT Bancorp, Inc. (the "Company") is responsible for establishing and maintaining adequate internal control over financial reporting. The Company's internal control over financial reporting is a process designed under the supervision of the Company's Chief Executive Officer and Chief Financial Officer to provide reasonable assurance regarding the reliability of financial reporting and the preparation of the Company's consolidated financial statements for external purposes in accordance with generally accepted accounting principles.

As of December 31, 2016, management assessed the effectiveness of the Company's internal control over financial reporting based on the criteria for effective internal control over financial reporting established in "Internal Control - Integrated Framework (2013)," issued by the Committee of Sponsoring Organizations (COSO) of the Treadway Commission. Based on the assessment, management determined that the Company's internal control over financial reporting as of December 31, 2016 was effective at the reasonable assurance level based on those criteria.

KPMG LLP, the independent registered public accounting firm that audited the consolidated financial statements of the Company included in this Annual Report on Form 10-K, has issued a report on the effectiveness of the Company's internal control over financial reporting as of December 31, 2016. The report, which expresses an unqualified opinion on the effectiveness of the Company's internal control over financial reporting as of December 31, 2016, is included in this Item under the heading "Report of Independent Registered Public Accounting Firm" on the following page.

## Report of Independent Registered Public Accounting Firm

The Board of Directors and Stockholders
NBT Bancorp Inc.:
We have audited NBT Bancorp, Inc. and subsidiaries' (the Company) internal control over financial reporting as of December 31, 2016, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). 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 Control Over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit.

We conducted our audit in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, 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.

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.

In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2016, based on the criteria established in Internal Control — Integrated Framework (2013) issued by COSO.

We have also audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States), the consolidated balance sheets of NBT Bancorp Inc. and subsidiaries as of December 31, 2016 and 2015 and 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, 2016, and our report dated March 1, 2017 expressed an unqualified opinion on those financial statements.
/s/ KPMG LLP
Albany, New York
March 1, 2017

None.

## PART III

ITEM 10. Directors, Executive Officers and Corporate Governance

The information required by this item is incorporated herein by reference to the Company's definitive Proxy Statement for its Annual Meeting of shareholders to be held on May 23, 2017 (the "Proxy Statement"), which will be filed with the SEC within 120 days after the Company's 2016 fiscal year end.

## ITEM 11. Executive Compensation

The information required by this item is incorporated herein by reference to the Proxy Statement which will be filed with the SEC within 120 days after the Company's 2016 fiscal year end.

## ITEM 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters

The following table provides information with respect to shares of common stock that may be issued under the Company's existing equity compensation plans:

|  | A. Number of securities to be issued upon exercise of outstanding options, warrants and rights | B. Weightedaverage exercise price of Outstanding options, warrants and rights |  | Number of securities remaining available for |
| :---: | :---: | :---: | :---: | :---: |
| Plan Category |  |  |  | Future issuance under Equity compensation plans (excluding securities reflected in column A) |
| Equity compensation plans approved by stockholders | 230,174 | \$ | 24.35 | 2,994,517 |
| Equity compensation plans not approved by stockholders | None |  | None | None |

The other information required by this item is incorporated herein by reference to the Proxy Statement which will be filed with the SEC within 120 days of the Company's 2016 fiscal year end.

## ITEM 13. Certain Relationships, Related Transactions and Director Independence

The information required by this item is incorporated herein by reference to the Proxy Statement which will be filed with the SEC within 120 days of the Company's 2016 fiscal year end.

## ITEM 14. Principal Accountant Fees and Services

The information required by this item is incorporated herein by reference to the Proxy Statement which will be filed with the SEC within 120 days of the Company's 2016 fiscal year end.

## PART IV

(a)(1) The following Consolidated Financial Statements are included in Part II, Item 8 hereof:

Report of Independent Registered Public Accounting Firm.
Consolidated Balance Sheets as of December 31, 2016 and 2015.

Consolidated Statements of Income for each of the three years ended December 31, 2016, 2015 and 2014.
Consolidated Statements of Changes in Stockholders’ Equity for each of the three years ended December 31, 2016, 2015 and 2014.
Consolidated Statements of Cash Flows for each of the three years ended December 31, 2016, 2015 and 2014.

Consolidated Statements of Comprehensive Income for each of the three years ended December 31, 2016, 2015 and 2014.
Notes to the Consolidated Financial Statements.
(a)(2) There are no financial statement schedules that are required to be filed as part of this form since they are not applicable or the information is included in the consolidated financial statements.
(a)(3) See below for all exhibits filed herewith and the Exhibit Index.
3.1 Restated Certificate of Incorporation of NBT Bancorp Inc. as amended through July 1, 2015 (filed as Exhibit 3.1 to Registrant's Form 10-Q, filed on August 10, 2015, and incorporated herein by reference)
3.2 Amended and Restated Bylaws of NBT Bancorp Inc. effective January 23, 2017 (filed as Exhibit 3.1 to Registrant’s Form 8-K, filed on January 25, 2017, and incorporated herein by reference).
3.3 Certificate of Designation of the Series A Junior Participating Preferred Stock (filed as Exhibit A to Exhibit 4.1 of the Registrant’s Form 8-K, filed on November 18, 2004, and incorporated herein by reference).
4.1 Specimen common stock certificate for NBT’s Bancorp Inc. common stock (filed as Exhibit 4.1 to the Registrant's Amendment No. 1 to Registration Statement on Form S-4, filed on December 27, 2005, and incorporated herein by reference).
10.1 NBT Bancorp Inc. 1993 Stock Option Plan (filed as Exhibit 99.1 to Registrant's Form S-8 Registration Statement, file number 333-71830, filed on October 18, 2001, and incorporated by reference herein).*
10.2 NBT Bancorp Inc. Non-Employee Director, Divisional Director and Subsidiary Director Stock Option Plan (filed as Exhibit 99.1 to Registrant's Form S-8 Registration Statement, file number 333-73038, filed on November 9, 2001, and incorporated by reference herein).*
10.3 NBT Bancorp Inc. Non-employee Directors Restricted and Deferred Stock Plan (filed as Exhibit 10.5 to Registrant's Form 10-K for the year ended December 31, 2008, filed on March 2, 2009, and incorporated herein by reference).*
10.4 NBT Bancorp Inc. Performance Share Plan (filed as Exhibit 10.6 to Registrant's Form 10-K for the year ended December 31, 2008, filed on March 2, 2009, and incorporated herein by reference).*
10.5 NBT Bancorp Inc. 2017 Executive Incentive Compensation Plan.*
$\overline{10.6}$ Supplemental Executive Retirement Agreement between NBT Bancorp Inc. and Martin A. Dietrich as amended and restated January 20 , 2010 (filed as Exhibit 10.14 to Registrant’s Form 10-K for the year ended December 31, 2009, filed on March 1, 2010, and incorporated herein by reference).*
10.7 Amended and Restated Employment Agreement, dated December 19, 2016, by and between NBT Bancorp Inc. and Michael J. Chewens (filed as Exhibit 10.3 to Registrant's Form 8-K, filed on December 20, 2016, and incorporated herein by reference).*

## Table of Contents

10.8 Form of Amended and Restated NBT Bancorp Inc. Supplemental Retirement Agreement, dated as of November 5, 2009, between NBT Bancorp Inc. and Messrs. Chewens and Levy (filed as Exhibit 10.7 to Registrant's Form 10-Q for the quarterly period ended September 30, 2009, filed on November 9, 2009, and incorporated herein by reference).*
10.9 Amendment to the Supplemental Executive Retirement Agreement, dated March 10, 2015, by and between NBT Bancorp Inc. and Michael J. Chewens (filed as Exhibit 10.6 to Registrant's Form 8-K, filed on March 16, 2015, and incorporated herein by reference).*
10.10 Amendment to the Supplemental Executive Retirement Agreement, dated March 10, 2015, by and between NBT Bancorp Inc. and Jeffrey M. Levy (filed as Exhibit 10.8 to Registrant's Form 8-K, filed on March 16, 2015, and incorporated herein by reference).*
10.11 Employment Agreement, dated March 10, 2015, by and between NBT Bancorp Inc. and Jeffrey M. Levy (filed as Exhibit 10.4 to Registrant's Form 8-K, filed on March 16, 2015, and incorporated herein by reference).*
10.12 Split-Dollar Agreement between NBT Bancorp Inc., NBT Bank, National Association and Martin A. Dietrich made November 10, 2008 (filed as Exhibit 10.1 to Registrant's Form 10-Q for the quarterly period ended September 30, 2008, filed on November 10, 2008, and incorporated herein by reference).*
10.13 First Amendment dated November 5, 2009 to Split-Dollar Agreement between NBT Bancorp Inc., NBT Bank, National Association and Martin A. Dietrich made November 10, 2008 (filed as Exhibit 10.6 to Registrant's Form 10-Q for the quarterly period ended September 30, 2009, filed on November 9, 2009, and incorporated herein by reference).*
10.14 Second Amendment dated July 28, 2014 to Split-Dollar Agreement between NBT Bancorp, Inc., NBT Bank, National Association, and Martin A. Dietrich made November 10, 2008 (filed as Exhibit 10.1 to Registrant's Form 8-K, filed on August 1, 2014, and incorporated herein by reference).*
10.15 NBT Bancorp Inc. 2008 Omnibus Incentive Plan (filed as Appendix A of Registrant's Definitive Proxy Statement on Form 14A, filed on March 31, 2008, and incorporated herein by reference).*
10.16 Long-Term Incentive Compensation Plan for Named Executive Officers (filed as Exhibit 10.24 to Registrant’s Form 10-K for the year ended December 31, 2011, filed on February 29, 2012, and incorporated herein by reference).*
10.17 Amended and Restated Employment Agreement, dated December 19, 2016, by and between NBT Bancorp Inc. and Timothy L. Brenner (filed as Exhibit 10.4 to Registrant's Form 8-K, filed on December 20, 2016, and incorporated herein by reference).*
10.18 Amended and Restated Supplemental Retirement Agreement and First Amendment to the Supplemental Retirement Agreement between Alliance Financial Corporation, Alliance Bank, N.A. and Jack H. Webb (filed as Exhibit 10.29 to Registrant's Form 10-K for the year ended December 31, 2013, filed on March 3, 2014, and incorporated herein by reference).*
10.19 Employment Agreement, dated December 19, 2016, by and between NBT Bancorp Inc. and John H. Watt, Jr. (filed as Exhibit 10.1 to Registrant's Form 8-K, filed on December 20, 2016, and incorporated herein by reference).*
10.20 Supplemental Executive Retirement Agreement, dated December 19, 2016 by and between NBT Bancorp Inc. and John H. Watt, Jr. (filed as Exhibit 10.2 to Registrant's Form 8-K, filed on December 20, 2016, and incorporated herein by reference).*
10.21 Employment Agreement, dated December 19, 2016, by and between NBT Bancorp Inc. and F. Sheldon Prentice.* A list of the subsidiaries of the Registrant.
$\underline{23}$ Consent of KPMG LLP.
31.1 Certification by the Chief Executive Officer pursuant to Rules 13(a)-14(a)/15(d)-14(e) of the Securities and Exchange Act of 1934.
31.2 Certification by the Chief Financial Officer pursuant to Rules 13(a)-14(a)/15(d)-14(e) of the Securities and Exchange Act of 1934.
32.1 Certification by the Chief Executive Officer pursuant to 18 U.S.C. 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2 Certification of the Chief Financial Officer pursuant to 18 U.S.C. 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.

## 101.INS XBRL Instance Document.

101.SCHXBRL Taxonomy Extension Schema Document.
101.CALXBRL Taxonomy Extension Calculation Linkbase Document.
101.DEF XBRL Taxonomy Extension Definition Linkbase Document.
101.LABXBRL Taxonomy Extension Label Linkbase Document.
101.PRE XBRL Taxonomy Extension Presentation Linkbase Document.

* Management contract or compensatory plan or arrangement.
(b) Exhibits to this Form 10-K are attached or incorporated herein by reference as noted above.
(c) Not applicable.


## None.

## SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, NBT Bancorp Inc. has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

NBT BANCORP INC. (Registrant)
March 1, 2017
/s/ John H. Watt Jr.

John H. Watt Jr.
Chief Executive Officer

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the Registrant and in the capacities and on the dates indicated.
/s/ Martin A. Dietrich

Martin A. Dietrich
Chairman and Director
Date: March 1, 2017
/s/ John H. Watt Jr.
John H. Watt Jr.
NBT Bancorp Inc. President, CEO, and Director (Principal Executive Officer)
Date: March 1, 2017
/s/ Michael J. Chewens

Michael J. Chewens
Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer)
Date: March 1, 2017
/s/ Patricia T. Civil
Patricia T. Civil, Director
Date: March 1, 2017
/s/ Timothy E. Delaney
Timothy E. Delaney, Director
Date: March 1, 2017
/s/ James H. Douglas
James H. Douglas, Director
Date: March 1, 2017
/s/ Andrew S. Kowalczyk III
Andrew S. Kowalczyk III, Director
Date: March 1, 2017
/s/ John C. Mitchell
John C. Mitchell, Director
Date: March 1, 2017

Michael M. Murphy, Director
Date: March 1, 2017
/s/ V. Daniel Robinson II
V. Daniel Robinson II, Director

Date: March 1, 2017
/s/ Matthew J. Salanger
Matthew J. Salanger, Director
Date: March 1, 2017
/s/ Joseph A. Santangelo
Joseph A. Santangelo, Director
Date: March 1, 2017
/s/ Robert A. Wadsworth
Robert A. Wadsworth, Director
Date: March 1, 2017
/s/ Lowell A. Seifter
Lowell A. Seifter, Director
Date: March 1, 2017
/s/ Jack H. Webb
Jack H. Webb, Director
Date: March 1, 2017

## NBT BANCORP INC. AND SUBSIDIARIES

## 2017 EXECUTIVE INCENTIVE COMPENSATION PLAN

## NBT BANCORP INC. AND SUBSIDIARIES

Table of ContentsPage
Introduction ..... 3
Plan Highlights ..... 4
Incentive Plan
Section I - Definitions ..... 5-6
Section II - Participation ..... 6
Section III - Activating the Plan ..... 6-7
Section IV - Calculation of Awards ..... 7
Section V - Distribution of Awards ..... 8
Section VI - Plan Administration ..... 8
Section VII - Amendment, Modification, Suspension or Termination ..... 9
Section VIII - Nonexclusivity ..... 9
Section IX - Effective Date ..... 9
Section X - Employer Relations with Participants ..... 9
Section XI - Governing Law ..... 9
Appendix A ..... 10

## Introduction

It is important to examine the benefits that accrue to the organization through the operation of the Executive Incentive Compensation Plan (EICP). The Plan impacts directly on the success of the organization and its purpose can be summarized as follows:

* Provides Motivation: The opportunity for incentive awards provides Executives with the impetus to "stretch" for challenging, yet attainable, goals.
* Provides Retention: By enhancing the organization's competitive compensation posture.
* Provides Management Team Building: By making the incentive award dependent on the attainment of organization goals, a "team orientation" is fostered among the participant group.
* Provides Individual Motivation: By encouraging the participant to make significant personal contribution to the corporate effort.
* Provides Competitive Compensation Strategy: The implementation of incentive arrangements is competitive with current practice in the banking industry.

1. The Plan is competitive compared with similar sized banking organizations and the banking industry in general.
2. The Compensation Committee of the Board of Directors makes all determinations regarding the Plan.
3. All active Executives are eligible for participation.
4. The financial criteria necessary for Plan operation consist of achieving certain levels of Earnings Per Share (EPS) for the Company and its Subsidiaries as applicable. The Committee may provide in any such Award that any evaluation of performance may include or exclude any of the following events that occur during a Performance Period: (a) the effect of changes in tax laws, accounting principles, or other laws or provisions affecting reported results; (b) any reorganization and restructuring programs; and (c) acquisitions or divestitures and related expenses. To the extent such inclusions or exclusions affect Awards to Covered Employees; they shall be prescribed in a form that meets the requirements of Code Section 162(m) for deductibility.
5. Incentive distributions will be made on or before March 15 of the year following the Plan Year and will be based on the matrix in Appendix A.
6. Maximum incentive awards will be based on attainment of corporate EPS goals. No bonus will be paid unless the Corporation achieves the threshold EPS goal set forth in Appendix A. The actual amount paid out for each Covered Employee cannot exceed the maximum award determined based upon level of the corporate EPS goals that have been achieved. The actual amount awarded can be reduced from the maximum award using negative discretion that would include additional corporate financial metrics and an assessment of each Covered Employee's Individual Performance Objectives.

The Board of Directors has established this 2017 Executive Incentive Compensation Plan. It is implemented pursuant to the provisions of the 2008 Omnibus Incentive Plan for purposes of paying performance-based compensation within the meaning of Section 162(m) of the Code. The purpose of the Plan is to meet and exceed financial goals and to promote a superior level of performance relative to the competition in our market areas. Through payment of incentive compensation beyond base salaries, the Plan provides reward for meeting and exceeding financial goals.

## SECTION I - DEFINITIONS

Various terms used in the Plan are defined as follows:

Award: An award granted under this Plan.
Base Salary: The base salary at the end of the Plan Year, excluding any bonuses, contributions to Executive benefit programs, or other compensation not designated as salary.

Board of Directors: The Board of Directors of NBT Bancorp Inc.

CEO: The CEO of NBT Bancorp Inc.
Code: The Internal Revenue Code of 1986, as now in effect or as hereafter amended.

Corporate Goals: Those pre-established objectives and goals of NBT Bancorp Inc. which are required to activate distribution of awards under the Plan.
Covered Employee: A Participant who is a Covered Employee within the meaning of Section 162(m)(3) of the Code.

Compensation Committee: The Compensation and Benefits Committee of the NBT Bancorp Inc. Board of Directors.
Individual Performance Objectives: The Covered Employee's contribution towards the Company's overall success in accomplishing its corporate goals and which may include, but is not limited to, consideration of financial metrics, special projects, leadership and professional development.

Plan Year: The 2017 calendar year.

## SECTION II - ELIGIBILITY TO PARTICIPATE

To be eligible for an award under the Plan, a Plan participant must be an Executive in full-time service at the start and close of the calendar year and at the time of the award unless mutually agreed upon prior to the Executive leaving the company. Newly hired employees may be recommended by the CEO and approved by the Compensation Committee as eligible for an award as determined by their date of hire or any relevant employment agreement. A Plan participant must be in the same or equivalent position, at year-end as they were when named a participant or have been promoted during the course of the year, to be eligible for an award. If a Plan participant voluntarily leaves the company prior to the payment of the award, he/she is not eligible to receive an award unless mutually agreed upon prior to the Executive leaving the company. However, if the active full-time service of a participant in the Plan is terminated by death, disability, retirement, or if the participant is on an approved leave of absence, an award may be recommended for such a participant based on the proportion of the Plan Year that he/she was in active service.

## SECTION III - ACTIVATING THE PLAN

If and to the extent that the Committee determines that a bonus to be granted under the Plan to a Plan participant who is designated by the Compensation Committee as likely to be a Covered Employee should qualify as "performance-based compensation" for purposes of Code Section 162(m), the bonus as to that Plan participants shall be determined consistently with the terms of the NBT Bancorp Inc. 2008 Omnibus Incentive Plan.

The operation of the Plan is predicated on attaining and exceeding management performance goals. The goals will consist of the attainment of certain Earnings Per Share (EPS) levels as applicable. Non-recurring events, as previously detailed, may be excluded from the financial results at the recommendation of the CEO and upon approval of the Compensation Committee; subject to the terms of the NBT Bancorp Inc. 2008 Omnibus Incentive Plan as applied to any Covered Employee whose bonus is intended to qualify for purposes of Code Section 162(m).

EPS goals shall be established not later than 90 days after the beginning of any performance period applicable to the bonus, or at such other date as may be required or permitted for "performance-based compensation" under Code Section 162(m). In addition, the maximum value of a bonus awarded under the Plan to a single Covered Employee may not exceed $\$ 2,000,000$ per Plan Year.

Prior to payment of any bonus amount under the Plan to a Covered Employee whose bonus is intended to qualify for purposes of Code Section 162(m), the Compensation Committee shall certify in writing that the EPS goal(s) and all other material terms stated herein have been attained. For this purpose, the approved minutes of a Compensation Committee meeting in which a certification is made shall be treated as a written certification.

The Corporation must achieve a threshold EPS goal set forth in Appendix A to trigger an award pursuant to the terms of this Plan. The bonus awards can range from 0 to $125 \%$ of the target award for Plan participants.

## SECTION IV - CALCULATION OF AWARDS

The Compensation Committee approves the incentive formula as shown in Appendix A. The Compensation Committee will make final determinations with respect to all incentive awards and will have final approval over all incentive awards, including the discretion to lower any such award. If the threshold EPS goal is met but below the baseline budget threshold established by the Company, the CEO may provide the Compensation Committee with a qualitative analysis of the Company's earnings and its performance which the Compensation Committee shall consider in its exercise of discretion under the plan. Prior to payment of any bonus amount under the Plan to a Covered Employee whose bonus is intended to qualify for purposes of Code Section $162(\mathrm{~m})$, the Compensation Committee shall certify in writing that the EPS goal(s) and all other material terms stated herein have been attained. For this purpose, the approved minutes of a Compensation Committee meeting in which a certification is made shall be treated as a written certification. The individual participant data regarding maximum award and formulas used in calculation has been customized and appears as Appendix A. The actual amount awarded is subject to the NBT Bancorp Inc. Incentive Compensation Clawback Policy.

The actual amount awarded for each Covered Employee cannot exceed the maximum award determined based upon achievement of the corporate EPS goals. The actual amount awarded can be reduced using negative discretion that would include, but not limited, additional corporate financial metrics and an assessment of each Covered Employee's Individual Performance Objectives.

## SECTION V - DISTRIBUTION OF AWARDS

Distribution of the EICP will be made by March 15 of the year following the plan year. Distribution of the award must be approved by the Compensation Committee.

In the event of death, any approved award earned under the provisions of this plan will become payable to the designated beneficiary of the participant as recorded under the Company's group life insurance program; or in the absence of a valid designation, to the participant's estate.

## SECTION VI - PLAN ADMINISTRATION

The Compensation Committee shall, with respect to the Plan have full power and authority to construe, interpret, manage, control and administer this Plan. The Committee shall decide upon cases in conformity with the objectives of the Plan under such rules as the Board of Directors may establish.

Any decision made or action taken by NBT Bancorp Inc., the Board of Directors, or the Compensation Committee arising out of, or in connection with, the administration, interpretation, and effect of the Plan shall be at their absolute discretion and will be conclusive and binding on all parties. No member of the Board of Directors, Compensation Committee, or employee shall be liable for any act or action hereunder, whether of omission or commission, by a Plan participant or employee or by any agent to whom duties in connection with the administration of the Plan have been delegated in accordance with the provision of the Plan.

## SECTION VII - AMENDMENT, MODIFICATION, SUSPENSION OR TERMINATION

NBT Bancorp Inc. reserves the right, by and through its Board of Directors to amend, modify, suspend, reinstate or terminate all or part of the Plan at any time. The Compensation Committee will give prompt written notice to each participant of any amendment, suspension or termination or any material modification of the Plan. In the event of a merger or acquisition, the Plan and related financial formulas may be reviewed and adjusted to take into account the effect of such activities.

NBT Bancorp Inc. reserves the right, by and through its Board of Directors and Compensation Committee to award bonus and other forms of incentive compensation outside the terms of this Plan.

## SECTION IX - EFFECTIVE DATE OF THE PLAN

The effective date of the Plan shall be January 1, 2017.

## SECTION X - EMPLOYER RELATION WITH PARTICIPANTS

Neither establishment nor the maintenance of the Plan shall be construed as conferring any legal rights upon any participant or any person for a continuation of employment, nor shall it interfere with the right of an employer to discharge any participant or otherwise deal with him/her without regard to the existence of the Plan.

## SECTION XI - GOVERNING LAW

Except to the extent pre-empted under federal law, the provisions of the Plan shall be construed, administered and enforced in accordance with the domestic internal law of the State of New York. In the event of relevant changes in the Internal Revenue Code, related rulings and regulations, changes imposed by other regulatory agencies affecting the continued appropriateness of the Plan and awards made thereunder, the Board may, at its sole discretion, accelerate or change the manner of payments of any unpaid awards or amend the provisions of the Plan.

## EMPLOYMENT AGREEMENT

This EMPLOYMENT AGREEMENT (the "Agreement") is made and entered into as of December 19, 2016, by and between F. Sheldon Prentice ("Executive") and NBT BANCORP INC., a Delaware corporation having its principal office in Norwich, New York ("NBTB").

## WITNESSETH:

WHEREAS, Executive currently serves as Executive Vice President, General Counsel and Corporate Secretary of NBTB and of NBT Bank, National Association, a national banking association which is a wholly-owned subsidiary of NBTB ("NBT Bank") (together with NBTB, the "Company");

WHEREAS, Executive and NBTB have previously entered into an Employment Agreement, dated May 7, 2010 (the "Previous Employment Agreement"), and a Change in Control Agreement, dated May 7, 2010 and as amended as of January 24, 2013 (the "Change in Control Agreement");

WHEREAS, the Company desires (i) to secure the continued employment of Executive, subject to the provisions of this Agreement and (ii) to update, to consolidate into one agreement, and to supersede the terms and conditions of the Previous Employment Agreement and the Change in Control Agreement; and

WHEREAS, Executive desires to enter into the Agreement for such periods and upon the terms and conditions set forth herein.
NOW, THEREFORE, in consideration of the premises and mutual covenants and agreements hereinafter set forth, intending to be legally bound, the parties agree as follows:

## 1. Employment; Responsibilities and Duties.

(a) NBTB hereby agrees to employ Executive and to cause NBT Bank and any successor organization to NBT Bank to employ Executive, and Executive hereby agrees to serve as Executive Vice President, General Counsel and Corporate Secretary of NBTB and of NBT Bank, and of any successor organization to NBTB or NBT Bank, as applicable, during the Term of Employment (as defined in Section 2 below). During the Term of Employment, Executive shall perform all duties and shall have the responsibilities and authority as set forth in the bylaws of NBTB or NBT Bank, as applicable, or as may otherwise be determined and assigned to him by NBTB or NBT Bank. During the Term of Employment, Executive shall report directly to the Chief Executive Officer of NBTB or his designee.
(b) Executive shall devote his full working time and best efforts to the performance of his responsibilities and duties hereunder. During the Term of Employment, Executive shall not, without the prior written consent of the chief executive officer of NBTB or his designee, render services in any capacity, whether as an employee, independent contractor, or otherwise, whether or not compensated, to any person or entity other than the Company or its affiliates; provided, that Executive may, where involvement in such activities does not, as reasonably determined by the Board of Directors of NBTB (the "Board"), individually or in the aggregate significantly interfere with the performance of his duties or violate the provisions of Section 4 hereof, (i) render services to charitable organizations, (ii) manage his personal investments in compliance with any Company limits or policies, and (iii) with the prior permission of the chief executive officer of NBTB or his designee, hold such other directorships or part-time academic appointments or have such other business affiliations as would otherwise be prohibited under this Section 1.

## 2. Term of Employment.

(a) The term of this Agreement (the "Term of Employment") shall be the period commencing on the date of this Agreement (the "Commencement Date") and continuing until the "Termination Date," which, subject to Section 2(b) hereof, shall mean the earliest to occur of:
(i) January 1, 2019; provided, however, that on December 31, 2017 and on each December 31 thereafter (each, a "Renewal Date"), the remaining Term of Employment shall automatically be extended by one additional year (to a total of two (2) years) unless either the Company or Executive provides written notice to the other party of non-renewal at least ninety (90) days prior to the applicable Renewal Date;
(ii) the death of Executive;
(iii) Executive's inability to engage in any substantial gainful activity, by reason of any medically determinable physical or mental impairment that can be expected to result in death or can be expected to last for a continuous period of not less than twelve (12) months ("Disability.");
(iv) the discharge of Executive by NBTB or NBT Bank for "Cause," which shall mean the termination of Executive's employment on account of: (a) any willful or gross misconduct by Executive with respect to the business and affairs of NBTB or NBT Bank, or with respect to any of their affiliates, for which Executive is assigned material responsibilities or duties; (b) the conviction of Executive of a felony (after the earlier of (I) the expiration of any applicable appeal period without perfection of an appeal by Executive or (II) the denial of any appeal as to which no further appeal or review is available to Executive), whether or not committed in the course of his employment with NBTB and NBT Bank; (c) Executive's willful neglect, failure, or refusal to carry out his duties hereunder in a reasonable manner (other than any such failure resulting from Disability or death or from termination by Executive for Good Reason, as hereinafter defined); or (d) the breach by Executive of any representation or warranty in Section 4 hereof or of any provision of this Agreement which breach is material and adverse to NBTB, NBT Bank, or any of their affiliates for which Executive is assigned material responsibilities or duties; provided, however, in each case, the Company shall provide prior written notice to Executive that specifically identifies the event which NBTB or NBT Bank believes constitutes Cause hereunder, and to the extent applicable, Executive shall have sixty (60) days from receiving such notice to cure;
(v) Executive's resignation from his positions as Executive Vice President, General Counsel and Corporate Secretary of NBTB and of NBT Bank other than for Good Reason (as hereinafter defined);
(vi) the termination of Executive's employment by NBTB or NBT Bank "without Cause," which shall mean Executive's termination of employment for any reason other than those set forth in Subsections (i)-(v) of this Section 2(a), at any time, upon the thirtieth (30th) day following notice to Executive; provided, further, for the avoidance of doubt, that the Company's providing notice of non-renewal of the Agreement in accordance with Section 2(a)(i) shall not constitute a termination of Executive's employment without Cause and shall not give rise to any severance benefits hereunder, other than as provided in Section 6(a); or
(vii) Executive's resignation for Good Reason. "Good Reason" shall mean, without Executive's express written consent, reassignment of Executive to a material reduction in duties, responsibilities, or position other than for Cause, a material decrease in the amount or level of Executive's Base Salary or benefits from the amount or level established in Section 3 hereof, or requiring Executive to be based anywhere other than where Executive's office is located upon the date of this Agreement, except for required travel on the Company's business to an extent substantially consistent with the business travel obligations which Executive undertook on behalf of the Company as of the date of this Agreement. Notwithstanding the foregoing, if there exists (without regard to this sentence) an event or condition that constitutes Good Reason, NBTB shall have thirty (30) days from the date on which Executive gives the written notice thereof to cure such event or condition (such notice to be given by Executive within ninety (90) days from the date the event or condition first occurs) and, if NBTB does so cure, such event or condition shall cease to constitute Good Reason thirty (30) days after the end of the cure period.
(b) Notwithstanding anything to the contrary in Section 2(a) hereof, in the event a tender offer or exchange offer is made by a Person (including any individual, corporation, partnership, group, association, or other "person," as such term is used in Section 14(d) of the Securities Exchange Act of 1934 (the "Exchange Act"), other than the Company or any employee benefit plan(s) sponsored by the Company) for more than thirty percent (30\%) of the combined voting power of the Company's outstanding securities ordinarily having the right to vote at elections of directors ("Voting Securities"), including shares of common stock, no par value, of the Company (the "Company Shares"), Executive agrees that he will not leave the employ of the Company (other than as a result of Disability) and will render services to the Company in the capacity in which he then serves until such tender offer or exchange offer has been abandoned or terminated or a Change in Control of the Company has occurred as a result of such tender offer or exchange offer. If, during the period Executive is obligated to continue in the employ of the Company pursuant to this Section 2(b), the Company terminates Executive's employment without Cause or Executive provides written notice of his decision to terminate his employment for Good Reason, Executive's obligations under this Section 2(b). shall thereupon terminate, and Executive will be entitled to payments provided under Section 6(b).
(c) A Termination Date shall not be deemed to have occurred for purposes of any provision of this Agreement providing for the payment of any amounts or benefits upon or following a termination of employment unless such termination is also a "separation from service" within the meaning of Section 409A of the Internal Revenue Code of 1986, as amended (the "Code") and, for purposes of any such provision of this Agreement, any references to a "termination," "termination of employment," or like terms shall mean a "separation from service."
3. Compensation. For the services to be performed by Executive for the Company and its affiliates under this Agreement, Executive shall be compensated in the following manner:
(a) Base Salary. During the Term of Employment:
(i) The Company shall pay Executive a salary, which on an annual basis shall be three hundred nine thousand five hundred sixty dollars ( $\$ 309,560.00$ ) ("Base Salary"), subject to annual adjustments based on recommendations from the NBTB Compensation and Benefits Committee and in line with compensation for comparable positions in companies of similar size and structure, but in no case less than three hundred nine thousand five hundred sixty dollars ( $\$ 309,560.00$ ). The Base Salary shall be payable in accordance with the normal payroll practices of the Company, with respect to executive personnel as presently in effect or as they may be modified by the Company from time to time.
(ii) Executive shall be eligible to be considered for performance bonuses commensurate with Executive's title and salary grade in accordance with the compensation policies of the Company with respect to executive personnel in effect as of the Commencement Date or as they may be modified by the Company from time to time.
(b) Employee Benefit Plans or Arrangements. During the Term of Employment, Executive shall be entitled to participate in all employee benefit plans of the Company, as presently in effect as of the Commencement Date or as they may be modified by the Company from time to time, under such terms as may be applicable to officers of Executive's rank employed by NBTB, NBT Bank, or their affiliates, including, without limitation, plans providing retirement benefits, stock options, restricted stock, or stock units, medical insurance, life insurance, disability insurance, long term care insurance, and accidental death or dismemberment insurance, provided that there be no duplication of such benefits as are provided under any other provision of this Agreement.
(c) Equity Awards._Executive shall be eligible for awards, as determined by and in the sole discretion of the Board, under NBTB's 2008 Omnibus Incentive Plan, or any successor thereto, as applicable to officers of Executive's rank.
(d) Vacation and Sick Leave. During the Term of Employment, Executive shall be entitled to paid annual vacation periods and sick leave in accordance with the policies of the Company applicable to officers of Executive's rank employed by NBTB, NBT Bank, or their affiliates, as in effect as of the Commencement Date or as may be modified by the Company from time to time, but in no event shall Executive be entitled to less than four (4) weeks of paid vacation per year.
(e) Enhanced Retirement Benefit. During the Term of Employment, Executive shall be eligible to receive a contribution to his deferred compensation account on an annual basis in an amount as determined by and in the sole discretion of the Board.
(f) Withholding. All compensation to be paid to Executive hereunder shall be subject to applicable federal, state, and local taxes and all other required withholdings. Executive hereby acknowledges and agrees that he is responsible for all taxes in connection with any benefits, fringe benefits, or perquisites provided under this Agreement, and he is not entitled to a Gross Up.
(g) Expenses._ During the Term of Employment, Executive shall be reimbursed for reasonable travel and other expenses incurred or paid by Executive in connection with the performance of his services under this Agreement, upon presentation of expense statements or vouchers or such other supporting information as may from time to time be requested by the Company, in accordance with such policies of the Company as are in effect as of the Commencement Date and as may be modified by the Company from time to time, under such terms as may be applicable to officers of Executive's rank employed by NBTB, NBT Bank, or their affiliates. All expenses or other reimbursements under this Agreement shall be made on or prior to the last day of the taxable year following the taxable year in which such expenses were incurred by Executive (provided that if any such reimbursements constitute taxable income to Executive, such reimbursements shall be paid no later than March 15th of the calendar year following the calendar year in which the expenses to be reimbursed were incurred), and no such reimbursement of expenses eligible for reimbursement in any taxable year shall in any way affect the expenses eligible for reimbursement in any other taxable year.
(a) Executive acknowledges that certain business methods, creative techniques, and technical data of the Company and any of its affiliates and the like are deemed by the Company to be and are in fact confidential business information of the Company or its affiliates or are entrusted to third parties. Such confidential information includes, but is not limited to, procedures, methods, sales relationships developed while in the service of the Company or its affiliates, knowledge of customers and their requirements, marketing plans, marketing information, studies, forecasts, and surveys, competitive analyses, mailing and marketing lists, new business proposals, lists of vendors, consultants, and other persons who render service or provide material to the Company or its affiliates, and compositions, ideas, plans, and methods belonging to or related to the affairs of the Company or its affiliates (collectively, "Confidential Information"). In this regard, the Company asserts proprietary rights in all of its Confidential Information and that of its affiliates, except for such information as is clearly in the public domain. Notwithstanding the foregoing, information that would be generally known or available to persons skilled in Executive's fields shall be considered to be "clearly in the public domain" for the purposes of the preceding sentence. Executive acknowledges that in connection with his employment with the Company, Executive has had or may have access to such Confidential Information, and he agrees that he will not disclose or divulge to any third party, except as may be required by his duties hereunder, by law, regulation, or order of a court or government authority, or as directed by the Company, nor shall he use to the detriment of the Company or its affiliates or use in any business or on behalf of any business competitive with or substantially similar to any business of the Company or its affiliates, any Confidential Information obtained during the course of his employment by the Company. In the event that disclosure is required by law, regulation, or order of a court or government authority, Executive agrees that as soon as practical and in any event no later than thirty (30) days after receiving notice that Executive is required to make such disclosure, Executive will provide notice to the Company of such requirement by law, regulation, or order of a court or government authority. This Section 4(a) shall not be construed as restricting Executive from disclosing such information to the employees of the Company or its affiliates. On or before the Termination Date, Executive shall promptly deliver to the Company any and all Confidential Information in his possession, whether tangible, electronic, or intangible in form.
(b) Executive acknowledges that in the course of employment with the Company, Executive has had and will have access to and gained knowledge of the trade secrets and other Confidential Information of the Company and its affiliates; has had and will have substantial relationships with the customers of the Company and its affiliates; and has performed and will perform services of special, unique, and extraordinary value to the Company and its affiliates. Therefore, Executive agrees that notwithstanding the termination of this Agreement for any reason, from the Commencement Date until the second ( $\left.2^{\text {nd }}\right)$ anniversary of the Termination Date, the Executive shall not, directly or indirectly, on behalf of himself or any other person or entity, without the written consent of the Company:
(i) become an officer, employee, consultant, director, or trustee of any savings bank, savings and loan association, savings and loan holding company, bank or bank holding company, where such position entails providing services to such company in any city, town, or county in which the Company or its affiliates has an office, determined as of the Termination Date, where Executive's position or service for such business is competitive with or otherwise similar to any of Executive's positions or services for the Company or its affiliates;
(ii) induce or solicit any customer, supplier, or agent of the Company or its affiliates about whom Executive has gained Confidential Information or with whom Executive, by virtue of his employment with the Company, has established a relationship or had frequent contact, to terminate or curtail an existing business or commercial relationship with the Company or its affiliates;
(iii) induce or solicit any customer or supplier of the Company or its affiliates about whom Executive has gained Confidential Information or with whom Executive, by virtue of his employment with the Company, has established a relationship or had frequent contact, to provide or purchase goods or services similar to the goods or services provided by it to or purchased by it from the Company or its affiliates; provided, however, that the provisions of this clause (iii) only apply to those persons or entities who are customers or suppliers of the Company or its affiliates as of the Termination Date or who were customers of the Company or its affiliates during the one-year period prior to the Termination Date; or
(iv) solicit, induce, recruit, offer employment to, hire, or take any other action intended, or that a reasonable person acting in like circumstances would expect, to have the effect of causing any officer or employee of NBTB, NBT Bank, or their affiliates, to terminate his or her employment.
(c) Executive acknowledges and agrees that irreparable injury will result to the Company in the event of a breach of any of the provisions of this Section 4 (the "Designated Provisions") and that the Company will have no adequate remedy at law with respect thereto. Accordingly, in the event of a material breach of any Designated Provision, and in addition to any other legal or equitable remedy the Company may have, the Company shall be entitled to the entry of a preliminary and permanent injunction (including, without limitation, specific performance) by a court of competent jurisdiction in Chenango County, New York, or elsewhere, to restrain the violation or breach thereof by Executive, and Executive submits to the jurisdiction of such court in any such action.
(d) It is the desire and intent of the parties that the provisions of this Section 4 shall be enforced to the fullest extent permissible under the laws and public policies applied in each jurisdiction in which enforcement is sought. Accordingly, if any particular provision of this Section 4 shall be adjudicated to be invalid or unenforceable, such provision shall be deemed amended to delete therefrom the portion thus adjudicated to be invalid or unenforceable, such deletion to apply only with respect to the operation of such provision in the particular jurisdiction in which such adjudication is made. In addition, should any court determine that the provisions of this Section 4 shall be unenforceable with respect to scope, duration, or geographic area, such court shall be empowered to substitute, to the extent enforceable, provisions similar hereto or other provisions so as to provide to the Company, to the fullest extent permitted by applicable law, the benefits intended by this Section 4.
5. Life Insurance. In light of the unusual abilities and experience of Executive, NBTB (or NBT Bank or their affiliates) in its discretion may apply for and procure as owner and for its own benefit insurance on the life of Executive, in such amount and in such form as NBTB may choose. NBTB shall make all payments for such insurance and shall receive all benefits from it. Executive shall have no interest whatsoever in any such policy or policies but, at the request of NBTB, shall submit to medical examinations and supply such information and execute such documents as may reasonably be required by the insurance company or companies to which NBTB has applied for insurance.
6. Payments Upon Termination.
(a) Generally. In the event that the Term of Employment shall be terminated for any reason, Executive shall, in consideration for Executive's covenants pursuant to Section 4 hereof, be entitled to receive, upon the occurrence of any such event:
(i) any unpaid Base Salary, payable pursuant to Section 3(a)(i). hereof, which shall have been earned and accrued as of the

## Termination Date; and

(ii) such rights as Executive shall have accrued as of the Termination Date under the terms of any plans or arrangements in which he participates pursuant to Section 3 hereof, any right to reimbursement for expenses accrued as of the Termination Date pursuant to Section 3(g)_hereof, and

# the right to receive the cash equivalent of paid annual leave accrued but unpaid as of the Termination Date pursuant to Section 3(d) hereof. 

(b) Termination without Cause or Resignation for Good Reason. Subject to Sections 6(c) and 6(d) of this Agreement, in the event that the Term of Employment shall be terminated for the reason set forth in Section 2(a)(vi). (termination without Cause) or Section 2(a)(vii) (resignation for Good Reason) of this Agreement, Executive shall be entitled to receive, in addition to the amounts and rights set forth in Section 6(a) hereof, a lump sum payment equal to 2.0 times Executive's Base Salary.
(c) Change in Control.
(i) Subject to Section 6(d) hereof, in the event that the Term of Employment shall be terminated for the reason set forth in Section 2(a)(vi) (termination without Cause) or Section 2(a).(vii) (resignation for Good Reason) hereof within twenty-four (24) months of a Change in Control (it being recognized that more than one such event may occur, in which case the twenty-four (24)-month period shall run from the date of each such occurrence), Executive shall be entitled to receive, in addition to the amounts and rights set forth in Section 6(a) hereof and in lieu of the amounts and rights set forth in Section 6(b), the following:
(A) A payment equal to the product of 2.0 multiplied by the Executive's Base Salary for the calendar year in which the Change in Control occurs; provided that such payment shall be paid in two (2) equal, annual installments, with the first installment to be made within thirty (30) days of Executive's Termination Date and the remaining one (1) installment made on the first business day of January of the next calendar year; provided, further, that under no circumstances shall two (2) installment payments be made during a single tax year of Executive; and
(B) (1) the Company shall maintain in full force and effect, for Executive's continued benefit and, if applicable, for the continued benefit of Executive's spouse and dependents, for two (2) years after the Termination Date, or such longer period as may be provided by the terms of the appropriate plan, certain noncash employee benefit plans, programs, or arrangements (including, without limitation, life insurance and health, dental, and vision insurance plans, but excluding disability or accidental death and dismemberment insurance) in which Executive was entitled to participate immediately prior to the Termination Date, as in effect at the Termination Date, or, if more favorable to Executive and, if applicable, Executive's spouse and dependents, as in effect generally at any time thereafter with respect to executive employees of the Company or any successor; provided that Executive's continued eligibility for and participation in such plans, programs, and arrangements is possible after Termination Date under the general terms and provisions of such plans, programs, and arrangements; provided, however, that if Executive becomes eligible to participate in a benefit plan, program, or arrangement of another employer which confers substantially similar benefits upon Executive, Executive shall cease to receive benefits under this subsection in respect of such plan, program, or arrangement; provided, further, that for health benefits that extend beyond the COBRA limitation period, the Company shall pay Executive an amount equal to the benefits that Executive would have received under this Section 6(c)(i)(B)(1). without regard to such limitation, and (2) Executive's benefit under any retirement plans maintained by the Company in which Executive is a participant shall be fully vested upon the Termination Date. In the event that Executive's participation in any such plan, program, or arrangement is not possible after the Termination Date under the general terms and provisions of such plans, programs, and arrangements, the Company shall arrange to provide Executive with benefits substantially similar to those which Executive is entitled to receive under such plans, programs, and arrangements or alternatively, pay an amount equal to the reasonable value of such substantially similar benefits. If Executive elects or, if applicable, his spouse or dependents elect, COBRA continuation coverage after the Termination Date, the Company will pay the applicable COBRA premium for the maximum period during which such coverage is available. Executive and, if applicable, Executive's spouse and dependents may elect, in lieu of COBRA continuation coverage, to have the acquiring entity obtain an individual or group health insurance coverage and the acquiring entity will pay premiums thereunder for the maximum period during which you and, if applicable, your spouse and family could have elected to receive COBRA continuation coverage.
(ii) In the event that the Term of Employment shall be terminated for the reason set forth in Section 2(a)(iii) (termination on account of Disability) hereof within twenty-four (24) months of a Change in Control (it being recognized that more than one such event may occur, in which case the twenty-four (24)-month period shall run from the date of each such occurrence), Executive's benefits shall thereafter be determined in accordance with the Company's long-term disability income insurance plan. If the Company's long-term disability income insurance plan is modified or terminated following a Change in Control, the Company shall substitute such a plan with benefits applicable to Executive substantially similar to those provided by such plan prior to its modification or termination. During any period that Executive fails to perform his duties hereunder as a result of incapacity due to physical or mental illness, Executive shall continue to receive his Base Salary at the rate then in effect until his employment is termi-nated by the Company for Disability.
(iii) A "Change in Control" of the Company shall mean the occurrence of one of the following:
(A) A change in control of a nature that would be required to be reported in response to Item 6(e) of Schedule 14A of Regulation 14 A , as in effect on the date hereof, pursuant to the Exchange Act; provided that, without limitation, such a change in control shall be deemed to have occurred at such time as any Person hereafter becomes the "Beneficial Owner" (as defined in Rule 13d-3 under the Exchange Act), directly or indirectly, of thirty percent ( $30 \%$ ) or more of the combined voting power of NBTB's Voting Securities;
(B) During any period of two (2) consecutive years, individuals who at the beginning of such period constitute the Board cease for any reason to constitute at least a majority thereof, unless the election, or the nomination for election by NBTB's shareholders, of each new director was approved by a vote of at least two-thirds (2/3) of the directors then still in office, who were directors at the beginning of the period;
(C) There shall be consummated ( $x$ ) any consolidation or merger of NBTB in which NBTB is not the continuing or surviving corporation or pursuant to which Voting Securities would be converted into cash, securities, or other property, other than a merger of NBTB in which the holders of Voting Securities immediately prior to the merger have the same proportionate ownership of common stock of the surviving corporation immediately after the merger, or (y) any sale, lease, exchange, or other transfer (in one transaction or a series of related transactions) of all, or substantially all, of the assets of NBTB, provided that any such consolidation, merger, sale, lease, exchange, or other transfer consummated at the insistence of an appropriate banking regulatory agency shall not constitute a change in control of NBTB;
(D) Approval by the shareholders of NBTB of any plan or proposal for the liquidation or dissolution of NBTB; or
(E) Any event which would be described in Subsections (A), (B), (C), or (D) of this Section 6(c)(iii) if "NBT Bank" were
substituted for "NBTB" therein.
In no event, however, shall a Change in Control be deemed to have occurred as a result of any acquisition of securities or assets of the Company, the Bank, or any subsidiary of either of them, (A) by NBTB, NBT Bank, or any subsidiary of either of them or (B) by any employee benefit plan maintained by any of them.
(iv) Within five (5) days following the consummation of a Change in Control of the Company, the Company (or its successor) shall establish a trust that conforms in all regards with the model trust published in Revenue Procedure 92-64 and deposit an amount sufficient to satisfy all liabilities of the Company under Section 6(c) of this Agreement. The trust shall be established with an independent trustee, if the Executive so chooses, and the Company (or its successor) shall be responsible for all set-up and ongoing fees associated with the trust until the satisfaction of all obligations under the trust.
(d) Release. Payment and provision of the benefits described in Sections 6(b) and $\underline{6}(\underline{c})$ of this Agreement (the "Severance Payments") are subject to Executive's execution and delivery to NBTB of a Separation Agreement and Release, in substantially the form attached hereto as Exhibit A (the "Release"), which shall be incorporated by reference into this Agreement and become a part hereof, within sixty (60) days of Executive's termination of employment, which has (and not until it has) become irrevocable, releasing NBTB, NBT Bank, and any of their affiliates, and their directors, officers, and employees, from any and all claims or potential claims arising from or related to Executive's employment with NBTB, NBT Bank, or any of their affiliates or Executive's termination of employment. If the Release is executed and delivered and no longer subject to revocation as provided in the preceding sentence, payments or benefits shall commence upon the first scheduled payment date immediately after the date the Release is executed and no longer subject to revocation (the "Release Effective Date"). The first such cash payment shall include payment of all amounts that otherwise would have been due prior to the Release Effective Date under the terms of this Agreement applied as though such payments commenced immediately upon Executive's Termination Date, and any payments made thereafter shall continue as provided herein. The delayed benefits shall in any event expire at the time such benefits would have expired had such benefits commenced immediately following Executive's Termination Date.

The Company may provide, in its sole discretion, that Executive may continue to participate in any benefits delayed pursuant to this Section 6(d). during the period of such delay, provided that Executive shall bear the full cost of such benefits during such delay period. Upon the date such benefits would otherwise commence pursuant to this Section 6(d), the Company may reimburse Executive the Company's share of the cost of such benefits, to the extent that such costs would otherwise have been paid by the Company or to the extent that such benefits would otherwise have been provided by the Company at no cost to Executive, in each case had such benefits commenced immediately upon Executive's Termination Date. Any remaining benefits shall be reimbursed or provided by the Company in accordance with the schedule and procedures specified herein.
(e) No Mitigation. Executive shall not be required to mitigate the amount of any payment provided for in this Agreement by seeking other employment or otherwise, nor, except as expressly set forth in Section 6(c)(i)(B) of this Agreement, shall the amount of any payment or benefit provided for in this Agreement be reduced by any compensation earned or benefits received by Executive as the result of employment by another employer after the Termination Date or otherwise.
(f) Regulatory Limits. Notwithstanding any other provision in this Agreement, the Company may terminate or suspend this Agreement and the employment of Executive hereunder, as if such termination were for Cause, to the extent required by the applicable federal or state statue related to banking, deposit insurance, or bank or savings institution holding companies, or by regulations or orders issued by the Office of the Controller of the Currency, the Federal Deposit Insurance Corporation, or any other state or federal banking regulatory agency having jurisdiction over NBTB or NBT Bank, and no payment shall be required to be made to or for the benefit of Executive under this Agreement to the extent such payment is prohibited by applicable law, regulation, or order issued by a banking agency or a court of competent jurisdiction; provided, that it shall be the Company's burden to prove that any such action was so required.
7. Maximization of After-Tax Amounts. Notwithstanding anything contained herein to the contrary, in the event any payments or benefits Executive becomes entitled to pursuant to this Agreement or any other payments or benefits received or to be received by Executive in connection with a Change in Control or termination of employment (whether pursuant to the terms of any other agreement, plan, or arrangement, or otherwise, with the Company, any Person whose actions result in a Change in Control, or any affiliate of the Company or such Person) (collectively the "Payments") will be subject to the tax (the "Excise Tax") imposed by Code Section 4999, the payments or benefits due under this Agreement shall be reduced so that the Payments will not result in the imposition of such Excise Tax. The Payment reduction contemplated by the preceding sentence shall be implemented by determining the "Parachute Payment Ratio" (as defined below) for each "parachute payment" within the meaning of Code Section 280G ("Section 280G"), and then reducing the "parachute payments" in order beginning with the "parachute payment" with the highest Parachute Payment Ratio. For "parachute payments" with the same Parachute Payment Ratio, such "parachute payments" shall be reduced based on the time of payment of such "parachute payments" with amounts having later payment dates being reduced first. For "parachute payments" with the same Parachute Payment Ratio and the same time of payment, such "parachute payments" shall be reduced on a pro rata basis (but not below zero) prior to reducing "parachute payments" with a lower Parachute Payment Ratio. For purposes hereof, the term "Parachute Payment Ratio" shall mean a fraction, the numerator of which is the value of the applicable "parachute payment" for purposes of Section 280G and the denominator of which is the intrinsic value of such "parachute payment." For purposes of determining whether any of the Payments will be subject to the Excise Tax and the amount of such Excise Tax, (i) the entire amount of the Payments shall be treated as "parachute payments" within the meaning of Code Section 280G(b)(2) and as subject to the Excise Tax, unless and to the extent, in the written opinion of the Company's independent accountants and as reasonably acceptable to Executive, such payments (in whole or in part) are not subject to the Excise Tax; and (ii) the value of any noncash benefits or any deferred payment or benefit (constituting a part of the Payments) shall be determined by the Company's independent auditors in accordance with the principles of Code Sections 280G(d)(3) and (4). Notwithstanding the foregoing, if (i) the Payments exceed three (3) times Executive's "base amount" as defined within Section 280G and (ii) Executive would receive at least $\$ 50,000$ more on a net after-tax basis if his Payments were not reduced pursuant to this Section 7 (after Executive's payment of the Excise Tax), then the Company will not reduce the Payments to Executive, and Executive shall be responsible for the Excise Tax related thereto. For purposes of determining the net after-tax benefit, Executive shall be deemed to pay federal income taxes at the highest marginal rate of the federal income taxation applicable to individuals (without taking into account surtaxes or loss or reduction of deductions) for the calendar year in which the Termination Date occurs and state and local income taxes at the highest marginal rates of taxation in the state and locality of your residence on the Termination Date.
8. Representations and Warranties.
(a) Executive represents and warrants to the Company that his execution, delivery, and performance of this Agreement will not result in or constitute a breach of or conflict with any term, covenant, condition, or provision of any commitment, contract, or other agreement or instrument, including, without limitation, any other employment agreement, to which Executive is or has been a party.
(b) Executive shall indemnify, defend, and hold harmless the Company for, from, and against any and all losses, claims, suits, damages, expenses, or liabilities, including court costs and counsel fees, which the Company has incurred or to which the Company may become subject, insofar as such losses, claims, suits, damages, expenses, liabilities, costs, or fees arise out of or are based upon any failure of any representation or warranty of Executive in Section 8(a) hereof to be true and correct when made.
9. Notices. All notices, consents, waivers, or other communications which are required or permitted hereunder shall be in writing and shall be deemed to have been duly given when delivered personally or by messenger, transmitted by telex or telegram, by express courier, or sent by registered or

## If to NBTB or NBT Bank:

# NBT Bancorp Inc. 

52 South Broad Street
Norwich, New York 13815
Attention: Chief Executive Officer

With a required copy to:
Richard Schaberg
Hogan Lovells US L.L.P.
555 13th Street, N.W.
Washington, D.C. 20004-1109
Fax: (202) 637-5910

If to Executive, to Executive's most recent address on file with the Company.
All such notices shall be deemed to have been given on the date delivered, transmitted, or mailed in the manner provided above.
10. Assignment; Successors. Neither party may assign this Agreement or any rights or obligations hereunder without the consent of the other party. This Agreement shall inure to the benefit of, and be binding upon, any corporate or other successor or assignee of the Company which shall acquire, directly or indirectly, by merger, consolidation, purchase, or otherwise, all or substantially all of the business or assets of the Company. The Company shall require any such successor, by an agreement in form and substance satisfactory to Executive, expressly to assume and agree to perform this Agreement in the same manner and to the same extent as the Company would be required to perform if no such succession had taken place. This Agreement shall inure to the benefit of and be enforceable by Executive's personal or legal representatives, executors, administrators, successors, heirs, distributes, devisees, and legatees. If Executive should die while any amount would still be payable to Executive hereunder if Executive had continued to live, all such amounts, unless otherwise provided herein, shall be paid in accordance with the terms of this Agreement to Executive's devisee, legatee, or other designee, or if there is no such designee, to Executive's estate.
11. Governing Law. This Agreement shall be governed by, construed, and enforced in accordance with the laws of the State of New York, without giving effect to the principles of conflicts of law thereof. The parties hereby designate Chenango County, New York to be the proper jurisdiction and venue for any suit or action arising out of this Agreement. Each of the parties consents to personal jurisdiction in such venue for such a proceeding and agrees that it may be served with process in any action with respect to this Agreement or the transactions contemplated thereby by certified or registered mail, return receipt requested, or to its registered agent for service of process in the State of New York. Each of the parties irrevocably and unconditionally waives and agrees, to the fullest extent permitted by law, not to plead any objection that it may now or hereafter have to the laying of venue or the convenience of the forum of any action or claim with respect to this Agreement or the transactions contemplated thereby brought in the courts aforesaid.
12. Entire Agreement; Amendment; Waiver. This Agreement constitutes the entire understanding between the Company and Executive relating to the subject matter hereof. Any previous discussions, agreements, commitments, or understandings between the parties hereto or between Executive and NBTB, NBT Bank, or any of their affiliates, whether oral or written, regarding the subject matter hereof, including without limitation the terms and conditions of employment, compensation, benefits, retirement, competition following employment, and the like, are superseded by this Agreement. Without limitation, this Agreement expressly supersedes the Previous Employment Agreement and the Change in Control Agreement. Neither this Agreement nor any provisions hereof can be modified, changed, discharged, or terminated except by an instrument in writing signed by the party against whom any waiver, change, discharge, or termination is sought. No waiver, by either party hereto at any time, of any breach by the other party hereto or of compliance with any condition or provision of this Agreement to be performed by such other party shall be deemed a waiver of similar or dissimilar provisions or conditions at the same, or at any prior or subsequent, time.

## 13. Illegality; Severability

(a) Notwithstanding anything in this Agreement to the contrary, this Agreement is not intended and shall not be construed to require any payment to Executive which would violate any federal or state statute or regulation, including without limitation the "golden parachute payment regulations" of the Federal Deposit Insurance Corporation codified to Part 359 of title 12, Code of Federal Regulations.
(b) If any provision or provisions of this Agreement shall be held to be invalid, illegal, or unenforceable for any reason whatsoever:
(i) the validity, legality, and enforceability of the remaining provisions of this Agreement (including, without limitation, each portion of any section of this Agreement containing any such provision held to be invalid, illegal, or unenforceable) shall not in any way be affected or impaired thereby; and
(ii) to the fullest extent possible, the provisions of this Agreement (including, without limitation, each portion of any section of this Agreement containing any such provisions held to be invalid, illegal, or unenforceable) shall be construed so as to give effect to the intent manifested by the provision held invalid, illegal, or unenforceable.
(a) The intent of the parties is that payments and benefits under this Agreement comply with Code Section 409A and the regulations and guidance promulgated thereunder and, accordingly, to the maximum extent permitted, this Agreement shall be interpreted to be in compliance therewith. In no event whatsoever shall NBTB, NBT Bank, or any of their directors, officers, employees, or agents be liable for any additional tax, interest, or penalty that may be imposed on Executive by Code Section 409A or damages for failing to comply with Code Section 409A. Notwithstanding any other provision of this Agreement to the contrary, in no event shall any payment under this Agreement that constitutes "deferred compensation" for purposes of Code Section 409A be subject to offset, counterclaim, or recoupment by any other amount payable to Executive unless otherwise permitted by Code Section 409A. For purposes of Code Section 409A, Executive's right to receive any installment payment pursuant to this Agreement shall be treated as a right to receive a series of separate and distinct payments.
(b) Notwithstanding any other payment schedule provided herein to the contrary, if Executive is deemed on the Termination Date a "specified employee" within the meaning of that term under Code Section 409A, then each of the following shall apply:
(i) With regard to any payment that is considered deferred compensation under Code Section 409A payable on account of a "separation from service," such payment shall be made on the date which is the earlier of (A) the expiration of the six (6)-month period measured from the date of Executive's "separation from service," and (B) the date of Executive's death (the "Delay_Period"), to the extent required under Code Section 409A. Upon the expiration of the Delay Period, all payments delayed pursuant to this Section 14 (whether they would have otherwise been payable in a single sum or in installments in the absence of such delay) shall be paid to Executive in a lump sum, and all remaining payments due under this Agreement shall be paid or provided in accordance with the normal payment dates specified for them herein; and
(ii) To the extent that any benefits to be provided during the Delay Period are considered deferred compensation under Code Section 409A provided on account of a "separation from service," and such benefits are not otherwise exempt from Code Section 409A, Executive shall pay the cost of such benefits during the Delay Period, and the Company shall reimburse Executive, to the extent that such costs would otherwise have been paid by the Company or to the extent that such benefits would otherwise have been provided by the Company at no cost to Executive, the Company's share of the cost of such benefits upon expiration of the Delay Period, and any remaining benefits shall be reimbursed or provided by the Company in accordance with the procedures specified herein.
15. Arbitration. Subject to the right of each party to seek specific performance (which right shall not be subject to arbitration), if a dispute arises out of or is in any way related to this Agreement or the asserted breach thereof, such dispute shall be referred to arbitration before the American Arbitration Association (the "AAA") pursuant to the AAA's National Rules for the Resolution of Employment Disputes (the "Arbitration Rules"). A dispute subject to the provisions of this Section 15 will exist if either party notifies the other party in writing that a dispute subject to arbitration exists and states, with reasonable specificity, the issue subject to arbitration (the "Arbitration Notice"). The parties agree that, after the issuance of the Arbitration Notice, the parties will try in good faith between the date of the issuance of the Arbitration Notice and the date the dispute is set for arbitration to resolve the dispute by mediation in accordance with the Arbitration Rules. If the dispute is not resolved by the date set for arbitration, then any controversy or claim arising out of this Agreement or the asserted breach hereof shall be resolved by binding arbitration and judgment upon any award rendered by arbitrator(s) may be entered in a court having jurisdiction. In the event any claim or dispute involves an amount in excess of $\$ 100,000$, either party may request that the matter be heard and resolved by a single arbitrator. The arbitrator shall have the same power to compel the attendance of witnesses and to order the production of documents or other materials and to enforce discovery as could be exercised by a United States District Court judge sitting in Chenango County, New York. In the event of any arbitration, each party shall have a reasonable right to conduct discovery to the same extent permitted by the Federal Rules of Civil Procedure, provided that discovery shall be concluded within ninety ( 90 ) days after the date the matter is set for arbitration. The arbitrator or arbitrators shall have the power to award reasonable attorneys' fees to the prevailing party. Any provisions in this Agreement to the contrary notwithstanding, this Section 15 shall be governed by the Federal Arbitration Act, and the parties have entered into this Agreement pursuant to such act.
16. Costs of Litigation. In the event litigation is commenced to enforce any of the provisions hereof, or to obtain declaratory relief in connection with any of the provisions hereof, the prevailing party shall be entitled to recover reasonable attorneys' fees. In the event this Agreement is asserted in any litigation as a defense to any liability, claim, demand, action, cause of action, or right asserted in such litigation, the party prevailing on the issue of that defense shall be entitled to recovery of reasonable attorneys' fees.
17. Company Right to Recover. If the Company is required to prepare an accounting restatement due to the material noncompliance of the Company as a result of misconduct, with regard to any financial reporting requirement under the securities laws, and Executive is subject to automatic forfeiture under Section 304 of the Sarbanes-Oxley Act of 2002 and Executive knowingly engaged in the misconduct, was grossly negligent in engaging in the misconduct, knowingly failed to prevent the misconduct, or was grossly negligent in failing to prevent the misconduct, Executive shall reimburse the Company the amount of any payment earned or accrued during the twelve (12)-month period following the first public issuance or filing with the United States Securities and Exchange Commission (whichever first occurred) of the financial document that contained such material noncompliance.

Notwithstanding anything in this Agreement, if the Company is required to prepare an accounting restatement, Executive will forfeit any payments made based on the achievement of pre-established performance goals that are later determined, as a result of the accounting restatement, not to have been achieved.

To the extent that any payment is made to Executive pursuant to this Agreement and information later becomes available that would have led to supervisory disapproval of the payment, then the Company and its successors expressly reserve the right to suspend or deny full allocation of all remaining payments and/or compel repayment of any or all dispersed payments, should later information warrant such action. Subsequent information which would lead to the exercise of these rights would include, without limitation, any information indicating that Executive has committed, is substantially responsible for, or has violated the respective acts or omissions, conditions, or offenses outlined in 12 C.F.R. section 359.4(a)(4).
18. Cooperation. The parties agree that certain matters in which Executive will be involved during the Term of Employment may necessitate Executive's cooperation in the future. Accordingly, following the termination of Executive's employment for any reason, to the extent reasonably requested by the Board, Executive shall cooperate with the Company in connection with matters arising out of Executive's service to the Company; provided, that the Company shall make reasonable efforts to minimize disruption of Executive's other activities. The Company shall reimburse Executive for reasonable expenses incurred in connection with such cooperation and, to the extent that Executive is required to spend substantial time on such matters, the Company shall compensate the Executive at an hourly rate based on Executive's Base Salary on the Termination Date or at another mutually agreed upon rate.
19. Affiliation. A company will be deemed to be an "affiliate" of, or "affiliated" with NBTB or NBT Bank according to the definition of "Affiliate" set forth in Rule 12b-2 of the General Rules and Regulations under the Exchange Act.
20. Headings. The section and subsection headings herein have been inserted for convenience of reference only and shall in no way modify or restrict any of the terms or provisions hereof.

## NBT BANCORP INC.

By:
Name: John H. Watt, Jr.
Title: President \& Chief Executive Officer
EXECUTIVE
F. Sheldon Prentice

## SEPARATION AGREEMENT AND RELEASE

In consideration of receipt and acceptance of the separation payments described in the Employment Agreement and listed on Appendix A between NBT BANCORP INC. ("NBTB") and F. Sheldon Prentice ("Executive"), dated December 19, 2016 (the "Employment Agreement"), into which this Separation Agreement and Release ("Separation Agreement") is incorporated by reference, Executive, on behalf of himself and his agents, heirs, executors, administrators, successors, and assigns, unconditionally and generally releases NBTB and NBT Bank, National Association ("NBT Bank"), their respective current and former owners, officers, directors, parents, affiliates, subsidiaries, related entities, agents and employees, and the heirs, executors, administrators, successors and assigns of all of the foregoing (collectively, "Releasee"), from or in connection with, and Executive hereby waives and/or settles, with prejudice, any and all complaints, causes of action, suits, controversies, or any liability, claims, demands, or damages, known or unknown and of any nature whatsoever and which Executive ever had, now has or shall or may have as of the date of this Separation Agreement, including without limitation, those arising directly or indirectly pursuant to or out of any aspect of Executive's employment or termination from employment with NBTB, NBT Bank or any other Releasee.
II. Specifically, without limitation of the foregoing, and except as to the enforcement of this Separation Agreement and any rights which cannot be waived as a matter of law, the release and waiver of claims under this Separation Agreement shall include and apply to any rights and/or claims (i) arising under any contract or employment arrangement, express or implied, written or oral; (ii) for wrongful dismissal or termination of employment; (iii) arising under any applicable federal, state, local or other statutes, laws, ordinances, regulations or the like, or case law, that relate to employment or employment practices and/or specifically, that prohibit discrimination based upon age, race, religion, sex, national origin, disability, genetic information or any other unlawful bases, including without limitation, Title VII of the Civil Rights Act of 1964, the Americans with Disabilities Act of 1990, the Age Discrimination in Employment Act, the Older Workers Benefit Protection Act, the Civil Rights Act of 1866, the Equal Pay Act of 1963, the Family Medical Leave Act of 1993, the Fair Labor Standards Act, the Employee Retirement Income Security Act of 1974, Executive Order 11246, the Worker Adjustment and Retraining Notification Act, the New York State Human Rights Law, the New York City Human Rights Law, the New York Labor Law, all as amended, and any other statutes, orders, laws, ordinances, regulations applicable to Employee's employment, of any state or city in which any Releasee is subject to jurisdiction, and/or any political subdivision thereof; (iv) based upon any other federal, state or local statutes, orders, laws, ordinances, regulations, case law, public policy, or common law or the like; (v) concerning recruitment, hiring, discharge, promotions, transfers, employment status, right to reemployment, wages, bonus or incentive pay, severance pay, stock or stock options, employment benefits (including, without limitation, sick or other leave, medical, disability, life, or any other insurance, 401(k), pension, other retirement plans or benefits, or any other fringe benefits), workers' compensation, intentional or negligent misrepresentation and/or infliction of emotional distress, interference with contract, fraud, libel, slander, defamation, invasion of privacy or loss of consortium, together with any and all tort, contract, or other claims which have been or might have been asserted by Executive or on his behalf in any suit, charge of discrimination, or claim against the Releasee; and (vi) for damages, including without limitation, punitive or compensatory damages, or for attorneys' fees, expenses, costs, wages, injunctive or equitable relief.
III. Executive expressly understands and acknowledges that it is possible that unknown losses or claims exist or that present losses may have been underestimated in amount or severity, and Executive explicitly took that into account in determining the amount of consideration to be paid for the giving of the release in this Separation Agreement, and a portion of said consideration and the mutual covenants were given in exchange for a full satisfaction and discharge of such claims.
IV. Executive and NBT Bank acknowledge that the above release and waiver of claims shall not apply to the obligation of NBT Bank to make payments (if any) of any vested benefit under NBT Bank's tax-qualified employee benefit plans nor to Executive's right to continue healthcare insurance under the provisions of the Consolidated Omnibus Budget Reconciliation Act of 1985.
V. Executive represents and warrants that he has not filed or commenced any complaints, claims, actions or proceeding of any kind against any Releasee with any federal, state or local court or any administrative or regulatory body. Executive agrees not to commence or participate as a party in any proceeding in any court or forum against any Releasee which is based upon any act, omission or occurrence up to and including the date of the execution of this Separation Agreement. Executive further agrees not to encourage or participate in any action or proceeding brought by any person (except a government agency) against any Releasee. Notwithstanding the foregoing, this Separation Agreement does not affect Executive's right to file a charge or complaint with any state, local or federal agency or to participate or cooperate in such a matter. However, Executive acknowledges that he is not entitled to monetary damages resulting from any such actions.
VI. This Separation Agreement is not and shall not be construed as an admission by any Releasee or Executive of any wrongdoing or illegal acts or omissions and each party expressly denies that they engaged in any wrongdoing or illegal or acts or omissions. Executive shall not, except as may be required by law, make any oral or written negative, disparaging or adverse statements, suggestions or representations of or concerning NBT Bank or any Releasee.
VII. Executive agrees to cooperate reasonably with and to be readily available to NBT Bank to assist in any matter, including government agency investigations, court litigation or potential litigation, about which Executive may have knowledge. If Executive receives a subpoena or other legal process relating in any way to same, Executive immediately will provide NBT Bank notice of the contact or the service of such subpoena or other legal process, and shall cooperate with NBT Bank in responding.
VIII. Except as prohibited by law, each Releasee shall be excused from any obligation to make payment of the separation payments in the Employment Agreement in the event that paragraphs I through IV of this Separation Agreement are determined to be void or unenforceable, in whole or in part; or Executive is found to have made a material misstatement in any term, condition, representation or acknowledgement in this Separation Agreement, in either of which event Executive shall also be liable for any damages and costs suffered or incurred by any Releasee by reason of such misstatement or breach.
IX. This Separation Agreement shall be incorporated by reference into the Employment Agreement and shall be made a part thereof.
X. Executive agrees and acknowledges that:
(a) With respect to the General Release in Section II hereof, Executive agrees and understands that he is specifically releasing all claims under the Age Discrimination in Employment Act, as amended, 29 U.S.C. § 621 et seq. Executive acknowledges that he has read and understands this Agreement and executes it voluntarily and without coercion;
(b) Executive has been advised by NBT Bank to consult with an attorney before executing this Separation Agreement and has been given twentyone (21) days to review this Separation Agreement and to consider whether to sign this Separation Agreement. Executive may elect to sign this Separation Agreement prior to the expiration of the twenty-one (21) day consideration period specified herein, and Executive agrees that if he elects to do so, such election is knowing and voluntary and comes after full opportunity to consult with an attorney;
(c) Executive has the right to revoke this Separation Agreement within the seven (7) day period following the date Executive signs this Separation Agreement (the "Revocation Period") and any revocation shall be made by providing a signed notice in writing, delivered personally or by fax to the Chief Human Resources Officer at NBT Bancorp, 52 South Broad Street, Norwich, New York, 13815 no later than 5:00 p.m. on the seventh calendar day following his execution of this Separation Agreement;
(d) This Separation Agreement will not be effective or enforceable, and the separation payments under the Employment Agreement are not required and shall not be delivered or paid, until Executive has delivered a signed, notarized original of this Separation Agreement to the Chief Human Resources Officer at NBT Bancorp, 52 South Broad Street, Norwich, New York, 13815 and the Revocation Period has expired without revocation of this Separation Agreement. It is not necessary that any Releasee sign this Separation Agreement following Executive's full and complete execution of it for it to become fully effective and enforceable;
(e) Executive relied solely on his own judgment and/or that of this attorney regarding the consideration for and the terms of this Separation Agreement and is signing this Separation Agreement knowingly and voluntarily of his own free will;
(f) Executive is not entitled to the separation payments under the Employment Agreement unless he agrees to and honors the terms of the terms of this Separation Agreement; and
(g) Executive has read and understands this Separation Agreement and further understands that, subject to the limitations contained herein, it includes a general release of any and all known and unknown, foreseen or unforeseen claims presently asserted or otherwise arising through the date of his singing of this Separation Agreement that he may have against any Releasee.
XI. Executive understands all of the terms of this Separation Agreement, and agrees that such terms are fair, reasonable and are not the result of any fraud, duress, coercion, pressure or undue influence exercised by or on behalf of any Releasee; and Executive has agreed to and entered into this Separation Agreement and all of its terms, knowingly, freely and voluntarily.
XII. There are no other agreements of any nature between any Releasee and Executive with respect to the matters discussed in this Separation Agreement with respect to the matters discussed in this Separation Agreement, except as expressly stated herein, and in signing this Separation Agreement, Executive is not relying on any agreements or representation, except those expressly contained in this Separation Agreement.
XIII. This Separation Agreement shall be governed by the laws of New York, excluding the choice of law rules thereof.
XIV. This Separation Agreement may be executed in counterparts, each of which shall be deemed an original, and, when executed by all parties to this Separation Agreement, shall constitute one and the same instrument. Facsimile or PDF transmissions of this Separation Agreement signed by any party hereto shall be deemed an original counterpart and binding.

## F. Sheldon Prentice

## STATE OF NEW YORK )

COUNTY OF )

On the ____ day of $\qquad$ 20_, personally came $\qquad$ and being duly sworn, acknowledged that he is the person described in and who executed the foregoing Separation Agreement and acknowledged that he executed same.

Notary Public

NBT BANCORP INC.
By: $\qquad$
Date: $\qquad$
Title: $\qquad$

## EXHIBIT 21

List of Subsidiaries of the Registrant

|  | Jurisdiction of Incorporation | Names Under Which Subsidiary does Business |
| :---: | :---: | :---: |
| NBT Bancorp Inc. Subsidiaries: |  |  |
|  | Organized in the United States of |  |
| NBT Bank, National Association | America | NBT Bank |
| NBT Financial Services, Inc. | Delaware | NBT Financial Services |
| Hathaway Agency, Inc. | New York | Hathaway Agency |
| CNBF Capital Trust I | Delaware | CNBF Capital Trust I |
| NBT Statutory Trust I | Delaware | NBT Statutory Trust I |
| NBT Statutory Trust II | Delaware | NBT Statutory Trust II |
| NBT Holdings, Inc. | New York | NBT Holdings |
| Alliance Financial Capital Trust I | Delaware | Alliance Financial Capital Trust I |
|  |  | Alliance Financial Capital |
| Alliance Financial Capital Trust II NBT Bank, National Association Subsidiaries: | Delaware | Trust II |
| NBT Capital Corp. | New York | NBT Capital Corp. |
| LA Lease, Inc. | Pennsylvania | LA Lease |
| Colonial Financial Services, Inc. | New York | Colonial Financial Services |
| NBT Services, Inc. | Delaware | NBT Services |
| Broad Street Property Associates, Inc. | New York | Broad Street Property Associates |
| Pennstar Bank Services Company | Delaware | Pennstar Bank Services |
| FNB Financial Services, Inc. | Delaware | FNB Financial Services |
| CNB Realty Trust | Maryland | CNB Realty Trust |
| Alliance Preferred Funding Corp. | Delaware | Alliance Preferred Funding |
| Alliance Leasing, Inc. <br> NBT Financial Services, Inc. Subsidiaries: | New York | Alliance Leasing |
| Pennstar Financial Services, Inc. | Pennsylvania | Pennstar Financial Services |
| EPIC Advisors, Inc. | New York | EPIC Advisors |
| Columbia Ridge Capital Management, Inc. | New York | Columbia Ridge Capital Management |
| NBT Holdings, Inc. Subsidiaries: |  |  |
| NBT Insurance Agency, LLC | New York | NBT - Mang Insurance Agency |

## CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Board of Directors
NBT Bancorp Inc.:
We consent to incorporation by reference in the Registration Statements on Form S-3 (File No. 333-203795) and Forms S-8 (File Nos. 333-71830, 33372772, 333-73038, 333-66472, 333-97995, 333-107479, 333-107480, 333-127098, 333-139956, 333-150956 and 333-168332) of NBT Bancorp Inc. of our reports dated March 1, 2017, with respect to the consolidated balance sheets of NBT Bancorp Inc. and subsidiaries as of December 31, 2016 and 2015, and 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, 2016, and the effectiveness of internal control over financial reporting as of December 31, 2016, which reports appear in the December 31, 2016 annual report on Form 10-K of NBT Bancorp Inc.
/s/ KPMG LLP
Albany, New York
March 1, 2017

## CERTIFICATION OF PRINCIPAL EXECUTIVE OFFICER PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, John H. Watt Jr., certify that:

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

Date: March 1, 2017

By: /s/ John H. Watt Jr.
John H. Watt Jr.
Chief Executive Officer

## CERTIFICATION OF PRINCIPAL FINANCIAL OFFICER PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002

I, Michael J. Chewens, certify that:

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

Date: March 1, 2017
By: /s/ Michael J. Chewens

## Michael J. Chewens

Senior Executive Vice President and
Chief Financial Officer

The undersigned, the Chief Executive Officer of NBT Bancorp Inc. (the "Company"), hereby certifies that to his knowledge on the date hereof:
(a) the Form $10-\mathrm{K}$ of the Company for the Annual Period Ended December 31, 2016, filed on the date hereof with the Securities and Exchange Commission (the "Report"), fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
(b) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

| /s/ John H. Watt Jr. |
| :--- |
| John H. Watt Jr. |
| Chief Executive Officer |
| March 1, 2017 |

A signed original of this written statement required by Section 906, or other document authenticating, acknowledging, or otherwise adopting the signature that appears in typed form within the electronic version of this written statement required by Section 906, has been provided to NBT Bancorp Inc. and will be retained by NBT Bancorp Inc. and furnished to the Securities and Exchange Commission or its staff upon request.

The undersigned, the Chief Financial Officer of NBT Bancorp Inc. (the "Company"), hereby certifies that to his knowledge on the date hereof:
(a) the Form 10-K of the Company for the Annual Period Ended December 31, 2016, filed on the date hereof with the Securities and Exchange Commission (the "Report"), fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
(b) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.
/s/ Michael J. Chewens
Michael J. Chewens
Senior Executive Vice President and
Chief Financial Officer
March 1, 2017
A signed original of this written statement required by Section 906, or other document authenticating, acknowledging, or otherwise adopting the signature that appears in typed form within the electronic version of this written statement required by Section 906, has been provided to NBT Bancorp Inc. and will be retained by NBT Bancorp Inc. and furnished to the Securities and Exchange Commission or its staff upon request.


[^0]:    (1) Includes the impact of the acquisition of Alliance Financial Corporation ("Alliance") on March 8, 2013.
    (2) Includes the impact of the acquisition of Hampshire First Bank on June 8, 2012.
    (3) Tangible book value calculation (non-GAAP):

[^1]:    * Consumer charge-off and recoveries include consumer and home equity.

[^2]:    with

