UNITED STATES SECURITIES AND EXCHANGE COMMISSION Washington, D.C. 20549

FORM 10-K

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the Fiscal Year Ended December 31, 2018

Commission File No. 001-36695

PATHFINDER BANCORP, INC.

(Exact name of registrant as specified in its charter)

Maryland (State or other jurisdiction of incorporation or organization)

 \times

38-3941859 (I.R.S. Employer Identification No.)

214 West First Street Oswego, NY 13126

(Address of principal executive offices) (Zip code)

Registrant's telephone number, including area code (315) 343-0057

	Securities regi	stered pursuant to Section 12(b) of the Act:
Comn	Title of each class non Stock, \$0.01 par value	Name of each exchange on which registered The NASDAQ Stock Market LLC
	Securities register	red pursuant to Section 12(g) of the Act: None
Indicate by check mark if the reg	sistrant is a well-known seasoned issuer,	as defined in Rule 405 of the Securities Act. Yes \square No \boxtimes
Indicate by check mark if the reg	gistrant is not required to file reports pure	uant to Section 13 or Section 15(d) of the Act. Yes \square No \boxtimes
		quired to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes ⊠ No
		cally every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T orter period that the registrant was required to submit such files). Yes \boxtimes No \square
		405 of Regulation S-K (§229.405 of this chapter) is not contained herein, and will not be contained, to statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-
9	9	filer, an accelerated filer, a non-accelerated filer, a smaller reporting company or emerging growth smaller reporting company" and "emerging growth company" in Rule 12b-2 of the Exchange Act.
Large accelerated filer		Accelerated filer
Non-accelerated filer Emerging growth company		Smaller reporting company
0 00 1 0	indicate by check mark if the registran ursuant to Section 13(a) of the Exchange	has elected not to use the extended transition period for complying with any new or revised financial Act. \Box

The aggregate market value of the voting and non-voting common equity held by non-affiliates of the Registrant, computed by reference to the last sale price on June 30, 2018,

As of March 26, 2019, there were 4,387,244 shares outstanding of the Registrant's common stock.

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

DOCUMENTS INCORPORATED BY REFERENCE:

Proxy Statement for the 2019 Annual Meeting of Shareholders of the Registrant (Part III).

as reported by the NASDAQ Capital Market (\$15.97), was approximately \$69.2 million.

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PART I

FORWARD-LOOKING STATEMENTS

When used in this Annual Report the words or phrases "will likely result", "are expected to", "will continue", "is anticipated", "estimate", "project" or similar expressions are intended to identify "forward-looking statements" within the meaning of the Private Securities Litigation Reform Act of 1995. Such statements are subject to certain risks and uncertainties. Actual results and financial condition may differ, possibly materially, from the anticipated results and financial condition indicated in these forward-looking statements. Important factors that could cause the Company's actual results and financial condition to differ from those indicated in the forward-looking statements include, among others:

- Credit quality and the effect of credit quality on the adequacy of our allowance for loan losses;
- Deterioration in financial markets that may result in impairment charges relating to our securities portfolio;
- Competition in our primary market areas;
- Changes in interest rates and national or regional economic conditions;
- Changes in monetary and fiscal policies of the U.S. Government, including policies of the U.S. Treasury and the Federal Reserve Board;
- Significant government regulations, legislation and potential changes thereto;
- A reduction in our ability to generate or originate revenue-producing assets as a result of compliance with heightened capital standards;
- Increased cost of operations due to regulatory oversight, supervision and examination of banks and bank holding companies, and higher deposit insurance premiums;
- Cyberattacks, computer viruses and other technological threats that may breach the security of our websites or other systems;
- Technological changes that may be more difficult or expensive than expected;
- Limitations on our ability to expand consumer product and service offerings due to consumer protection laws and regulations; and
- Other risks described herein and in the other reports and statements we file with the SEC.

These risks and uncertainties should be considered in evaluating forward-looking statements and undue reliance should not be placed on such statements. Undue reliance should not be placed on any such forward-looking statements, which speak only as of the date made. The factors listed above could affect the Company's financial performance and could cause the Company's actual results for future periods to differ materially from any opinions or statements expressed with respect to future periods in any current statements. Additionally, all statements in this document, including forward-looking statements, speak only as of the date they are made, and the Company undertakes no obligation to update any statement in light of new information or future events.

ITEM 1: BUSINESS

GENERAL

Pathfinder Bancorp, Inc.

Pathfinder Bancorp, Inc. (the "Company") is a Maryland corporation headquartered in Oswego, New York. The primary business of the Company is its investment in Pathfinder Bank (the "Bank") which is 100% owned by the Company. The Company is subject to supervision and regulation by the Board of Governors of the Federal Reserve System (the "Federal Reserve Board"). Pathfinder Bank is a commercial bank chartered by the New York State Department of Financial Services (the "NYSDFS").

The Company owns a non-consolidated Delaware statutory trust subsidiary, Pathfinder Statutory Trust II, of which 100% of the common equity is owned by the Company. Pathfinder Statutory Trust II was formed in connection with the issuance of \$5.2 million in trust preferred securities.

At December 31, 2018 and 2017, 4,362,328 and 4,280,227 shares of Company common stock were outstanding, respectively.

At December 31, 2018, the Company had total consolidated assets of \$933.1 million, total deposits of \$727.1 million and shareholders' equity of \$64.2 million plus a noncontrolling interest of \$238,000, which represents the 49% of the FitzGibbons Agency, LLC not owned by the Company.

The Company's executive office is located at 214 West First Street, Oswego, New York and the telephone number at that address is (315) 343-0057. Its internet address is www.pathfinderbank.com. Information on our website is not and should not be considered to be a part of this report.

Pathfinder Bank

The Bank is a New York-chartered commercial bank and its deposit accounts are insured up to applicable limits by the Federal Deposit Insurance Corporation ("FDIC") through the Deposit Insurance Fund ("DIF"). The Bank is subject to extensive regulation by the NYSDFS, as its chartering agency, and by the FDIC, as its deposit insurer and primary federal regulator. The Bank is a member of the Federal Home Loan Bank of New York ("FHLBNY") and is also subject to certain regulations by the Federal Home Loan Bank System.

The Bank is primarily engaged in the business of attracting deposits from the general public in the Bank's market area, and investing such deposits, together with other sources of funds, in loans secured by commercial real estate, residential real estate, small business loans, and consumer loans. The Bank also invests a portion of its assets in a broad range of debt securities issued by the United States Government and its agencies and sponsored enterprises, state and municipal governments and agencies, and corporations. The Company invests primarily in debt securities but will from time to time also invest in mutual funds and equity securities. The Company also invests in mortgage-backed securities issued or guaranteed by United States Government sponsored enterprises, collateralized mortgage obligations and similar debt securities issued by both government sponsored entities and private (non-governmental) issuers, and asset-backed securities that are generally issued by private entities. The Bank's principal sources of funds are deposits, principal and interest payments on loans and investments, as well as borrowings from correspondent financial institutions. The principal source of income is interest on loans and investment securities. The Bank's principal expenses are interest paid on deposits and borrowed funds, employee compensation and benefits, data processing and facilities

The Bank also owns 100% of Whispering Oaks Development Corp. ("Whispering Oaks"), a New York corporation that is retained to operate or develop real estate-related projects. At December 31, 2018, Whispering Oaks operated a small tenant-occupied commercial building that houses an ATM facility for the Bank, and, through a wholly-owned second-tier subsidiary, is the sole limited partner in an unconsolidated special-purpose partnership. The partnership currently operates a low-income residential housing facility. The activities of Whispering Oaks resulted in a pre-tax income of \$22,000 in 2018.

Pathfinder REIT, Inc., a subsidiary of the Bank, ceased all operations in December 2017 and all of its assets and liabilities were transferred at that time to its parent entity, Pathfinder Bank. The cessation of Pathfinder REIT, Inc.'s operations and the transfer of all assets and liabilities from Pathfinder REIT, Inc. to Pathfinder Bank had no effect on the Company's consolidated financial position at December 31, 2017 or results of operations for the year ended December 31, 2017. The formal dissolution of Pathfinder REIT, Inc. as a legal entity was completed in the first quarter of 2019.

Additionally, the Bank owns 100% of Pathfinder Risk Management Company, Inc., which was established to record the 51% controlling interest upon the December 2013 purchase of the FitzGibbons Agency, an Oswego County property, casualty and life insurance brokerage business with approximately \$840,000 in annual revenues. The activities of Pathfinder Risk Management Company, Inc. resulted in pre-tax losses of \$45,000 in 2018. The Company's 51% controlling interest in this entity resulted in a loss of \$22,000 for the Company on a consolidated basis in 2018.

Employees

As of December 31, 2018, the Bank had 156 full-time employees and 7 part-time employees. The employees are not represented by a collective bargaining unit and we consider our relationship with our employees to be good.

MARKET AREA AND COMPETITION

Market Area

We provide financial services to individuals, families, small to mid-size businesses and municipalities through our seven branch offices located in Oswego County, three branch offices in Onondaga County and one limited purpose office in Oneida County.

Our primary lending market area includes both Oswego and Onondaga Counties. However, our primary deposit generating area is concentrated in Oswego County and in the areas surrounding our Onondaga County branches.

The economies of Oswego County and Onondaga County are based primarily on manufacturing, energy production, heath care, education, and government. The broader Central New York market has a more diverse array of economic sectors, including food processing production and transportation, in addition to financial services. The region has also developed particular strength in emerging industries such as bio-processing, medical devices, aircraft systems and renewable energy.

Based on recent independent market survey reports, median home values were \$141,200 in Onondaga County and \$106,400 in Oswego County at the end of 2018. Home values have shown only modest increases in recent years within the Syracuse metro area, including Onondaga and Oswego Counties. This modest increase in home values within the area followed a period in which home values within the area exhibited relative stability compared to many other areas of the country during the most recent economic recession that began in 2008.

Competition

Pathfinder Bank encounters strong competition both in attracting deposits and in originating real estate and other loans. Our most direct competition for deposits and loans comes from commercial banks, savings institutions and credit unions in our market area, including money-center banks such as JPMorgan Chase & Co. and Bank of America, regional banks such as M&T Bank and Key Bank N. A., and community banks such as NBT Bank and Community Bank N.A., all of which have greater total assets than we do. In addition, potential new competitors may be emerging that are generically defined as financial technology (also referred to as "FinTech" or "fintech") companies. These entities seek to employ new technology and various forms of innovation in order to compete with traditional methods of delivering financial services. The advanced use of smartphones for mobile banking, automated investing services and cryptocurrency are examples of such technologies. Financial technology companies consist of both startups and established financial institutions and technology companies trying to replace or enhance the usage of financial services provided by existing financial service entities, such as the Company. Many existing financial institutions are implementing fintech solutions and technologies in order to improve and develop their services, as well as gaining an improved competitive position. Many of these technologies either are implemented to varying degrees by the Bank, or will be available to the Bank for future implementation through its network of service providers and computer system vendors. It cannot be predicted with certainty at this time how effective these new competitors will be in our marketplace or what costs the Company will incur in the future to implement and maintain competitive technologies.

We compete for deposits by offering depositors a high level of personal service, a wide range of competitively priced financial services, and a well distributed network of branches, ATMs, and electronic banking. We compete for loans through our competitive pricing, our experienced and active loan officers, local knowledge of our market and local decision making, strong community support and involvement, and a highly reputable brand. As the economy has improved, and loan demand has increased, competition from financial institutions for commercial and residential loans has also increased. Additionally, some of our competitors offer products and services that we do not offer, such as trust services and private banking. Our primary focus is to build and develop profitable consumer and commercial customer relationships while maintaining our role as a community bank.

As of June 30, 2018, based on the most recently-available FDIC data, we had the largest market share in Oswego County, representing 44.4% of all deposits, and we additionally held 1.5% of all deposits in Onondaga County. In addition, when combining both Oswego and Onondaga Counties, we have the sixth largest market share of sixteen institutions, representing 6.4% of the total market.

LENDING ACTIVITIES

General

Our primary lending activity is originating commercial real estate and commercial loans, the vast majority of which have periodically adjustable rates of interest and one-to-four family residential real estate loans, the majority of which have fixed rates of interest. Our loan portfolio also includes one-to-four family residential loans, municipal loans, home equity loans and lines and consumer loans. In order to diversify our loan portfolio, increase our revenues, and make our loan portfolio less interest rate sensitive, the Company has actively sought to increase its commercial real estate and commercial business lending activities, consistent with safe and sound underwriting practices. Accordingly, we offer adjustable-rate commercial mortgage loans, short-and medium-term mortgage loans, and floating rate commercial loans and lines.

Commercial Real Estate Loans

Over the past several years, we have focused on originating commercial real estate loans, and we believe that commercial real estate loans will continue to provide growth opportunities for us. We expect to increase, subject to our underwriting standards and market conditions, this business line in the future with a target loan size of \$500,000 to \$2.0 million to small businesses and real estate projects in our market area. Commercial real estate loans are secured by properties such as multi-family residential, office, retail, warehouse and owner-occupied commercial properties.

Our commercial real estate underwriting policies provide that such real estate loans may be made in amounts up to 80% of the appraised value of the property. Commercial real estate loans are offered with interest rates that are generally fixed for up to three or five years then are adjustable based on the FHLBNY advance rate. Contractual maturities generally do not exceed 20 years. In reaching a decision whether to make a commercial real estate loan, we consider market conditions, operating trends, net cash flows of the property, the borrower's expertise and credit history, and the appraised value of the underlying property. We will also consider the terms and conditions of the leases and the stability of the tenant base. We generally require that the properties securing these real estate loans have debt service coverage ratios (the ratio of earnings before interest, taxes, depreciation and amortization divided by interest expense and current maturities of long term debt) of at least 120%. Environmental due diligence is generally conducted for commercial real estate loans. Typically, commercial real estate loans made to corporations, partnerships and other business entities require personal guarantees by the owners of 20% or more of the borrower.

A commercial real estate borrower's financial condition is monitored on an ongoing basis by requiring periodic financial statement updates, payment history reviews, property inspections and periodic face-to-face meetings with the borrower. We generally require borrowers with aggregate outstanding balances exceeding \$100,000 to provide annual updated financial statements and/or federal tax returns. These requirements also apply to all guarantors on these loans. We also require borrowers to provide an annual report of income and expenses for the property, including a rent-roll, as applicable.

Loans secured by commercial real estate generally have greater credit risk than one-to-four family residential real estate loans. The increased credit risk associated with commercial real estate loans is a result of several factors, including larger loan balances concentrated with a limited number of borrowers, the impact of local and general economic conditions on the borrower's ability to repay the loan. Furthermore, the repayment of loans secured by commercial real estate properties typically depends upon the successful operation of the real property securing the loan. If the cash flows from the property are reduced, the borrower's ability to repay the loan may be impaired. However, commercial real estate loans generally have higher interest rates than loans secured by one-to-four family residential real estate.

Commercial Loans

We typically originate commercial loans, including commercial term loans and commercial lines of credit, on the basis of a borrower's ability to make repayment from the cash flows of the borrower's business, conversion of current assets in the normal course of business (for seasonal working capital lines), the industry and market in which they operate, experience and stability of the borrower's management team, earnings projections and the underlying assumptions, and the value and marketability of any collateral securing the loan. As a result, the availability of funds for the repayment of commercial loans and commercial lines of credit is substantially dependent on the success of the business itself and the general economic environment in our market area. Therefore, commercial loans and commercial lines of credit that we originate have greater credit risk than one-to-four family residential real estate loans.

Commercial term loans are typically secured by equipment, furniture and fixtures, inventory, accounts receivable or other business assets, or, in some circumstances, such loans may be unsecured. From time to time, we also originate commercial

loans that are guaranteed by the Unites States Small Business Administration ("SBA") or United States Department of Agriculture ("USDA") loan programs. Over the past several years, we have focused on increasing our commercial lending and our business strategy is to continue to increase our originations of commercial loans to small businesses in our market area, subject to our underwriting standards and market conditions. Our commercial loans are generally comprised of adjustable-rate loans, indexed to the prime rate, with terms consisting of three to seven years, depending on the needs of the borrower and the useful life of the underlying collateral. We make commercial loans to businesses operating in our market area for purchasing equipment, property improvements, business expansion or working capital. If a commercial loan is secured by equipment, the maturity of a term loan will depend on the useful life of the equipment purchased, the source of repayment for the loan and the purpose of the loan. We generally obtain personal guarantees on our commercial loans.

Our commercial lines of credit are typically adjustable rate lines, indexed to the prime interest rate. Generally, our commercial lines of credit are secured by business assets or other collateral, and generally payable on-demand pursuant to an annual review. Since the commercial lines of credit may expire without being drawn upon, the total committed amounts do not necessarily represent future cash requirements.

Residential Real Estate Loans

Historically, our primary lending focus consisted of originating one-to-four family, owner-occupied residential mortgage loans, substantially all of which were secured by properties located in our market area. As noted above, we have shifted our lending focus in recent years towards originating more commercial real estate and commercial loans.

We currently offer one-to-four family residential real estate loans with terms up to 30 years that are generally underwritten according to Federal National Mortgage Association ("Fannie Mae") guidelines, and we refer to loans that conform to such guidelines as "conforming loans." We generally originate both fixed-rate and adjustable-rate mortgage loans in amounts up to the maximum conforming loan limits as established by the Federal Housing Finance Agency, which as of December 31, 2018, was generally \$453,100 for single-family homes in our market area.

Although conforming loans are generally saleable at management's discretion, we generally hold our one-to-four family residential real estate loans in our portfolio but have the capability to sell the mortgages into the secondary market, at management's discretion, as a source of liquidity or as a means of managing interest-rate risk. Such loan sales were conducted on a limited basis in 2018 and 2017. A significant portion of our loan portfolio consists of fixed-rate one-to-four family residential real estate loans with terms in excess of 15 years. We also originate one-to-four family residential real estate loans secured by non-owner occupied properties. However, we generally do not make loans in excess of 80% loan-to-value on non-owner occupied properties.

Our fixed-rate one-to-four family residential real estate loans include loans that generally amortize on a monthly basis over periods between 10 to 30 years. Fixed-rate one-to-four family residential real estate loans often remain outstanding for significantly shorter periods than their contractual terms because borrowers have the right to refinance or prepay their loans.

Our adjustable-rate one-to-four family residential real estate loans generally consist of loans with initial interest rates fixed for one, three, or five years, and annual adjustments thereafter are indexed based on changes in the one-year United States Treasury bill constant maturity rate. Our adjustable-rate mortgage loans generally have an interest rate adjustment limit of 200 basis points per adjustment, with a maximum lifetime interest rate adjustment limit of 600 basis points. In the current low interest rate environment, we have not originated a significant amount of adjustable-rate mortgage loans. Although adjustable-rate one-to-four family residential real estate loans may reduce, to an extent, our vulnerability to changes in market interest rates because they periodically reprice, as interest rates increase the required payments due from a borrower also increase (subject to rate caps), thereby increasing the potential for default by the borrower. At the same time, the ability of the borrower to repay the loan and the marketability of the underlying collateral may be adversely affected by higher interest rates. Upward adjustments of the contractual interest rate are also limited by our maximum periodic and lifetime rate adjustments.

For borrowers who do not obtain private mortgage insurance ("PMI"), our lending policies limit the maximum loan-to-value ratio on both fixed-rate and adjustable-rate mortgage loans to 80% of the appraised value of the collateralized property, with the exception of a limited use product which allows for loans up to 90% with no PMI. For most one-to-four family residential real estate loans with loan-to-value ratios of between 80% and 95%, we require the borrower to obtain private mortgage insurance. For first mortgage loan products, we require the borrower to obtain title insurance. We also require homeowners' insurance, fire and casualty, and, if necessary, flood insurance on properties securing real estate loans. We do not, and have never offered or invested in, one-to-four family residential real estate loans specifically designed for borrowers with sub-prime credit scores, including interest-only, negative amortization or payment option adjustable-rate mortgage loans.

Residential Construction Loans

Our one-to-four family residential real estate loan portfolio also includes residential constructions loans. Our residential construction loans generally have initial terms of up to six months, subject to extension, during which the borrower pays interest only. Upon completion of construction, these loans typically convert to permanent loans secured by the completed residential real estate. Our construction loans generally have rates and terms comparable to residential real estate loans that we originate.

Tax-exempt Loans

We make loans to local governments and municipalities for either tax anticipation or for small expenditure projects, including equipment acquisitions and construction projects. Our municipal loans are generally fixed for a term of one year or less, and are generally unsecured. Interest earned on municipal loans is tax exempt for federal tax purposes, which enhances the overall yield on each loan. Generally, the municipality will have a deposit relationship with us along with the lending relationship.

We also make tax-exempt loans to commercial borrowers based on obligations issued by a state or local authority to provide economic development such as the state dormitory authority.

Home Equity Loans and Junior Liens

Home equity loans and junior liens are made up of lines of credit secured by owner-occupied and non-owner occupied one-to-four family residences and second and third real estate mortgage loans. Home equity loans and home equity lines of credit are generally underwritten using the same criteria that we use to underwrite one-to-four family residential mortgage loans. We typically originate home equity loans and home equity lines of credit on the basis of the applicant's credit history, an assessment of the applicant's ability to meet existing obligations and payments on the proposed loan, and the value of the collateral securing the loan. Home equity loans are offered with fixed interest rates. Lines of credit are offered with adjustable rates, which are indexed to the prime rate, and with a draw period of up to 10 years and a payback period of up to 20 years. The loan-to-value ratio for our home equity loans is generally limited to 80% when combined with the first security lien, if applicable. The loan to value of our home equity lines of credit is generally limited to 80%, unless the Bank holds the first mortgage. If we hold the first mortgage, we will permit a loan to value of up to 90%, and we adjust the interest rate and underwriting standards to compensate for the additional risk.

For all first lien position mortgage loans, we use outside independent appraisers. For second position mortgage loans where we also hold the existing first mortgage, we will use the lesser of the existing appraisal amount used in underwriting the first mortgage or assessed value. For all other second mortgage loans, we will use a third-party service which gathers all data from real property tax offices and gives the property a low, middle and high value, together with similar properties for comparison. The middle value from the third-party service will be the value used in underwriting the loan. If the valuation method for the loan amount requested does not provide a value, or the value is not sufficient to support the loan request and it is determined that the borrower(s) are credit worthy, a full appraisal may be ordered.

Home equity loans and junior liens secured by junior mortgages have greater risk than one-to-four family residential mortgage loans secured by first mortgages. We face the risk that the collateral will be insufficient to compensate us for loan losses and costs of foreclosure, after repayment of the senior mortgages, if applicable. When customers default on their loans, we attempt to work out the relationship in order to avoid foreclosure because the value of the collateral may not be sufficient to compensate us for the amount of the unpaid loan and we may be unsuccessful in recovering the remaining balance from those customers. Moreover, decreases in real estate values could adversely affect our ability to fully recover the loan balance in the event of a default.

Consumer Loans

We are authorized to make loans for a variety of personal and consumer purposes and our consumer loan portfolio consists primarily of automobile, recreational vehicles and unsecured personal loans, as well as unsecured lines of credit and loans secured by deposit accounts. Our procedure for underwriting consumer loans includes an assessment of the applicant's credit history and ability to meet existing obligations and payments for the proposed loan, as well as an evaluation of the value of the collateral security, if any.

Consumer loans generally entail greater credit-related risk than one-to-four family residential mortgage loans, particularly in the case of loans that are unsecured or are secured by assets that tend to depreciate in value, such as automobiles. As a result, consumer loan collections are primarily dependent on the borrower's continuing financial stability and thus are more likely to

be adversely affected by job loss, divorce, illness or personal bankruptcy. In these cases, repossessed collateral for a defaulted consumer loan may not provide an adequate source of repayment for the outstanding loan, and the remaining value often does not warrant further substantial collection efforts against the borrower.

The Company will invest from time to time in pools of collateralized consumer loans originated and serviced by financial institutions operating outside of the Company's primary market area. Loan pools will, in some instances, have economic advantages in terms of yield and/or other portfolio characteristics, such as interest rate risk sensitivity, superior to investment securities and are used to increase the performance characteristics of the Company's interest earning-asset portfolios viewed as a whole. Typically, the Company will acquire a participating interest from the originating institution in an amount that is less than 100% of the outstanding principal balance of the entire pool and the originating institution will retain a residual principal interest in the portion of the loans not acquired by the Company. Loans acquired through these transactions are required by the Company's internal policies to be underwritten to standards that are consistent with those of the Company's own underwriting guidelines and internal practices. Pre-purchase due diligence is performed that includes a thorough review of the originating institution's regulatory compliance procedures, underwriting practices and individual loan documentation. Since these pools are subject to borrower credit default and are collateralized by out-of-market assets, the Company relies on the best efforts of the originating institution, acting as the loans' servicer, to collect on the loans within the pool and to mitigate losses due to such defaults. Such mitigation efforts include the orderly and timely liquidation of loan collateral, as necessary. Accordingly, such loan pools have both the credit risk typically associated with consumer loans and servicer risk components that are carefully monitored by the Company on an ongoing basis.

Loan Originations, Purchases, Sales and Servicing

We benefit from a number of sources for our loan originations, including real estate broker referrals, existing customers, borrowers, builders, attorneys, and "walk-in" customers. Our loan origination activity may be affected adversely by a rising interest rate environment which may result in decreased loan demand. Other factors, such as the overall health of the local economy and competition from other financial institutions, can also impact our loan originations. Although we originate both fixed-rate and adjustable-rate loans, our ability to generate each type of loan depends upon borrower demand, market interest rates, borrower preference for fixed-rate versus adjustable-rate loans, and the interest rates offered on each type of loan by other lenders in our market area. These lenders include commercial banks, savings institutions, credit unions, and mortgage banking companies that also actively compete for local real estate loans. Accordingly, the volume of loan originations may vary from period to period.

The majority of the fixed rate residential loans that are originated each year meet the underwriting guidelines established by Fannie Mae. While infrequent, in the past, we have sold residential mortgage loans in the secondary market, and we may do so in the future, although we continue to service loans once they are sold.

From time to time, although infrequent, we may purchase commercial loan participations in which we are not the lead lender. In these circumstances, we follow our customary loan underwriting and approval policies. We also have participated out portions of commercial and commercial real estate loans that exceeded our loans-to-one borrower legal lending limit and for purposes of risk diversification. Except in the case of broadly diversified pools of collateralized consumer loans, as described above, we do not purchase whole loans.

Loan Approval Procedures and Authority

The Bank's lending activities follow written, non-discriminatory underwriting standards and loan origination procedures established by management and the board of directors. Our policies are designed to provide loan officers with guidelines on acceptable levels of risk, given a broad range of factors. The loan approval process is intended to assess the borrower's ability to repay the loan, the viability of the loan and the adequacy of the value of the collateral that will secure the loan, if applicable.

The board of directors grants loan officers individual lending authority to approve extensions of credit. The level of authority for loan officers varies based upon the loan type, total relationship, form of collateral and risk rating of the borrower. Each loan officer is charged with the responsibility of achieving high credit standards. Individual lending authority can be increased, suspended or removed by the board of directors, as recommended by the President or Executive Vice President and Chief Banking Officer.

If a loan is in excess of any individual loan officer's lending authority, the extension of credit must be referred to the Officer Loan Committee ("OLC"). The OLC is comprised of the President (serving as chairman), the Executive Vice President and Chief Banking Officer (serving as chair in the absence of the President), the Executive Vice President, Chief Operating Officer, as well as other members of the management team and retail and commercial lenders as may be appointed by the President. The OLC has authority to approve all commercial loans, and one-to-four family residential real estate loans where the total related credit is \$1.2 million or less which are not within the lenders' individual authority. In addition, the OLC may approve all municipal loans, where the total related credit is \$2.5 million or less, and the individual loan amount is \$2.5 million or less and the individual loan amount is \$200,000 for unsecured loans or \$750,000 for secured loans. The Executive Loan Committee, which consists of members of the Bank's board of directors, must approve all extensions of credit in excess of the limits for the OLC and lenders individual authority.

Loans to One Borrower

Under New York law, New York commercial banks are subject to loans-to-one borrower limits, which are substantially similar as those applicable to national banks, which restrict loans to one borrower to an amount equal to 15% of unimpaired capital and unimpaired surplus, which was \$12.5 million at December 31, 2018, on an unsecured basis, and an additional amount equal to 10% of unimpaired capital and unimpaired surplus, which was \$8.3 million at December 31, 2018, if the loan is secured by readily marketable collateral (generally, financial instruments and bullion, but not real estate), subject to exceptions.

Additionally, our internal loan policies limit the total related credit to be extended to any one borrower (after application of the rules of attribution), with respect to any and all loans with the Bank to 10% of tier 1 and 2 capital, subject to certain exceptions. The indebtedness includes all credit exposure whether direct or contingent, used or unused.

ASSET QUALITY

Loan Delinquencies and Collection Procedures

When a loan becomes delinquent, we make attempts to contact the borrower to determine the cause of the delayed payments and seek a solution to permit the loan to be brought current within a reasonable period of time. The outcome can vary with each individual borrower. In the case of mortgage loans and consumer loans, a late notice is sent 15 days after an account becomes delinquent. If delinquency persists, notices are sent at the 30 day delinquency mark, the 45 day delinquency mark and the 60 day delinquency mark. We also attempt to establish telephone contact with the borrower early on in the process. In the case of residential mortgage loans, included in every late notice is a letter that includes information regarding home-ownership counseling. As part of a workout agreement, we will accept partial payments during the month in order to bring the account current. If attempts to reach an agreement are unsuccessful and the customer is unable to comply with the terms of the workout agreement, we will review the account to determine if foreclosure is warranted, in which case, consistent with New York law, we send a 90 day notice of foreclosure and then a 30 day notice before legal proceedings are commenced. A consumer final demand letter is sent in the case of a consumer loan. In the case of commercial loans and commercial mortgage loans, we follow a similar notification practice with the exception of the previously mentioned information on home-ownership counseling. In addition, commercial loans do not require 90 day notices of foreclosure. Generally, commercial borrowers only receive 10 day notices before legal proceedings can be commenced. Commercial loans may experience longer workout times that may trigger a need for a loan modification that could meet the requirements of a troubled debt restructured loan.

Impaired Loans, Non-performing Loans and Troubled Debt Restructurings

The policy of the Bank is to provide a continuous assessment of the quality of its loan portfolio through the maintenance of an internal and external loan review process. The process incorporates a loan risk grading system designed to recognize degrees of risk on individual commercial and mortgage loans in the portfolio. Management is responsible for monitoring of asset quality and risk grade designations, which are communicated to the board on a regular basis.

We generally cease accruing interest on our loans when contractual payments of principal or interest have become 90 days past due or management has serious doubts about further collectability of principal or interest, even though the loan is currently performing. A loan may remain on accrual status if it is in the process of collection and is either guaranteed or well secured. When a loan is placed on non-accrual status, unpaid interest credited to income is reversed. Interest received on non-accrual loans generally is applied against principal or interest if it is recognized on the cash basis method. Generally, loans are restored to accrual status when the obligation is brought current, has performed in accordance with the contractual terms for a reasonable period of time, generally for a minimum of six months, and the ultimate collectability of the total contractual principal and interest is no longer in doubt.

Our Allowance for Loan and Lease Losses policy ("ALLL") establishes criteria for selecting loans to be measured for impairment based on the following:

Residential and Consumer Loans:

- · All loans rated substandard or worse, on nonaccrual, and above our total related credit ("TRC") threshold balance of \$300,000.
- All Troubled Debt Restructured Loans

Commercial Lines and Loans, Commercial Real Estate and Tax-exempt loans:

- All loans rated substandard or worse, on nonaccrual, and above our TRC threshold balance of \$100,000.
- All Troubled Debt Restructured Loans

Impairment is measured by determining the present value of expected future cash flows or, for collateral-dependent loans, the fair value of the collateral adjusted for market conditions and selling expenses as compared to the loan carrying value.

Troubled Debt Restructurings ("TDR")

TDRs are loan restructurings in which we, for economic or legal reasons related to an existing borrower's financial difficulties, grant a concession to the debtor that we would not otherwise consider. Typically, a troubled debt restructuring involves a modification of terms of debt, such as reduction of the stated interest rate for the remaining original life of the debt, extension of the maturity date at a stated interest rate lower than the current market rate for new debt with similar risk, reduction of the face amount of the debt, or reduction of accrued interest. We consider modifications only after analyzing the borrower's current repayment capacity, evaluating the strength of any guarantors based on documented current financial information, and assessing the current value of any collateral pledged. These modifications are made only when there is a reasonable and attainable workout plan that has been agreed to by the borrower and that is in our best interests. Some examples of residential TDRs include restructures encouraged by the Federal Government's HAMP and HARP Programs, in which we have participated.

Loans on non-accrual status at the date of modification are initially classified as non-accrual troubled debt restructurings. Our policy provides that troubled debt restructured loans are returned to accrual status after a period of satisfactory and reasonable future payment performance under the terms of the restructuring. Satisfactory payment performance is generally no less than six consecutive months of timely payments and demonstrated ability to continue to repay.

Foreclosed real estate

Fair values for foreclosed real estate are initially recorded based on market value evaluations by third parties, less costs to sell ("initial cost basis"). Any write-downs required when the related loan receivable is exchanged for the underlying real estate collateral at the time of transfer to foreclosed real estate are charged to the allowance for loan losses. Values are derived from appraisals of underlying collateral or discounted cash flow analysis. Subsequent to foreclosure, valuations are updated periodically and assets are marked to current fair value, not to exceed the initial cost basis. In the determination of fair value subsequent to foreclosure, management also considers other factors or recent developments, such as, changes in absorption rates and market conditions from the time of valuation, and anticipated sales values considering management's plans for disposition. Either change could result in adjustment to lower the property value estimates indicated in the appraisals.

Loan delinquencies together with properties within our Foreclosed Real Estate portfolio are reviewed monthly by the board of directors.

Classified Assets

Federal regulations provide for the classification of loans and other assets, such as debt and equity securities considered by the FDIC to be of lesser quality, as "substandard," "doubtful" or "loss." An asset is considered "substandard" if it is inadequately protected by the current net worth and paying capacity of the obligor or of the collateral pledged, if any. "Substandard" assets include those characterized by the "distinct possibility" that the insured institution will sustain "some loss" if the deficiencies are not corrected. Assets classified as "doubtful" have all of the weaknesses inherent in those classified "substandard," with the added characteristic that the weaknesses present make "collection or liquidation in full," on the basis of currently existing facts, conditions, and values, "highly questionable and improbable." Assets classified as "loss" are those considered "uncollectible" and of such little value that their continuance as assets without the establishment of a specific allowance for loan losses is not warranted. Assets that do not currently expose the insured institution to sufficient risk to warrant classification in one of the aforementioned categories but possess weaknesses are designated as "special mention" by our management.

When an insured institution classifies problem assets as either substandard or doubtful, it may establish general allowances in an amount deemed prudent by management to cover losses that are both probable and reasonable to estimate. General allowances represent allowances which have been established to cover accrued losses associated with lending activities that are both probable and reasonable to estimate, but which, unlike specific allowances, have not been allocated to particular problem assets. When an insured institution classifies problem assets as "loss," it is required either to establish a specific allowance for losses equal to 100% of that portion of the asset so classified or to charge-off such amount. An institution's determination as to the classification of its assets and the amount of its valuation allowances is subject to review by the regulatory authorities, which may require the establishment of additional general or specific allowances.

In connection with the filing of our periodic regulatory reports and in accordance with our classification of assets policy, we continuously assess the quality of our loan portfolio and we regularly review the loans in our loan portfolio to determine whether any loans require classification in accordance with applicable regulations. Loans are listed on the "watch list" initially because of emerging financial weaknesses even though the loan is currently performing in accordance with its terms, or delinquency status, or if the loan possesses weaknesses although currently performing. Management reviews the status of our loan portfolio delinquencies, by loan types, with the full board of directors on a monthly basis. Individual classified loan relationships are discussed as warranted. If a loan deteriorates in asset quality, the classification is changed to "special mention," "substandard," "doubtful" or "loss" depending on the circumstances and the evaluation. Generally, loans 90 days or more past due are placed on nonaccrual status and classified "substandard."

We also employ a risk grading system for our loans to help assure that we are not taking unnecessary and/or unmanageable risk. The primary objective of the loan risk grading system is to establish a method of assessing credit risk to further enable management to measure loan portfolio quality and the adequacy of the allowance for loan losses. Further, we contract with an external loan review firm to complete a credit risk assessment of the loan portfolio on a regular basis to help determine the current level and direction of our credit risk. The external loan review firm communicates the results of their findings to the Executive Loan Committee in writing and by periodically attending the Executive Loan Committee meetings. Any material issues discovered in an external loan review are also communicated immediately to the President of the Bank. See Note 5 to the consolidated financial statements for further details on the Company's credit quality indicators that define our risk grading system.

Allowance for Loan Losses

The allowance for loan losses represents management's estimate of losses inherent in the loan portfolio as of the date of the statement of condition and it is recorded as a reduction of loans. The allowance for loan losses is maintained at a level considered adequate to provide for losses that can be reasonably anticipated. Management performs a quarterly evaluation of the adequacy of the allowance. The allowance is increased by the provision for loan losses, and decreased by charge-offs, net of recoveries. Loans deemed to be uncollectible are charged against the allowance for loan losses, and subsequent recoveries, if any, are credited to the allowance. All or part of the principal balance of loans receivable are charged off to the allowance as soon as it is determined that the repayment of all or part of the principal balance is highly unlikely. Non-residential consumer loans are generally charged off no later than 120 days past due on a contractual basis, unless productive collection efforts are providing results. Consumer loans may be charged off earlier in the event of bankruptcy, or if there is an amount that is deemed uncollectible. No portion of the allowance for loan losses is restricted to any individual loan type and the entire allowance is available to absorb any and all loan losses.

The allowance is based on three major components which are: (i) specific components for impaired loans, (ii) recent historical losses and several qualitative factors applied to a general pool of loans, and (iii) an unallocated component.

The first component is the specific allowance that relates to loans that are classified as impaired. For these loans, an allowance is established when the discounted cash flows or collateral value of the impaired loan are lower than the carrying value of the loan. A loan is considered impaired when, based on current information and events, it is probable that we will be unable to collect the scheduled payments of principal or interest when due according to the contractual terms of the loan agreement. Impairment is measured by either the present value of the expected future cash flows discounted at the loan's effective interest rate or the fair value of the underlying collateral if the loan is collateral dependent. The majority of our loans utilize the fair value of the underlying collateral. Factors considered by management in determining impairment include payment status, collateral value and the probability of collecting scheduled principal and interest payments when due. Loans that experience insignificant payment delays and payment shortfalls generally are not classified as impaired. Management determines the significance of payment delays and shortfalls on a case-by case basis, taking into consideration all of the circumstances surrounding the loan and the borrower, including the length and reason for the delay, the borrower's prior payment record and the amount of shortfall in relation to what is owed.

The second component is the general allowance which covers pools of loans, by loan class, not considered impaired, smaller balance homogenous loans, such as residential real estate, home equity and other consumer loans. These pools of loans are evaluated for loss exposure based on historical loss rates for each of these categories of loans. The ratio of net charge-offs to loans outstanding within each loan class over the most recent eight quarters, lagged by one quarter, is used to generate the historical loss rates.

In addition, qualitative factors are added to the historical loss rates in arriving at the total allowance for loan losses needed for this general pool of loans. The qualitative factors include changes in national and local economic trends, the rate of growth in the portfolio, trends of delinquencies and nonaccrual balances, changes in loan policy, and changes in lending management experience and related staffing. Each factor is assigned a value to reflect improving, stable or declining conditions based on management's best judgment using relevant information available at the time of the evaluation. These qualitative factors, applied to each product class, make the evaluation inherently subjective, as it requires material estimates that may be susceptible to significant revision as more information becomes available.

The third component may consist of an unallocated allowance which is maintained to cover uncertainties that could affect management's estimate of probable losses. The unallocated component of the allowance, when present, reflects an additional margin for potential imprecision inherent in the underlying assumptions used in the methodologies for estimating specific and general losses in the portfolio. This component would typically be appropriate in times of significant economic dislocations or uncertainties in either, or both, the local and national economies. The unallocated allowance generally comprises less than 10% of the total allowance for loan losses and can be as little as 0% of total allowance.

When a loan is determined to be impaired, we will reevaluate the collateral which secures the loan. For real estate loans, we will obtain a new appraisal or broker's opinion, whichever is considered to provide the most accurate value in the event of sale. An evaluation of equipment held as collateral will be obtained from an independent firm able to provide such an evaluation. Collateral will be inspected not less than annually for all impaired loans and will be reevaluated not less than every two years. Appraised values are discounted to arrive at the estimated selling price of the collateral, which is considered to be the estimated fair value. The discounts also include estimated costs to sell the property. For commercial and industrial loans secured by non-real estate collateral, such as accounts receivable, inventory and equipment, estimated fair values are determined based on the borrower's financial statements, inventory reports, accounts receivable agings or equipment appraisals or invoices. Indications of value from these sources are generally discounted based on the age of the financial information or the quality of the assets.

Large groups of homogeneous loans are evaluated for impairment in the aggregate. Accordingly, we do not separately identify individual residential mortgage loans with outstanding principal balances less than \$300,000, home equity and other consumer loans for impairment disclosures. We make exceptions to this general rule when such loans are (1) rated substandard or worse, on nonaccrual status and are related to borrowers with total related credit exposure in excess of our threshold balance of \$300,000; or (2) the loans are subject to a troubled debt restructuring agreement.

In addition, the FDIC and NYSDFS, as an integral part of their examination process, periodically review our allowance for loan losses and may require us to recognize additions to the allowance based on their judgments about information available to them at the time of their examination, which may not be currently available to management. Based on management's comprehensive analysis of the loan portfolio, we believe the current level of the allowance for loan losses is adequate.

INVESTMENT AND HEDGING ACTIVITIES

Our investment policy is established by the board of directors. Our investment policy dictates that investment decisions will be made based on the safety of the investment, liquidity requirements, potential returns, cash flow targets, and consistency with our interest rate risk management objectives. The Asset Liability Management Committee (the "ALCO") of the board of directors acts in the capacity of an investment committee and is responsible for overseeing our investment program and evaluating on an ongoing basis our investment policy and objectives. Our President, Chief Financial Officer and the Board-designated Chief Investment Officer have the authority to purchase and sell securities within specific guidelines established by the investment policy. All transactions are reviewed by the board of directors at its regular meetings.

All investment securities must meet regulatory guidelines and be permissible bank investments. Our investment securities include United States Government obligations, securities of various federal agencies and of state and municipal governments, deposits at the FHLBNY, certificates of deposit at federally insured institutions, and federal funds. Within certain regulatory limits, we may also invest a portion of our assets in mutual funds, mortgage-backed and asset-backed securities issued by private issuers, equity securities and investment grade corporate debt securities. As part of our membership in the FHLBNY, we are required to maintain a dividend-earning investment in FHLBNY stock.

All securities purchased will be classified at the time of purchase as either held-to-maturity or available-for-sale. We do not maintain a trading account. Securities purchased with the intent and ability to hold until maturity will be classified as held-to-maturity. Securities placed in the held-to-maturity category will be accounted for at amortized cost.

Securities that do not qualify or are not categorized as held-to-maturity are classified as available-for-sale. This classification includes securities that may be sold in response to changes in interest rates, the security's prepayment risk, liquidity needs, the availability of and the yield on alternative investments, and funding sources and terms. These securities are reported at fair value, which is determined on a monthly basis. Unrealized gains and losses are reported as a separate component of capital, net of tax. The aggregate change in value of the portfolio is reported to the board of directors monthly.

The general objectives of the investment portfolio are to assist in the overall interest rate risk management of the Bank, generate a reasonable rate of return consistent with the safety of principal, provide a source of liquidity, minimize our tax liability, and mitigate our interest rate and credit risk. We purchase securities to provide necessary liquidity for day-to-day operations and when investable funds exceed loan demand. The effect that the proposed security would have on our credit and interest rate risk and risk-based equity is also considered.

Securities classified as held-to-maturity, other than mortgage-backed securities and collateralized mortgage obligations (which are issued by government-sponsored enterprises and private issuers), consist primarily of state and political subdivision securities, and to a lesser extent, federal agency obligations and corporate securities. Our securities classified as available-for-sale consist primarily of mortgage- and asset-backed securities, corporate securities and federal agency obligations. Federal agency obligations include Federal Farm Credit Bank notes, Federal Home Loan Bank notes, Fannie Mae notes and Federal Home Loan Mortgage Corporation ("Freddie Mac") notes. For a discussion on mortgage backed securities, see "Mortgage-Backed Securities and Collateralized Mortgage Obligations."

We also have an investment in FHLBNY stock which is classified separately from securities due to the restrictions on sale or transfer. For further information regarding our securities portfolio, see Note 4 to the consolidated financial statements.

On five occasions during 2017, the Company sold, and subsequently repurchased, U.S. Treasury securities in the approximate amount of \$40.0 million for each transaction. These transactions were intended to act as hedges against rising short-term interest rates. The Company was in controlling possession of, but did not own, the securities at the time of each sale. On each occasion, the Treasury securities had been received by the Company, under industry-standard repurchase agreements, from an unrelated third party as collateral for a 30-day loan of approximately \$40.0 million which was made at market interest rates to that third party. The security sale on each occasion provided the funds necessary to advance the loan to the third party and placed the Company in what is generally described as a "short position" with respect to the sold U.S. Treasury security. These transactions acted as a hedge against rising short-term interest rates because the price of each sold security would be expected to decline in a rising short-term interest rate environment and could therefore be re-acquired at the conclusion of each 30-day loan period at a price lower than the price at which the securities were originally sold. Generally, short-term rates rose over the combined duration of these transactions and, consequently, the Company recognized aggregate gains on the sale and repurchase of the securities of \$428,000 in 2017. The transactions' gains were characterized as capital gains for tax purposes. These capital gains utilized existing, previously reserved-for, capital loss tax carryforwards that were established in 2013. The Company recognized tax benefits related to these transactions of \$150,000 in 2017. The tax benefits arose from the reversal of valuation allowances established in 2013 against the portion of the Company's deferred tax assets related to existing capital loss carryforward tax positions. The valuation allowances were originally established due to the uncertainty at that time related to the Company's ability to generate future capital gain income within the five-year statutory life of the capital loss carryforward position under the Internal Revenue Code. The recognized tax benefit from the reversal of those valuation allowances reduced the Company's effective tax rate from what would have been 24.0% to 20.6 % in 2017 without regard to the effects of the one-time charge related to the enactment on December 22, 2017 of the Tax Cuts and Jobs Act of 2017 (the "Tax Act").

The capital gain income and the additional recognized tax benefits derived from these transactions were partially offset by an additional \$368,000 in after-tax interest expense on borrowings from additional pre-tax interest expense on those borrowings of \$598,000 that reduced pretax net interest margin by that amount in 2017. In total, after-tax net income increased by \$178,000

for the twelve months ended December 31, 2017 as a result of these hedging transactions. The Company did not have any hedging activities during the twelve months ended December 31, 2018.

MORTGAGE-BACKED SECURITIES AND COLLATERALIZED MORTGAGE OBLIGATIONS

We purchase mortgage-backed securities and collateralized mortgage obligations guaranteed by Fannie Mae, Freddie Mac and the Government National Mortgage Association ("Ginnie Mae"). In recent years, the Company has also increased the level of its investments in mortgage-backed securities and collateralized mortgage obligations issued by private entities. These securities are generally senior tranches of multi-class issuances that provide substantial credit enhancements to the senior tranches and therefore reasonable, but not absolute, protection for the Company from the risks of default. We invest in mortgage-backed securities and collateralized mortgage obligations to achieve positive interest rate spreads with minimal administrative expense, and to lower our credit risk through geographic diversification. These securities are generally relatively short in duration and therefore reduce the Bank's sensitivity to changes in interest rates. All privately issued mortgage-backed securities held by the Bank at December 31, 2018 were either rated at or above the lowest investment grade for credit quality by a nationally-recognized statistical rating organization (a "NRSRO") or were the most senior tranches of securitizations that were not rated by a NRSRO at the time of the securities' issuance. We regularly monitor the credit quality of this portfolio. At December 31, 2018, no securities held by the Bank in this category had been downgraded by a NRSRO.

Mortgage-backed securities and collateralized mortgage obligations are created by pooling mortgages and issuing a security with an interest rate which is less than the interest rate on the underlying mortgages. These securities typically represent a participation interest in a pool of single-family or multi-family mortgages, although we focus our investments on mortgage related securities backed by one-to-four family real estate loans. The issuers of such securities pool and resell the participation interests in the form of securities to investors such as the Bank, and in the case of government agency sponsored issues, guarantee the payment of principal and interest to investors. Mortgage-backed securities and collateralized mortgage obligations generally yield less than the loans that underlie such securities because of the cost of payment guarantees, if any, and credit enhancements. These fixed-rate securities are usually more liquid than individual mortgage loans.

Investments in collateralized mortgage obligations involve a risk that actual prepayments may differ from estimated prepayments over the life of the security, which may require adjustments to the amortization of any premium or accretion of any discount relating to such instruments, thereby changing the net yield on such securities. There is also reinvestment risk associated with the cash flows from such securities or if such securities are redeemed by the issuer. In addition, the market value of such securities may be adversely affected in a rising interest rate environment, particularly since all of our collateralized mortgage obligations have a fixed rate of interest. The relatively short weighted average remaining life of our collateralized mortgage obligation portfolio mitigates our potential risk of loss in a rising interest rate environment.

ASSET-BACKED SECURITIES

We also purchase asset-backed securities issued by private entities. These securities typically represent a participation interest in a pool of non-mortgage loans. Asset-backed securities are created by pooling homogenous non-mortgage loans (such as unsecured consumer loans) and issuing a security with an interest rate which is less than the interest rate on the underlying loan notes. The issuers of such securities pool and resell the participation interests in the form of securities to investors such as the Bank. Asset-backed securities generally yield less than the loans that underlie such securities because of the cost of credit enhancements. These securities, which may be fixed or adjustable-rate are usually more substantially more liquid than individual loans.

The securities of the type the Bank typically invests in are typically collateralized by consumer loans or commercial business trade receivables and are generally senior tranches of multi-class issuances. These tranches are offered with substantial credit enhancements and therefore reasonable, but not absolute, protection for the Company from the risks of default. We invest in asset-backed securities to achieve positive interest rate spreads with minimal administrative expense, and to lower our credit risk through geographical and asset-type diversification. These securities are generally relatively short in duration and therefore reduce the Bank's sensitivity to changes in interest rates. All asset-backed securities held by the Bank at December 31, 2018 were either rated at or above the lowest investment grade for credit quality by a NRSRO or were the most senior tranches of securitizations that were not rated by a NRSRO at the time of the securities' issuance. We regularly monitor the credit quality of this portfolio. At December 31, 2018, no securities held by the Bank in this category had been downgraded by a NRSRO.

SOURCES OF FUNDS

General

Deposits have traditionally been our primary source of funds for use in lending and investment activities. We also rely on advances from the FHLBNY and the Certificates of Deposit Account Registry Service ("CDARS") provided by an independent third-party, Promontory Interfinancial Network, as a form of brokered deposits. In addition to deposits and borrowings, we derive funds from scheduled loan payments, investment maturities, loan prepayments, retained earnings and income on interest-earning assets. While scheduled loan payments and income on interest-earning assets are relatively stable sources of funds, deposit inflows and outflows can vary widely and are influenced by prevailing market interest rates, economic conditions and competition from other financial institutions.

Deposits

A majority of our depositors are persons or businesses who work or reside or operate in Oswego and Onondaga Counties. We offer a variety of deposits, including checking, savings, money market deposit accounts, and certificates of deposit. Deposit account terms vary, with the principal differences being the minimum balance required, the amount of time the funds must remain on deposit and the interest rate. We establish interest rates, maturity terms, service fees and withdrawal penalties on a periodic basis. Management determines the rates and terms based on rates paid by competitors, our need for funds or liquidity, overall growth goals and federal and state regulations. The flow of deposits is influenced significantly by general economic conditions, changes in interest rates and competition. The variety of deposit accounts that we offer allows us to be competitive in generating deposits and to respond with flexibility to changes in our customers' demands. We believe that deposits are a stable source of funds, but our ability to attract and maintain deposits at favorable rates will be affected by market conditions, including competition and prevailing interest rates. In addition, the Bank holds municipal deposits, which have been a more volatile source of funds.

The CDARS is a form of a brokered deposit program in which we have been a participant since 2009. In addition to offering depositors enhanced FDIC insurance coverage, being a participant in CDARS allows us to fund our balance sheet through the CDARS' One-Way Buy program. This program uses a competitive bid process for available deposits, up to \$50 million, at specified terms. These deposits work well for us because of their weekly availability, coupled with their short term duration, which allows us to more closely mirror our funding needs. We believe this arrangement is a viable source of funding provided that we maintain our "well-capitalized" status. See Note 11 to the consolidated financial statements for further details on our brokered deposits.

On May 24, 2018, The Economic Growth, Regulatory Relief and Consumer Protection Act of 2018 (the "EGRRCPA") was enacted, which repealed or modified certain provisions of the Dodd-Frank Act and eased regulations on all financial institutions with the exception of the largest banks. The EGRRCPA's provisions include, among other items, clarifying that, subject to various conditions, reciprocal deposits of another depository institution obtained using a deposit broker through a deposit placement network for purposes of obtaining maximum deposit insurance would not be considered brokered deposits subject to the FDIC's brokered-deposit regulations. At December 31, 2017, the Bank had \$145.1 million in deposits that were categorized under the then-applicable regulations as brokered deposits. Of the \$145.1 million in deposits categorized as brokered deposits at December 31, 2017, \$59.5 million would be considered to be brokered deposits under the EGRRCPA regulations in effect at December 31, 2018.

Brokered deposits are employed by the Bank's management to supplement the funding that the Bank obtains from customer deposits and other borrowings, principally from the FHLB-NY, and are used to increase the overall efficiency of the Bank's funding mix. Management intends to continue to use brokered deposits in the future as an integral part of its overall funding strategies.

Borrowings

The Bank has a number of existing credit facilities available to it. At December 31, 2018, the Bank had existing lines of credit at FHLBNY, the Federal Reserve Bank ("FRB"), and two other correspondent banks. We obtain advances primarily from the FHLBNY utilizing the security of the common stock we own in the FHLBNY and qualifying residential mortgage loans as collateral, provided certain standards related to creditworthiness are met. These advances are made pursuant to several credit programs, each of which has its own interest rate and range of maturities. FHLBNY advances are generally available to meet seasonal and other withdrawals of deposit accounts and to permit increased lending.

Subordinated Loans

The Company has a non-consolidated subsidiary trust, Pathfinder Statutory Trust II, of which the Company owns 100% of the common equity. The Trust issued \$5,000,000 of 30-year floating rate Company-obligated pooled capital securities of Pathfinder Statutory Trust II ("Floating-Rate Debentures"). The Company borrowed the proceeds of the capital securities from its subsidiary by issuing floating rate junior subordinated deferrable interest debentures having substantially similar terms. The capital securities mature in 2037 and are treated as Tier 1 capital by the FDIC and the FRB. The capital securities of the trust are a pooled trust preferred fund of Preferred Term Securities VI, Ltd., with interest rates that reset quarterly, and are indexed to the 3-month LIBOR plus 1.65%. These securities have a five-year call provision. The Company guarantees all of these securities.

The Company's equity interest in the trust subsidiary is included in other assets on the Consolidated Statements of Financial Condition at December 31, 2018 and 2017. For regulatory reporting purposes, the Federal Reserve has indicated that the preferred securities will continue to qualify as Tier 1 Capital subject to previously specified limitations, until further notice. If regulators make a determination that Trust Preferred Securities can no longer be considered in regulatory capital, the securities become callable and the Company may redeem them.

On October 15, 2015, the Company executed a \$10.0 million non-amortizing Subordinated Loan with an unrelated third party that is scheduled to mature on October 1, 2025. The Company has the right to prepay the Subordinated Loan at any time after October 15, 2020 without penalty. The annual interest rate charged to the Company will be 6.25% through the maturity date of the subordinated loan. The Subordinated Loan is senior in the Company's credit repayment hierarchy only to the Company's common equity and, as a result, qualifies as Tier 2 capital for all future periods when applicable. The Company paid \$172,000 in origination and legal fees as part of this transaction. These fees will be amortized over the life of the Subordinated Loan through its first call date using the effective interest method. The effective cost of funds related to this transaction is 6.44% calculated under this method. Accordingly, interest expense of \$647,000 and \$645,000 were recorded in the years ended December 31, 2018 and 2017, respectively.

SUPERVISION AND REGULATION

General

Pathfinder Bank is a New York-chartered commercial bank and the Company is a Maryland corporation and a registered bank holding company. The Bank's deposits are insured up to applicable limits by the FDIC. The Bank is subject to extensive regulation by NYSDFS, as its chartering agency, and by the FDIC, its primary federal regulator and deposit insurer. The Bank is required to file reports with, and is periodically examined by, the FDIC and the NYSDFS concerning its activities and financial condition and must obtain regulatory approvals prior to entering into certain transactions, including, but not limited to, mergers with or acquisitions of other financial institutions. As a registered bank holding company, the Company is regulated by the Federal Reserve Board.

The regulatory and supervisory structure establishes a comprehensive framework of activities in which an institution can engage and is intended primarily for the protection of depositors and the deposit insurance funds, rather than for the protection of shareholders and creditors. The regulatory structure also gives the regulatory authorities extensive discretion in connection with their supervisory and enforcement activities and examination policies, including policies concerning the establishment of deposit insurance assessment fees, classification of assets and establishment of adequate loan loss reserves for regulatory purposes. Any change in such regulatory requirements and policies, whether by the New York State legislature, the NYSDFS, the FDIC, the Federal Reserve Board or the United States Congress, could have a material adverse impact on the financial condition and results of operations of the Company and the Bank.

Set forth below is a summary of certain material statutory and regulatory requirements applicable to the Company and the Bank. The summary is not intended to be a complete description of such statutes and regulations and their effects on the Company and the Bank.

The Dodd-Frank Act

The Dodd-Frank Act significantly changed bank regulation and has affected the lending, investment, trading and operating activities of depository institutions and their holding companies. The Dodd-Frank Act created the Consumer Financial Protection Bureau with extensive powers to supervise and enforce consumer protection laws. The Consumer Financial Protection Bureau has broad rule-making authority for a wide range of consumer protection laws that apply to all banks and savings institutions, including the authority to prohibit "unfair, deceptive or abusive" acts and practices. Banks and savings

institutions with \$10 billion or less in assets, such as Pathfinder Bank, continue to be examined by their applicable federal bank regulators. The Dodd-Frank Act also gave state attorneys general the ability to enforce applicable federal consumer protection laws.

The Dodd-Frank Act broadened the base for FDIC assessments for deposit insurance and permanently increased the maximum amount of deposit insurance to \$250,000 per depositor. The Dodd-Frank Act also, among other things, required originators of certain securitized loans to retain a portion of the credit risk, stipulated regulatory rate-setting for certain debit card interchange fees, repealed restrictions on the payment of interest on commercial demand deposits and contained a number of reforms related to mortgage originations. The Dodd-Frank Act increased the ability of shareholders to influence boards of directors by requiring companies to give shareholders a non-binding vote on executive compensation and so-called "golden parachute" payments. The Dodd-Frank Act also directed the Federal Reserve Board to promulgate rules prohibiting excessive compensation paid to company executives, regardless of whether the company is publicly traded or not.

The Economic Growth, Regulatory Relief and Consumer Protection Act of 2018 (the "EGRRCPA")

On May 24, 2018, the EGRRCPA was enacted, which repealed or modified certain provisions of the Dodd-Frank Act and eased regulations on all financial institutions with the exception of the largest banks. The EGRRCPA's provisions include, among other items: (i) exempting banks with less than \$10 billion in assets from the ability-to-repay requirements for certain qualified residential mortgage loans held in portfolio; (ii) not requiring appraisals for certain transactions valued at less than \$400,000 in rural areas; (iii) exempting banks that originate fewer than 500 open-end and 500 closed-end mortgages from HMDA's expanded data disclosures; (iv) clarifying that, subject to various conditions, reciprocal deposits of another depository institution obtained using a deposit broker through a deposit placement network for purposes of obtaining maximum deposit insurance would not be considered brokered deposits subject to the FDIC's brokered-deposit regulations; (v) raising eligibility for the 18-month exam cycle from \$1 billion to banks with \$3 billion in assets; and (vi) simplifying capital calculations by requiring regulators to establish for institutions under \$10 billion in assets a community bank leverage ratio (tangible equity to average consolidated assets) at a percentage not less than 8% and not greater than 10%; that such institutions may elect to replace the general applicable risk-based capital requirements for determining well-capitalized status. In addition, the law required the Federal Reserve Board to raise the asset threshold under its Small Bank Holding Company Policy Statement from \$1 billion to \$3 billion for bank or savings and loan holding companies that are exempt from consolidated capital requirements, provided that such companies meet certain other conditions such as not engaging in significant nonbanking activities.

New York Bank Regulation

Pathfinder Bank derives its lending, investment, branching and other authority primarily from the applicable provisions of New York State Banking Law and the regulations of the NYSDFS, as limited by federal laws and regulations. Under these laws and regulations, commercial banks, including Pathfinder Bank, may invest in real estate mortgages, consumer and commercial loans, certain types of debt securities, including certain corporate debt securities and obligations of federal, state and local governments and agencies, certain types of corporate equity securities and certain other assets. Under the statutory authority for investing in equity securities, a bank may invest up to 2% of its assets or 20% of its capital, whichever is less in exchange-registered corporate stock. Investment in the stock of a single corporation is limited to the lesser of 1% of the bank's assets or 15% of the Bank's capital. The Bank's authority to invest in equity securities is constrained by federal law, as explained later. Such equity securities must meet certain earnings ratios and other tests of financial performance. A bank may also exercise trust powers upon approval of the NYSDFS. Pathfinder Bank does not presently have trust powers.

New York State chartered banks may also invest in subsidiaries. A bank may use this power to invest in corporations that engage in various activities authorized for banks, plus any additional activities that may be authorized by the NYSDFS.

Furthermore, New York banking regulations impose requirements on loans which a bank may make to its executive officers and directors and to certain corporations or partnerships in which such persons have equity interests. These requirements include that (i) certain loans must be approved in advance by a majority of the entire board of directors and the interested party must abstain from participating directly or indirectly in voting on such loan, (ii) the loan must be on terms that are not more favorable than those offered to unaffiliated third parties, and (iii) the loan must not involve more than a normal risk of repayment or present other unfavorable features.

Under the New York State Banking Law, the Superintendent may issue an order to a New York State chartered banking institution to appear and explain an apparent violation of law, to discontinue unauthorized or unsafe practices and to keep prescribed books and accounts. Upon a finding by the NYSDFS that any director, trustee or officer of any banking organization has violated any law, or has continued unauthorized or unsafe practices in conducting the business of the banking organization after having been notified by the Superintendent to discontinue such practices, such director, trustee or officer may be removed from office after notice and an opportunity to be heard. The Bank does not know of any past or current practice, condition or

violation that may lead to any proceeding by the Superintendent or the NYSDFS against the Bank or any of its directors or officers.

New York State Community Reinvestment Regulation

Pathfinder Bank is also subject to provisions of the New York State Banking Law which imposes continuing and affirmative obligations upon banking institutions organized in New York State to serve the credit needs of its local community ("NYCRA") which are substantially similar to those imposed by the Federal Community Reinvestment Act ("CRA"). Pursuant to the NYCRA, a bank must file copies of all federal CRA reports with the NYSDFS. The NYCRA requires the NYSDFS to make a written assessment of a bank's compliance with the NYCRA every 24 to 36 months, utilizing a four-tiered rating system and make such assessment available to the public. The NYCRA also requires the Superintendent to consider a bank's NYCRA rating when reviewing a bank's application to engage in certain transactions, including mergers, asset purchases and the establishment of branch offices or automated teller machines, and provides that such assessment may serve as a basis for the denial of any such application. Pathfinder Bank's NYCRA most recent rating, dated March 31, 2015, was "satisfactory."

Federal Regulations

Capital Requirements. Federal regulations require federally insured depository institutions to meet several minimum capital standards: a common equity Tier 1 capital to risk-based assets ratio of 4.5%, a Tier 1 capital to risk-based assets ratio of 6.0%, a total capital to risk-based assets of 8.0%, and a 4.0% Tier 1 capital to total assets leverage ratio. These capital requirements were effective January 1, 2015 and are the result of a final rule implementing recommendations of the Basel Committee on Banking Supervision and certain requirements of the Dodd-Frank Act.

In determining the amount of risk-weighted assets for purposes of calculating risk-based capital ratios, all assets, including certain off-balance sheet assets (e.g., recourse obligations, direct credit substitutes, residual interests) are multiplied by a risk weight factor assigned by the regulations based on the risks believed inherent in the type of asset. Higher levels of capital are required for asset categories believed to present greater risk. Common equity Tier 1 capital is generally defined as common stockholders' equity and retained earnings. Tier 1 capital is generally defined as common equity Tier 1 and additional Tier 1 capital. Additional Tier 1 capital includes certain noncumulative perpetual preferred stock and related surplus and minority interests in equity accounts of consolidated subsidiaries. Total capital includes Tier 1 capital (common equity Tier 1 capital plus additional Tier 1 capital) and Tier 2 capital. Tier 2 capital is comprised of capital instruments and related surplus, meeting specified requirements, and may include cumulative preferred stock and long-term perpetual preferred stock, mandatory convertible securities, intermediate preferred stock and subordinated debt. Also included in Tier 2 capital is the allowance for loan and lease losses limited to a maximum of 1.25% of risk-weighted assets and, for institutions that have exercised an opt-out election regarding the treatment of Accumulated Other Comprehensive Income, up to 45% of net unrealized gains on available-for-sale equity securities with readily determinable fair market values. Pathfinder Bank exercised the opt-out election. Calculation of all types of regulatory capital is subject to deductions and adjustments specified in the regulations. In assessing an institution's capital adequacy, regulators take into consideration, not only these numeric factors, but qualitative factors as well, and has the authority to establish higher capital requirements for individual institutions when and where deemed necessary.

In addition to establishing the minimum regulatory capital requirements, the regulations limit capital distributions and certain discretionary bonus payments to management if the institution does not hold a "capital conservation buffer" consisting of 2.5% of common equity Tier 1 capital to risk-weighted asset above the amount necessary to meet its minimum risk-based capital requirements. The capital conservation buffer requirement was phased in beginning January 1, 2016 at 0.625% of risk-weighted assets and increased each year until fully implemented at 2.5% on January 1, 2019. Notwithstanding the foregoing, pursuant to the EGRRCPA, the FDIC proposed a rule that establishes a community bank leverage ratio (tangible equity to average consolidated assets) at 9% for institutions under \$10 billion in assets that such institutions may elect to utilize in lieu of the general applicable risk-based capital requirements under Basel III. Such institutions that meet the community bank leverage ratio and certain other qualifying criteria will automatically be deemed to be well-capitalized. Until the FDIC's proposed rule is finalized, the Basel III risk-based and leverage ratios remain in effect.

Standards for Safety and Soundness. As required by statute, the federal banking agencies have adopted final regulations and Interagency Guidelines Establishing Standards for Safety and Soundness to implement safety and soundness standards. The guidelines set forth the safety and soundness standards that the federal banking agencies use to identify and address problems at insured depository institutions before capital becomes impaired. The guidelines address internal controls and information systems, internal audit systems, credit underwriting, loan documentation, interest rate exposure, asset growth, asset quality, earnings, compensation, fees and benefits and, more recently, safeguarding customer information. If the appropriate federal

banking agency determines that an institution fails to meet any standard prescribed by the guidelines, the agency may require the institution to submit to the agency an acceptable plan to achieve compliance with the standard.

Business and Investment Activities. Under federal law, all state-chartered FDIC-insured banks, including commercial banks, have been limited in their activities as principal and in their equity investments to the type and the amount authorized for national banks, notwithstanding state law. Federal law permits certain exceptions to these limitations.

The FDIC is also authorized to permit state banks to engage in state authorized activities or investments not permissible for national banks (other than non-subsidiary equity investments) if they meet all applicable capital requirements and it is determined that such activities or investments do not pose a significant risk to the FDIC insurance fund. The FDIC has adopted regulations governing the procedures for institutions seeking approval to engage in such activities or investments. The Gramm-Leach-Bliley Act of 1999 specified that a state bank may control a subsidiary that engages in activities as principal that would only be permitted for a national bank to conduct in a "financial subsidiary," if a bank meets specified conditions and deducts its investment in the subsidiary for regulatory capital purposes.

Prompt Corrective Regulatory Action. Federal law requires, among other things, that federal bank regulatory authorities take "prompt corrective action" with respect to banks that do not meet minimum capital requirements. For these purposes, the law establishes five capital categories: well capitalized, adequately capitalized, undercapitalized, significantly undercapitalized and critically undercapitalized.

An institution is deemed to be "well capitalized" if it has a total risk-based capital ratio of 10.0% or greater, a Tier 1 risk-based capital ratio of 8.0% or greater and a common equity Tier 1 ratio of 6.5% or greater. An institution is "adequately capitalized" if it has a total risk-based capital ratio of 8.0% or greater, a leverage ratio of 4.0% or greater and a common equity Tier 1 ratio of 4.5% or greater. An institution is "undercapitalized" if it has a total risk-based capital ratio of less than 8.0%, a Tier 1 risk-based capital ratio of less than 6.0%, a leverage ratio of less than 4.0% or a common equity Tier 1 ratio of less than 4.5%. An institution is deemed to be "significantly undercapitalized" if it has a total risk-based capital ratio of less than 3.0% or a common equity Tier 1 ratio of less than 4.0%, a leverage ratio of less than 3.0% or a common equity Tier 1 ratio of less than 4.0%, a leverage ratio of less than 3.0% or a common equity Tier 1 ratio of less than 3.0%. An institution is considered to be "critically undercapitalized" if it has a ratio of tangible equity (as defined in the regulations) to total assets that is equal to or less than 2.0%.

"Undercapitalized" banks must adhere to growth, capital distribution (including dividend) and other limitations and are required to submit a capital restoration plan. A bank's compliance with such a plan must be guaranteed by any company that controls the undercapitalized institution in an amount equal to the lesser of 5% of the institution's total assets when deemed undercapitalized or the amount necessary to achieve the status of adequately capitalized. If an "undercapitalized" bank fails to submit an acceptable plan, it is treated as if it is "significantly undercapitalized." "Significantly undercapitalized" banks must comply with one or more of a number of additional measures, including, but not limited to, a required sale of sufficient voting stock to become adequately capitalized, a requirement to reduce total assets, cessation of taking deposits from correspondent banks, the dismissal of directors or officers and restrictions on interest rates paid on deposits, compensation of executive officers and capital distributions by the parent holding company. "Critically undercapitalized" institutions are subject to additional measures including, subject to a narrow exception, the appointment of a receiver or conservator within 270 days after being designated "critically undercapitalized."

As noted above, the EGRRCPA has eliminated the Basel III requirements for banks with less than \$10.0 billion in assets who elect to follow the community bank leverage ratio once the FDIC's rule is finalized. The FDIC's proposed rule provides that the Bank will be well-capitalized with a community bank leverage ratio of 9% or greater, adequately capitalized with a community bank leverage ratio of 7.5% or greater, undercapitalized if the Bank's community bank leverage ratio is less than 7.5% and greater than 6% and significantly undercapitalized if the Bank's community bank leverage ratio is less than 6%. The definition of critically undercapitalized is unchanged from the current regulations.

At December 31, 2018, Pathfinder Bank was well-capitalized.

Transactions with Related Parties. Transactions between a bank (and, generally, its subsidiaries) and its related parties or affiliates are limited by Sections 23A and 23B of the Federal Reserve Act. An affiliate of a bank is any company or entity that controls, is controlled by or is under common control with the bank. In a holding company context, the parent bank holding company ("BHC") and any companies which are controlled by such parent holding company are affiliates of the bank. Generally, Sections 23A and 23B of the Federal Reserve Act limit the extent to which the bank or its subsidiaries may engage in "covered transactions" with any one affiliate to 10% of such institution's capital stock and surplus and contain an aggregate

limit on all such transactions with all affiliates to an amount equal to 20% of such institution's capital stock and surplus. The term "covered transaction" includes the making of loans, purchase of assets, issuance of a guarantee and similar transactions.

In addition, loans or other extensions of credit by the institution to the affiliate are required to be collateralized in accordance with specified requirements. The law also requires that affiliate transactions be on terms and conditions that are substantially the same, or at least as favorable to the institution, as those provided to non-affiliates.

Pathfinder Bank's authority to extend credit to its directors, executive officers and 10% shareholders, as well as to entities controlled by such persons, is currently governed by the requirements of Sections 22(g) and 22(h) of the Federal Reserve Act and Regulation O of the Federal Reserve Board. Among other things, these provisions generally require that extensions of credit to insiders:

- be made on terms that are substantially the same as, and follow credit underwriting procedures that are not less stringent than, those prevailing for comparable transactions with unaffiliated persons and that do not involve more than the normal risk of repayment or present other unfavorable features; and
- not exceed certain limitations on the amount of credit extended to such persons, individually and in the aggregate, which limits are based, in part, on the amount of Pathfinder Bank's capital.

In addition, extensions of credit in excess of certain limits must be approved by Pathfinder Bank's board of directors. Extensions of credit to executive officers are subject to additional limits based on the type of extension involved.

Enforcement. The FDIC has extensive enforcement authority over insured state banks, including Pathfinder Bank. That enforcement authority includes, among other things, the ability to assess civil money penalties, issue cease and desist orders and remove directors and officers. In general, enforcement actions may be initiated in response to violations of laws and regulations and unsafe or unsound practices. The FDIC also has authority under federal law to appoint a conservator or receiver for an insured bank under certain circumstances. The FDIC is required, with certain exceptions, to appoint a receiver or conservator for an insured state non-member bank if the bank was "critically undercapitalized" on average during the calendar quarter beginning 270 days after the date on which the institution became "critically undercapitalized."

Federal Insurance of Deposit Accounts. The Dodd-Frank Act permanently increased the maximum amount of deposit insurance for banks, savings institutions and credit unions to \$250,000 per depositor.

The FDIC assesses insured depository institutions to maintain its Deposit Insurance Fund. Under the FDIC's risk-based assessment system, institutions deemed less risky pay lower assessments. Assessments for institutions of less than \$10 billion of assets are now based on financial measures and supervisory ratings derived from statistical modeling estimating the probability of failure of an institution's failure within three years. That technique, effective July 1, 2016, replaced the previous system under which institutions were placed into risk categories.

The Dodd-Frank Act increased the minimum target Deposit Insurance Fund ratio from 1.15% of estimated insured deposits to 1.35% of estimated insured deposits. The FDIC was required to seek to achieve the 1.35% ratio by September 30, 2020. The FDIC indicated that the 1.35% ratio was exceeded in November 2018. Insured institutions of less than \$10 billion of assets will receive credits for the portion of their assessments that contributed to the reserve ratio between 1.15% and 1.35%. The Dodd-Frank Act eliminated the 1.5% maximum fund ratio, instead leaving it to the discretion of the FDIC, and the FDIC has exercised that discretion by establishing a long-range fund ratio of 2%.

In addition to the FDIC assessments, the United States government-sponsored enterprise known as the Financing Corporation ("FICO") is authorized to impose and collect, with the approval of the FDIC, assessments for anticipated payments, issuance costs and custodial fees on bonds issued by the FICO in the 1980s to recapitalize the former Federal Savings and Loan Insurance Corporation. The bonds issued by the FICO are due to fully mature in September 2019. The FICO assessment rate is adjusted quarterly to reflect changes in the assessment base as determined from quarterly Call Report submissions. For the quarter ended December 31, 2018, the annualized Financing Corporation assessment was equal to 0.32 of a basis point of total assets less tangible capital.

The FDIC has authority to increase insurance assessments. Any significant increase would have an adverse effect on the operating expenses and results of operations of Pathfinder Bank. Management cannot predict what assessment rates will be in the future.

Insurance of deposits may be terminated by the FDIC upon a finding that an institution has engaged in unsafe or 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. We do not currently know of any practice, condition or violation that may lead to termination of our deposit insurance.

Community Reinvestment Act. Under the CRA, a bank has a continuing and affirmative obligation, consistent with its safe and sound operation, to help meet the credit needs of its entire community, 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. The CRA does require the FDIC, in connection with its examination of a bank, to assess the institution's record of meeting the credit needs of its community and to take such record into account in its evaluation of certain applications by such institution, including applications to establish or acquire branches and merger with other depository institutions. The CRA requires the FDIC to provide a written evaluation of an institution's CRA performance utilizing a four-tiered descriptive rating system. Pathfinder Bank's latest FDIC CRA rating, dated March 11, 2016, was "satisfactory."

Federal Reserve System. The Federal Reserve Board regulations require depository institutions to maintain non-interest-earning reserves against their transaction accounts (primarily negotiable order of withdrawal (NOW) and regular checking accounts). The regulations generally provide that reserves be maintained against aggregate transaction accounts as follows: a 3% reserve ratio is assessed on net transaction accounts up to and including \$124.2 million; a 10% reserve ratio is applied above \$124.2 million. The first \$16.3 million of otherwise reservable balances are exempted from the reserve requirements. The amounts are adjusted annually. Pathfinder Bank complies with the foregoing requirements.

Federal Home Loan Bank System. Pathfinder Bank is a member of the Federal Home Loan Bank System, which consists of twelve regional Federal Home Loan Banks. The Federal Home Loan Bank System provides a central credit facility primarily for member institutions as well as other entities involved in home mortgage lending. As a member of the FHLBNY, Pathfinder Bank is required to acquire and hold a specified amount of shares of capital stock in the FHLBNY. As of December 31, 2018, Pathfinder Bank was in compliance with this requirement.

Other Regulations

Interest and other charges collected or contracted for by Pathfinder Bank are subject to state usury laws and federal laws concerning interest rates. Pathfinder Bank's operations are also subject to federal laws applicable to credit transactions, such as the:

- Truth-In-Lending Act, governing disclosures of credit terms to consumer borrowers;
- Real Estate Settlement Procedures Act, requiring that borrowers for mortgage loans for one-to-four family residential real estate receive various disclosures, including good faith estimates of settlement costs, lender servicing and escrow account practices, and prohibiting certain practices that increase the cost of settlement services;
- The TILA-RESPA Integrated Disclosure Rule, commonly known as the TRID rule, which became effective on October 3, 2015. This rule amended the Truth in Lending Act and the Real Estate Settlement Procedures Act to integrate several consumer disclosures for mortgage loans;
- Home Mortgage Disclosure Act, requiring financial institutions to provide information to enable the public and public officials to determine
 whether a financial institution is fulfilling its obligation to help meet the housing needs of the community it serves;
- Equal Credit Opportunity Act, prohibiting discrimination on the basis of race, creed or other prohibited factors in extending credit;
- Fair Credit Reporting Act, governing the use and provision of information to credit reporting agencies;
- Fair Debt Collection Act, governing the manner in which consumer debts may be collected by collection agencies;
- Truth in Savings Act;
- Rules and regulations of the various federal agencies charged with the responsibility of implementing such federal laws;

- Right to Financial Privacy Act, which imposes a duty to maintain confidentiality of consumer financial records and prescribes procedures for complying with administrative subpoenas of financial records;
- Electronic Funds Transfer Act and Regulation E promulgated thereunder, which govern automatic deposits to and withdrawals from deposit accounts and customers' rights and liabilities arising from the use of automated teller machines and other electronic banking services;
- Check Clearing for the 21st Century Act (also known as "Check 21"), which gives "substitute checks," such as digital check images and copies made from that image, the same legal standing as the original paper check;
- USA PATRIOT Act, which requires banks operating to, among other things, establish broadened anti-money laundering compliance programs, due diligence policies and controls to ensure the detection and reporting of money laundering. Such required compliance programs are intended to supplement existing compliance requirements, also applicable to financial institutions, under the Bank Secrecy Act and the Office of Foreign Assets Control regulations; and
- Gramm-Leach-Bliley Act, which places limitations on the sharing of consumer financial information by financial institutions with unaffiliated third parties. Specifically, the Gramm-Leach-Bliley Act requires all financial institutions offering financial products or services to retail customers to provide such customers with the financial institution's privacy policy and provide such customers the opportunity to "opt out" of the sharing of certain personal financial information with unaffiliated third parties.

Holding Company Regulation

The Company, as a BHC, is subject to examination, regulation, and periodic reporting under the Bank Holding Company Act of 1956, as amended, as administered by the Federal Reserve Board. The Company is required to obtain the prior approval of the Federal Reserve Board to acquire all, or substantially all, of the assets of any bank or bank holding company. Prior Federal Reserve Board approval would be required for the Company to acquire direct or indirect ownership or control of any voting securities of any bank or BHC if it would, directly or indirectly, own or control more than 5% of any class of voting shares of the bank or bank holding company.

A BHC is generally prohibited from engaging in, or acquiring, direct or indirect control of more than 5% of the voting securities of any company engaged in non-banking activities. One of the principal exceptions to this prohibition is for activities found by the Federal Reserve Board to be so closely related to banking or managing or controlling banks as to be a proper incident thereto. Some of the principal activities that the Federal Reserve Board has determined by regulation to be closely related to banking are: (i) making or servicing loans; (ii) performing certain data processing services; (iii) providing securities brokerage services; (iv) acting as fiduciary, investment or financial advisor; (v) leasing personal or real property under certain conditions; (vi) making investments in corporations or projects designed primarily to promote community welfare; and (vii) acquiring a savings association.

The Gramm-Leach-Bliley Act of 1999 authorizes a BHC that meets specified conditions, including depository institutions subsidiaries that are "well capitalized" and "well managed," to opt to become a "financial holding company." A "financial holding company" may engage in a broader array of financial activities than permitted a typical bank holding company. Such activities can include insurance underwriting and investment banking. The Company has elected to be a "financial holding company."

The Dodd-Frank Act required the Federal Reserve Board to promulgate consolidated capital requirements for bank and savings and loan holding companies that are no less stringent, both quantitatively and in terms of components of capital, than those applicable to their subsidiary depository institutions. Instruments such as cumulative preferred stock and trust-preferred securities, which are currently includable as Tier 1 capital, by bank holding companies within certain limits are no longer includable as Tier 1 capital, subject to certain grandfathering. The previously discussed final rule regarding regulatory capital requirements implements the Dodd-Frank Act's directives as to holding company capital requirements.

In December 2014, legislation was passed by Congress that requires the Federal Reserve to revise its "Small Bank Holding Company Policy Statement" to exempt bank and savings and loan holding companies with less than \$1.0 billion of consolidated assets from the consolidated capital requirements, provided that such companies meet certain other conditions such as not engaging in significant nonbanking activities. The Federal Reserve maintains authority to apply the consolidated capital requirements to any bank or savings and loan holding company as warranted for supervisory purposes. Regulations implementing the exemption were effective in May 2015.

On August 28, 2018, pursuant to EGRRCPA, the FRB issued an interim final rule revising the Policy Statement increasing the consolidated asset limit to \$3 billion. Under the Policy Statement, a BHC that meets certain Qualitative Requirements:

- is exempt from the FRB's risk-based capital and leverage rules (Appendixes A and D of Regulation Y); and
- may use debt to finance up to 75% of the purchase price of an acquisition allowing (in theory) a BHC to have a debt-to-equity ratio of up to 3:1.

The Policy Statement now applies to a BHC with consolidated assets of less than \$3 billion that meets the following Qualitative Requirements: (i) it is not engaged in significant non-banking activities either directly or through a non-bank subsidiary; (ii) it does not conduct significant off-balance sheet activities, including securitizations or asset management or administration, either directly or through a non-bank subsidiary; or (iii) it does not have a material amount of debt or equity securities outstanding (other than trust preferred securities) that are registered with the SEC. BHCs that meet these Qualitative Requirements are determined to be "Qualifying BHCs". A Qualifying BHC is exempt from the FRB's risk-based capital and leverage rules. As a consequence, it does not have to comply with the Basel III Capital Adequacy rules. Each subsidiary bank of a Qualifying BHC must comply with the Basel III Capital Adequacy rules and must be well-capitalized. If any subsidiary bank is not, the FRB expects it to become well-capitalized within a brief period of time. This Policy Statement applies to the Company.

A BHC is generally required to give the Federal Reserve Board prior written notice of any purchase or redemption of then outstanding equity securities if the gross consideration for the purchase or redemption, when combined with the net consideration paid for all such purchases or redemptions during the preceding 12 months, is equal to 10% or more of the company's consolidated net worth. The Federal Reserve Board may disapprove such a purchase or redemption if it determines that the proposal would constitute an unsafe and unsound practice, or would violate any law, regulation, Federal Reserve Board order or directive, or any condition imposed by, or written agreement with, the Federal Reserve Board. The Federal Reserve Board has adopted an exception to that approval requirement for well-capitalized bank holding companies that meet certain other conditions. The Federal Reserve Board has issued guidance which requires consultation with the Federal Reserve Board prior to a redemption or repurchase in certain circumstances.

The Federal Reserve Board has issued a policy statement regarding the payment of dividends by BHCs. In general, the Federal Reserve Board's policies provide that dividends should be paid only out of current earnings and only if the prospective rate of earnings retention by the BHC appears consistent with the organization's capital needs, asset quality and overall financial condition. The Federal Reserve Board's policies also require that a BHC serve as a source of financial strength to its subsidiary banks by using available resources to provide capital funds during periods of financial stress or adversity and by maintaining the financial flexibility and capital-raising capacity to obtain additional resources for assisting its subsidiary banks where necessary. The Dodd-Frank Act codified the source of strength policy. Under the prompt corrective action laws, the ability of a BHC to pay dividends may be restricted if a subsidiary bank becomes undercapitalized. These regulatory policies could affect the ability of the Company to pay dividends or otherwise engage in capital distributions.

The Company and the Bank will be affected by the monetary and fiscal policies of various agencies of the United States Government, including the Federal Reserve System. In view of changing conditions in the national economy and in the money markets, it is impossible for management to accurately predict future changes in monetary policy or the effect of such changes on the business or financial condition of the Company or the Bank.

The Company's status as a registered BHC under the Bank Holding Company Act will not exempt it from certain federal and state laws and regulations applicable to corporations generally, including, without limitation, certain provisions of the federal securities laws.

Federal Securities Laws

The Company's common stock is registered with the Securities and Exchange Commission under the Securities Exchange Act of 1934. We are subject to the information, proxy solicitation, insider trading restrictions and other requirements under the Securities Exchange Act of 1934.

The registration under the Securities Act of 1933 of the Company's shares of common stock issued in the Company's stock offering does not cover the resale of those shares. Shares of common stock purchased by persons who are not our affiliates may be resold without registration. Shares purchased by our affiliates are subject to the resale restrictions of Rule 144 under the Securities Act of 1933. If we meet the current public information requirements of Rule 144 under the Securities Act of 1933, each affiliate of ours that complies with the other conditions of Rule 144, including those that require the affiliate's sale to be aggregated with those of other persons, would be able to sell in the public market, without registration, a number of shares not to exceed, in any three-month period, the greater of 1% of our outstanding shares, or the average weekly volume of trading in

the shares during the preceding four calendar weeks. In the future, we may permit affiliates to have their shares registered for sale under the Securities Act of 1933.

Sarbanes-Oxley Act of 2002

The Sarbanes-Oxley Act of 2002 addresses, among other issues, corporate governance, auditing and accounting, executive compensation, and enhanced and timely disclosure of corporate information. We have prepared policies, procedures and systems designed to ensure compliance with these regulations.

FEDERAL AND STATE TAXATION

Federal Taxation

General. The Bank and the Company is subject to federal income taxation in the same general manner as other corporations, with some exceptions discussed below. The following discussion of federal taxation is intended only to summarize certain pertinent federal income tax matters and is not a comprehensive description of the tax rules applicable to the Company or the Bank.

On December 22, 2017, the Tax Cuts and Jobs Act ("Tax Act") was signed into law. The Tax Act instituted significant changes to various sections of the Internal Revenue Code that affect the Company. Most notably, the Tax Act reduced the Company's marginal federal income tax rate from 34% to 21% effective January 1, 2018. Generally Accepted Accounting Principles ("GAAP") requires that the impact of the provisions of the Tax Act be accounted for in the period of enactment. Accordingly, the Company recorded a nonrecurring income tax benefit in the fourth quarter of 2017 related to the Tax Act in the amount of \$155,000. The reduction in income tax expense was largely attributable to the reduction in the value of net deferred tax assets and liabilities reflecting lower future tax obligations resulting from the Tax Act's enacted lower federal corporate tax rate.

The Company's federal tax return was under audit for the year ended December 31, 2014 by the Internal Revenue Service. The Company received a final notice that the audit was concluded on April 16, 2018, with no findings or changes to our reported tax. The Company's federal tax returns have not been audited in the five years previous to 2014.

Method of Accounting. For federal income tax purposes, the Company currently reports its income and expenses on the accrual method of accounting and uses a tax year ending December 31 for filing its federal and state income tax returns.

Bad Debt Reserves. Prior to 1996, Pathfinder Bank was permitted to establish a reserve for bad debts and to make annual additions to the reserve. These additions could, within specified formula limits, be deducted in arriving at our taxable income. As a result of tax law changes in 1996, Pathfinder Bank was required to use the specific charge-off method in computing its bad debt deduction beginning with its 1996 federal tax return. Savings institutions were required to recapture any excess reserves over those established as of December 31, 1987 (base year reserve). At December 31, 2018, Pathfinder Bank had no reserves subject to recapture in excess of its base year reserves. The Bank is required to use the specific charge-off method to account for tax bad debt deductions

Taxable Distributions and Recapture. Prior to 1996, bad debt reserves created prior to 1988 were subject to recapture into taxable income if Pathfinder Bank failed to meet certain thrift asset and definitional tests or made certain distributions. Tax law changes in 1996 eliminated thrift-related recapture rules. However, under current law, pre-1988 tax bad debt reserves remain subject to recapture if Pathfinder Bank makes certain non-dividend distributions, repurchases any of its common stock, pays dividends in excess of earnings and profits, or fails to qualify as a "bank" for tax purposes. At December 31, 2018 our total federal pre-base year bad debt reserve was approximately \$1.3 million.

Alternative Minimum Tax. The Tax Act repealed the alternative minimum tax on corporations for the years beginning after December 31, 2017.

Net Operating Loss Carryovers. Under pre-Tax Act law, generally, a financial institution may carry back net operating losses to the preceding two taxable years and forward to the succeeding 20 taxable years. Under the Tax Act, for net operating losses arising in tax years ending after December 31, 2017, the two-year carryback limit is repealed for financial institutions and the net operating loss may be carried forward indefinitely. For losses arising in tax years beginning after December 31, 2017, the net operating loss deduction is limited to 80% of taxable income.

Corporate Dividends Received Deduction. The Company may exclude from its federal taxable income 100% of dividends received from Pathfinder Bank as a wholly-owned subsidiary by filing consolidated tax returns. The corporate dividends

received deduction is 65% when the corporation receiving the dividend owns at least 20% of the stock of the distributing corporation. The dividends-received deduction is 50% when the corporation receiving the dividend owns less than 20% of the distributing corporation.

Interest Expense. The Tax Act limits a taxpayer's annual deduction of business interest expense to the sum of (i) business interest income and (ii) 30% of "adjusted taxable income", defined as a business's taxable income without taking into account business interest income or expense, net operating losses, and, for 2018 through 2021, depreciation, amortization and depletion. Because we generate significant amounts of net interest income, we do not expect to be impacted by this limitation.

Employee Compensation. A publicly held corporation is not permitted to deduct compensation in excess of \$1 million per year paid to certain employees. The Tax Act eliminates certain exceptions to the \$1 million limit applicable under prior law related to performance-based compensation, such as equity grants and cash bonuses that are paid only on the attainment of performance goals. Based on our current compensation plans, we do not expect to be impacted by this limitation.

Business Asset Expensing. The Tax Act allows taxpayers to immediately expense the entire cost of certain depreciable tangible property and real property improvements acquired and placed in service after September 27, 2017 and before January 1, 2023 (with an additional year for certain property). This 100% bonus depreciation is phased out proportionately for property placed in service on or after January 1, 2023 and before January 1, 2027 (with an additional year for certain property).

State Taxation

New York State franchise tax is imposed in an amount equal to the greater of 6.5% of Business Income, .075% of average Business Capital, or a fixed dollar amount based on New York sourced gross receipts. Various Business Income subtraction modifications are available to qualified banks based on its qualified loan portfolio. Commencing January 1, 2018, the Company changed its subtraction modification from that of a captive real estate investment trust (REIT) to one based on interest income from qualifying loans. This change follows the laws enacted by New York State effective January 1, 2015. As a result, for 2018 the Company is subject to a fixed dollar amount and the current effective income tax rate in New York State was reduced to close to \$0. It is anticipated that the Company's New York State effective income tax will remain substantially at 0.0% for future periods under the current law.

The Bank maintains a pool of loans that generates income sourced from the State of Indiana. Taxes from this activity are considered to be nominal to the overall financial statements.

As a Maryland business corporation, the Company is required to file an annual report with, and pay franchise taxes to, the State of Maryland.

ITEM 1A: RISK FACTORS

Not required of a smaller reporting company.

ITEM 1B: UNRESOLVED STAFF COMMENTS

None.

ITEM 2: PROPERTIES

The Company has seven offices located in Oswego County, three offices in Onondaga County and one loan production office in Oneida County. Management believes that the Bank's facilities are adequate for the business conducted. The following table sets forth certain information concerning the main office and each branch office of the Bank at December 31, 2018. The aggregate net book value of the Bank's premises and equipment was \$20.6 million at December 31, 2018. For additional information regarding the Bank's properties, see Notes 8 and 18 to the consolidated financial statements.

Location	Opening Date	Owned/Leased
Main Office	1874	Owned
214 West First Street		
Oswego, New York 13126		
Plaza Branch	1989	Owned (1)
Route 104, Ames Plaza		
Oswego, New York 13126		
Mexico Branch	1978	Owned
Norman & Main Streets		
Mexico, New York 13114		
Oswego East Branch	1994	Owned
34 East Bridge Street		
Oswego, New York 13126		
Lacona Branch	2002	Owned
1897 Harwood Drive	2002	Owned
Lacona, New York 13083		
34cona, 11cm 1000		
Fulton Branch	2003	Owned (2)
5 West First Street South		
Fulton, New York 13069		
Central Square Branch	2005	Owned
3025 East Ave		
Central Square, New York 13036		
Cicero Branch	2011	Owned
5194 State Route 31		
Cicero, New York 13039		
Syracuse Pike Block Branch	2014	Leased (3)
.09 West Fayette Street	2014	Leaseu (9)
Syracuse, New York 13202		
V		
Clay Branch	2018	Owned
7775 State Route 31		
Liverpool, NY 13090		
Idian I and Dundanting Office	2017	I 1(4)
Jtica Loan Production Office	2017	Leased (4)
158 Genesee Street		
Jtica, New York 13502		

⁽¹⁾ The building is owned; the underlying land is leased with an annual rent of \$34,000.

⁽²⁾ The building is owned; the underlying land is leased with an annual rent of \$37,000.

⁽³⁾ The premises are leased with an annual rent of \$59,000.

⁽⁴⁾ The premises are leased with an annual rent of \$16,000.

ITEM 3: LEGAL PROCEEDINGS

There are various claims and lawsuits to which the Company is periodically involved that are incidental to the Company's business, most notably foreclosures. In the opinion of management, such claims and lawsuits in the aggregate are not expected to have a material adverse impact on the Company's consolidated financial condition and results of operations at December 31, 2018.

ITEM 4: MINE SAFETY DISCLOSURE

Not applicable.

PART II

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

The Company's common stock trades on the NASDAQ Capital Market under the symbol "PBHC."

There were 338 shareholders of record (excluding the number of persons or entities holding stock in street name through various brokerage firms) as of March 26, 2019. The following table sets forth the high and low closing bid prices and cash dividends paid per share of common stock for the periods indicated.

	Price per share								
Quarter Ended:		High	Low	Dividend Paid					
December 31, 2018	\$	15.66 \$	13.46 \$	0.0600					
September 30, 2018	\$	15.97 \$	15.03 \$	0.0600					
June 30, 2018	\$	16.20 \$	15.04 \$	0.0600					
March 31, 2018	\$	15.86 \$	15.21 \$	0.0600					
December 31, 2017	\$	15.50 \$	15.10 \$	0.0575					
September 30, 2017	\$	15.70 \$	15.00 \$	0.0550					
June 30, 2017	\$	15.99 \$	14.55 \$	0.0525					
March 31, 2017	\$	15.09 \$	13.02 \$	0.0500					

The Company did not repurchase any shares of its common stock during the fourth quarter of 2018.

Equity Compensation Plan Information

The following table provides information as of December 31, 2018 with respect to shares of common stock that may be issued under the Company's existing equity compensation plans.

Plan Category	Number of securities to be issued upon exercise of outstanding options, warrants and rights	Weighted-average exercise price of outstanding options, warrants and rights	Number of securities remaining available for future issuance under equity compensation plans
Equity compensation plans approved by security holders	324,930	\$ 10.50	47,450
Equity compensation plans not approved by stockholders	N/A	N/A	N/A

Dividends and Dividend History

The Company (and its predecessor) has historically paid regular quarterly cash dividends on its common stock. The board of directors presently intends to continue the payment of regular quarterly cash dividends, subject to the need for those funds for debt service and other purposes. Payment of dividends on the common stock is subject to determination and declaration by the board of directors and will depend upon a number of factors, including capital requirements, regulatory limitations on the payment of dividends, Pathfinder Bank and its subsidiaries' results of operations and financial condition, tax considerations, and general economic conditions. More details are included within the section titled Regulation and Supervision.

ITEM 6: SELECTED FINANCIAL DATA

The following selected consolidated financial data sets forth certain financial highlights of the Company and should be read in conjunction with the consolidated financial statements and related notes, and the "Management's Discussion and Analysis of Financial Condition and Results of Operations" included elsewhere in this Annual Report on Form 10-K.

	For the years ended December 31,									
Year End (In thousands, except per share amounts)		2018		2017		2016		2015		2014
Total assets	\$	933,115	\$	881,257	\$	749,034	\$	623,254	\$	561,024
Investment securities available-for-sale		177,664		171,138		141,955		98,942		88,073
Investment securities held-to-maturity		53,908		66,196		54,645		44,297		40,875
Loans receivable, net		612,964		573,705		485,900		424,732		382,189
Deposits		727,060		723,603		610,983		490,315		415,568
Borrowings and subordinated loans		133,628		88,947		73,972		56,291		71,255
Shareholders' equity		64,459		62,144		58,361		71,229		69,204
For the Year										
Total interest income	\$	34,810	\$	29,413	\$	24,093	\$	21,424	\$	19,699
Total interest expense		9,044		6,290		3,804		2,657		2,614
Net interest income		25,766		23,123		20,289		18,767		17,085
Provision for loan losses		1,497		1,769		953		1,349		1,205
Net interest income after provision for loan losses		24,269		21,354		19,336		17,418		15,880
Total noninterest income		3,835		4,085		4,072		4,062		3,663
Total noninterest expense		23,549		21,094		18,999		17,477		15,589
Net income before income taxes		4,555		4,345		4,409		4,003		3,954
Income tax expense		546		922		1,111		1,071		1,153
Net (loss) income attributable to noncontrolling interest		(22)		(68))	26		43		56
Net income	\$	4,031	\$	3,491	\$	3,272	\$	2,889	\$	2,745
Per Share										
Income per share - basic (a)	\$	0.97	\$	0.86	\$	0.79	\$	0.67	\$	0.64
Income per share - diluted (a)		0.94		0.83		0.78		0.66		0.63
Book value per common share		14.72		14.44		13.67		13.28		12.82
Tangible book value per common share		13.65		13.34		12.55		12.19		11.78
Cash dividends declared		0.240		0.215		0.200		0.160		0.120
Performance Ratios										
Return on average assets		0.45	%	0.42	%	0.48	%	0.48	%	0.51 %
Return on average equity		6.33		5.69		5.35		4.08		5.50
Average equity to average assets		7.09		7.47		8.97		11.76		9.27
Shareholders' equity to total assets at end of year		6.88		7.01		7.73		11.36		12.26
Net interest rate spread		2.85		2.83		3.03		3.21		3.31
Net interest margin		3.02		2.97		3.14		3.31		3.40
Average interest-earning assets to average interest-bearing liabilities		116.52		116.05		118.35		121.73		117.88
Noninterest expense to average assets		2.62		2.57		2.79		2.90		2.90
Efficiency ratio (b)		79.04		79.06		79.80		78.12		76.40
Dividend payout ratio (c)		24.93		25.21		25.18		25.22		13.89
Return on average common equity		6.33		5.69		5.35		5.00		7.45

	For the years ended December 31,									
	2018		2017		2016		2015		2014	
Asset Quality Ratios										
Nonperforming loans as a percent of total loans	0.35	%	0.84	%	0.98	%	1.24	%	1.61	%
Nonperforming assets as a percent of total assets	0.36		0.61		0.72		0.94		1.16	
Allowance for loan losses to loans receivable	1.18		1.23		1.27		1.33		1.38	
Allowance for loan losses as a percent of										
nonperforming loans	340.13		145.61		129.85		107.30		85.50	
Regulatory Capital Ratios (Bank Only)										
Total capital (to risk-weighted assets)	13.69	%	13.97	%	14.79	%	16.22	%	16.60	%
Tier 1 capital (to risk-weighted assets)	12.49		12.72		13.54		14.95		15.31	
Tier 1 capital (to adjusted assets)	8.31		8.16		9.06		10.00		10.55	
Tier 1 Common Equity (to risk-weighted assets)	12.49		12.72		13.54		14.95		15.31	
Number of:										
Banking offices	11		10		9		9		9	
Fulltime equivalent employees	160		140		133		124		122	

- (a) Adjusted to reflect the 1.6472 exchange ratio used in the conversion for 2014.
- (b) The efficiency ratio is calculated as noninterest expense divided by the sum of net interest income and noninterest income, excluding net gains on sales, redemptions and impairment of investment securities and net gains (losses) on sales of loans and foreclosed real estate.
- (c) The dividend payout ratio is calculated using dividends declared and not waived by Pathfinder Bancorp, MHC for periods prior to the Conversion and Offering that occurred on October 16, 2014, divided by net income.

See table below for a reconciliation of the non-GAAP financial measures.

NON-GAAP FINANCIAL INFORMATION

Regulation G, a rule adopted by the Securities and Exchange Commission (SEC), applies to certain SEC filings, including earnings releases, made by registered companies that contain "non-GAAP financial measures." GAAP is generally accepted accounting principles in the United States of America. Under Regulation G, companies making public disclosures containing non-GAAP financial measures must also disclose, along with each non-GAAP financial measure, certain additional information, including a reconciliation of the non-GAAP financial measure to the closest comparable GAAP financial measure (if a comparable GAAP measure exists) and a statement of the Company's reasons for utilizing the non-GAAP financial measure as part of its financial disclosures. The SEC has exempted from the definition of "non-GAAP financial measures" certain commonly used financial measures that are not based on GAAP. When these exempted measures are included in public disclosures, supplemental information is not required. Financial institutions, like the Company and its subsidiary bank, are subject to an array of bank regulatory capital measures that are financial in nature but are not based on GAAP and are not easily reconcilable to the closest comparable GAAP financial measures, even in those cases where a comparable measure exists. The Company follows industry practice in disclosing its financial condition under these various regulatory capital measures, including period-end regulatory capital ratios for its subsidiary bank, in its periodic reports filed with the SEC, and does so without compliance with Regulation G, on the widely-shared assumption that the SEC regards such non-GAAP measures to be exempt from Regulation G. The Company uses in this regulatory filing additional non-GAAP financial measures that are commonly utilized by financial institutions and have not been specifically exempted by the SEC from Regulation G. The Company provides, as supplemental information, such non-GAAP measures included in this document as described imm

	For the years ended December 31,									
Year End (In thousands, except per share amounts)	-	2018		2017		2016		2015		2014
Per Share										
Book value per common share										
Total Pathfinder Bancorp, Inc. shareholders' equity (book value)										
(GAAP)	\$	64,221	\$	61,811	\$	57,929	\$	70,805	\$	68,790
Preferred stock		-		-		-		13,000		13,000
Total shares outstanding		4,362		4,280		4,237		4,354		4,352
Book value per common share	\$	14.72	\$	14.44	\$	13.67	\$	13.28	\$	12.82
Total common equity										
Total equity (GAAP)	\$	64,221	\$	61,811	\$	57,929	\$	57,805	\$	55,790
Goodwill		4,536		4,536		4,536		4,536		4,367
Intangible assets		165		182		198		214		175
Common equity	\$	59,520	\$	57,093	\$	53,195	\$	53,055	\$	51,248
Tangible book value per common share										
Common equity	\$	59,520	\$	57,093	\$	53,195	\$	53,055	\$	51,248
Total shares outstanding		4,362		4,280		4,237		4,354		4,352
Tangible book value per common share	\$	13.65	\$	13.34	\$	12.55	\$	12.19	\$	11.78
Performance Ratios										
Efficiency ratio										
Operating expenses (numerator)	\$	23,549	\$	21,094	\$	18,999	\$	17,477	\$	15,589
Net interest income		25,766		23,123		20,289		18,767		17,085
Noninterest income		3,835		4,085		4,072		4,062		3,663
Less: (Loss)/Gain on the sale/redemption of investment										
securities/loans/foreclosed real estate		(132)		526		554		456		344
Less : Loss on marketable equity securities		(62)		-	_		_	-		-
Denominator	\$	29,795	\$	26,682	\$	23,807	\$	22,373	\$	20,404
Efficiency ratio		79.04	%	79.06	%	79.80	%	78.12	%	76.40 %
Dividend payout ratio										
Dividends declared (numerator)	\$	1,005	\$	880	\$	820	\$	696	\$	368
Net income available to common shareholders (denominator)		4,031	0/	3,491	0.1	3,256	0.4	2,759	0/	2,650
Dividend payout ratio		24.93	%	25.21	%	25.18	%	25.22	%	13.89 %
Return on average common equity										
Net income attributable to Pathfinder Bancorp Inc. (GAAP)	\$	4.021	¢	2 401	ď	2 272	\$	2.000	¢	2.745
(numerator)	\$	4,031	\$	3,491	\$	3,272	\$	2,889	\$	2,745
Average equity Preferred stock		63,667		61,383		61,102		70,819 13,000		49,870 13,000
Denominator	\$	63,667	\$	61,383	\$	61,102	\$	57,819	\$	36,870
	Ф	•			<u>э</u> %					
Return on average common equity		6.33	%	5.69	70	5.35	%	5.00	%	7.45 %

	For the years ended December 31,									
		2018		2017		2016		2015		2014
Regulatory Capital Ratios (Bank Only)										
Total capital (to risk-weighted assets)										
Total equity (GAAP)	\$	86,614	\$	71,535	\$	66,846	\$	64,097	\$	61,308
Goodwill		(4,536)		(4,536)		(4,536)		(4,536)		(4,367)
Intangible assets		(165)		(146)		(119)		(86)		(181)
Addback: Accumulated other comprehensive income		(6,042)		4,261		3,812		2,563		2,082
Total Tier 1 Capital	\$	75,871	\$	71,114	\$	66,003	\$	62,038	\$	58,842
Allowance for loan and lease losses		7,306		6,991		6,095		5,193		4,812
Unrealized Gain on available-for-sale securities		-		-		-		55		177
Total Tier 2 Capital	\$	7,306	\$	6,991	\$	6,095	\$	5,248	\$	4,989
Total Tier 1 plus Tier 2 Capital (numerator)	\$	83,177	\$	78,105	\$	72,098	\$	67,286	\$	63,831
Risk-weighted assets (denominator)		607,414		559,161		487,448		414,842		384,425
Total core capital to risk-weighted assets		13.69	%	13.97	%	14.79	%	16.22	%	16.60 %
Total Tier 1 capital (numerator) Risk-weighted assets (denominator)	\$	75,871 607,414	\$	71,114 559,161	\$	66,003 487,448	\$	62,038 414,842	\$	58,842 384,425
Total capital to risk-weighted assets		12.49	%	12.72	%	13.54	%	14.95	%	15.31 %
Tier 1 capital (to adjusted assets)										
Total Tier 1 capital (numerator)	\$	75,871	\$	71,114	\$	66,003	\$	62,038	\$	58,842
Total average assets		917,740		876,263		733,512		625,018		562,100
Goodwill		(4,536)		(4,536)		(4,536)		(4,536)		(4,367)
Intangible assets		(165)		(146)		(119)		(86)		(181)
Adjusted assets (denominator)	\$	913,039	\$	871,581	\$	728,857	\$	620,396	\$	557,552
Total capital to adjusted assets		8.31	%	8.16	%	9.06	%	10.00	%	10.55 %
Tier 1 Common Equity (to risk-weighted assets)										
Total Tier 1 capital (numerator)	\$	75,871	\$	71,114	\$	66,003	\$	62,038	\$	58,842
Risk-weighted assets (denominator)		607,414		559,161		487,448		414,842		384,425
Total Tier 1 Common Equity to risk-weighted assets		12.49	%	12.72	%	13.54	%	14.95	%	15.31 %

ITEM 7: MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS.

INTRODUCTION

Throughout Management's Discussion and Analysis ("MD&A") the term, the "Company", refers to the consolidated entity of Pathfinder Bancorp, Inc. Pathfinder Bank and Pathfinder Statutory Trust II are wholly owned subsidiaries of Pathfinder Bancorp, Inc.; however, Pathfinder Statutory Trust II is not consolidated for reporting purposes (see Note 13 of the consolidated financial statements). Pathfinder REIT, Inc., Pathfinder Risk Management Company, Inc., and Whispering Oaks Development Corp. are wholly owned subsidiaries of Pathfinder Bank. Pathfinder REIT, Inc., ceased all operations in December 2017 and all of its assets and liabilities were transferred at that time to its parent entity, Pathfinder Bank. The cessation of Pathfinder REIT, Inc.'s operations and the transfer of all assets and liabilities from Pathfinder REIT, Inc. to Pathfinder Bank had no effect on the Company's consolidated financial position at December 31, 2017 or results of operations for the year ended December 31, 2017. The formal dissolution of Pathfinder REIT, Inc. as a legal entity was completed in the first quarter of 2019.

On October 16, 2014, Pathfinder Bancorp, MHC converted from the mutual to stock form of organization (the "Conversion"). In connection with the Conversion, the Company sold 2,636,053 shares of common stock to depositors at \$10.00 per share. Shareholders of Pathfinder Bancorp, Inc., a federal corporation ("Pathfinder-Federal"), the Company's predecessor, received 1.6472 shares of the Company's common stock for each share of Pathfinder-Federal common stock they owned immediately prior to completion of the transaction. Following the completion of the Conversion, Pathfinder-Federal was succeeded by the Company and Pathfinder Bancorp, MHC ceased to exist. The Company had 4,362,328 and 4,280,227 shares outstanding at December 31, 2018 and December 31, 2017, respectively.

Since the Conversion, we have transformed from a traditional savings bank to a commercial bank. While not reducing our role as a leading originator of one-to-four family residential real estate loans within our marketplace, which had been our primary focus as a savings bank, we have substantially grown our business and commercial real estate loan portfolios over the past four years. As a commercial bank, we have been able to offer customized products and services to meet individual customer needs and thereby more definitively differentiate our services from those offered by our competitors. As a result, we have been able to create a substantially more diversified loan portfolio than the one that was in place before the Conversion process began. When compared to the Bank's loan portfolio composition prior to the Conversion, it is our view that this portfolio (1) significantly improves upon both the distribution of credit risk across a broader range of borrowers, industries and collateral types, and (2) is more likely to generate consistent net interest margins in a broader range of interest rate environments due to the portfolio's increased percentage of shorter-term and/or adjustable-rate assets. In a concurrent effort, the Bank has been able to fund the high level of growth in our loan portfolios primarily with deposits gathered from our local community. We believe that we have gathered these deposits at a reasonable overall cost in terms of deposit interest rates, as well as at a reasonable overall level of related infrastructure and customer support service expenses.

On June 1, 2016, Pathfinder Bank, a savings bank chartered by the NYSDFS, merged into Pathfinder Commercial Bank, a limited purpose commercial bank also chartered by the NYSDFS. Prior to the merger, Pathfinder Bank owned 100% of Pathfinder Commercial Bank. On that same date, NYSDFS expanded the powers that it had previously granted to Pathfinder Commercial Bank and chartered Pathfinder Commercial Bank as a fully-empowered commercial bank. Simultaneously, the entity that had operated as "Pathfinder Commercial Bank" changed its name to "Pathfinder Bank." As a result of this charter conversion and accompanying name change, the entity now known as "Pathfinder Bank" is a commercial bank with the full range of powers granted under a commercial banking charter in New York State. The merger, which had no effect on the Company's results of operations, converted the consolidated Bank from a savings bank to a commercial bank and was completed in order to better align the Bank's charter with its long-term strategic focus.

We have consistently emphasized developing our business and commercial banking franchise by offering products that are attractive to small- to mediumsized businesses in our market area. We differentiate our loan solutions and related services through the maintenance of high standards of customer service, solution flexibility and convenience. Highlights of our business strategy are as follows:

- Continuing emphasis on business banking. We intend to continue to use our branch office network and experienced commercial loan and deposit specialists to provide convenient commercial loan and deposit products and services to business customers. We believe that by continuing to develop our commercial relationships with small businesses we will offer a variety of services and deposit products that will provide a sustainable source of net interest income for the Company and will become a growing source of fee income in the future. We will continue to introduce products and services designed to attract new business customers and increase the breadth of solutions that we can offer to our existing business customer base.
- Continuing our emphasis on commercial business and commercial real estate lending. In recent years, we have successfully increased our commercial business and commercial real estate lending activities, consistent with safe

and sound underwriting practices. In this regard, we have added, and will continue to add, personnel who are experienced in originating and underwriting commercial real estate and commercial business loans. We view the growth of our commercial business and commercial real estate loans as a means of further diversifying and increasing our interest income. In increasing our business banking activities, we are continuously deepening relationships with local businesses, which offer recurring and potentially increasing sources of both fee income and lower-cost transactional deposits. In that regard, our emphasis on commercial business and commercial real estate lending has complimented, and will continue to compliment, our traditional one-to-four family residential real estate lending.

- **Diversifying our products and services with a goal of increasing non-interest income over time.** We have sought to reduce our dependence on net interest income by increasing fee income from the value-added services that we provide. We offer property and casualty and life insurance through our subsidiary, Pathfinder Risk Management Company, Inc., and its insurance agency subsidiary, the FitzGibbons Agency, LLC. Additionally, Pathfinder Bank's investment services provide brokerage services for purchasing stocks, bonds, mutual funds, annuities, and long-term care insurance products. We intend to gradually grow these businesses. We believe that there will be opportunities to cross-sell these products to our deposit and loan customers which will increase our non-interest income over time.
- Continuing to grow our customer relationships and deposit base by expanding our branch network. As conditions permit, we will expand our branch network through a combination of de novo branching and acquisitions of branches and/or other financial services companies. We believe that as we expand our branch network, our customer relationships and deposit base will continue to grow. Our branch expansion focus will be primarily within Onondaga County, NY, which encompasses the greater Syracuse, NY area. We currently have three branches in Onondaga County, including the branch in Clay, NY that we opened in the fourth quarter of 2018. We continue to actively seek opportunities for an increased presence within that marketplace. This is consistent with our belief that we have already achieved meaningful brand recognition among potential customers there. Consistent with this strategy, in November 2018, the Bank acquired an additional site location on West Onondaga Street in Syracuse, which will be renovated and converted into another full-service banking location. We consider the Syracuse Southwest Corridor neighborhood, where this site is located, to be an under-banked area of the region and believe that this branch will qualify for various economic incentives under New York State's Banking Development District, or BDD, program. The BDD program is designed to encourage the establishment of bank branches in areas where there is a demonstrated need for additional banking services. The program was developed in recognition of the fact that banks play a critically important role in promoting individual wealth, community development, and revitalization. This investment demonstrates Pathfinder Bank's firm commitment to servicing diverse economic areas within its geographic market. We plan to soon begin renovation work on the acquired facility and expect to open our new Syracuse Southwest branch office by the end of 2019. We will continue to seek similar branch network expansion opportunities in the future. In addition to the full-service branches located in Oswego and Onondaga Counties, we opened, in 2017, a loan production office in Utica, located in Oneida County, NY, to increase our availability to potential commercial and business loan customers within that market area.
- **Banking Platform and Technologies.** We have committed significant resources to establish a banking platform to accommodate future growth by upgrading our information technology, maintaining a robust risk management and compliance staff, improving credit administration functionality, and upgrading our physical infrastructure. We believe that these investments will enable us to achieve operational efficiencies with minimal additional investments, while providing increased convenience for our customers.
- *Managing Capital*. The Company received \$24.9 million in net proceeds from the sale of approximately 2.6 million shares of common stock as a result of the Conversion in October 2014. In October 2015, the Company executed the issuance of the \$10.0 million non-amortizing Subordinated Loan and subsequently used those proceeds in February 2016 to substantially fund the full retirement of \$13.0 million in SBLF Preferred stock. We have successfully leveraged this \$27.9 million in net additional capital by growing our consolidated assets by \$352.7 million, or 60.8%, since October 2014. It is our intent to balance our future growth with capital adequacy considerations in a manner that will continue to allow us to effectively serve all of our key stakeholders and maintain our "well capitalized" capital position.
- **Providing quality customer service.** Our strategy emphasizes providing quality customer service and meeting the financial needs of our customer base by offering a full complement of loan, deposit, financial services and online banking solutions. Our competitive advantage is our ability to make decisions, such as approving loans, more quickly than our larger competitors. Customers enjoy, and will continue to enjoy, access to senior executives and local decision makers at the Bank and the flexibility it brings to their businesses.

APPLICATION OF CRITICAL ACCOUNTING POLICIES

The Company's consolidated financial statements are prepared in accordance with accounting principles generally accepted in the United States and follow practices within the banking industry. Application of these principles requires management to make estimates, assumptions and judgments that affect the amounts reported in the consolidated financial statements and accompanying notes. These estimates, assumptions and judgments are based on information available as of the date of the financial statements; accordingly, as this information changes, the financial statements could reflect different estimates, assumptions and judgments. Certain policies inherently have a greater reliance on the use of estimates, assumptions and judgments and as such have a greater possibility of producing results that could be materially different than originally reported. Estimates, assumptions and judgments are necessary when assets and liabilities are required to be recorded at fair value or when an asset or liability needs to be recorded contingent upon a future event. Carrying assets and liabilities at fair value inherently results in more financial statement volatility. The fair values, and information used to record valuation adjustments for certain assets and liabilities, are based on quoted market prices or are provided by other third-party sources, when available. When third party information is not available, valuation adjustments are estimated in good faith by management.

The most significant accounting policies followed by the Company are presented in Note 1 to the consolidated financial statements. These policies, along with the disclosures presented in the other financial statement notes and in this discussion, provide information on how significant assets and liabilities are valued in the consolidated financial statements and how those values are determined. Based on the valuation techniques used and the sensitivity of financial statement amounts to the methods, assumptions, and estimates underlying those amounts, management has identified the allowance for loan losses, deferred income taxes, pension obligations, the evaluation of investment securities for other than temporary impairment, the annual evaluation of the Company's goodwill for possible impairment, and the estimation of fair values for accounting and disclosure purposes to be the accounting areas that require the most subjective and complex judgments. These areas could be the most subject to revision as new information becomes available.

Allowance for Loan Losses. The allowance for loan losses represents management's estimate of probable loan losses inherent in the loan portfolio. Determining the amount of the allowance for loan losses is considered a critical accounting estimate because it requires significant judgment on the use of estimates related to the amount and timing of expected future cash flows on impaired loans, estimated losses on pools of homogeneous loans based on historical loss experience, and environmental factors, all of which may be susceptible to significant change. The Company establishes a specific allowance for all commercial loans in excess of the total related credit threshold of \$100,000 and single borrower residential mortgage loans in excess of the total related credit threshold of \$300,000 identified as being impaired which are on nonaccrual and have been risk rated under the Company's risk rating system as substandard, doubtful, or loss. The Company also establishes a specific allowance, regardless of the size of the loan, for all loans subject to a troubled debt restructuring agreement. In addition, an accruing substandard loan could be identified as being impaired. The measurement of impaired loans is generally based upon the present value of future cash flows discounted at the historical effective interest rate, except that all collateral-dependent loans are measured for impairment based on the fair value of the collateral, less costs to sell. At December 31, 2018, the Bank's position in impaired loans consisted of 44 loans totaling \$6.0 million. Of these loans, 23 loans, totaling \$2.1 million, were valued using the present value of future cash flows method; and 21 loans, totaling \$3.9 million, were valued based on a collateral analysis. For all other loans, the Company uses the general allocation methodology that establishes an allowance to estimate the probable incurred loss for each risk-rating category. Note 1 to the consolidated financial statements describes the methodology used to determine the allowance

Deferred Income Tax Assets and Liabilities. Deferred income tax assets and liabilities are determined using the liability method. Under this method, the net deferred tax asset or liability is recognized for the future tax consequences. This is attributable to the differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases as well as net operating and capital loss carry forwards. Deferred tax assets and liabilities are measured using enacted tax rates applied to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in income tax expense in the period that includes the enactment date. If current available evidence about the future raises doubt about the likelihood of a deferred tax asset being realized, a valuation allowance is established. The judgment about the level of future taxable income, including that which is considered capital, is inherently subjective and is reviewed on a continual basis as regulatory and business factors change. In prior years, management believed that it may not have been able to generate sufficient future taxable income in the form of capital gains to offset its capital loss carry forward position before those potential tax benefits expired. Accordingly, a valuation allowance of \$150,000 was maintained at December 31, 2016. During 2017, the Company recognized net capital gains of \$428,000, effectively utilizing all capital loss carryforward tax benefits established in prior years and thereby eliminating the need for any valuation allowance related to the future utilization of those carryforwards at December 31, 2017 or in subsequent periods. As a result, the Company maintained no valuation allowance related to future tax benefits related to the utilization of capital loss carryforwards at December 31, 2018 or December 31, 2017.

On December 22, 2017, the Tax Act was signed into law. The Tax Act instituted significant changes to various sections of the Internal Revenue Code that effects the Company. Most notably, the Tax Act reduced the Company's marginal federal income tax rate from 34% to 21% starting January 1, 2018. GAAP requires that the impact of the provisions of the Tax Act be accounted for in the period of enactment. Accordingly, the Company recorded an income tax benefit in the fourth quarter of 2017 related to the Tax Act in the amount of \$155,000. The reduction in income tax expense was largely attributable to the reduction in the value of net deferred tax liabilities and assets reflecting lower future tax obligations resulting from the Tax Act's enacted lower federal corporate tax rate. See Note 17 to the consolidated financial statements contained herein.

Pension Obligations. Pension and postretirement benefit plan liabilities and expenses are based upon actuarial assumptions of future events, including fair value of plan assets, interest rates, and the length of time the Company will have to provide those benefits. The assumptions used by management are discussed in Note 14 to the consolidated financial statements contained herein.

Evaluation of Investment Securities for Other-Than-Temporary-Impairment ("OTTI"). The Company carries all of its available-for-sale investments at fair value with any unrealized gains or losses reported net of tax as an adjustment to shareholders' equity and included in accumulated other comprehensive income (loss), except for the credit-related portion of debt security impairment losses and OTTI of equity securities which are charged to earnings. The Company's ability to fully realize the value of its investments in various securities, including corporate debt securities, is dependent on the underlying creditworthiness of the issuing organization. In evaluating the debt security (both available-for-sale and held-to-maturity) portfolio for other-than-temporary impairment losses, management considers (1) if we intend to sell the security before recovery of its amortized cost; (2) if it is "more likely than not" we will be required to sell the security before recovery of its amortized cost basis. When the fair value of a held-to-maturity or available-for-sale security is less than its amortized cost basis, an assessment is made as to whether OTTI is present. The Company considers numerous factors when determining whether a potential OTTI exists and the period over which the debt security is expected to recover. The principal factors considered are (1) the length of time and the extent to which the fair value has been less than the amortized cost basis, (2) the financial condition of the issuer and (guarantor, if any) and adverse conditions specifically related to the security, industry or geographic area, (3) failure of the issuer of the security to make scheduled interest or principal payments, (4) any changes to the rating of the security by a rating agency, and (5) the presence of credit enhancements, if any, including the guarantee of the federal government or any of its agencies.

Evaluation of Goodwill. Management performs an annual evaluation of the Company's goodwill for possible impairment. Based on the results of the 2018 evaluation, management has determined that the carrying value of goodwill is not impaired as of December 31, 2018. The evaluation approach is described in Note 10 of the consolidated financial statements contained herein.

Estimation of Fair Value. The estimation of fair value is significant to several of our assets; including investment securities available-for-sale, interest rate derivative (discussed in detail in Note 22 of the consolidated financial statements), intangible assets, foreclosed real estate, and the value of loan collateral when valuing loans. These are all recorded at either fair value, or the lower of cost or fair value. Fair values are determined based on third party sources, when available. Furthermore, accounting principles generally accepted in the United States require disclosure of the fair value of financial instruments as a part of the notes to the consolidated financial statements. Fair values on our available-for-sale securities may be influenced by a number of factors; including market interest rates, prepayment speeds, discount rates, and the shape of yield curves.

Fair values for securities available-for-sale are obtained from an independent third party pricing service. Where available, fair values are based on quoted prices on a nationally recognized securities exchange. If quoted prices are not available, fair values are measured using quoted market prices for similar benchmark securities. Management made no adjustments to the fair value quotes that were provided by the pricing source. The fair values of foreclosed real estate and the underlying collateral value of impaired loans are typically determined based on evaluations by third parties, less estimated costs to sell. When necessary, appraisals are updated to reflect changes in market conditions.

RECENT EVENTS

On December 20, 2018, the board of directors declared a quarterly dividend of \$0.06 per common share. The dividend was payable on February 8, 2019 to shareholders of record on January 18, 2019.

EXECUTIVE SUMMARY AND RESULTS OF OPERATIONS

The Company reported net income of \$4.0 million for 2018, an increase of \$540,000, or 15.5%, as compared to net income of \$3.5 million for 2017. Net income increased during 2018, as compared to the previous year, due to an increase in net interest income before the provision for loan losses of \$2.6 million, a reduction of income tax expense of \$376,000, and a reduction in the provision for loan losses of \$272,000. These increases in net income were partially offset by an increase in noninterest expense of \$2.5 million, and a decrease on total noninterest income of \$250,000. Basic and diluted earnings per share in 2018 were \$0.97 and \$0.94, respectively, as compared to \$0.86 and \$0.83 in 2017, respectively. Return on average assets increased three basis points to 0.45% in 2018 from 0.42% in 2017. Return on average equity increased 64 basis points to 6.33% in 2018 as compared to 5.69% in 2017. The increase in return on average assets in 2018, as compared to the previous year, was primarily due to the rate of increase in net income being above the rate of increase in average assets increased in 2018 by \$76.1 million, or 9.25% as the Company grew its total assets from \$881.3 million at December 31, 2017 to \$933.1 million at December 31, 2018. The increase in return on average equity in 2018, as compared to the previous year, was primarily due to the increase in net income in 2018.

Net interest income before provision for loan losses increased \$2.6 million, or 11.4%, to \$25.8 million in 2018 on average interest earning assets of \$852.1 million as compared to net interest income before provision for loan losses of \$23.1 million in 2017 on average interest earning assets of \$779.9 million. Interest and dividend income increased \$5.4 million in 2018 to \$34.8 million, as compared to interest and dividend income of \$29.4 million in 2017. The aggregate increase in the average balance of interest-earning assets of \$72.2 million in 2018 as compared to 2017 led to an increase in interest and dividend income of \$2.7 million, that was further enhanced by an increase of 32 basis points in the overall average yield earned on those assets that contributed an additional \$2.7 million in interest income in 2018, as compared to the previous year. The \$5.4 million increase in interest income was partially offset by an increase in interest expense of \$2.8 million due to an increase in average interest-bearing liabilities of \$59.2 million and an increase in the average rate paid on those liabilities of 30 basis points in 2018 as compared to 2017.

The Company recorded a provision for loan losses of \$1.5 million in 2018 as compared to \$1.8 million in the prior year. The \$272,000 year-over-year decrease in provision for loan losses reflected the loan portfolio's generally improving credit quality metrics partially offset by the effects of a 6.8% increase in aggregate loan balances from December 31, 2017 to December 31, 2018. In addition, during 2017, the Company recorded a specific reserve of \$300,000 for a single commercial real estate loan with an outstanding balance of \$1.7 million. The loan was collateralized by a special-purpose commercial property and the balance of the loan was considered to not be fully realizable at that time. The Company recorded \$1.5 million in net charge-offs in 2018 as compared to \$890,000 in net charge-offs in 2017. The ratio of net charge-offs to average loans increased to 0.22% in 2018 from 0.16% in 2017. The increase in the year-over-year charge-off rate was due primarily to the charge-off in 2018 of a single fully-reserved commercial real estate loan in the amount of \$596,000 and the charge-off of a single fully-reserved commercial and industrial loan in the amount of \$124,000.

Noninterest income was \$3.8 million in 2018, a decrease of \$250,000, or 6.1%, from \$4.1 million in 2017. Net gains on the sales and redemptions of investment securities decreased \$671,000 from a gain of \$489,000 in 2017 to a loss of \$182,000 in 2018. During 2018, the Company realized losses of \$182,000 on the sales of certain securities in order to provide funding for reinvestment into loans and securities considered to be better matches for the Company's overall balance sheet strategies. During 2017, the Company engaged in certain short-term interest rate hedging strategies that generated net gains of \$428,000. In addition, the Company realized net gains on the sales and redemptions of investment securities of \$61,000 as the Company sold certain securities as part of its overall asset management strategies. All other categories of noninterest income increased \$421,000 in aggregate during 2018, as compared to the previous year, primarily due to increases in other charges, commissions and fees of \$196,000 and earnings and gain on bank owned life insurance of \$143,000.

Noninterest expense increased \$2.5 million, or 11.6% to \$23.5 million in 2018 from \$21.1 million in 2017. The year-over-year increase in noninterest expenses was primarily due to personnel expenses that increased \$1.4 million, or 11.6%, in 2018 as compared to 2017. All other noninterest expenses increased \$1.1 million, or 11.6%, in 2018, as compared to the previous year, as all categories of noninterest expense, not related to personnel costs, increased in a manner that was substantially proportional to the Company's increased asset size. In addition, the increase in these non-personnel related expenses in 2018, as compared to 2017, reflected the deployment of additional resources by the Company into risk management systems and improved customer service activities. See the detailed discussion noninterest expense, below.

In 2018, the Company's effective tax rate was 11.9%, as compared to 20.6% in 2017. The Company's federal statutory income tax rate of 21.0% was reduced 6.2% in 2018 by the combined effects of tax exempt income received in the form of interest on tax exempt loans and investment securities, and the increase in the value of its bank owned life insurance. All other individually

immaterial items related to the calculation of the Company's effective tax rate in aggregate decreased the Company's effective tax rate by 2.9% in 2018.

In 2017, GAAP required that the impact of the provisions of the Tax Act on deferred tax assets and liabilities be accounted for in the period of enactment. Accordingly, the Company recorded an income tax benefit in the fourth quarter of 2017 related to the Tax Act in the amount of \$155,000. The reduction in income tax expense was largely attributable to the reduction in the value of net deferred tax assets and liabilities reflecting lower future tax obligations resulting from the Tax Act's enacted lower federal corporate tax rate. Absent this one-time income tax benefit, the Company's income tax expense for 2017 would have been \$1.1 million. The Company's reported effective tax rate for 2017 was 20.6%. Absent this one-time tax benefit discussed above, the Company's effective tax rate in 2017 would have been 24.1%.

The Company's effective tax rate in 2017, absent the effects of the one-time benefit related to the Tax Act, was further reduced in 2017 by 3.5% from 24.1% to 20.6% due to the reversal of \$150,000 in valuation allowances for deferred tax assets related to capital loss carryforward tax positions established in previous years. The Company was able to generate sufficient capital gains in 2017 to offset all capital loss carryforward positions at December 31, 2016 and thereby eliminate the need for a reserve against their related deferred tax assets. At December 31, 2018 and 2017, the Company had no unused capital loss carryforward positions or deferred tax assets related to those positions.

Total assets were \$933.1 million at December 31, 2018 as compared to \$881.3 million at December 31, 2017. The increase in total assets of \$51.9 million, or 5.9%, was the result of the increase in loans, principally commercial real estate and residential mortgages of \$39.4 million, partially offset by a \$5.3 million reduction in investment securities. All other assets increased by a net \$17.7 million, primarily due to an increase in bank owned life insurance, cash and equivalents and premises and equipment of \$5.2 million, \$4.3 million and \$4.5 million, respectively. The increase in total assets in 2018 was funded largely by a \$44.7 million increase in borrowings from the FHLBNY, and a \$21.6 million increase in customer deposits, partially offset by an \$18.1 million decrease in time deposits acquired through the CDARS program.

Measured as a percentage of total loans and total assets, the majority of loan credit quality metrics improved in 2018 as compared to the previous year. Nonperforming loans to total loans were 0.35% at December 31, 2018, down 49 basis points compared to 0.84% at December 31, 2017. The allowance for loan losses to non-performing loans at December 31, 2018 was 340.13%, compared with 145.61% at December 31, 2017. This increase was the result of two non-performing commercial real estate loans of significant size that were effectively resolved in 2018. These improvements in credit quality measures were reflected in a slight decline in the ratio of the allowance for loan losses to year end loans decreasing from 1.23% at December 31, 2017 to 1.18% at December 31, 2018. This decrease reflected management's estimate of the probable losses inherent in the current loan portfolio.

The ratio of net charge-offs to average loans increased to 0.22% for 2018 as compared to 0.16% for 2017. This activity reflected charge-offs for those accounts deemed uncollectible but reserved for in prior years through the provision for loan losses. Total past due loans measured as a percent of total loans, decreased from 2.09% at December 31, 2017 to 1.81% at December 31, 2018. The level of nonperforming loans decreased in aggregate by \$2.7 million, or 56.1%, led by a decrease in nonperforming residential loans of \$1.1 million and a decrease in nonperforming residential mortgage loans of \$912,000. Commensurate with the decline in nonperforming loans to year end loans, the ratio of nonperforming assets to total assets decreased to 0.36% at December 31, 2018 from 0.61% at December 31, 2017. The improvements in our nonperforming loan measures largely reflect the \$39.4 million increase in our aggregate loan portfolio achieved while we continued to maintain our conservative underwriting practices.

The Company's shareholders' equity increased \$2.4 million, or 3.9%, to \$64.2 million at December 31, 2018 from \$61.8 million at December 31, 2017. This increase was primarily due to an increase in retained earnings of \$3.1 million, resulting from the Company's reported net income of \$4.0 million in 2018, partially offset by common stock dividend distributions of \$1.0 million, a \$969,000 increase in additional paid in capital, and the accretion of \$180,000 unearned ESOP shares. Paid in capital increased in 2018 due to the exercise of stock options during the year primarily by members of the Company's management team. These net increases to shareholders' equity were partially offset by a \$1.8 million increase in the Company's accumulated other comprehensive loss. The increase in accumulated other comprehensive loss at December 31, 2018, as compared to December 31, 2017, was the result of an unrealized decline, after tax effects, of \$1.3 million related to the Company's available-for-sale investment securities portfolio, and an unrealized loss, after tax effects, for pension and other postretirement obligations of \$932,000. The unrealized decline in the value of the Company's available-for-sale investment securities portfolio was primarily due to the increases in market interest rates that occurred in 2018. The increase in the unrealized loss for pension and other postretirement obligations was primarily due to the significant declines in global equity markets that took place in the fourth quarter of 2018. These increases in accumulated other comprehensive loss were partially offset by an increase of

\$373,000, after tax effects, primarily related to the transfer of \$35.2 million in securities from held-to-maturity to available-for-sale concurrent with the adoption in 2018 of ASU 2017-12: Derivatives and Hedging [Topic 815]: Targeted Improvements to Accounting for Hedging Activities.

Net Interest Income

Net interest income is the Company's primary source of operating income. It is the amount by which interest earned on interest-earning deposits, loans and investment securities exceeds the interest paid on deposits and borrowed money. Changes in net interest income and the net interest margin ratio resulted from the interaction between the volume and composition of interest earning assets, interest-bearing liabilities, and their respective yields and funding costs.

The following comments refer to the table of Average Balances and Rates and the Rate/Volume Analysis, both of which follow below.

Net interest income, before provision for loan losses, increased \$2.6 million, or 11.4%, to \$25.8 million in 2018 as compared to \$23.1 million in the previous year. Our net interest margin for the year ended December 31, 2018 increased to 3.02% from 2.97% for the comparable prior year. The increase in net interest income was primarily due to a \$5.4 million, or 18.4%, increase in interest and dividend income in 2018 to \$34.8 million primarily as a result of the \$72.2 million, or 9.3%, increase in the average balances on interest earning assets. This increase in interest income was partially offset by an increase in interest expense of \$2.7 million, or 43.8%, during 2018, as compared to the previous year. The increase in interest expense was primarily the result of increases in interest paid on time deposits and MMDA accounts of \$2.0 million and \$878,000, respectively. Increases between 2018 and 2017 were recorded in average rates paid on time deposits, FHLBNY borrowings (net of hedging activities in the amount of \$598,000 recorded in 2017) and MMDA accounts of 56 basis points, 51 basis points and 35 basis points, respectively.

Average Balances and Rates

The following table sets forth information concerning average interest-earning assets and interest-bearing liabilities and the yields and rates thereon. Interest income and resultant yield information in the table has not been adjusted for tax equivalency. Averages are computed on the daily average balance for each month in the period divided by the number of days in the period. Yields and amounts earned include loan fees. Nonaccrual loans have been included in interest-earning assets for purposes of these calculations.

Part				Fe	or the twelve	months ende	d December 31	Ι,		
Marriage Marriage			2018			2017			2016	
Delian in thousands Delian Delian				Average			Average			Average
The transity The		Average		Yield/	Average		Yield /	Average		Yield /
Loans	(Dollars in thousands)	Balance	Interest	Cost	Balance	Interest	Cost	Balance	Interest	Cost
Taxable investment securities	Interest-earning assets:									
Tax-exempt investment securities 28,444 720 2.53% 28,497 1,038 3.64% 32,387 865 2.67% Fed funds sold and interest-earning deposits 16.496 246 1.49% 20,999 156 0.74% 15,898 64 0.40% Total interest-earning assets 852,065 34,810 4.09% 779,859 29,413 3.77% 645,691 24,093 3.73% 70 70 70 70 70 70 70 7	Loans	\$ 609,648	\$ 28,426	4.66%	\$ 546,193	\$ 24,392	4.47%	\$ 455,129	\$ 20,703	4.55%
Fed funds sold and interest-earning deposits 16,496 246 1.49% 20,999 156 0.74% 15,898 64 0.40% 100	Taxable investment securities	197,477	5,418	2.74%	184,170	3,827	2.08%	142,277	2,461	1.73%
Interest-earning deposits		28,444	720	2.53%	28,497	1,038	3.64%	32,387	865	2.67%
Total interest-earning assets	Fed funds sold and									
Nominterest-earning assets:	interest-earning deposits	16,496	246	1.49%	20,999	156	0.74%	15,898	64	0.40%
Other assets	Total interest-earning assets	852,065	34,810	4.09%	779,859	29,413	3.77%	645,691	24,093	3.73%
Allowance for loan losses	Noninterest-earning assets:									
Net unrealized gains on available-for-sale securities (4,018) (1,642) 397 Total assets \$898,045 \$821,983 \$681,220 Interest-bearing liabilities: NOW accounts \$66,934 \$116 0.17% \$67,581 \$105 0.16% \$56,541 92 0.16% Money management accounts 13,584 21 0.15% 13,960 25 0.18% 14,392 35 0.24% MMDA accounts 236,958 2,262 0.95% 231,671 1,384 0.60% 167,817 699 0.42% Savings and club accounts 83,511 85 0.10% 84,092 82 0.10% 79,317 74 0.09% Time deposits 243,342 4,328 1.78% 189,614 2,308 1.22% 165,464 1,541 0.93% Subordinated loans 15,075 846 5,61% 15,041 794 5,28% 15,006 792 5,28% Borrowings 71,875 1,386 1,93%	Other assets	57,529			50,147			41,097		
Total assets	Allowance for loan losses	(7,531)			(6,381)			(5,965)		
Total assets	Net unrealized gains									
NOW accounts	on available-for-sale securities	(4,018)			(1,642)			397		
NOW accounts \$ 66,934 \$ 116 0.17% \$ 67,581 \$ 105 0.16% \$ 56,541 92 0.16% Money management accounts 13,584 21 0.15% 13,960 25 0.18% 14,392 35 0.24% MMDA accounts 236,958 2,262 0.95% 231,671 1,384 0.60% 167,817 699 0.42% Savings and club accounts 83,511 85 0.10% 84,092 82 0.10% 79,317 74 0.09% Time deposits 243,342 4,328 1,78% 189,614 2,308 1,22% 165,464 1,541 0.93% Subordinated loans 15,075 846 5,61% 15,041 794 5,28% 15,006 792 5,28% Borrowings 71,875 1,386 1,93% 70,071 1,592 2,27% 47,051 571 1,21% Total interest-bearing liabilities 731,279 9,044 1,24% 672,030 6,290 0.94% 545	Total assets	\$ 898,045			\$ 821,983			\$ 681,220		
Money management accounts 13,584 21 0.15% 13,960 25 0.18% 14,392 35 0.24% MMDA accounts 236,958 2,262 0.95% 231,671 1,384 0.60% 167,817 699 0.42% Savings and club accounts 83,511 85 0.10% 84,092 82 0.10% 79,317 74 0.09% Time deposits 243,342 4,328 1,78% 189,614 2,308 1.22% 165,464 1,541 0.93% Subordinated loans 15,075 846 5,61% 15,041 794 5,28% 15,006 792 5,28% Borrowings 71,875 1,386 1,93% 70,071 1,592 2,27% 47,051 571 1,21% Total interest-bearing liabilities 731,279 9,044 1,24% 672,030 6,290 0,94% 545,588 3,804 0,70% Nominterest-bearing liabilities Demand deposits 96,719 83,053 69,898	Interest-bearing liabilities:									
MMDA accounts 236,958 2,262 0.95% 231,671 1,384 0.60% 167,817 699 0.42% Savings and club accounts 83,511 85 0.10% 84,092 82 0.10% 79,317 74 0.09% Time deposits 243,342 4,328 1.78% 189,614 2,308 1.22% 165,464 1,541 0.93% Subordinated loans 15,075 846 5.61% 15,041 794 5.28% 15,006 792 5.28% Borrowings 71,875 1,386 1.93% 70,071 1,592 2.27% 47,051 571 1.21% Total interest-bearing liabilities 731,279 9,044 1.24% 672,030 6,290 0.94% 545,588 3,804 0.70% Noninterest-bearing liabilities 6,380 5,517 4,632 4,632 4,632 4,632 4,632 4,632 4,632 4,632 4,632 4,632 4,632 4,632 4,632 4,632 4,632 <td>NOW accounts</td> <td>\$ 66,934</td> <td>\$ 116</td> <td>0.17%</td> <td>\$ 67,581</td> <td>\$ 105</td> <td>0.16%</td> <td>\$ 56,541</td> <td>92</td> <td>0.16%</td>	NOW accounts	\$ 66,934	\$ 116	0.17%	\$ 67,581	\$ 105	0.16%	\$ 56,541	92	0.16%
Savings and club accounts 83,511 85 0.10% 84,092 82 0.10% 79,317 74 0.09% Time deposits 243,342 4,328 1,78% 189,614 2,308 1.22% 165,464 1,541 0.93% Subordinated loans 15,075 846 5.61% 15,041 794 5.28% 15,006 792 5.28% Borrowings 71,875 1,386 1.93% 70,071 1,592 2.27% 47,051 571 1.21% Total interest-bearing liabilities 731,279 9,044 1.24% 672,030 6,290 0.94% 545,588 3,804 0.70% Nominterest-bearing liabilities Demand deposits 96,719 83,053 69,898 69,898 69,898 69,898 69,898 69,898 69,898 69,898 69,898 69,118 69,898 69,118 69,118 69,118 69,118 69,118 69,118 69,118 69,119 69,118 69,119 69,119 <t< td=""><td>Money management accounts</td><td>13,584</td><td>21</td><td>0.15%</td><td>13,960</td><td>25</td><td>0.18%</td><td>14,392</td><td>35</td><td>0.24%</td></t<>	Money management accounts	13,584	21	0.15%	13,960	25	0.18%	14,392	35	0.24%
Time deposits 243,342 4,328 1,78% 189,614 2,308 1,22% 165,464 1,541 0.93% Subordinated loans 15,075 846 5,61% 15,041 794 5,28% 15,006 792 5,28% Borrowings 71,875 1,386 1,93% 70,071 1,592 2,27% 47,051 571 1,21% Total interest-bearing liabilities 731,279 9,044 1,24% 672,030 6,290 0,94% 545,588 3,804 0,70% Nominterest-bearing liabilities 96,719 83,053 69,898 69,898 69,898 69,898 69,898 60,809	MMDA accounts	236,958	2,262	0.95%	231,671	1,384	0.60%	167,817	699	0.42%
Subordinated loans 15,075 846 5.61% 15,041 794 5.28% 15,006 792 5.28% Borrowings 71,875 1,386 1.93% 70,071 1,592 2.27% 47,051 571 1.21% Total interest-bearing liabilities 731,279 9,044 1.24% 672,030 6,290 0.94% 545,588 3,804 0.70% Noninterest-bearing liabilities: Demand deposits 96,719 83,053 69,898 Other liabilities 6,380 5,517 4,632 Total liabilities 834,378 760,600 620,118 Shareholders' equity 63,667 61,383 61,102 Total liabilities & shareholders' equity 898,045 821,983 681,220 Net interest rate spread 2,85% 23,123 2,0289 Net interest margin 3,02% 2,97% 3,14%	Savings and club accounts	83,511	85	0.10%	84,092	82	0.10%	79,317	74	0.09%
Borrowings 71,875 1,386 1.93% 70,071 1,592 2,27% 47,051 571 1,21% Total interest-bearing liabilities 731,279 9,044 1,24% 672,030 6,290 0.94% 545,588 3,804 0.70% Nominterest-bearing liabilities 96,719 83,053 69,898 Other liabilities 6,380 5,517 4,632 Total liabilities 834,378 760,600 620,118 Shareholders' equity 63,667 61,383 61,102 Total liabilities & shareholders' equity \$898,045 \$821,983 \$681,220 Net interest income \$25,766 \$23,123 \$20,289 Net interest rate spread 2.85% 2.83% 3.03% Net interest margin 3.02% 2.97% 3.14%	Time deposits	243,342	4,328	1.78%	189,614	2,308	1.22%	165,464	1,541	0.93%
Total interest-bearing liabilities 731,279 9,044 1.24% 672,030 6,290 0.94% 545,588 3,804 0.70% Noninterest-bearing liabilities: Use and deposits 96,719 83,053 69,898 Other liabilities 6,380 5,517 4,632 Total liabilities 834,378 760,600 620,118 Shareholders' equity 63,667 61,383 61,102 Total liabilities & shareholders' equity \$898,045 \$821,983 \$681,220 Net interest income \$25,766 \$23,123 \$20,289 Net interest rate spread 2.85% 2.83% 3.03% Net interest margin 3.02% 2.97% 3.14%	Subordinated loans	15,075	846	5.61%	15,041	794	5.28%	15,006	792	5.28%
Noninterest-bearing liabilities: Demand deposits 96,719 83,053 69,898 Other liabilities 6,380 5,517 4,632 Total liabilities 834,378 760,600 620,118 Shareholders' equity 63,667 61,383 61,102 Total liabilities & shareholders' equity \$ 898,045 \$ 821,983 \$ 681,220 Net interest income \$ 25,766 \$ 23,123 \$ 20,289 Net interest rate spread 2.85% 2.83% 3.03% Net interest margin 3.02% 2.97% 3.14% Ratio of average interest-earning assets 3.02% 2.97% 3.14%	Borrowings	71,875	1,386	1.93%	70,071	1,592	2.27%	47,051	571	1.21%
Demand deposits 96,719 83,053 69,898 Other liabilities 6,380 5,517 4,632 Total liabilities 834,378 760,600 620,118 Shareholders' equity 63,667 61,383 61,102 Total liabilities & shareholders' equity \$ 898,045 \$ 821,983 \$ 681,220 Net interest income \$ 25,766 \$ 23,123 \$ 20,289 Net interest rate spread 2.85% 2.83% 3.03% Net interest margin 3.02% 2.97% 3.14% Ratio of average interest-earning assets 3.02% 2.97% 3.14%	Total interest-bearing liabilities	731,279	9,044	1.24%	672,030	6,290	0.94%	545,588	3,804	0.70%
Other liabilities 6,380 5,517 4,632 Total liabilities 834,378 760,600 620,118 Shareholders' equity 63,667 61,383 61,102 Total liabilities & shareholders' equity \$ 898,045 \$ 821,983 \$ 681,220 Net interest income \$ 25,766 \$ 23,123 \$ 20,289 Net interest rate spread 2.85% 2.83% 3.03% Net interest margin 3.02% 2.97% 3.14% Ratio of average interest-earning assets	Noninterest-bearing liabilities:									
Total liabilities 834,378 760,600 620,118 Shareholders' equity 63,667 61,383 61,102 Total liabilities & shareholders' equity \$ 898,045 \$ 821,983 \$ 681,220 Net interest income \$ 25,766 \$ 23,123 \$ 20,289 Net interest rate spread 2.85% 2.83% 3.03% Net interest margin 3.02% 2.97% 3.14% Ratio of average interest-earning assets	Demand deposits	96,719			83,053			69,898		
Shareholders' equity 63,667 61,383 61,102 Total liabilities & shareholders' equity \$ 898,045 \$ 821,983 \$ 681,220 Net interest income \$ 25,766 \$ 23,123 \$ 20,289 Net interest rate spread 2.85% 2.83% 3.03% Net interest margin 3.02% 2.97% 3.14% Ratio of average interest-earning assets	Other liabilities	6,380			5,517			4,632		
Total liabilities & shareholders' equity \$ 898,045 \$ 821,983 \$ 681,220 Net interest income \$ 25,766 \$ 23,123 \$ 20,289 Net interest rate spread 2.85% 2.83% 3.03% Net interest margin 3.02% 2.97% 3.14% Ratio of average interest-earning assets	Total liabilities	834,378			760,600			620,118		
Net interest income \$ 25,766 \$ 23,123 \$ 20,289 Net interest rate spread 2.85% 2.83% 3.03% Net interest margin 3.02% 2.97% 3.14% Ratio of average interest-earning assets 3.02% 3.02% 3.02%	Shareholders' equity	63,667			61,383			61,102		
Net interest rate spread2.85%2.83%3.03%Net interest margin3.02%2.97%3.14%Ratio of average interest-earning assets	Total liabilities & shareholders' equity	\$ 898,045			\$ 821,983			\$ 681,220		
Net interest margin 3.02% 2.97% 3.14% Ratio of average interest-earning assets	Net interest income		\$ 25,766			\$ 23,123			\$ 20,289	
Ratio of average interest-earning assets	Net interest rate spread			2.85%			2.83%			3.03%
	Net interest margin			3.02%			2.97%			3.14%
	Ratio of average interest-earning assets									
	to average interest-bearing liabilities			116.52%			116.05%			118.35%

Rate/Volume Analysis

Net interest income can also be analyzed in terms of the impact of changing interest rates on interest-earning assets and interest-bearing liabilities, and changes in the volume or amount of these assets and liabilities. The following table represents the extent to which changes in interest rates and changes in the volume of interest-earning assets and interest-bearing liabilities have affected the Company's interest income and interest expense during the periods indicated. Information is provided in each category with respect to: (i) changes attributable to changes in volume (change in volume multiplied by prior rate); (ii) changes attributable to changes in rate (changes in rate multiplied by prior volume); and (iii) total increase or decrease. Changes attributable to both rate and volume have been allocated ratably. Tax-exempt securities have not been adjusted for tax equivalency.

Years Ended December 31, 2018 vs. 2017 2017 vs. 2016

			_01	0 10. 2017				717 45. 2010	
		Increase/(Decrease) Due to				Inc	rease	(Decrease) Due	to
	<u></u>				Total				Total
					Increase				Increase
(In thousands)		Volume		Rate	(Decrease)	Volume		Rate	(Decrease)
Interest Income:									
Loans		2,924		1,110	4,034	4,073		(384)	3,689
Taxable investment securities		293		1,298	1,591	811		555	1,366
Tax-exempt investment securities		(2)		(316)	(318)	(113))	286	173
Interest-earning deposits		(39)		129	90	25		67	92
Total interest and dividend income		3,176		2,221	5,397	4,796		524	5,320
Interest Expense:									
NOW accounts		(1)		12	11	17		(4)	13
Money management accounts		(1)		(3)	(4)	(1))	(9)	(10)
MMDA accounts		32		846	878	320		365	685
Savings and club accounts		(1)		4	3	5		3	8
Time deposits		769		1,251	2,020	247		520	767
Subordinated loans		2		50	52	2		-	2
Borrowings		40		(246)	(206)	367		654	1,021
Total interest expense		840		1,914	2,754	957		1,529	2,486
Net change in net interest income	\$	2,336	\$	307	\$ 2,643	\$ 3,839	\$	(1,005) \$	5 2,834

Interest Income

Changes in interest income result from changes in the average balances of loans, securities, and interest-earning deposits and the related average yields on those balances.

Interest and dividend income increased \$5.4 million, or 18.4%, to \$34.8 million in 2018 as compared to \$29.4 million in 2017 due principally to the \$72.2 million, or 9.3%, increase in average interest-earning assets. The increase in average interest-earning assets was primarily due to the increase in the average balances of loans, which increased \$63.5 million or 11.6% in 2018, as compared to the previous year. The increase in the average balance of loans was due principally to increases in adjustable-rate commercial business and commercial real estate loans. The average yields earned on loans increased 19 basis points to 4.66% in 2018 from 4.47% in 2017 as maturing lower rate loans were replaced by loans at current higher market rates. Interest on taxable investment securities increase \$1.6 million in 2018, as compared with the previous year. The average yields earned on taxable investment securities increased 66 basis points to 2.74% in 2018 as compared to 2.08% in 2017, accounting for an increase in interest income of \$1.3 million in 2018, as compared to 2017. The year-over-year increase in the interest rates earned on taxable investment securities was primarily due to increases in shorter-term interest rates that allowed amortizing and maturing securities' balances to be replaced in 2018 with generally higher-yielding securities. The average balance of taxable investment securities increased \$13.3 million, or 7.2%, in 2018, as compared to the previous year, accounting for an increase in 2018 interest income from investment securities of \$293,000, as compared to 2017.

Interest Expense

Changes in interest expense result from changes in the average balances of deposits and borrowings and the related average interest costs on those balances.

Interest expense increased \$2.7 million, or 43.8%, to \$9.0 million in 2018, as compared to \$6.3 million in the previous year. The increase in interest expense was primarily the result of increases in interest paid on time deposits and MMDA accounts of \$2.0 million and \$878,000, respectively. Increases between 2018 and 2017 were recorded in average rates paid on time deposits, FHLBNY borrowings (net of hedging activities in the amount of \$598,000 recorded in 2017) and MMDA accounts of 56 basis points, 51 basis points and 35 basis points, respectively. The increase in interest expense was primarily due to a generally rising interest rate environment in 2018 and the competitive interest rates offered in the Bank's market place.

Total interest expense also increased in 2018, as compared to the previous year, due to increases in the average balance of time deposits and MMDA accounts of \$53.7 million and \$5.3 million, respectively. The increase in the average balance of time deposits in 2018 was due to an increase of \$28.7 million in time deposits acquired through the CDARS program and \$25.0 million in time deposits obtained by the Bank through its customer base. The increase in the average balance of time deposits, and to a lesser extent, the increase in the average balance of MMDA accounts were largely the result of promotional activity designed to increase balances within these deposit categories and, to a lesser extent, the opening of the Bank's tenth full-service branch location in the fourth quarter of 2018.

In addition to the factors discussed above related to the increase in interest expense in 2018 as compared to the previous year, the Company incurred \$598,000 in pre-tax interest expense related to short-term interest rate hedging activities in 2017. On five occasions during 2017, the Company sold, and subsequently repurchased, a U.S. Treasury security in the approximate amount of \$40.0 million for each transaction. These transactions were intended to act as hedges against rising short-term interest rates. The Company was in controlling possession of, but did not own, the securities at the time of each sale. The securities had been received by the Company, under industry-standard repurchase agreements, from an unrelated third party as collateral for 30-day loans approximately equal to the value of the sold Treasury security on each occasion which were made at market rates of interest to that third party. The security sale on each occasion provided the funds necessary to advance the loan to the third party and placed the Company in what is generally described as a "short position" with respect to the sold U.S. Treasury security. These transactions acted as a hedge against rising short-term interest rates because the price of each sold security would be expected to decline in a rising short-term interest rate environment and could therefore be re-acquired at the conclusion of each 30-day loan period at a price lower than the price at which the security was originally sold. Short-term rates generally rose over the combined duration of these transactions and, consequently, the Company recognized aggregate gains on the sale and repurchase of the securities in the amounts of \$428,000 for the twelve months ended December 31, 2017. The transactions' gains were characterized as capital gains for tax purposes. These capital gains utilized existing, previously reservedfor, capital loss tax carryforwards that were established in 2013. The Company recognized tax benefits related to these transactions of \$150,000 for the twelve months ended December 31, 2017. The tax benefits arose from the reversal of valuation allowances established in 2013 against the portion of the Company's deferred tax asset related to existing capital loss carryforward positions. The valuation allowances were originally established due to the uncertainty at that time of the Company's ability to generate future capital gain income within the five-year statutory life of the capital loss carryforward position under the Internal Revenue Code. The reversals of these valuation allowances against deferred tax assets had the effect of reducing the Company's effective income tax rate by 3.3% in 2017.

The capital gain income and the additional recognized tax benefits derived from these transactions were partially offset by an additional \$368,000 in after-tax interest expense on borrowings for the year ended December 31, 2017. In total, net after-tax net income was increased by \$178,000 in 2017 as a result of the hedging transactions. All hedging transactions were closed at December 31, 2017 and had no effect on the Company's consolidated statement of condition on that date. There were no hedging activities in 2018.

Provision for Loan Losses

We establish a provision for loan losses, which is charged to operations, at a level management believes is appropriate to absorb probable incurred credit losses in the loan portfolio. In evaluating the level of the allowance for loan losses, management considers historical loss experience, the types and amount of loans in the loan portfolio, adverse situations that may affect a borrower's ability to repay, estimated value of any underlying collateral, and prevailing economic conditions. This evaluation is inherently subjective as it requires estimates that are susceptible to significant revision as more information becomes available or as future events change. The provision for loan losses represents management's estimate of the amount necessary to maintain the allowance for loan losses at an adequate level.

The Company recorded a provision for loan losses of \$1.5 million in 2018 as compared to \$1.8 million in the prior year. The \$272,000 year-over-year decrease in provision for loan losses reflected the loan portfolio's generally improving credit quality metrics partially offset by the effects of a 6.8% increase in aggregate loan balances from December 31, 2017 to December 31, 2018. In addition, during 2017, the Company recorded a specific reserve of \$300,000 for a single commercial real estate loan with an outstanding balance of \$1.7 million. The loan was collateralized by a special-purpose commercial property and the balance of the loan was considered to not be fully realizable at that time. The Company recorded \$1.3 million in net charge-offs in 2018 as compared to \$890,000 in net charge-offs in 2017. The ratio of net charge-offs to average loans increased to 0.22% in 2018 from 0.16% in 2017. The increase in the year-over-year charge-off rate was due primarily to the charge-off in 2018 of a single fully-reserved commercial real estate loan in the amount of \$596,000 and the charge-off of a single fully-reserved commercial and industrial loan in the amount of \$124,000.

Noninterest Income

The Company's noninterest income is primarily comprised of fees on deposit account balances and transactions, loan servicing, commissions and net gains or losses on sales of securities, loans, and foreclosed real estate.

The following table sets forth certain information on noninterest income for the years indicated.

	Years Ended December 31,						
(Dollars in thousands)		2018		2017		Change	
Service charges on deposit accounts	\$	1,148	\$	1,130	\$	18	1.6%
Earnings and gain on bank owned life insurance		427		284		143	50.4%
Loan servicing fees		170		149		21	14.1%
Debit card interchange fees		576		484		92	19.0%
Insurance agency revenue		840		803		37	4.6%
Other charges, commissions and fees		868		709		159	22.4%
Noninterest income before gains		4,029		3,559		470	13.2%
Net (losses) gains on sales and redemptions of investment securities		(182)		489		(671)	-137.2%
Net gains on sales of loans and foreclosed real estate		50		37		13	35.1%
Loss on marketable equity securities		(62)		-		(62)	100.0%
Total noninterest income	\$	3,835	\$	4,085	\$	(250)	-6.1%

Noninterest income for the year ended December 31, 2018 decreased \$250,000, or 6.1%, from the year ended December 31, 2017. Noninterest income before gains (losses) on the sales and redemptions of investment securities, loss on marketable equity securities, and gains on the sale of loans and foreclosed real estate increased \$470,000, or 13.2%, to \$4.0 million in 2018 as compared to \$3.6 million in 2017. This \$470,000 increase in 2018, as compared with the previous year, was primarily due to increases in other charges, commissions and fees of \$196,000, increased gains on bank owned life insurance of \$143,000, and aggregate increases of \$131,000 in service charges on deposit accounts, loan servicing fees and debit card interchange fees.

Net gains (losses) on the sales and redemptions of investment securities decreased \$671,000 from a gain of \$489,000 in 2017 to a loss of \$182,000 in 2018. During 2018, the Company realized losses of \$182,000 on the sales of certain securities in order to provide funding for reinvestment into loans and securities considered to be better matches for the Company's overall balance sheet strategies. During 2017, the Company engaged in certain short-term interest rate hedging strategies that generated net gains of \$428,000. In addition, the Company realized net gains on the sales and redemptions of investment securities of \$61,000 as the Company sold certain securities as part of its overall asset management strategies.

Noninterest Expense

The following table sets forth certain information on noninterest expense for the years indicated.

		Years Ended	Dece	mber 31,	
(Dollars in thousands)	2018	2017		Change	_
Salaries and employee benefits	\$ 13,304	\$ 11,917	\$	1,387	11.6%
Building occupancy	2,325	2,196		129	5.9%
Data processing	1,995	1,779		216	12.1%
Professional and other services	1,360	952		408	42.9%
Advertising	935	809		126	15.6%
FDIC assessments	492	473		19	4.0%
Audits and exams	422	353		69	19.5%
Insurance agency expense	875	932		(57)	-6.1%
Community service activities	541	415		126	30.4%
Other expenses	1,300	1,268		32	2.5%
Total noninterest expenses	\$ 23,549	\$ 21,094	\$	2,455	11.6%

Noninterest expense for 2018 increased \$2.5 million, or 11.6%, to \$23.6 million from \$21.1 million for the prior year. Higher noninterest expenses largely reflect investments in personnel and support functionality related to the Company's continued efforts to increase its business activities, primarily in the Syracuse market. In addition, these higher expenses reflect management's execution of its planned enhancements to the Company's risk management capabilities and improvements to the Company's customer service level functionality.

The year-over-year increase in noninterest expenses was primarily due to higher personnel expenses that increased \$1.4 million, or 11.6%, in 2018 as compared to 2017. The increase in salaries expense was due to the expansion of the Company's staffing levels in a number of areas, primarily focused on enhanced business development, risk management activities and customer service-related activities. These increases in personnel expenses resulted from increases of \$1.4 million, or 20.0%, in salaries expense and \$252,000, or 12.6%, in aggregate employee benefits and payroll taxes, partially offset by decreases of \$242,000, or 20.7%, in commission expense, and \$63,000, or 4.0%, in all other personnel expense categories. Personnel expense in 2018 was increased by \$536,000 (\$443,000 in salaries and employee benefits, and \$93,000 in stock-based compensation) due to the contractually-mandated acceleration of certain retirement benefits for a senior officer who elected to retire prior to his originally scheduled full retirement date. Absent the effects of this nonrecurring accelerated retirement expense, personnel expense would have been reduced by \$536,000 from \$13.3 million to \$12.8 million for the year ended December 31, 2018 and would have represented a 7.1% increase from the \$11.9 million in personnel expense recorded in 2017.

Building and occupancy expense increased \$129,000, or 5.9%, primarily due to increased maintenance, depreciation and communications expenses principally related to the Company's ongoing refurbishment and modernization programs for its physical facilities and the opening of the Bank's tenth full-service branch location, located in Clay NY, in November 2018.

Data processing expense increased \$216,000, or 12.1%, primarily due to increased equipment depreciation related to system upgrades and increased transaction-related fees paid to third-party vendors. These increased transaction-related fees resulted from higher transaction volumes derived from both greater numbers of customers in 2018, as compared to the previous year, and increased utilization levels by existing customers of the Bank's internet and mobile banking offerings.

Professional and other services expense increased \$408,000, or 42.9%, primarily due to the increased use in 2018 of externally-sourced management consulting services. The increased use of these services related primarily to operational and strategic planning activities that took place during 2018.

Advertising expense increased \$126,000, or 15.6%, in 2018 as compared to the previous year, as the Company sought to increase brand awareness and corresponding business activity within the Company's market area, particularly in Onondaga County. In addition, the Company increased its overall direct-to-customer advertising expenditures in the latter half of 2018 in support of the opening of the Bank's tenth full-service branch location.

Audits and exams expense increased \$69,000, or 19.6%, in 2018 principally due to increased utilization of third-party internal audit services in 2018, as compared to the previous year.

Community service activities increased \$126,000, or 30.4%, in 2018 primarily due to the Company's expanded presence in the Syracuse market. These activities, include event sponsorships, financial support for community development agencies, memberships and other direct support for economic development agencies and similar organizations dedicated to growing the economies, and increasing employment, within our marketplace, and charitable donations. These activities are intended to support overall economic and social development within the communities in which we serve and to promote overall brand awareness.

Income Tax Expense

The Company reported income tax expense of \$546,000 in 2018 and \$922,000 in 2017. Income tax expense decreased \$376,000 in 2018 as compared to the previous year. On December 22, 2017, the Tax Act was signed into law. The Tax Act instituted significant changes to various sections of the Internal Revenue Code that affects the Company. Most notably, the Tax Act reduced the Company's marginal federal income tax rate from 34.0% to 21.0% starting January 1, 2018. The Company's effective tax rate differs from the federal statutory rate due primarily to non-taxable interest income and other tax advantaged income derived from bank owned life insurance. Other factors, such as the effects of state income taxes have typically partially offset to the effective tax rate reducing effects of tax advantaged income.

New York State franchise tax is imposed in an amount equal to the greater of 6.5% of Business Income, .075% of average Business Capital, or a fixed dollar amount based on New York sourced gross receipts. Various Business Income subtraction modifications are available to qualified banks based on its qualified loan portfolio. Commencing January 1, 2018, the Company changed its subtraction modification from that of a captive real estate investment trust (REIT) to one based on interest income from qualifying loans. This change follows the laws enacted by New York State effective January 1, 2015. As a result, for 2018 the Company is subject to a fixed dollar amount and the current effective income tax in New York State was reduced to close to \$0. It is anticipated that the Company's New York State effective income tax rate will remain substantially at 0.0% for future periods under the current law.

The Bank maintains a pool of loans that generates income sourced from the State of Indiana. Taxes from this activity are considered to be nominal to the overall financial statements.

As a Maryland business corporation, the Company is required to file an annual report with, and pay franchise taxes to, the State of Maryland.

In 2018, the Company's effective tax rate was 11.9%, as compared to 20.6% in 2017. The Company's federal statutory income tax rate of 21.0% was reduced 6.2% in 2018 by the combined effects of tax exempt income received in the form of interest on tax exempt loans and investment securities, and the increase in the value of its bank owned life insurance. All other individually immaterial items related to the calculation of the Company's effective tax rate decreased the Company's effective tax rate by an aggregate 2.9% in 2018.

In 2017, GAAP required that the impact of the provisions of the Tax Act on deferred tax assets and liabilities be accounted for in the period of enactment. Accordingly, the Company recorded an income tax benefit in the fourth quarter of 2017 related to the Tax Act in the amount of \$155,000. The reduction in income tax expense was largely attributable to the reduction in the value of net deferred tax assets and liabilities reflecting lower future tax obligations resulting from the Tax Act's enacted lower federal corporate tax rate. Absent this one-time income tax benefit, the Company's income tax expense for 2017 would have been \$1.1 million. The Company's reported effective tax rate for 2017 was 20.6%. Absent this one-time tax benefit discussed above, the Company's effective tax rate in 2017 would have been 24.1%.

The Company's effective tax rate in 2017, absent the effects of the one-time benefit related to the Tax Act, was further reduced in 2017 by 3.5% from 24.1% to 20.6% due to the reversal of \$150,000 in valuation allowances for deferred tax assets related to capital loss carryforward tax positions established in previous years. The Company was able to generate sufficient capital gains in 2017 to offset all capital loss carryforward positions at December 31, 2016 and thereby eliminate the need for a reserve against their related deferred tax assets. At December 31, 2018 and 2017, the Company had no unused capital loss carryforward positions or deferred tax assets related to those positions.

See Note 17 to the consolidated financial statements for the reconciliation of the statutory tax rate to the effective tax rate.

Earnings Per Share

Basic and diluted earnings per share for the year ended December 31, 2018 were \$0.97 and \$0.94, respectively, as compared to basic and diluted earnings per share of \$0.86 and \$0.83 for the year ended December 31, 2017. The increase in basic and diluted earnings per share comparing year-over-year was due to the increase in net income available to common shareholders between these two years.

CHANGES IN FINANCIAL CONDITION

Total assets were \$933.1 million at December 31, 2018 as compared to \$881.3 million at December 31, 2017. The increase in total assets of \$51.9 million, or 5.9%, was the result of the increase in loans, principally commercial real estate and residential mortgages of \$39.4 million, partially offset by a \$5.3 million reduction in investment securities. All other assets increased by a net \$17.7 million, primarily due to an increase in bank owned life insurance, cash and equivalents and premises and equipment of \$5.2 million, \$4.3 million and \$4.5 million, respectively. The increase in total assets in 2018 was funded largely by a \$44.7 million increase in borrowings from the FHLBNY, and a \$21.6 million increase in customer deposits, partially offset by an \$18.1 million decrease in time deposits acquired through the CDARS program.

Investment Securities

The investment portfolio represented 26.5% of the Company's average interest earning assets in 2018 and is designed to generate a favorable rate of return consistent with safety of principal while assisting the Company in meeting its liquidity needs and interest rate risk strategies. All of the Company's investments, with the exception of marketable equity securities, are classified as either available-for-sale or held-to-maturity. The Company does not hold any trading securities. The Company invests primarily in securities issued by United States Government agencies and sponsored enterprises ("GSE"), mortgage-backed securities, collateralized mortgage obligations, state and municipal obligations, mutual funds, equity securities, investment grade corporate debt instruments, and common stock issued by the FHLBNY. By investing in these types of assets, the Company reduces the credit risk of its asset base through geographical and collateral-type diversification but must accept lower yields than would typically be available on loan products. Our mortgage-backed securities and collateralized mortgage obligations portfolio includes privately-issued but substantially over-collateralized pass-through securities as well as pass-through securities guaranteed by Fannie Mae, Freddie Mac, or Ginnie Mae. The investment securities portfolio has approximately 6.5% of its composition in pass-through securities comprised of seasoned mortgage-backed securities whose underlying collateral was, to varying degrees (depending on the individual security's initial and current composition), considered sub-prime or high-risk at the securities' issuance dates. These privately-issued mortgage-backed securities are believed to be adequately collateralized by subordinate structures and ongoing credit support mechanisms and are, therefore, well insulated from loss of principal due to credit default.

At December 31, 2018, available-for-sale investment securities increased 3.8% to \$177.7 million and held-to-maturity investment securities decreased 18.6% to \$53.9 million. There were no securities that exceeded 10% of consolidated shareholders' equity. During 2018, the bank transferred \$35.2 million in securities from held-to-maturity to available-for-sale concurrent with the adoption in 2018 of *ASU 2017-12: Derivatives and Hedging [Topic 815]: Targeted Improvements to Accounting for Hedging Activities.* The transfer had had no material effect on the results of operations in 2018. See Note 4 to the consolidated financial statements for further discussion on securities.

Our available-for-sale investment securities are carried at fair value and our held-to-maturity investment securities are carried at amortized cost.

The following table sets forth the carrying value of the Company's investment portfolio at December 31:

		Available	e-for-S	Sale	 Held-to-	Matur	ity
(In thousands)	·	2018		2017	2018		2017
Investment Securities:							
US treasury, agencies and GSEs	\$	17,031	\$	41,336	\$ 3,987	\$	4,948
State and political subdivisions		23,065		13,681	5,089		35,130
Corporate		17,200		8,600	9,924		8,311
Asset backed securities		18,119		6,644	1,509		-
Residential mortgage-backed - US agency		31,666		35,742	11,601		6,853
Collateralized mortgage obligations - US agency		46,441		53,348	13,972		7,574
Collateralized mortgage obligations - Private label		23,936		11,052	7,826		3,380
Common stock - financial services industry		206		735	-		-
Total investment securities	\$	177,664	\$	171,138	\$ 53,908	\$	66,196

The following table sets forth the scheduled maturities, amortized cost, fair values and average yields for the Company's investment securities at December 31, 2018. Average yield is calculated on the amortized cost to maturity. Adjustable rate mortgage-backed securities are included in the period in which interest rates are next scheduled to be reset.

AVAILABLE FOR SALE

	One Year	or Less		'han One e Years	More Than Five to Ten Years		
		Annualized		Annualized		Annualized	
	Amortized	Weighted	Amortized	Weighted	Amortized	Weighted	
(Dollars in thousands)	Cost	Avg Yield	Cost	Avg Yield	Cost	Avg Yield	
Debt investment securities:							
US Treasury, agencies and GSEs	\$ 10,173	1.61%	\$ 5,000	2.30%	\$ 1,998	3.47%	
State and political subdivisions	281	1.75%	5,686	2.57%	5,382	2.33%	
Corporate	37	2.81%	3,814	3.19%	13,538	4.17%	
Asset backed securities	-	-	3,548	4.26%	8,055	3.88%	
Total	\$ 10,491	1.62%	\$ 18,048	2.96%	\$ 28,973	3.70%	
Mortgage-backed securities:							
Residential mortgage-backed - US agency	\$ -	-	\$ 5,592	2.45%	\$ 10,127	2.41%	
Collateralized mortgage obligations - US agency	-	-	1,945	1.94%	4,600	2.11%	
Collateralized mortgage obligations - Private label	-	-	5,090	4.00%	-	-	
Total	\$ -	-	\$ 12,627	3.00%	\$ 14,727	2.32%	
Other non-maturity investments:							
Equity securities	\$ 206	1.39%	-	-	\$ -	-	
Total	\$ 206	1.39%	\$ -	-	\$ -	-	
Total investment securities	\$ 10,697	1.61%	\$ 30,675	2.97%	\$ 43,700	3.23%	

	More Than Ten Years				Total Investment Securities			
		Annualized				Annualized		
	Amortized	Weighted	Amortize	d	Fair	Weighted		
(Dollars in thousands)	Cost	Avg Yield	Co	st	Value	Avg Yield		
Debt investment securities:								
US Treasury, agencies and GSEs	\$ -	-	\$ 17,17	1 \$	17,031	2.03%		
State and political subdivisions	12,312	2.58%	23,66	1	23,065	2.51%		
Corporate	-	-	17,38	9	17,200	3.95%		
Asset backed securities	6,640	4.74%	18,24	3	18,119	4.27%		
Total	\$ 18,952	3.34%	\$ 76,46	4 \$	75,415	3.15%		
Mortgage-backed securities:								
Residential mortgage-backed - US agency	\$ 16,690	2.51%	\$ 32,40	9 \$	31,666	2.47%		
Collateralized mortgage obligations - US agency	41,556	2.50%	48,10	1	46,441	2.44%		
Collateralized mortgage obligations - Private label	19,227	3.40%	24,31	7	23,936	3.53%		
Total	\$ 77,473	2.73%	\$ 104,82	7 \$	102,043	2.70%		
Other non-maturity investments:								
Equity securities	\$ -	-	\$ 20	6 \$	206	1.39%		
Total	\$ -	-	\$ 20	6 \$	206	1.39%		
Total investment securities	\$ 96,425	2.85%	\$ 181,49	7 \$	177,664	2.89%		

HELD-TO-MATURITY

			More 7	Γhan One	More Th	ıan Five
	One Year or Less		to Fiv	ve Years	to Ten Years	
		Annualized		Annualized		Annualized
	Amortized	Weighted	Amortized	Weighted	Amortized	Weighted
(Dollars in thousands)	Cost	Avg Yield	Cost	Avg Yield	Cost	Avg Yield
Debt investment securities:						
US Treasury, agencies and GSEs	\$ 1,996	1.78%	\$ 1,991	1.89%	\$ -	-
State and political subdivisions	1,114	2.38%	1,485	2.78%	1,780	3.08%
Corporate	-	-	2,809	3.69%	4,996	5.29%
Asset backed securities	-	-	1,509	4.16%	-	-
Total	\$ 3,110	1.99%	\$ 7,794	3.15%	\$ 6,776	4.71%
Mortgage-backed securities:						
Residential mortgage-backed - US agency	\$ -	-	\$ 1,472	3.01%	\$ 4,484	3.33%
Collateralized mortgage obligations - US agency	-	-	2,957	3.17%	1,478	3.63%
Collateralized mortgage obligations - Private label	-	-	2,000	4.72%	2,172	3.86%
Total	\$ -	-	\$ 6,429	3.62%	\$ 8,134	3.53%
Total investment securities	\$ 3,110	1.99%	\$ 14,223	3.36%	\$ 14,910	4.06%

	More Than	Ten Years	Tota	al Inve	estment Securiti	es
		Annualized				Annualized
	Amortized	Weighted	Amortized		Fair	Weighted
(Dollars in thousands)	Cost	Avg Yield	Cost		Value	Avg Yield
Debt investment securities:						
US Treasury, agencies and GSEs	\$ -	- \$	3,987	\$	3,952	1.83%
State and political subdivisions	710	4.97%	5,089		5,027	3.10%
Corporate	2,119	3.74%	9,924		9,746	4.51%
Asset backed securities	-	=	1,509		1,496	4.16%
Total	\$ 2,829	4.05% \$	20,509	\$	20,221	3.61%
Mortgage-backed securities:						
Residential mortgage-backed - US agency	\$ 5,645	3.56% \$	11,601	\$	11,678	3.40%
Collateralized mortgage obligations - US agency	9,537	3.63%	13,972		14,052	3.53%
Collateralized mortgage obligations - Private label	3,654	3.54%	7,826		7,818	3.93%
Total	\$ 18,836	3.59% \$	33,399	\$	33,548	3.58%
Total investment securities	\$ 21,665	3.65% \$	53,908	\$	53,769	3.59%

The yield information disclosed above does not give effect to changes in fair value that are reflected in accumulated other comprehensive loss in consolidated shareholders' equity.

Loans Receivable

Average loans receivable represented 71.5% of the Company's average interest earning assets in 2018 and account for the greatest portion of total interest income. At December 31, 2018, the Company has the largest portion of its loan portfolio in commercial loan products that represent 53.1% of total loans. These products include credits extended to businesses and political subdivisions within its marketplace that are typically secured by commercial real estate, equipment, inventories, and accounts receivable. The residential mortgage loans product segment represents 38.5% of total loans at December 31, 2018. The Company has seen the proportion of commercial loan products to total loans increase in recent years and it will continue to emphasize these types of loans. Notwithstanding this emphasis, the Company also anticipates a continued commitment to financing the purchase or improvement of residential real estate in its market area.

The following table sets forth the composition of our loan portfolio, including net deferred costs, in dollar amount and as a percentage of loans. There were no loans classified as loans held for sale at the dates indicated.

					Decemb	oer 31,				
(Dollars in thousands)	2018		201	7	201	16	201	.5	20	14
Residential real estate	\$ 238,894	38.5%	\$221,623	38.2%	\$206,900	42.0%	\$189,367	44.0%	\$175,322	45.2%
Commercial real estate	212,622	34.3%	192,540	33.2%	150,569	30.6%	129,481	30.1%	125,883	32.5%
Commercial and tax exempt	116,914	18.8%	111,786	19.2%	103,394	21.0%	83,016	19.3%	59,268	15.3%
Home equity and junior liens	26,416	4.3%	26,235	4.5%	24,991	5.1%	23,688	5.5%	22,905	5.9%
Consumer loans	25,424	4.1%	28,647	4.9%	6,293	1.3%	4,886	1.1%	4,160	1.1%
Total loans receivable	\$620,270	100.0%	\$580,831	100.0%	\$492,147	100.0%	\$430,438	100.0%	\$387,538	100.0%

The following table shows the amount of loans outstanding, including net deferred costs, as of December 31, 2018 which, based on remaining scheduled repayments of principal, are due in the periods indicated. Demand loans having no stated schedule of repayments, no stated maturity, and overdrafts are reported as one year or less. Adjustable and floating rate loans are included in the period on which interest rates are next scheduled to adjust, rather than the period in which they contractually mature. Fixed rate loans are included in the period in which the final contractual repayment is due.

	Due Under	Due 1-5	Due Over	
(In thousands)	One Year	Years	Five Years	Total
Real estate:				
Commercial real estate	\$ 5,164	\$ 5,500	\$ 201,958	\$ 212,622
Residential real estate	105	4,677	234,112	238,894
	5,269	10,177	436,070	451,516
Commercial and tax exempt	46,695	26,185	44,034	116,914
Home Equity and junior liens	60	713	25,643	26,416
Consumer	1,196	18,380	5,848	25,424
Total loans	\$ 53,220	\$ 55,455	\$ 511,595	\$ 620,270

The following table sets forth fixed- and adjustable-rate loans at December 31, 2018 that are contractually due after December 31, 2019:

	Due After
(In thousands)	One Year
Interest rates:	
Fixed	\$ 271,986
Variable	295,064
Total loans	\$ 567,050

Total loans receivable, including net deferred costs, increased \$39.4 million, or 6.8%, to \$620.3 million at December 31, 2018 when compared to \$580.8 million at December 31, 2017, primarily due to the growth in adjustable-rate commercial and commercial real estate loans, and fixed-rate residential mortgage loans. The Company does not originate sub-prime, Alt-A, negative amortizing or other higher risk structured residential mortgages. Commercial and commercial real estate loans increased \$25.2 million, or 8.3%, to \$329.5 million at December 31, 2018 as compared to \$304.3 million at December 31, 2017. The Company maintained its previously established credit standards, but continued to benefit from the expanding relationship-derived business activity within the markets that the Bank serves.

Nonperforming Loans and Assets

The following table represents information concerning the aggregate amount of nonperforming assets:

	December 31,											
(Dollars In thousands)		2018		2017		2016		2015		2014		
Nonaccrual loans:												
Commercial and commercial real estate loans	\$	830	\$	2,443	\$	1,863	\$	3,238	\$	4,030		
Consumer		142		363		388		365		324		
Residential mortgage loans		1,176		2,088		2,560		1,715		1,902		
Total nonaccrual loans		2,148		4,894		4,811		5,318		6,256		
Total nonperforming loans		2,148		4,894		4,811		5,318		6,256		
Foreclosed real estate		1,173		468		597		517		261		
Total nonperforming assets	\$	3,321	\$	5,362	\$	5,408	\$	5,835	\$	6,517		
Accruing troubled debt restructurings	\$	2,574	\$	2,539	\$	5,531	\$	1,916	\$	2,219		
Nonperforming loans to total loans		0.35%		0.84%		0.98%)	1.24%)	1.61%		
Nonperforming assets to total assets		0.36%		0.61%		0.72%)	0.94%)	1.16%		

Nonperforming assets include nonaccrual loans, nonaccrual troubled debt restructurings ("TDR"), and foreclosed real estate ("FRE"). Loans are considered a TDR when, due to a borrower's financial difficulties, the Company makes a concession(s) to the borrower that it would not otherwise consider. These modifications may include an extension of the term of the loan, and granting a period when interest-only payments can be made, with the principal payments made over the remaining term of the loan or at maturity. TDRs are included in the above table within the categories of nonaccrual loans or accruing TDRs.

Total nonperforming loans decreased \$2.7 million, or 56.1%, between December 31, 2017 and December 31, 2018, driven by decreases of \$1.6 million, \$912,000 and \$221,000 in nonperforming commercial and commercial real estate, residential real estate and consumer loans, respectively. The decrease in nonperforming commercial and commercial real estate loans was comprised of 11 loans that were nonperforming at December 31, 2018 as compared to 18 loans that were nonperforming at December 31, 2018 as compared to 28 loans that were nonperforming at December 31, 2017. Management believes that the value of the collateral properties underlying the loans is sufficient to preclude any significant losses related to these loans. Management continues to monitor and react to national and local economic trends as well as general portfolio conditions which may impact the quality of the portfolio, and considers these environmental factors in support of the allowance for loan loss reserve. Management believes that the current level of the allowance for loan losses, at \$7.3 million at December 31, 2018, adequately addresses the current level of risk within the loan portfolio, particularly considering the types and levels of collateralization supporting the substantial majority of the portfolio. The Company maintains strict loan underwriting standards and carefully monitors the performance of the loan portfolio.

Foreclosed Real Estate ("FRE") balances increased by \$705,000 at December 31, 2018, from the prior year end and reflected the timing of foreclosures versus sales in 2018. The number of FRE properties remained constant at five properties at December 31, 2018 and December 31, 2017.

The Company generally places a loan on nonaccrual status and ceases accruing interest when loan payment performance is deemed unsatisfactory and the loan is past due 90 days or more. There are no loans that are past due 90 days or more and still accruing interest. The Company considers a loan impaired when, based on current information and events, it is probable that the Company will be unable to collect the scheduled payments of principal and interest when due according to the contractual terms of the loan.

Had the loans in nonaccrual status performed in accordance with their original terms, additional interest income of \$75,000 and \$66,000 would have been recorded for the years ended December 31, 2018 and December 31, 2017, respectively.

The measurement of impaired loans is based upon the fair value of the collateral or the present value of future cash flows discounted at the historical effective interest rate for impaired loans when the receipt of contractual principal and interest is probable. At December 31, 2018 and December 31, 2017, the Company had \$6.0 million and \$9.2 million in loans, which were deemed to be impaired, having specific reserves of \$631,000 and \$1.1 million, respectively. The \$3.3 million year-over-year

decrease in impaired loans was principally due to decreases of \$2.6 million, \$291,000 and \$224,000 in impaired commercial real estate loans, impaired commercial lines of credit, and impaired other commercial and industrial loans, respectively. All other loan product segments (which include residential loans, home equity loans, and junior lien loans on residential property) reported modest year-over-year decreases in impaired loans of \$114,000 in aggregate.

The threshold for individually measuring impairment on commercial real estate or commercial loans remains at \$100,000 and for residential mortgage loans remains at \$300,000 at December 31, 2018. The thresholds described above do not apply to loans that have been classified as troubled debt restructurings, which are individually measured for impairment at the time that the restructuring is affected.

Appraisals are obtained at the time a real estate secured loan is originated. For commercial real estate held as collateral, the property is inspected every two years.

Management has identified certain loans with potential credit profiles that may result in the borrowers not being able to comply with the current loan repayment terms and which may result in possible future impaired loan reporting. Potential problem loans increased \$10.7 million to \$14.6 million at December 31, 2018, compared to \$3.9 million at December 31, 2017. These loans have been internally classified as special mention, substandard, or doubtful, yet are not currently considered impaired. The increase in potential problem loans was primarily due to a \$7.5 million increase in potential problem commercial real estate loans, a \$2.9 million increase in commercial and industrial loans, and a \$1.3 million increase in commercial lines of credit. These increases were partially offset by a decrease of \$977,000 in potential problem residential real estate loans. The \$7.5 million increase in potential problem commercial real estate loans was primarily due to the addition of seven relationships; six relationships rated special mention with an outstanding balance of \$6.9 million, and one loan rated substandard with an outstanding balance of \$527,000.

Total potential problem loans, including impaired loans, were \$20.6 million at December 31, 2018, comprised of special mention, substandard and doubtful loans of \$14.3 million, \$4.2 million and \$2.1 million, respectively. Total problem loans were \$13.2 million at December 31, 2017, comprised of special mention, substandard and doubtful loans of \$3.0 million, \$5.3 million and \$4.9 million, respectively. Substandard and doubtful loans declined \$1.1 million and \$2.8 million, respectively, at December 31, 2018 as compared to December 31, 2017, partially offset by an increase of \$11.3 million in loans classified as special mention. The decrease in loans classified as doubtful was primarily due to a \$2.0 million decrease in commercial real estate loans, due to a single commercial real estate loan with an outstanding balance of \$1.7 million that was doubtful at December 31, 2017, and was charged off and moved into foreclosure at December 31, 2018. The decrease in loans classified as substandard was primarily due to a decrease in residential real estate loans and commercial lines of credits, which decreased \$679,000 and \$290,000, respectively. The increase in loans classified as special mention was primarily due to the \$11.1 million increase in commercial real estate loans, other commercial and industrial loans and commercial lines of credit, due to the addition of one aggregated relationship totaling \$8.9 million and five other individually unrelated relationships with an outstanding balance of \$1.9 million. The aggregated relationship, classified as special mention, in the amount of \$8.9 million, consists of eight loans made to a real estate developer secured by, or related to, multiple projects. The eight loans include three secured commercial real estate loans totaling \$5.5 million, two unsecured commercial and industrial loans totaling \$2.2 million, and three secured commercial lines of credit totaling \$1.2 million. All loans were current as of December 31, 2018 and as of the date of this filing. The aggregated re

The Company measures delinquency based on the amount of past due loans as a percentage of total loans. The ratio of delinquent loans to total loans decreased to 1.81% at December 31, 2018 as compared to 2.09% at December 31, 2017. Delinquent loans decreased \$921,000 year-over-year, primarily due to a decrease of \$864,000 in delinquent residential real estate loans. At December 31, 2018, there were \$11.2 million in loans past due including \$8.1 million, \$1.1 million and \$2.0 million in loans 30-59 days, 60-89 days, and greater than 90 days past due, respectively. At December 31, 2017, there were \$12.2 million in loans past due including \$4.3 million, \$3.3 million and \$4.6 million in loans 30-59 days, 60-89 days, and greater than 90 days past due, respectively.

The decrease of \$921,000 in total loans past due at December 31, 2018, as compared to December 31, 2017, was primarily due to a decrease of \$2.5 million and \$2.2 million in loans 90 days and over past due and 60-89 days past due, respectively, partially offset by an increase of \$3.8 million in loans 30-59 days past due. The decrease in loans 90 days and over past due was primarily due to a decrease of \$1.1 million in commercial real estate loans. At December 31, 2018 there were three new loans with an outstanding balance of \$323,000 that were over 90 days past due, while at December 31, 2017, there were seven loans with an outstanding balance of \$1.4 million. The decrease in loans 60-89 days past due was primarily due to a decrease of \$1.8 million in commercial real estate loans, due to a single commercial real estate loan with an outstanding balance of \$1.7 million

that was 60-89 days past due at December 31, 2017, and was charged off and moved into foreclosure as of December 31, 2018. The increase in loans 30-59 days past due was primarily due to an increase of \$3.5 million in commercial real estate loans. At December 31, 2018 there were eight loans with an outstanding balance of \$4.3 million that were 30-59 days past due, while at December 31, 2017, there were five loans with an outstanding balance of \$720,000 that were 30-59 days past due.

The ratio of the allowance to loan losses to period end loans at December 31, 2018 was 1.18% as compared to 1.23% at December 31, 2017.

In the normal course of business, the Bank has, from time to time, sold residential mortgage loans and participation interests in commercial loans. As is typical in the industry, the Bank makes certain representations and warranties to the buyer. Pathfinder Bank maintains a quality control program for closed loans and considers the risks and uncertainties associated with potential repurchase requirements to be minimal.

Allowance for Loan Losses

The allowance for loan losses is established through provision for loan losses and reduced by loan charge-offs net of recoveries. The allowance for loan losses represents the amount available for probable credit losses in the Company's loan portfolio as estimated by management. In its assessment of the qualitative factors used in arriving at the required allowance for loan losses, management considers changes in national and local economic trends, the rate of the portfolios' growth, trends in delinquencies and nonaccrual balances, changes in loan policy, and changes in management experience and staffing. These factors, coupled with the recent historical loss experience within the loan portfolio by product segment support the estimable and probable losses within the loan portfolio.

The Company establishes a specific allocation for all commercial loans identified as being impaired with a balance in excess of \$100,000 that are also on nonaccrual or have been risk rated under the Company's risk rating system as substandard, doubtful, or loss. The measurement of impaired loans is based upon either the present value of future cash flows discounted at the historical effective interest rate or the fair value of the collateral, less costs to sell for collateral dependent loans. At December 31, 2018, the Bank's position in impaired loans consisted of 44 loans totaling \$6.0 million. Of these loans, 23 loans, totaling \$2.1 million, were valued using the present value of future cash flows method; and 21 loans, totaling \$3.9 million, were valued based on a collateral analysis. The Company uses the fair value of collateral, less costs to sell to measure impairment on commercial and commercial real estate loans. Residential real estate loans in excess of \$300,000 will also be included in this individual loan review. Residential real estate loans less than this amount will be included in impaired loans if it is part of the total related credit to a previously identified impaired commercial loan. The Company also establishes a specific allowance, regardless to the size of the loan, for all loans subject to a troubled debt restructuring agreement.

The allowance for loan losses at December 31, 2018 and 2017 was \$7.3 million and \$7.1 million, or 1.18% and 1.23% of total year end loans, respectively. The Company recorded \$1.3 million in net charge-offs in 2018 as compared to \$890,000 in net charge-offs in 2017. The ratio of net charge-offs to average loans increased to 0.22% in 2018 from 0.16% in 2017. The increase in the year-over-year charge-off rate was due primarily to the charge-off in 2018 of a single fully-reserved commercial real estate loan in the amount of \$596,000 and the charge-off of a single fully-reserved commercial and industrial loan in the amount of \$124,000.

For further discussion of our allowance for loan losses procedures, please see "Business-Allowance for Loan Losses" and in Note 6 to the consolidated financial statements contained in this Annual Report on Form 10-K.

The following table sets forth the allocation of allowance for loan losses by loan category for the periods indicated. The allocation of the allowance by category is not necessarily indicative of future losses and does not restrict the use of the allowance to absorb losses in any category.

	20	018	20	017	20	016	20)15	20	014	
	Allocation	Percent of									
	of the	Loans to									
(Dollars in thousands)	Allowance	Total Loans									
Residential real estate	\$ 766	38.5%	\$ 865	38.2%	\$ 759	42.0%	\$ 581	44.0%	\$ 509	45.2%	
Commercial real estate	3,578	34.3%	3,589	33.1%	2,935	30.6%	2,983	30.1%	2,801	32.5%	
Commercial and tax exempt	2,016	18.8%	1,950	19.2%	2,056	21.0%	1,674	19.3%	1,497	15.3%	
Home equity and junior liens	409	4.3%	514	4.5%	331	5.1%	350	5.5%	388	5.9%	
Consumer loans	385	4.1%	208	4.9%	166	1.3%	118	1.1%	98	1.1%	
Unallocated	152		-		-		-		56		
Total	\$ 7,306	100.0%	\$ 7,126	100.0%	\$ 6,247	100.0%	\$ 5,706	100.0%	\$ 5,349	100.0%	

The following table sets forth the allowance for loan losses for the years indicated and related ratios:

(Dollars In thousands)	2018	2017	2016	2015	2014
Balance at beginning of year	\$ 7,126	\$ 6,247	\$ 5,706	\$ 5,349	\$ 5,041
Provisions charged to operating expenses	1,497	1,769	953	1,350	1,205
Recoveries of loans previously charged-off:					
Commercial real estate and loans	66	15	31	48	23
Consumer and home equity	58	46	63	69	52
Residential real estate	21	13	13	40	2
Total recoveries	145	74	107	157	77
Loans charged off:					_
Commercial real estate and loans	(952)	(587)	(69)	(787)	(634)
Consumer and home equity	(265)	(211)	(208)	(129)	(183)
Residential real estate	(245)	(166)	(242)	(234)	(157)
Total charged-off	(1,462)	(964)	(519)	(1,150)	(974)
Net charge-offs	(1,317)	(890)	(412)	(993)	(897)
Balance at end of year	\$ 7,306	\$ 7,126	\$ 6,247	\$ 5,706	\$ 5,349
Net charge-offs to average loans outstanding	0.22%	0.16%	0.09%	0.25%	0.25%
Allowance for loan losses to year-end loans	1.18%	1.23%	1.27%	1.33%	1.38%

Premises and Equipment

The Company held \$20.6 million and \$16.1 million in premises and equipment, net of accumulated depreciation, at December 31, 2018 and 2017, respectively. Premises and equipment, net of accumulated depreciation, increased \$4.5 million, or 27.9%, at December 31, 2018, as compared to December 31, 2017. The increase was primarily due to the acquisition and development costs associated with the Bank's tenth branch location, in Clay, NY, and the investment in a mixed use office and retail property located in downtown Oswego, NY. The Clay branch site was acquired, refurbished and opened in 2018. The mixed use office and retail property, acquired in the fourth quarter of 2018, was under development at December 31, 2018. This property is being developed primarily as a source of future rental income. The new branch location and the mixed use property added \$2.1 million and \$1.6 million, respectively, to the Company's total premises and equipment, net of accumulated depreciation, during 2018. The \$1.6 million recorded for the mixed use office and retail property was the full contractual price of the acquisition. Of that amount, \$400,000 is being held by the Company in escrow pending the successful completion of certain property development activities by the property's previous owner. This \$400,000 amount is recorded as an addition to other liabilities at December 31, 2018. The \$942,000 remainder of the increase in premises and equipment, net of accumulated depreciation, at December 31, 2018, as compared to December 31, 2017, was related to a variety of smaller, individually immaterial, replacement and refurbishment projects for both properties and data processing equipment infrastructure, and the site acquisition of the Syracuse Southwest Corridor branch site in the amounts of \$694,000, in the aggregate, and \$248,000, respectively.

Bank Owned Life Insurance

The Company held \$16.9 million and \$11.7 million in bank owned life insurance at December 31, 2018 and 2017, respectively. Bank owned life insurance increased \$5.2 million, or 44.3%, at December 31, 2018, as compared to December 31, 2017. The increase was primarily due to the purchase of \$5.0 million in additional bank owned life insurance in April 2018 and the increase in the cash value of the policies, in the amount of \$427,000, recorded as income in 2018, partially offset by the surrender of a policy related to a deceased former employee.

Deposits

The Company's deposit base is drawn from ten full-service offices in its market area. The deposit base consists of demand deposits, money management and money market deposit accounts, savings, and time deposits. Average deposits increased \$71.1 million, or 10.6%, in 2018. For the year ended December 31, 2018, 67.2% of the Company's average deposit base of \$741.0 million consisted of core deposits. Core deposits, which exclude time deposits, are considered to be more stable and provide the Company with a lower cost source of funds than time deposits. The Company will continue to emphasize retail and business

core deposits by providing depositors with a full range of deposit product offerings and will maintain its recent focus on deposit gathering within the Syracuse market.

At December 31, 2018, consumer deposits, and commercial and business deposits increased \$8.6 million and \$23.1 million, respectively, partially offset by a decrease in municipal deposits of \$28.3 million, when compared to December 31, 2017. The decrease in municipal deposits at December 31, 2018 as compared to December 31, 2017, was largely due to factors that the Company's management believes to be transitory. The increase in consumer deposits reflected the Bank's increased market penetration among non-business customers, particularly in northern Onondaga County, driven by the Bank's focused marketing initiatives. The increase in commercial and business deposits was the result of the Company's successful execution of its strategy to expand products and services to our existing commercial and business relationships within the markets that we serve. The decrease in municipal deposits at December 31, 2018, as compared to December 31, 2017, was largely due to factors that the Company's management believes to be transitory in nature, and primarily due to the specific short-term cash management requirements of a small number of large balance municipal depositors.

Total deposits of \$727.0 million at December 31, 2018 consisted in part of \$41.4 million in brokered money market and certificates of deposit accounts, respectively. Brokered deposits represented 5.7% of all deposits at December 31, 2018. Total deposits of \$723.6 million at December 31, 2017 consisted in part of \$94.1 million and \$51.1 million in brokered money market and certificates of deposit accounts, respectively. Brokered deposit represented 20.1% of all deposits at December 31, 2017.

The EGRRCPA repealed or modified certain provisions of the Dodd-Frank Act and eased regulations on all financial institutions with the exception of the largest banks. The EGRRCPA's provisions include, among other items, clarifying that, subject to various conditions, reciprocal deposits of another depository institution obtained using a deposit broker through a deposit placement network for purposes of obtaining maximum deposit insurance would not be considered brokered deposits subject to the FDIC's brokered-deposit regulations. At December 31, 2018, the Bank held \$41.4 million in deposits that under the EGRRCPA were categorized as brokered deposits. At December 31, 2017, the Bank had \$145.1 million in deposits that were categorized under the then-applicable regulations as brokered deposits. Of the \$145.1 million in deposits categorized as brokered deposits at December 31, 2017, \$59.5 million would be considered to be brokered deposits under the EGRRCPA regulations in effect at December 31, 2018.

The following table sets forth our deposit composition in dollar amount and as a percentage of total deposits.

			December	31,				
(Dollars in thousands)	2018	}	2017			20	016	
Savings accounts	\$ 80,545	11.1%	\$ 80,587	11.1%	\$	80,139	13.1	%
Time accounts	199,598	27.4%	160,736	22.2%	1	132,007	21.6	%
Time accounts of \$250,000 or more	77,224	10.6%	52,691	7.3%		57,349	9.4	%
Money management accounts	13,180	1.8%	14,905	2.1%		14,718	2.4	%
MMDA accounts	189,679	26.1%	253,088	35.0%	1	192,692	31.5	%
Demand deposit interest-bearing	57,407	7.9%	66,093	9.1%		53,587	8.8	%
Demand deposit noninterest-bearing	103,124	14.2%	89,783	12.4%		75,282	12.3	%
Mortgage escrow funds	6,303	0.9%	5,720	0.8%		5,209	0.9	%
Total Deposits	\$ 727,060	100.0%	\$ 723,603	100.0%	\$ 6	510,983	100.0	%

At December 31, 2018, time deposit accounts in excess of \$100,000 totaled \$156.8 million, or 56.6% of time deposits and 21.6% of total deposits. At December 31, 2017, these deposits totaled \$147.2 million, or 68.9% of time deposits and 20.3% of total deposits.

The following table indicates the amount of the Company's time deposit accounts of \$100,000 or more by time remaining until maturity as of December 31, 2018:

(In thousands)

Remaining Maturity:	
Three months or less	\$ 38,097
Three through six months	25,316
Six through twelve months	43,427
Over twelve months	49,912
Total	\$ 156,752

Borrowings

Borrowings are comprised primarily of advances and overnight borrowing at the FHLBNY.

The following table represents information regarding short-term borrowings for the years ended December 31:

(Dollars in thousands)	2018	2017	2016
Maximum outstanding at any month end	\$ 39,000 \$	41,600 \$	65,100
Average amount outstanding during the year	13,556	31,268	31,468
Balance at the end of the period	39,000	30,600	42,000
Average interest rate during the year	1.63%	1.34%	0.68%
Average interest rate at the end of the period	2.15%	1.32%	0.85%

The following table represents information regarding long-term borrowings for the years ended December 31:

(Dollars in thousands)	2018	2017	2016
Maximum outstanding at any month end	\$ 79,534	\$ 43,288	\$ 17,000
Average amount outstanding during the year	58,316	38,276	16,163
Balance at the end of the period	79,534	43,288	17,000
Average interest rate during the year	2.00%	1.55%	1.67%
Average interest rate at the end of the period	2.32%	1.68%	1.59%

Subordinated Loans

The Company has a non-consolidated subsidiary trust, Pathfinder Statutory Trust II, of which the Company owns 100% of the common equity. The Trust issued \$5,000,000 of 30-year floating rate Company-obligated pooled capital securities of Pathfinder Statutory Trust II ("Floating-Rate Debentures"). The Company borrowed the proceeds of the capital securities from its subsidiary by issuing floating rate junior subordinated deferrable interest debentures having substantially similar terms. The capital securities mature in 2037 and are treated as Tier 1 capital by the FDIC and FRB. The capital securities of the trust are a pooled trust preferred fund of Preferred Term Securities VI, Ltd., whose interest rate resets quarterly, and are indexed to the 3-month LIBOR rate plus 1.65%. These securities have a five-year call provision. The Company paid \$199,000 and \$149,000 in interest expense related to this issuance in 2018 and 2017, respectively. The Company guarantees all of these securities.

The Company's equity interest in the trust subsidiary is included in other assets on the Consolidated Statements of Financial Condition at December 31, 2018 and 2017. For regulatory reporting purposes, the Federal Reserve has indicated that the preferred securities will continue to qualify as Tier 1 Capital subject to previously specified limitations, until further notice. If regulators make a determination that Trust Preferred Securities can no longer be considered in regulatory capital, the securities become callable and the Company may redeem them at its discretion.

On October 15, 2015, the Company executed a \$10.0 million non-amortizing Subordinated Loan with an unrelated third party that is scheduled to mature on October 1, 2025. The Company has the right to prepay the Subordinated Loan at any time after October 15, 2020 without penalty. The annual interest rate charged to the Company will be 6.25% through the maturity date of the subordinated loan. The Subordinated Loan is senior in the Company's credit repayment hierarchy only to the Company's common equity and, as a result, qualifies as Tier 2 capital for all future periods when applicable. The Company paid \$172,000 in origination and legal fees as part of this transaction. These fees will be amortized over the life of the Subordinated Loan through its first call date using the effective interest method. The effective cost of funds related to this transaction is 6.44% calculated under this method. Accordingly, interest expense of \$647,000 and \$645,000 were recorded in the years ended December 31, 2018 and 2017, respectively.

Other Liabilities

The Company had \$7.7 million and \$6.4 million in other liabilities at December 31, 2018 and 2017, respectively. Other liabilities increased \$1.3 million, or 20.2%, at December 31, 2018, as compared to December 31, 2017. The increase was primarily due to (1) an accrual of \$443,000, charged to income in 2018, related to the contractually-mandated acceleration of certain retirement benefits for a senior officer who elected to retire prior to his originally scheduled full retirement date; and (2) a \$400,000 amount, held in escrow, related to the purchase of the downtown Oswego, NY, mixed use office and retail property, described above. This reserve balance, included in the purchase price of the property as a component of premises and equipment, net of depreciation, at December 31, 2018, will be paid in two installments of \$200,000 each in 2019 and 2020,

respectively, pending the successful completion of certain property development activities by the property's previous owner. The \$443,000 liability related to the retired senior officer will be paid out in 30 monthly installments commencing in January 2019. The \$444,000 aggregate remainder of the increase in other liabilities at December 31, 2018, as compared to December 31, 2017, was due to a variety of individually immaterial items.

Capital

The Company's shareholders' equity increased \$2.4 million, or 3.9%, to \$64.2 million at December 31, 2018 from \$61.8 million at December 31, 2017. This increase was primarily due to an increase in retained earnings of \$3.1 million, resulting from the Company's reported net income of \$4.0 million in 2018, partially offset by common stock dividend distributions of \$1.0 million, a \$969,000 increase in additional paid in capital, and the accretion of \$180,000 unearned ESOP shares. Paid in capital increased in 2018 due to the exercise of stock options during the year primarily by members of the Company's management team. These net increases to shareholders' equity were partially offset by a \$1.8 million increase in the Company's accumulated other comprehensive loss. The increase in accumulated other comprehensive loss at December 31, 2018, as compared to December 31, 2017, was the result of an unrealized decline, after tax effects, of \$1.3 million related to the Company's available-for-sale investment securities portfolio, and an unrealized loss, after tax effects, for pension and other postretirement obligations of \$932,000. The unrealized decline in the value of the Company's available-for-sale investment securities portfolio was primarily due to the increases in market interest rates that occurred in 2018. The increase in the unrealized loss for pension and other postretirement obligations was primarily due to the significant declines in global equity markets that took place in the fourth quarter of 2018. These increases in accumulated other comprehensive loss were partially offset by an increase of \$373,000, after tax effects, primarily related to the transfer of \$35.2 million in securities from held-to-maturity to available-for-sale concurrent with the adoption in 2018 of ASU 2017-12: Derivatives and Hedging [Topic 815]: Targeted Improvements to Accounting for Hedging Activities.

At December 31, 2017, the Company adopted ASU 2018-02 under the early adoption permissibility provisions of that Standard. Accordingly, the Company elected to reclassify to retained earnings in the statement of stockholders' equity the stranded tax effects related to cumulative net unrealized losses on available-for-sale securities in Accumulated Other Comprehensive Income ("AOCI") related to the Tax Act. The Company determined the amount of this adjustment using the portfolio approach as specified in the Standard. The reclassification, as it relates to the Company, encompassed only the change in corporate income tax rates as other potential effects of the Tax Act considered by the provisions of ASU 2018-02 were not considered to be applicable to the Company.

Risk-based capital provides the basis for which all banks are evaluated in terms of capital adequacy. Capital adequacy is evaluated primarily by the use of ratios which measure capital against total assets, as well as against total assets that are weighted based on defined risk characteristics. The Company's goal is to support growth and expansion activities, while maintaining a strong capital position and exceeding regulatory standards. At December 31, 2018, the Bank exceeded all regulatory required minimum capital ratios and met the regulatory definition of a "well-capitalized" institution. See "Supervision and Regulation – Federal Regulations – Capital Requirements."

As a result of the Dodd-Frank Act, the Company's ability to raise new capital through the use of trust preferred securities may be limited because these securities will no longer be included in Tier 1 capital. In addition, our ability to generate or originate additional revenue producing assets may be constrained in the future in order to comply with the new capital standards required by federal regulation that took effect January 1, 2016. See Note 20 to the consolidated financial statements contained herein and the regulation and supervision section within Part I of this Annual Report on Form 10-K for further discussion on regulatory capital requirements.

The Bank is 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 Company's 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 its 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 Bank to maintain amounts and ratios of total and Tier 1 capital (as defined in the regulations) to risk-weighted assets (as defined), and of Tier 1 capital (as defined) to average assets (as defined).

As of December 31, 2018, the Bank's most recent notification from the Federal Deposit Insurance Corporation categorized the Bank as "well-capitalized", under the regulatory framework for prompt corrective action. To be categorized as "well-

capitalized", the Bank must maintain total risk-based, Tier 1 risk-based and Tier 1 leverage ratios. There are no conditions or events since that notification that management believes have changed the Bank's category.

The regulations also impose a "capital conservation buffer" consisting of 2.5% of common equity Tier 1 capital to risk-weighted assets above the amount necessary to meet its minimum risk-based capital requirements. The buffer is separate from the capital ratios required under the Prompt Corrective Action ("PCA") standards and imposes restrictions on dividend distributions and discretionary bonuses. In order to avoid these restrictions, the capital conservation buffer effectively increases the minimum the following capital to risk-weighted assets ratios: (1) Core Capital, (2) Total Capital and (3) Common Equity. The capital conservation buffer requirement was phased in beginning January 1, 2016 at 0.625% of risk-weighted assets and increased each year until fully implemented at 2.5% on January 1, 2019. At December 31, 2018, the Bank exceeded all current and projected regulatory required minimum capital ratios, including the maximum capital buffer level that was required on January 1, 2019.

LIQUIDITY

Liquidity management involves the Company's ability to generate cash or otherwise obtain funds at reasonable rates to support asset growth, meet deposit withdrawals, maintain reserve requirements, and otherwise operate the Company on an ongoing basis. The Company's primary sources of funds are deposits, borrowed funds, amortization and prepayment of loans and maturities of investment securities and other short-term investments, and earnings and funds provided from operations. While scheduled principal repayments on loans are a relatively predictable source of funds, deposit flows and loan prepayments are greatly influenced by general interest rates, economic conditions and competition. The Company manages the pricing of deposits to maintain a desired deposit balance. In addition, the Company invests excess funds in short-term interest-earning and other assets, which provide liquidity to meet lending requirements.

The Company's liquidity has been enhanced by its ability to borrow from the FHLBNY, whose competitive advance programs and lines of credit provide the Company with a safe, reliable, and convenient source of funds. A significant decrease in deposits in the future could result in the Company having to seek other sources of funds for liquidity purposes. Such sources could include, but are not limited to, additional borrowings, brokered deposits, negotiated time deposits, the sale of "available-for-sale" investment securities, the sale of loans, or the sale of whole loans. Such actions could result in higher interest expense costs and/or losses on the sale of securities or loans.

For the year ended December 31, 2018, cash and equivalents increased by \$4.3 million. The Company reported net cash flows from financing activities of \$47.4 million generated principally by an increase in the net proceeds from long-term borrowings of \$36.2 million, a net increase in non-brokered deposits of \$21.6 million, and an \$8.4 million increase in short-term borrowings, partially offset by a by a decrease in brokered deposits of \$18.1 million. Additionally, \$9.0 million was provided through operating activities. These cash flows were primarily invested in: (1) net increases in loans outstanding of \$42.5 million, (2) \$5.6 million in the purchase of premises and equipment, and (3) \$5.0 million in bank owned life insurance during 2018.

Certificates of deposit due within one year of December 31, 2018 totaled \$187.0 million, representing 67.6% of certificates of deposit at December 31, 2018, a decrease from 68.6% at December 31, 2017. We believe the large percentage of certificates of deposit that mature within one year reflect customers' hesitancy to invest their funds for long periods in the current low interest rate environment. If these maturing deposits do not remain with us, we will be required to seek other sources of funds, including other certificates of deposit and borrowings. Depending on market conditions, we may be required to pay higher rates on such deposits or other borrowings than we currently pay on the certificates of deposit due on or before December 31, 2018.

The Company is a separate legal entity from the Bank and must provide for its own liquidity. In addition to its operating expenses, the Company is responsible for paying any dividends declared to its shareholders and making payments on its subordinated loans. The Company may repurchase shares of its common stock. The Company's primary sources of funds are the proceeds it retained from the conversion and offering, interest and dividends on securities and dividends received from the Bank. The amount of dividends that the Bank may declare and pay to the Company in any calendar year, without prior regulatory approval, cannot exceed net income for that year to date plus retained net income (as defined) for the preceding two calendar years. The Company believes that this restriction will not have an impact on the Company's ability to meet its ongoing cash obligations. At December 31, 2018 and 2017, the Company had cash and cash equivalents of \$26.3 million and \$22.0 million, respectively.

In June 2018, the Company renewed a \$12.0 million portion of an expiring \$26.0 million Irrevocable Stand-By Letter of Credit ("LOC"), first established in June 2016, with the FHLBNY as an alternative means of collateralizing certain public funds deposits. A LOC is a conditional commitment issued by the FHLBNY to guarantee the performance of the Bank with respect to large public funds deposits. These deposits are placed with the Bank by entities, such as municipalities and other political subdivisions within the Bank's market area, and typically exceed the statutory FDIC deposit insurance limits for individual accounts. As a matter of statute, these depositors require that collateral be directly deposited by the Bank with an independent safekeeping agent, or in certain cases, that LOCs be issued by a third party that is acceptable to the depositor. The Bank finds

that, with certain depositor relationships, this method of collateralization for the benefit of the municipal depositors is more economically efficient than posting specific securities with a safekeeping agent. The Bank committed a portion of its mortgage loan portfolio as pledged collateral to the FHLBNY for the LOC. Loans encumbered as collateral for letters of credit reduce the Bank's available liquidity position in that available borrowing capacity with the FHLBNY is decreased substantially on a dollar-for-dollar basis.

The Bank has a number of existing credit facilities available to it. At December 31, 2018, total credit available under the existing lines of credit was approximately \$189.3 million at FHLBNY, the FRB, and two other correspondent banks. At December 31, 2018, the Company had \$130.5 million of the available lines of credit utilized, including encumbrances supporting the outstanding letters of credit, described above, on its existing lines of credit with the remainder of \$58.8 million available.

The Asset Liability Management Committee of the Company is responsible for implementing the policies and guidelines for the maintenance of prudent levels of liquidity. As of December 31, 2018, management reported to the board of directors that the Bank was in compliance with its liquidity policy guidelines.

OFF-BALANCE SHEET ARRANGEMENTS

The Bank is also a party to financial instruments with off-balance sheet risk in the normal course of business to meet the financing needs of its customers. These financial instruments include commitments to extend credit and standby letters of credit. At December 31, 2018, the Bank had \$118.7 million in outstanding commitments to extend credit and standby letters of credit. See Note 18 within the Notes to Consolidated Financial Statements contained herein.

ITEM 7A: QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Not required of a smaller reporting company.

ITEM 8: FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

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MANAGEMENT'S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING

The Company's management is responsible for establishing and maintaining adequate internal control over financial reporting, as such term is defined in Rules 13a-15(f) and 15d-15(f) of the Securities Exchange Act of 1934, as amended. 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 policies or procedures may deteriorate. The Company's internal control over financial reporting is a process designed under the supervision of the Company's principal executive officer and principal financial officer to provide reasonable assurance regarding the reliability of financial reporting and the preparation of the Company's financial statements for external reporting purposes in accordance with United States generally accepted accounting principles.

Under the supervision and with the participation of management, including the Company's principal executive officer and principal financial officer, the Company conducted an evaluation of the effectiveness of its internal control over financial reporting based on the framework in *Internal Control – Integrated Framework* (1992) issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on its evaluation under that framework, management concluded that the Company's internal control over financial reporting was effective as of December 31, 2018. In addition, based on our assessment, management has determined that there were no material weaknesses in the Company's internal controls over financial reporting.

This annual report does not include an attestation report of the Company's independent registered public accounting firm regarding internal control over financial reporting pursuant to the rules of the Dodd-Frank Act that exempts the Company from such attestation and requires only management's report.

/s/ Thomas W. Schneider Thomas W. Schneider President and Chief Executive Officer

Oswego, New York March 27, 2019 /s/ Walter F. Rusnak Walter R. Rusnak

Senior Vice President, Chief Financial Officer

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Shareholders of Pathfinder Bancorp, Inc. Oswego, New York:

Opinion on the Financial Statements

We have audited the accompanying consolidated statements of condition of Pathfinder Bancorp, Inc. and subsidiaries (the "Company") as of December 31, 2018 and 2017 and the related consolidated statements of income, comprehensive income, changes in shareholders' equity and cash flows for each of the years in the two-year period ended December 31, 2018 and the related notes (collectively referred to as the consolidated financial statements). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2018 and 2017, and the results of its operations and its cash flows for each of the years in the two-year period ended December 31, 2018, in conformity with accounting principles generally accepted in the United States of America.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on the Company's consolidated financial statements based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. The Company is not required to have, nor were we engaged to perform, an audit of its internal control over financial reporting. As part of our audits, we are required to obtain an understanding of internal control over financial reporting, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control over financial reporting. Accordingly, we express no such opinion.

Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

We have served as the Company's auditor since 2011.

/s/ BONADIO & CO., LLP

Bonadio & Co., LLP Pittsford, New York March 27, 2019

Pathfinder Bancorp, Inc. Consolidated Statements of Condition

December 31,

2018

December 31,

2017

Cash and due from banks	\$ 9,610	\$ 9,708
Interest-earning deposits (including restricted balances of \$3,993 and \$6,342,		
respectively)	16,706	12,283
Total cash and cash equivalents	26,316	21,991
Available-for-sale securities, at fair value	177,664	171,138
Held-to-maturity securities, at amortized cost (fair value of \$53,769 and \$66,426,		
respectively)	53,908	66,196
Marketable equity securities, at fair value	453	-
Federal Home Loan Bank stock, at cost	5,937	3,855
Loans	620,270	580,831
Less: Allowance for loan losses	7,306	7,126
Loans receivable, net	612,964	573,705
Premises and equipment, net	20,623	16,117
Accrued interest receivable	3,068	3,047
Foreclosed real estate	1,173	468
Intangible assets, net	165	182
Goodwill	4,536	4,536
Bank owned life insurance	16,941	11,742
Other assets	9,367	8,280
Total assets	\$ 933,115	\$ 881,257
LIABILITIES AND SHAREHOLDERS' EQUITY: Deposits:		
Interest-bearing	\$ 623,936	\$ 633,820
Noninterest-bearing	103,124	89,783
Total deposits	727,060	723,603
Short-term borrowings	39,000	30,600
Long-term borrowings	79,534	43,288
Subordinated loans	15,094	15,059
Accrued interest payable	304	186
Other liabilities	7,664	6,377
Total liabilities	868,656	819,113
Shareholders' equity:		
Common stock, par value \$0.01; 25,000,000 authorized shares; 4,362,328 and 4,280,227 shares outstanding, respectively	44	43
Additional paid in capital	29,139	28,170
Retained earnings	42,114	39,020
Accumulated other comprehensive loss	(6,042)	(4,208)
Unearned ESOP	(1,034)	(1,214)
Total Pathfinder Bancorp, Inc. shareholders' equity	64,221	61,811
Noncontrolling interest	238	333
Total equity	 64,459	62,144
Total liabilities and shareholders' equity	\$ 933,115	\$ 881,257

The accompanying notes are an integral part of the consolidated financial statements.

(In thousands, except share and per share data)

ASSETS:

Pathfinder Bancorp, Inc. Consolidated Statements of Income

		For the year ended		For the year ended
(In thousands, except per share data)		December 31, 2018		December 31, 2017
Interest and dividend income:				
Loans, including fees	\$	28,426	\$	24,392
Debt securities:	•	-, -	,	,
Taxable		5,159		3,598
Tax-exempt		720		1,038
Dividends		259		229
Federal funds sold and interest earning deposits		246		156
Total interest and dividend income		34,810		29,413
Interest expense:				
Interest on deposits		6,812		3,904
Interest on short-term borrowings		221		997
Interest on long-term borrowings		1,165		595
Interest on subordinated loans		846		794
Total interest expense		9,044		6,290
Net interest income		25,766		23,123
Provision for loan losses		1,497		1,769
Net interest income after provision for loan losses		24,269		21,354
Noninterest income:		24,203		21,004
Service charges on deposit accounts		1,148		1,130
Earnings and gain on bank owned life insurance		427		284
Loan servicing fees		170		149
Net (losses) gains on sales and redemptions of investment securities		(182)		489
Loss on marketable equity securities		(62)		
Net gains on sales of loans and foreclosed real estate		50		37
Debit card interchange fees		576		484
Insurance agency revenue		840		803
Other charges, commissions & fees		868		709
Total noninterest income		3,835		4,085
Noninterest expense:		5,000		1,000
Salaries and employee benefits		13,304		11,917
Building occupancy		2,325		2,196
Data processing		1,995		1,779
Professional and other services		1,360		952
Advertising		935		809
FDIC assessments		492		473
Audits and exams		422		353
Insurance agency expense		875		932
Community service activities		541		415
Other expenses		1,300		1,268
Total noninterest expenses		23,549		21,094
Income before income taxes		4,555		4,345
Provision for income taxes		546		922
Net income attributable to noncontrolling interest and				
Pathfinder Bancorp, Inc.		4,009		3,423
Net loss attributable to noncontrolling interest		(22)		(68)
Net income available to common shareholders	\$	4,031	\$	3,491
	Ψ	.,		5,.01
Earnings per common share - basic	\$	0.97	\$	0.86
Earnings per common share - diluted	\$	0.94	\$	0.83

The accompanying notes are an integral part of the consolidated financial statements.

Dividends per common share

0.24

0.215

Pathfinder Bancorp, Inc. Consolidated Statements of Comprehensive Income

		ended		
(In thousands)	Decem	ber 31, 2018	Decen	nber 31, 2017
Net Income	\$	4,009	\$	3,423
Other Community (Learn) Income				
Other Comprehensive (Loss) Income Retirement Plans:				
Retirement plan net losses recognized in plan expenses		171		150
Plan losses not recognized in plan expenses		(1,432)		(631)
Net unrealized loss on retirement plans		(1,261)		(481)
ret uniculzed 1000 on retrement plant		(1,201)		(101)
<u>Unrealized holding (losses) gains on available-for-sale securities</u>				
Unrealized holding (losses) gains arising during the period		(1,991)		1,454
Reclassification adjustment for net (losses) gains included in net income		182		(489)
Net unrealized (loss) gain on available-for-sale securities		(1,809)		965
· · · · ·				
Accretion of net unrealized loss on securities transferred to held-to-maturity(1)		175		191
Other comprehensive (loss) income, before tax		(2,895)		675
Tax effect		755		(271)
Other comprehensive (loss) income, net of tax		(2,140)		404
Comprehensive income	\$	1,869	\$	3,827
Comprehensive loss, attributable to noncontrolling interest	\$	(22)	\$	(68)
Comprehensive income attributable to Pathfinder Bancorp, Inc.	\$	1,891	\$	3,895
Tax Effect Allocated to Each Component of Other Comprehensive (Loss) Income				
Retirement plan net losses recognized in plan expenses	\$	(45)	\$	(61)
Plan losses not recognized in plan expenses		374		252
Unrealized holding (losses) gains arising during the period		520		(582)
Reclassification adjustment for net (losses) gains included in net income		(48)		196
Accretion of net unrealized loss on securities transferred to held-to-maturity(1)		(46)		(76)
Income tax effect related to other comprehensive (loss) income	\$	755	\$	(271)

(1) The accretion of the unrealized holding losses in accumulated other comprehensive loss at the date of transfer at September 30, 2013 partially offsets the amortization of the difference between the par value and the fair value of the investment securities at the date of transfer, and is an adjustment of yield.

The accompanying notes are an integral part of the consolidated financial statements.

Pathfinder Bancorp, Inc. Consolidated Statements of Changes in Shareholders' Equity Years ended December 31, 2018 and December 31, 2017

				1.15.2 1				cumulated ther Com-				NT.		
	Co	mmon	A	dditional Paid in	т	Retained	-	tner Com- orehensive	т:	nearned	contr	Non- colling		
(In thousands, except share and per share data)	Co	Stock		Capital		Earnings	P	Loss	C	ESOP		iterest		Total
Balance, January 1, 2018	\$	43	\$	28,170	\$	39,020	\$	(4,208)	\$	(1,214)	\$	333	\$	62,144
Net income (loss)	Ψ	-	Ψ	20,170	Ψ	4,031	Ψ	(4,200)	Ψ	(1,214)	Ψ	(22)	Ψ	4,009
Other comprehensive loss, net of tax		_		_		4,031		(2,140)		_		(22)		(2,140)
ESOP shares earned (24,442 shares)				195				(2,140)		180				375
Restricted stock awards (14,490 shares)		_		-		_		_		-		_		5/5
Stock based compensation		_		398		_		_		_		_		398
Stock options exercised		1		384		_		_		_		_		385
Cumulative effect of change in measurement of				304										303
equity securities (1)		_		_		53		(53)		_		_		_
Cumulative effect of change in investment						55		(55)						
securities transfer (2)		_		_		_		359		_		_		359
Common stock dividends declared (\$0.24 per share)		-		-		(1,005)		-		-		-		(1,005)
Cumulative effect of affiliate capital allocation		-		(8)		15		-		-		(7)		-
Distributions from affiliates		-		-		-		-		-		(66)		(66)
Balance, December 31, 2018	\$	44	\$	29,139	\$	42,114	\$	(6,042)	\$	(1,034)	\$	238	\$	64,459
Balance, January 1, 2017	\$	43	\$	27,483	\$	35,619	\$	(3,822)	\$	(1,394)	\$	432	\$	58,361
Net income (loss)		-		-		3,491		-		-		(68)		3,423
Other comprehensive income, net of tax		-		-		-		404		-		-		404
ESOP shares earned (24,442 shares)		-		187		-		-		180		-		367
Restricted stock awards (15,720 shares)		-		-		-		-		-		-		-
Stock based compensation		-		345		-		-		-		-		345
Stock options exercised		-		155		-		-		-		-		155
Common stock dividends declared (\$0.215 per share)		-		-		(880)		-		-		-		(880)
Reclassification of effect of tax rate change (3)		-		-		790		(790)		-		-		-
Distributions from affiliates		-		-		-		-		-		(31)		(31)
Balance, December 31, 2017	\$	43	\$	28,170	\$	39,020	\$	(4,208)	\$	(1,214)	\$	333	\$	62,144

- (1) Cumulative effect of unrealized gain on marketable equity securities based on the adoption of ASU 2016-01 Financial Instruments Overall (Subtopic 825-10): Recognition and Measurement of Financial Assets and Liabilities.
- 2) Cumulative effect of unrealized gains on the transfer of 52 investment securities from held-to-maturity classification to available-for-sale classification based on the adoption of ASU 2017-12: Derivatives and Hedging (Topic 815): Targeted Improvements to Accounting for Hedging Activities.
- (3) Reclassification from accumulated other comprehensive loss to retained earnings for stranded tax effects resulting from the newly enacted Federal corporate income tax rate reduction from 34% to 21%.

The accompanying notes are an integral part of the consolidated financial statements.

Pathfinder Bancorp, Inc. Consolidated Statements of Cash Flows

		For the Years ended December 31,		
(In thousands)		2018	2017	
OPERATING ACTIVITIES				
Net income attributable to Pathfinder Bancorp, Inc.	\$	4,031 \$	3,491	
Adjustments to reconcile net income to net cash flows from operating				
activities:				
Provision for loan losses		1,497	1,769	
Deferred income tax (benefit)		343	(100)	
Proceeds from sale of loans		216	53	
Originations of loans held-for-sale		(212)	(53)	
Realized (gains) losses on sales, redemptions and calls of:				
Real estate acquired through foreclosure		(47)	(31)	
Loans		(3)	(6)	
Available-for-sale investment securities		171	(29)	
Held-to-maturity investment securities		11	(32)	
Premise and equipment		(8)	-	
Depreciation		1,180	1,035	
Amortization of mortgage servicing rights		12	28	
Amortization of deferred loan costs		321	322	
Amortization of deferred financing from subordinated debt		35	34	
Earnings and gain on bank owned life insurance		(427)	(284)	
Net amortization of premiums and discounts on investment securities		1,656	1,678	
Amortization of intangible assets		17	16	
Stock based compensation and ESOP expense		773	712	
Net change in accrued interest receivable		(21)	(515)	
Pension plan contribution		(825)	-	
Net change in other assets and liabilities		262	(1,246)	
Net cash flows from operating activities		8,982	6,842	
INVESTING ACTIVITIES				
Purchase of investment securities available-for-sale		(55,291)	(132,748)	
Purchase of investment securities held-to-maturity		(28,452)	(21,449)	
Purchase of Federal Home Loan Bank stock		(8,679)	(10,213)	
Proceeds from redemption of Federal Home Loan Bank stock		6,597	9,608	
Proceeds from maturities and principal reductions of investment securities available-for-sale		44,577	38,262	
Proceeds from maturities and principal reductions of investment securities		,	,	
held-to-maturity		5,842	7,080	
Proceeds from sales, redemptions and calls of:		·		
Available-for-sale investment securities		34,631	65,010	
Held-to-maturity investment securities		953	2,635	
Real estate acquired through foreclosure		744	993	
Premise and equipment		14	-	
Purchase of bank owned life insurance		(5,000)	-	
Proceeds from bank owned life insurance		228	-	
Realized gains on hedging activity		-	(428)	
Net change in loans		(42,497)	(90,718)	
Purchase of premises and equipment		(5,692)	(1,975)	
Net cash flows from investing activities		(52,025)	(133,943)	
		(,)	(_55,5 15)	

FINANCING ACTIVITIES		 _
Net change in demand deposits, NOW accounts, savings accounts, money		
management deposit accounts, MMDA accounts and escrow deposits	(43,969)	92,470
Net change in time deposits	65,525	18,329
Net change in brokered deposits	(18,099)	1,821
Net change in short-term borrowings	8,400	(11,347)
Payments on long-term borrowings	(2,000)	(7,000)
Proceeds from long-term borrowings	38,246	33,228
Proceeds from exercise of stock options	385	155
Cash dividends paid to common shareholders	(1,025)	(884)
Change in noncontrolling interest, net	(95)	(99)
Net cash flows from financing activities	47,368	126,673
Change in cash and cash equivalents	4,325	(428)
Cash and cash equivalents at beginning of period	21,991	22,419
Cash and cash equivalents at end of period	\$ 26,316	\$ 21,991
CASH PAID DURING THE PERIOD FOR:		
Interest	\$ 8,925	\$ 6,179
Income taxes	662	945
NON-CASH INVESTING ACTIVITY		
Real estate acquired in exchange for loans	1,420	822
RESTRICTED CASH		
Federal Reserve Bank Reserve Requirements included in interest earning		
deposits	3,993	6,342

The accompanying notes are an integral part of the consolidated financial statements.

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS

NOTE 1: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Nature of Operations

The accompanying consolidated financial statements include the accounts of Pathfinder Bancorp, Inc. (the "Company") and its wholly owned subsidiary, Pathfinder Bank (the "Bank"). The Company is a Maryland corporation headquartered in Oswego, New York. On October 16, 2014, the Company completed its conversion from the mutual holding company structure and the related public offering and is now a stock holding company that is fully owned by the public. As a result of the conversion, the mutual holding company and former mid-tier holding company were merged into Pathfinder Bancorp, Inc. The primary business of the Company is its investment in Pathfinder Bank (the "Bank") which is 100% owned by the Company. The Company sold 2,636,053 shares of common stock in the offering, including 105,442 shares sold to the Pathfinder Bank employee stock ownership plan ("ESOP"). All shares were sold at a price of \$10.00 per share raising \$26.4 million in gross proceeds. Additionally, \$197,000 in cash was received from the merger of MHC into the company; and after accounting for conversion related expenses of \$1.5 million, the Company received \$24.9 million in net proceeds. Concurrent with the completion of the offering, publicly owned shares of Pathfinder Bancorp, Inc., a federal corporation, were exchanged for 1.6472 shares of the Company's common stock. At December 31, 2018, 4,362,328 shares of common stock were outstanding. The Bank has two wholly owned operating subsidiaries, Pathfinder Risk Management Company, Inc. ("PRMC") and Whispering Oaks Development Corp. All significant inter-company accounts and activity have been eliminated in consolidation. Although the Company owns, through its subsidiary PRMC, 51% of the membership interest in FitzGibbons Agency, LLC ("FitzGibbons"), the Company is required to consolidate 100% of FitzGibbons within the consolidated financial statements. The 49% of which the Company does not own is accounted for separately as noncontrolling interests within the consolidated financial statements.

The Company has seven branch offices located in Oswego County, three branch offices in Onondaga County and one limited purpose office in Oneida County. The Company is primarily engaged in the business of attracting deposits from the general public in the Company's market area, and investing such deposits, together with other sources of funds, in loans secured by commercial real estate, business assets, one-to-four family residential real estate and investment securities.

Use of Estimates in the Preparation of Consolidated Financial Statements

The preparation of consolidated financial statements in accordance with accounting principles generally accepted in the United States of America 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 consolidated financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates. Management has identified the allowance for loan losses, deferred income taxes, pension obligations, the annual evaluation of the Company's goodwill for possible impairment and the evaluation of investment securities for other than temporary impairment and the estimation of fair values for accounting and disclosure purposes to be the accounting areas that require the most subjective and complex judgments, and as such, could be the most subject to revision as new information becomes available.

The Company is subject to the regulations of various governmental agencies. The Company also undergoes periodic examinations by the regulatory agencies which may subject it to further changes with respect to asset valuations, amounts of required loss allowances, and operating restrictions resulting from the regulators' judgments based on information available to them at the time of their examinations.

Significant Group Concentrations of Credit Risk

Most of the Company's activities are with customers located primarily in Oswego and Onondaga counties of New York State. A large portion of the Company's portfolio is centered in residential and commercial real estate. The Company closely monitors real estate collateral values and requires additional reviews of commercial real estate appraisals by a qualified third party for commercial real estate loans in excess of \$400,000. All residential loan appraisals are reviewed by an individual or third party who is independent of the loan origination or approval process and was not involved in the approval of appraisers or selection of the appraiser for the transaction, and has no direct or indirect interest, financial or otherwise in the property or the transaction. Note 4 discusses the types of securities that the Company invests in. Note 5 discusses the types of lending that the Company engages in. The Company does not have any significant concentrations to any one industry or customer.

Advertising

The Company generally follows the policy of charging the costs of advertising to expense as incurred. Expenditures for new marketing and advertising material designs and/or media content, related to specifically-identifiable marketing campaigns are capitalized and expensed over the estimated life of the campaign. Such periods of time are generally 12-24 months in duration and do not exceed 36 months.

Noncontrolling Interest

Noncontrolling interest represents the portion of ownership and profit or loss that is attributable to the minority owners of FitzGibbons.

Cash and Cash Equivalents

Cash and cash equivalents include cash on hand, amounts due from banks and interest-bearing deposits (with original maturity of three months or less).

Investment Securities

The Company classifies investment securities as either available-for-sale or held-to-maturity. The Company does not hold any securities considered to be trading. Available-for-sale securities are reported at fair value, with net unrealized gains and losses reflected as a separate component of shareholders' equity, net of the applicable income tax effect. Held-to-maturity securities are those that the Company has the ability and intent to hold until maturity and are reported at amortized cost.

Gains or losses on investment security transactions are based on the amortized cost of the specific securities sold. Premiums and discounts on securities are amortized and accreted into income using the interest method over the period to maturity.

The Company records its investment in marketable equity securities ("MES") at fair value. Changes in the fair value of MES are recorded as additions to, or subtractions from, net income in the period that the change occurs. These changes in fair value are separately disclosed as gains (losses) on equity securities on the Consolidated Statements of Income.

Note 4 to the consolidated financial statements includes additional information about the Company's accounting policies with respect to the impairment of investment securities.

Federal Home Loan Bank Stock

Federal law requires a member institution of the Federal Home Loan Bank ("FHLB") system to hold stock of its district FHLB according to a predetermined formula. The stock is carried at cost.

Transfers of Financial Assets

Transfers of financial assets, including sales of loans and loan participations, are accounted for as sales when control over the assets has been surrendered. Control over transferred assets is deemed to be surrendered when (1) the assets have been isolated from the Company, (2) the transferree obtains the right (free of conditions that constrain it from taking advantage of that right) to pledge or exchange the transferred assets, and (3) the Company does not maintain effective control over the transferred assets through an agreement to repurchase them before their maturity.

Loans

The Company grants mortgage, commercial, municipal, and consumer loans to customers. Loans that management has the intent and ability to hold for the foreseeable future or until maturity or pay-off are stated at their outstanding unpaid principal balances, less the allowance for loan losses plus net deferred loan origination costs. The ability of the Company's debtors to honor their contracts is dependent upon the real estate and general economic conditions in the market area. Interest income is generally recognized when income is earned using the interest method. Nonrefundable loan fees received and related direct origination costs incurred are deferred and amortized over the life of the loan using the interest method, resulting in a constant effective yield over the loan term. Deferred fees are recognized into income and deferred costs are charged to income immediately upon prepayment of the related loan.

The loans receivable portfolio is segmented into residential mortgage, commercial and consumer loans. The residential mortgage segment consists of one-to-four family first-lien residential mortgages and construction loans. Commercial loans consist of the following classes: real estate, lines of credit, other commercial and industrial, and tax-exempt loans. Consumer loans include both home equity lines of credit and loans with junior liens and other consumer loans.

Allowance for Loan Losses

The allowance for loan losses represents management's estimate of losses inherent in the loan portfolio as of the date of the statement of condition and it is recorded as a reduction of loans. The allowance is increased by the provision for loan losses, and decreased by charge-offs, net of recoveries. Loans deemed to be uncollectible are charged against the allowance for loan losses, and subsequent recoveries, if any, are credited to the allowance. All, or part, of the principal balance of loans receivable are charged off to the allowance as soon as it is determined that the repayment of all, or part, of the principal balance is highly unlikely. Non-residential consumer loans are generally charged off no later than 120 days past due on a contractual basis, unless productive collection efforts are providing results. Consumer loans may be charged off earlier in the event of bankruptcy, or if there is an amount that is deemed uncollectible. No portion of the allowance for loan losses is restricted to any individual loan product and the entire allowance is available to absorb any and all loan losses.

The allowance for loan losses is maintained at a level considered adequate to provide for losses that can be reasonably anticipated. Management performs a quarterly evaluation of the adequacy of the allowance. The allowance is based on three major components which are; specific components for larger loans, recent historical losses and several qualitative factors applied to a general pool of loans, and an unallocated component.

The first component is the specific component that relates to loans that are classified as impaired. For these loans, an allowance is established when the discounted cash flows or collateral value of the impaired loan is lower than the carrying value of that loan.

The second or general component covers pools of loans, by loan class, not considered impaired, smaller balance homogeneous loans, such as residential real estate, home equity and other consumer loans. These pools of loans are evaluated for loss exposure first based on historical loss rates for each of these categories of loans. The ratio of net charge-offs to loans outstanding within each product class, over the most recent eight quarters, lagged by one quarter, is used to generate the historical loss rates. In addition, qualitative factors are added to the historical loss rates in arriving at the total allowance for loan loss need for this general pool of loans. The qualitative factors include changes in national and local economic trends, the rate of growth in the portfolio, trends of delinquencies and nonaccrual balances, changes in loan policy, and changes in lending management experience and related staffing. Each factor is assigned a value to reflect improving, stable or declining conditions based on management's best judgment using relevant information available at the time of the evaluation. These qualitative factors, applied to each product class, make the evaluation inherently subjective, as it requires material estimates that may be susceptible to significant revision as more information becomes available. Adjustments to the factors are supported through documentation of changes in conditions in a narrative accompanying the allowance for loan loss analysis and calculation.

The third or unallocated component is maintained to cover uncertainties that could affect management's estimate of probable losses. The unallocated component of the allowance reflects the margin of imprecision inherent in the underlying assumptions used in the methodologies for estimating specific and general losses in the portfolio and generally comprises less than 10% of the total allowance for loan loss.

A loan is considered impaired when, based on current information and events, it is probable that the Company will be unable to collect the scheduled payments of principal or interest when due according to the contractual terms of the loan agreement. Factors considered by management in determining impairment include payment status, collateral value and the probability of collecting scheduled principal and interest payments when due. Loans that experience insignificant payment delays and payment shortfalls generally are not classified as impaired. Management determines the significance of payment delays and shortfalls on a case-by case basis, taking into consideration all of the circumstances surrounding the loan and the borrower, including the length and reason for the delay, the borrower's prior payment record and the amount of shortfall in relation to what is owed. Impairment is measured by either the present value of the expected future cash flows discounted at the loan's effective interest rate or the fair value of the underlying collateral, if the loan is collateral dependent. The majority of the Company's loans utilize the fair value of the underlying collateral.

An allowance for loan loss is established for an impaired loan if its carrying value exceeds its estimated fair value. The estimated fair values of substantially all of the Company's impaired loans are measured based on the estimated fair value of the loan's collateral. For loans secured by real estate, estimated fair values are determined primarily through third-party appraisals,

less costs to sell. Appraised values are discounted to arrive at the estimated selling price of the collateral, which is considered to be the estimated fair value. The discounts also include estimated costs to sell the property.

For commercial and industrial loans secured by non-real estate collateral, such as accounts receivable, inventory and equipment, estimated fair values are determined based on the borrower's financial statements, inventory reports, accounts receivable agings or equipment appraisals or invoices. Indications of value from these sources are generally discounted based on the age of the financial information or the quality of the assets.

Large groups of homogeneous loans are collectively evaluated for impairment. Accordingly, the Company does not separately identify individual residential mortgage loans less than \$300,000, home equity and other consumer loans for impairment disclosures, unless such loans are related to borrowers with impaired commercial loans or they are subject to a troubled debt restructuring agreement. Loans that are related to borrowers with impaired commercial loans or are subject to a troubled debt restructuring agreement are evaluated individually for impairment.

Commercial loans whose terms are modified are classified as troubled debt restructurings if the Company grants such borrowers concessions and it is deemed that those borrowers are experiencing financial difficulty. Concessions granted under a troubled debt restructuring generally include but are not limited to a temporary reduction in the interest rate or an extension of a loan's stated maturity date. Commercial loans classified as troubled debt restructurings are designated as impaired and evaluated individually as discussed above.

The allowance calculation methodology includes further segregation of loan classes into risk rating categories. The borrower's overall financial condition, repayment sources, guarantors and value of the collateral, if appropriate, are evaluated not less than annually for commercial loans or when credit deficiencies arise on all loans. Credit quality risk ratings include regulatory classifications of special mention, substandard, doubtful and loss. See Note 5 for a description of these regulatory classifications.

In addition, Federal and State regulatory agencies, as an integral part of their examination process, periodically review the Company's allowance for loan losses and may require the Company to recognize additions to the allowance based on their judgments about information available to them at the time of their examination, which may not be currently available to management. Based on management's comprehensive analysis of the loan portfolio, management believes the current level of the allowance for loan losses is adequate.

Income Recognition on Impaired and Nonaccrual Loans

For all classes of loans receivable, the accrual of interest is discontinued when the contractual payment of principal or interest has become 90 days past due or management has serious doubts about further collectability of principal or interest, even though the loan may be currently performing. A loan may remain on accrual status if it is either well secured or guaranteed and in the process of collection. When a loan is placed on nonaccrual status, unpaid interest is reversed and charged to interest income. Interest received on nonaccrual loans, including impaired loans, generally is either applied against principal or reported as interest income, according to management's judgment as to the collectability of principal. Generally, loans are restored to accrual status when the obligation is brought current, has performed in accordance with the contractual terms for a reasonable period of time, generally six months, and the ultimate collectability of the total contractual principal and interest is no longer in doubt. Nonaccrual troubled debt restructurings are restored to accrual status if principal and interest payments, under the modified terms, are current for six consecutive months after modification.

For nonaccrual loans, when future collectability of the recorded loan balance is expected, interest income may be recognized on a cash basis. In the case where a nonaccrual loan had been partially charged off, recognition of interest on a cash basis is limited to that which would have been recognized on the recorded loan balance at the contractual interest rate. Cash interest receipts in excess of that amount are recorded as recoveries to the allowance for loan losses until prior charge-offs have been fully recovered.

Off-Balance Sheet Credit Related Financial Instruments

In the ordinary course of business, the Company has entered into commitments to extend credit, including commitments under standby letters of credit. Such financial instruments are recorded when they are funded.

Premises and Equipment

Premises and equipment are stated at cost, less accumulated depreciation. Depreciation is computed on a straight-line basis over the estimated useful lives of the related assets, ranging up to 40 years for premises and 10 years for equipment. Maintenance and

repairs are charged to operating expenses as incurred. The asset cost and accumulated depreciation are removed from the accounts for assets sold or retired and any resulting gain or loss is included in the determination of income.

Foreclosed Real Estate

Physical possession of residential real estate property collateralizing a residential mortgage loan occurs when legal title is obtained upon completion of foreclosure or when the borrower conveys all interest in the property to satisfy the loan through completion of a deed-in-lieu of foreclosure or through a similar legal agreement. Properties acquired through foreclosure, or by deed-in-lieu of foreclosure, are recorded at their fair value less estimated costs to sell. Fair value is typically determined based on evaluations by third parties. Costs incurred in connection with preparing the foreclosed real estate for disposition are capitalized to the extent that they enhance the overall fair value of the property. Any write-downs on the asset's fair value less costs to sell at the date of acquisition are charged to the allowance for loan losses. Subsequent write downs and expenses of foreclosed real estate are included as a valuation allowance and recorded in noninterest expense.

Goodwill and Intangible Assets

Goodwill represents the excess cost of an acquisition over the fair value of the net assets acquired. Goodwill is not amortized, but is evaluated annually for impairment. Intangible assets, such as customer lists, are amortized over their useful lives, generally 15 years.

Mortgage Servicing Rights

Originated mortgage servicing rights are recorded at their fair value at the time of transfer of the related loans and are amortized in proportion to, and over the period of, estimated net servicing income or loss. The carrying value of the originated mortgage servicing rights is periodically evaluated for impairment or between annual evaluations under certain circumstances.

Stock-Based Compensation

Compensation costs related to share-based payment transactions are recognized based on the grant-date fair value of the stock-based compensation issued. Compensation costs are recognized over the period that an employee provides service in exchange for the award. Compensation costs related to the Employee Stock Ownership Plan are dependent upon the average stock price and the shares committed to be released to plan participants through the period in which income is reported.

Retirement Benefits

The Company has a non-contributory defined benefit pension plan that covered substantially all employees. On May 14, 2012, the Company informed its employees of its decision to freeze participation and benefit accruals under the plan, primarily to reduce some of the volatility in earnings that can accompany the maintenance of a defined benefit plan. The plan was frozen on June 30, 2012. Compensation earned by employees up to June 30, 2012 is used for purposes of calculating benefits under the plan but there will be no future benefit accruals after this date. Participants as of June 30, 2012 will continue to earn vesting credit with respect to their frozen accrued benefits as they continue to work. Pension expense under these plans is charged to current operations and consists of several components of net pension cost based on various actuarial assumptions regarding future experience under the plans.

Gains and losses, prior service costs and credits, and any remaining transition amounts that have not yet been recognized through net periodic benefit cost are recognized in accumulated other comprehensive loss, net of tax effects, until they are amortized as a component of net periodic cost. Plan assets and obligations are measured as of the Company's statement of condition date.

The Company has unfunded deferred compensation and supplemental executive retirement plans for selected current and former employees and officers that provide benefits that cannot be paid from a qualified retirement plan due to Internal Revenue Code restrictions. These plans are nonqualified under the Internal Revenue Code, and assets used to fund benefit payments are not segregated from other assets of the Company, therefore, in general, a participant's or beneficiary's claim to benefits under these plans is as a general creditor.

The Bank sponsors an Employee Stock Ownership Plan ("ESOP") covering substantially all full time employees. The cost of shares issued to the ESOP but not committed to be released to the participants is presented in the consolidated statement of condition as a reduction of shareholders' equity. ESOP shares are released to the participants on an annual basis in accordance with a predetermined schedule. The Company records ESOP compensation expense based on the shares committed to be

released and allocated to the participant's accounts multiplied by the average share price of the Company's stock over the period. Dividends related to unallocated shares are recorded as compensation expense.

Derivative Financial Instruments

Derivatives are recorded on the statement of condition as assets and liabilities measured at their fair value. The accounting for increases and decreases in the value of derivatives depends upon the use of derivatives and whether the derivatives qualify in whole or in part for the provisions of hedge accounting. The fair value of cash-flow hedging instruments ("Cash Flow Hedge") are recorded in either other assets or other liabilities. On an ongoing basis, the statement of condition is adjusted to reflect the then current fair value of the Cash Flow Hedge. The related gains or losses are reported in other comprehensive income (loss) and are subsequently reclassified into earnings, as a yield adjustment in the same period in which the related interest on the hedged item (primarily a variable-rate debt obligation) affects earnings. To the extent that the Cash Flow Hedge is not effective, the ineffective portion of the Cash Flow Hedge is immediately recognized as interest expense.

As a hedge against rising short-term interest rates, the Company sold a series of U.S. Treasury securities in the amount of \$40 million during 2017. The Company was in controlling possession of, but did not own, the securities which had been received as collateral, under industry-standard repurchase agreements, for a corresponding series of 30-day loans of approximately \$40 million on each occurrence to an unrelated third party at market rates of interest. The sale of these securities provided the funds necessary to advance the loan to the third party and placed the Company in what is generally described as a "short position" with respect to the sold U.S. Treasury securities. This transaction acted as a hedge against rising short-term interest rates because the price of the sold securities would be expected to decline in a rising short-term interest rate environment and could be subsequently re-acquired at the conclusion of the 30-day loan period at a price lower than the price at which it was originally sold. Short-term rates generally rose during the successive 30-day loan periods and, consequently, the Company recognized gains on the sale of those securities in the amount of \$428,000 when the Treasury securities were repurchased.

The hedge positions were closed on December 31, 2017 and there was no additional activity during 2018.

Income Taxes

Provisions for income taxes are based on taxes currently payable or refundable and deferred income taxes on temporary differences between the tax basis of assets and liabilities and their reported amounts in the consolidated financial statements. Deferred tax assets and liabilities are reported in the consolidated financial statements at currently enacted income tax rates applicable to the period in which the deferred tax assets and liabilities are expected to be realized or settled.

On December 22, 2017, the Tax Act was signed into law. The Tax Act instituted significant changes to various sections of the Internal Revenue Code that affect the Company. Most notably, the Tax Act reduced the Company's marginal federal income tax rate from 34% to 21% effective January 1, 2018. GAAP requires that the impact of the provisions of the Tax Act on deferred tax assets and liabilities be accounted for in the period of enactment. Accordingly, the Company recorded an income tax benefit in the fourth quarter of 2017 related to the Tax Act in the amount of \$155,000. The reduction in income tax expense was largely attributable to the reduction in the value of net deferred tax assets and liabilities reflecting lower future tax obligations resulting from the Tax Act's enacted lower federal corporate tax rate.

Earnings Per Share

Basic earnings per common share are computed by dividing net income, after preferred stock dividends and preferred stock discount accretion, by the weighted average number of common shares outstanding throughout each year. Diluted earnings per share gives effect to weighted average shares that would be outstanding assuming the exercise of issued stock options using the treasury stock method. Unallocated shares of the Company's ESOP plan are not included when computing earnings per share until they are committed to be released.

Segment Reporting

The Company has evaluated the activities relating to its strategic business units. The controlling interest in the FitzGibbons Agency is dissimilar in nature and management when compared to the Company's other strategic business units which are judged to be similar in nature and management. The Company has determined that the FitzGibbons Agency is below the reporting threshold in size in accordance with Accounting Standards Codification 280. Accordingly, the Company has determined it has no reportable segments.

Comprehensive Income (Loss)

Accounting principles generally require that recognized revenue, expenses, gains and losses be included in net income. Although certain changes in assets and liabilities are reported as a separate component of the equity section of the statement of condition, such items, along with net income, are components of comprehensive income.

Accumulated other comprehensive loss represents the sum of these items, with the exception of net income, as of the balance sheet date and is represented in the table below.

	As of December 31,	
Accumulated Other Comprehensive Loss By Component:	 2018	2017
Unrealized loss for pension and other postretirement obligations	\$ (4,266) \$	(3,003)
Tax effect	1,114	783
Net unrealized loss for pension and other postretirement obligations	(3,152)	(2,220)
Unrealized loss on available-for-sale securities	(3,833)	(2,108)
Tax effect	1,001	550
Net unrealized loss on available-for-sale securities	(2,832)	(1,558)
Unrealized loss on securities transferred to held-to-maturity	(82)	(585)
Tax effect	24	155
Net unrealized loss on securities transferred to held-to-maturity	(58)	(430)
Accumulated other comprehensive loss	\$ (6,042) \$	(4,208)

Reclassifications

Certain amounts in the 2017 consolidated financial statements have been reclassified to conform to the current year presentation. These reclassifications had no effect on net income as previously reported.

NOTE 2: NEW ACCOUNTING PRONOUNCEMENTS

The Financial Accounting Standards Board ("FASB") and, to a lesser extent, other authoritative rulemaking bodies promulgate GAAP to regulate the standards of accounting in the United States. From time to time, the FASB issues new GAAP standards, known as Accounting Standards Updates ("ASUs") some of which, upon adoption, may have the potential to change the way in which the Company recognizes or reports within its consolidated financial statements. The following presentation provides a description of standards that were adopted in 2018 and standards not yet adopted as of December 31, 2018, but could have an impact on the Company's consolidated financial statements upon adoption.

Standards Adopted in 2018

Standard: Revenue from Contracts with Customers (ASU 2014-09: Revenue from Contracts with Customers [Topic 606])

Description: This accounting guidance promulgates a core principle that an entity should recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services.

Adopted: January 1, 2018

Effect on Consolidated Financial Statements: As described in Note 27, the Company adopted the revenue recognition guidance and applied the modified retrospective approach for reporting purposes. The substantial majority of the Company's revenues are derived from net interest income on financial assets and liabilities. Income of this nature is specifically excluded from the scope of this amended guidance. With respect to noninterest income, under the new guidance credit card interchange revenue is now presented net of related customer rewards expense within other revenues from operations. For the years ended December 31, 2018 and 2017, the Company recognized \$100,000 and \$94,000, respectively, of credit card customer rewards expense within other revenues from operations.

Standard: Recognition and Measurement of Financial Assets and Financial Liabilities (ASU 2016-01: Financial Instruments—Overall [Subtopic 825-10]: Recognition and Measurement of Financial Assets and Financial Liabilities)

Description: The amended guidance requires (1) equity investments (excluding those accounted for under the equity method of accounting or those that result in consolidation of the investee) be measured at fair value with changes in fair value recognized in net income, (2) public entities to use the exit price when measuring the fair value of financial instruments for disclosure purposes, and (3) an entity to present separately in other comprehensive income a change in the instrument-specific credit risk when the entity has elected to measure a liability at fair value in accordance with the fair value option.

Adopted: January 1, 2018

Effect on Consolidated Financial Statements: The Company held marketable equity securities with a fair value of \$515,000 in its available-for-sale portfolio at December 31, 2017. Effective January 1, 2018, fair value changes in such equity securities were recognized in the consolidated statement of income as opposed to AOCI where they had been recognized under previous accounting guidance. The Company recognized losses of \$62,000 during 2018 related to an unrealized decline in value of the marketable equity securities held by the Bank, which had a fair value of \$453,000 at December 31, 2018. Management believes the declines in the value of those securities to be transitory in nature. Although those securities have historically fluctuated in value, how those securities could change in value in the future is not predictable.

Standard: Improvements to Accounting for Hedging Activities (ASU 2017-12: Derivatives and Hedging [Topic 815]: Targeted Improvements to Accounting for Hedging Activities)

Description: The amended guidance (1) expands and clarifies hedge accounting for nonfinancial and financial risk components, (2) aligns the recognition and presentation of the effects of the hedging instrument and hedged item in the financial statements, and (3) simplifies the requirements for assessing effectiveness in a hedging relationship.

Adopted: The Company adopted this guidance, effective January 1, 2018, in the second quarter of 2018.

Effect on Consolidated Financial Statements: As a result of the adoption of this Update, the Company transferred 52 securities with an aggregate amortized cost of \$35.2 million from the held-to-maturity classification to the available-for-sale classification as of the adoption date. The transfer of these securities resulted in a decrease in accumulated other comprehensive loss of \$359,000 on the adoption date. The Company had no derivative or hedging positions at December 31, 2018 and had no derivative or hedging positions during the year ended December 31, 2018. The Company anticipates that it will use derivatives and hedging transactions in the future as part of its overall risk management programs. The use of derivatives and hedging transactions may be significant and result in material impacts to the consolidated financial statements in the future. However, due to the highly uncertain nature and timing of the potential use of these instruments and/or transactions, management cannot predict the effect that this Update will have on the consolidated financial statements in future periods.

Standard: Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost (ASU 2017-07: Compensation — Retirement Benefits [Topic 715] Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost)

Description: The amended guidance requires the service cost component of the net periodic pension cost and net periodic postretirement benefit cost to be reported in the same line item in the income statement as other compensation costs arising from services rendered by the pertinent employees during the period. The amendments also require that the other components of net benefit costs be presented separately from the service cost component.

Adopted: January 1, 2018

Effect on Consolidated Financial Statements: The Company modified its defined benefit pension plan in 2012, thereby eliminating the further accumulation of service cost credits by its employees after that date. The Company previously reported, and continues to report, all of its net periodic pension and postretirement benefit costs in salaries and employee benefits within the consolidated statement of income. Information about net periodic pension and postretirement benefit costs that were not service cost-related is included in Note 14.

Standard: Scope of Modification Accounting for Share-Based Payment Awards (ASU 2016-09: Compensation — Stock Compensation [Topic 718]: Improvements to Employee Share-Based Payment Accounting)

Description: The amended guidance addresses which changes to the terms and conditions of a share-based payment award require an entity to apply modification accounting.

Adopted: January 1, 2018

Effect on Consolidated Financial Statements: The guidance is to be applied on a prospective basis for awards modified on or after the adoption date. There were no such award modifications in 2018.

Standard: Restricted Cash (ASU 2016-18: Statements of Cash Flows [Topic 230]: Restricted Cash)

Description: The amended guidance requires that restricted cash and restricted cash equivalents be included with cash and cash equivalents when reconciling the beginning-of-period and end-of-period total amounts shown on the statement of cash flows. In addition, when cash, cash equivalents, and restricted cash or restricted cash equivalents are presented in more than one line item within the statement of financial position, the line items and amounts must be presented on the face of the statement of cash flows or disclosed in the notes to the financial statements. Information about the nature of restrictions on an entity's cash and cash equivalents must also be disclosed.

Adopted: January 1, 2018

Effect on Consolidated Financial Statements: This disclosure guidance was applied using a retrospective transition method beginning with first quarter 2018 reporting and did not have a material impact on the Company's consolidated financial statements.

Standard: Classification of Certain Cash Receipts and Cash Payments (ASU 2016-15: Statement of Cash Flows [Topic 230]: Classification of Certain Cash Receipts and Cash Payments)

Description: This amendment provides clarifying guidance for classifying cash inflows or outflows on the statement of cash flows where previous guidance was unclear or silent.

Adopted: January 1, 2018

Effect on Consolidated Financial Statements: This disclosure guidance was applied using a retrospective transition method beginning with first quarter 2018 reporting and did not have a material impact on the Company's consolidated financial statements.

Standard: Clarifying the Definition of a Business (ASU 2017-01: Business Combinations [Topic 805]: Clarifying the Definition of a Business)

Description: The amended guidance clarifies the definition of a business for purposes of evaluating whether transactions would be accounted for as acquisitions (or disposals) of assets or businesses.

Adopted: January 1, 2018

Effect on Consolidated Financial Statements: The guidance should be applied using a prospective transition method if applicable transactions occur. The Company had no transactions that would be accounted for as acquisitions (or disposals) of assets or businesses under the provisions of this Update in either 2018 or 2017.

Standard: Share-based Payment Awards (ASU 2017-11: Earnings per Share [Topic 260])

Description: The amended guidance clarifies which changes to the terms or conditions of a share-based payment award require an entity to apply modification accounting described in FASB Topic 18. An entity should account for the effects of a modification unless specific criteria regarding fair value, vesting condition, and classification are met. The current disclosure requirements in FASB Topic 18 apply regardless of whether an entity is required to apply modification accounting under the amendments in this guidance.

Adopted: January 1, 2018

Effect on Consolidated Financial Statements: The guidance will be applied using a prospective transition method required under the guidance for awards modified on or after the adoption date. There were no such modifications in 2018.

Standards Not Yet Adopted as of December 31, 2018

Standard: Leases (ASU 2016-02: Leases [Topic 842])

Description: The new guidance requires lessees to record a right-of-use asset and a lease liability for all leases with a term greater than 12 months. While the guidance requires all leases to be recognized in the balance sheet, there continues to be a differentiation between finance leases and operating leases for purposes of income statement recognition and cash flow statement presentation. For finance leases, interest on the lease liability and amortization of the right-of-use asset will be recognized separately in the statement of income. Repayments of principal on those lease liabilities will be classified within financing activities and payments of interest on the lease liability will be classified within operating activities in the statement of cash flows. For operating leases, a single lease cost is recognized in the statement of income and allocated over the lease term, generally on a straight-line basis. All cash payments are presented within operating activities in the statement of cash flows. The accounting applied by lessors is largely unchanged from existing GAAP, however, the guidance eliminates the accounting model for leveraged leases for leases that commence after the effective date of the guidance.

Required Date of Implementation: January 1, 2019

Effect on Consolidated Financial Statements: The Company occupies certain banking offices and land under noncancelable operating lease agreements which were not reflected in its consolidated balance sheet at December 31, 2018. Upon adoption of the guidance on January 1, 2019, the Company recorded an asset of \$2.5 million and a corresponding liability in the amount of \$2.7 million, as a result of recognizing right-of-use assets and lease liabilities on its consolidated statement of financial condition. The Company elected to adopt the transition relief under Topic 842, Leases, using the modified retrospective transition method recognizing a cumulative effect adjustment to the opening balance of retained earnings in the amount of \$239,000.

The Company owns certain properties that it leases to unaffiliated third parties at market rates. Lease rental income was \$134,000 and \$122,000 for the twelve months ended December 31, 2018 and 2017, respectively. All lease agreements are accounted for as operating leases. The Company has no unamortized initial direct costs related to the establishment of these lease agreements at January 1, 2019.

Standard: Premium Amortization on Purchased Callable Debt Securities (ASU 2017-08: Receivables—Nonrefundable Fees and Other Costs [Subtopic 310-20]: Premium Amortization on Purchased Callable Debt Securities)

Description: The amended guidance requires the premium on callable debt securities to be amortized to the earliest call date. The amendments do not require an accounting change for securities held at a discount; the discount continues to be amortized to maturity.

Required Date of Implementation: January 1, 2019

Effect on Consolidated Financial Statements: The Company has consistently employed accounting methodologies with respect to securities with purchased premiums that are consistent with the guidance provided in this Update. Accordingly, the Company does not expect the guidance to have a material impact on its consolidated financial statements.

Standard: Improvements to Nonemployee Share-Based Payment Accounting (ASU 2018-07: Compensation - Stock Compensation [Topic 718])

Description: Consistent with the accounting requirement for employee share-based payment awards, under the new guidance, nonemployee share-based payment awards within the scope of Topic 718 are measured on the grant date at the grant-date fair value of the equity instruments that an entity is obligated to issue when the good has been delivered or the service has been rendered and any other conditions necessary to earn the right to benefit from the instruments have been satisfied. The amendments in this Update affect all entities that enter into share-based payment transactions for acquiring goods and services from nonemployees.

Required Date of Implementation: January 1, 2019

Effect on Consolidated Financial Statements: The amendments should be applied using a prospective transition method. The Company is not currently party to any nonemployee share-based payment awards whereby the participant is obligated to any specific performance requirement other than to remain in the service of the Company through a specified vesting date, or schedule of vesting dates. Therefore, the Company does not expect the guidance will have a material impact on its consolidated financial statements.

Standard: Measurement of Credit Losses on Financial Instruments (ASU 2016-13: Financial Instruments—Credit Losses [Topic 326]: Measurement of Credit Losses on Financial Instruments)

Description: The amended guidance replaces the current incurred loss model for determining the allowance for credit losses with a current expected credit loss ("CECL") methodology. The guidance requires financial assets measured at amortized cost to be presented at the net amount expected to be collected. The allowance for credit losses will represent a valuation account that is deducted from the amortized cost basis of the financial assets to present their net carrying value at the amount expected to be collected. The income statement will reflect the measurement of credit losses for newly recognized financial assets as well as expected increases or decreases of expected credit losses that have taken place during the period. When determining the allowance, expected credit losses over the contractual term of the financial asset(s) (taking into account prepayments) will be estimated considering relevant information about past events, current conditions, and reasonable and supportable forecasts that affect the collectability of the reported amount. The amended guidance also requires recording an allowance for credit losses for purchased financial assets with a more-than-insignificant amount of credit deterioration since origination. The initial allowance for these assets will be added to the purchase price at acquisition rather than being reported as an expense. Subsequent changes in the allowance will be recorded through the income statement as an expense adjustment. In addition, the amended guidance requires credit losses relating to available-for-sale debt securities to be recorded through an allowance for credit losses. The calculation of credit losses for available-for-sale securities will be substantially unchanged from how it is determined under existing guidance.

Required Date of Implementation: January 1, 2020 (early adoption permitted)

Effect on Consolidated Financial Statements: The transition guidance requires an entity to make a cumulative-effect adjustment to opening retained earnings as of the beginning of the first reporting period in which the amendments are effective. The Company is assessing the new guidance to determine what modifications to existing credit estimation processes may be required. Accordingly, the Company has engaged external consulting service and analytical software providers to assist management with the transition to the CECL methodology. The implementation of this update is not expected to take place earlier than the required implementation date of January 1, 2020. The Company expects that the new guidance will likely result in an increase in its allowance for credit losses as a result of considering credit losses over the expected life of its loan and debt securities portfolios. The amount of the increase in the allowance for loan losses required under the CECL methodology, if any, cannot be determined as of the date of this report. The increase, if required, will at least partially depend on many factors not yet determinable, including changes to the composition of the Bank's loan portfolio, updates to loan portfolio credit histories and changes in general economic conditions between the date of this report and the implementation date for this Update. Increases in the level of allowances will also reflect new requirements to include estimated credit losses on investment securities classified as held-to-maturity, if any. The Company has formed an Implementation Committee, whose membership includes representatives of senior management, to develop plans that will encompass: (1) internal methodology changes (2) data collection and management activities, (3) internal communication requirements, and (4) estimation of the projected impact of this guidance. The amount of any change in the allowance for credit losses resulting from the new guidance will ultimately be impacted by the provisions of this guidance as well as

Standard: Simplifying the Test for Goodwill Impairment (ASU 2017-04: Intangibles—Goodwill and Other [Topic 350]: Simplifying the Test for Goodwill Impairment)

Description: Current guidance requires a two-step approach to determining if recorded goodwill is impaired. In Step 1, reporting entities must first evaluate whether or not the carrying value of a reporting unit is greater than its fair value. In Step 2, if a reporting unit's carrying value is greater than its fair value, then the entity should calculate the implied fair value of goodwill. If the carrying value of goodwill is more than the implied fair value, an impairment charge for the difference must be recorded. The amended guidance eliminates Step 2 from the goodwill impairment test. Therefore, under the new guidance, if the carrying value of a reporting unit is greater than its fair value, a goodwill impairment charge will be recorded for the difference (up to the carrying value of the recorded goodwill).

Required Date of Implementation: January 1, 2020 (early adoption permitted)

Effect on Consolidated Financial Statements: The amendments should be applied using a prospective transition method. The Company does not expect the guidance will have a material impact on its consolidated financial statements, unless at some point in the future one of its reporting units were to fail Step 1 of the goodwill impairment test.

Standard: Fair Value Measurement (ASU 2018-13: Fair Value Measurement (Topic 820): Disclosure Framework Changes to the Disclosure Requirements for Fair Value Measurement

Description: The Board is issuing the amendments in this Update as part of the disclosure framework project. The disclosure framework project's objective and primary focus are to improve the effectiveness of disclosures in the notes to financial statements by facilitating clear communication of the information required by GAAP that is most important to users of each entity's financial statements. The amendments in this Update modify the disclosure requirements for entities such as the Company on fair value measurements in Topic 820, Fair Value Measurement:

The following disclosure requirements were removed from Topic 820:

- 1. The amount of and reasons for transfers between Level 1 and Level 2 of the fair value hierarchy
- 2. The policy for timing of transfers between levels
- 3. The valuation processes for Level 3 fair value measurements

The following disclosure requirements were modified in Topic 820:

- 1. In lieu of a rollforward for Level 3 fair value measurements, a nonpublic entity is required to disclose transfers into and out of Level 3 of the fair value hierarchy and purchases and issues of Level 3 assets and liabilities.
- 2. For investments in certain entities that calculate net asset value, an entity is required to disclose the timing of liquidation of an investee's assets and the date when restrictions from redemption might lapse only if the investee has communicated the timing to the entity or announced the timing publicly.
- 3. The amendments clarify that the measurement uncertainty disclosure is to communicate information about the uncertainty in measurement as of the reporting date.

The following disclosure requirements were added to Topic 820:

- 1. The changes in unrealized gains and losses for the period included in other comprehensive income for recurring Level 3 fair value measurements held at the end of the reporting period
- 2. The range and weighted average of significant unobservable inputs used to develop Level 3 fair value measurements. For certain unobservable inputs, an entity may disclose other quantitative information (such as the median or arithmetic average) in lieu of the weighted average if the entity determines that other quantitative information would be a more reasonable and rational method to reflect the distribution of unobservable inputs used to develop Level 3 fair value measurements.

Required Date of Implementation: The amendments in this Update are effective for all entities for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2019. The amendments on changes in unrealized gains and losses, the range and weighted average of significant unobservable inputs used to develop Level 3 fair value measurements, and the narrative description of measurement uncertainty should be applied prospectively for only the most recent interim or annual period presented in the initial fiscal year of adoption. All other amendments should be applied retrospectively to all periods presented upon their effective date. Early adoption is permitted upon issuance of this Update. An entity is permitted to early adopt any removed or modified disclosures upon issuance of this Update and delay adoption of the additional disclosures until their effective date.

Effect on Consolidated Financial Statements: The Company does not expect the new guidance will have a material impact to its consolidated statements of condition or income.

Standard: Compensation (ASU 2018-14: Compensation - Retirement Benefits - Defined Benefit Plans - General (Subtopic 715 - 20): Disclosure Framework - Changes to the Disclosure Requirements for Defined Benefit Plans)

Description: The Board is issuing the amendments in this Update as part of the disclosure framework project. The amendments in this Update modify the disclosure requirements for employers that sponsor defined benefit pension or other postretirement plans.

The following disclosure requirements are removed from Subtopic 715-20:

- 1. The amounts in accumulated other comprehensive income expected to be recognized as components of net periodic benefit cost over the next fiscal year.
- 2. The amount and timing of plan assets expected to be returned to the employer.
- 3. Related party disclosures about the amount of future annual benefits covered by insurance and annuity contracts and significant transactions between the employer or related parties and the plan.
- 4. The effects of a one-percentage-point change in assumed health care cost trend rates on the (a) aggregate of the service and interest cost components of net periodic benefit costs and (b) benefit obligation for postretirement health care benefits.

The following disclosure requirements are added to Subtopic 715-20:

- 1. The weighted-average interest crediting rates for cash balance plans and other plans with promised interest crediting rates.
- 2. An explanation of the reasons for significant gains and losses related to changes in the benefit obligation for the period.

The amendments in this Update also clarify the disclosure requirements in paragraph 715-20-50-3, which state that the following information for defined benefit pension plans should be disclosed:

- 1. The projected benefit obligation (PBO) and fair value of plan assets for plans with PBOs in excess of plan assets.
- 2. The accumulated benefit obligation (ABO) and fair value of plan assets for plans with ABOs in excess of plan assets.

Required Date of Implementation: The amendments in this Update are effective for fiscal years ending after December 15, 2020, for public business entities and for fiscal years ending after December 15, 2021, for all other entities. Early adoption is permitted for all entities.

Effect on Consolidated Financial Statements: The Company does not expect the new guidance will have a material impact to its consolidated statements of condition or income.

Standard: Derivatives and Hedging (ASU 2018-16: Derivatives and Hedging (Topic 815): Inclusion of the Secured Overnight Financing Rate (SOFR) Overnight Index Swap (OIS) Rate as a Benchmark Interest Rate for Hedge Accounting Purposes)

Description: Topic 815, Derivatives and Hedging, provides guidance on the risks associated with financial assets or liabilities that are permitted to be hedged. Among those risks is the risk of changes in fair values or cash flows of existing or forecasted issuances or purchases of fixed-rate financial assets or liabilities attributable to the designated benchmark interest rate (referred to as interest rate risk). At present in the United States, eligible benchmark interest rates are the interest rates on direct Treasury obligations of the U.S. government (UST), the London Interbank Offered Rate (LIBOR) swap rate, and the Overnight Index Swap (OIS) Rate based on the Fed Funds Effective Rate. Accounting Standards Update No. 2017-12, Derivatives and Hedging (Topic 815): Targeted Improvements to Accounting for Hedging Activities, introduced the Securities Industry and Financial Markets Association (SIFMA) Municipal Swap Rate as the fourth permissible U.S. benchmark rate.

The amendments in this Update permit the use of the OIS rate based on SOFR as a U.S. benchmark interest rate for hedge accounting purposes under Topic 815 in addition to the UST, the LIBOR swap rate, the OIS rate based on the Fed Funds Effective Rate, and the SIFMA Municipal Swap Rate.

Required Date of Implementation: The Company adopted ASU 2017-12 in the quarter ended June 30, 2018. For public business entities that already have adopted the amendments in Update 2017-12, such as the Company, the amendments are effective for fiscal years beginning after December 15, 2018, and interim periods within those fiscal years.

Effect on Consolidated Financial Statements: The Company has certain assets, primarily in its investment securities portfolio, that have adjustable rates of interest based on LIBOR. To the extent that the Company utilizes hedging strategies involving those securities in the future, or uses hedging strategies designed to modify the effective repricing characteristics of its fixed-rate asset or fixed-rate liabilities portfolios to floating-rate assets or floating-rate liabilities in the future the use of the liabilities in the future, the use of the OIS rate based on SOFR as a U.S. benchmark interest rate for hedge accounting purposes may have an effect on future results of operations. The Company had no hedging activities in place at December 31, 2018 and does not expect the new guidance will have a material impact to its consolidated statements of condition or income.

NOTE 3: EARNINGS PER SHARE

Basic earnings per share are calculated by dividing net income available to common shareholders by the weighted average number of common shares outstanding during the period. Net income available to common shareholders is net income to Pathfinder Bancorp, Inc. less the total of preferred dividends declared. Diluted earnings per share include the potential dilutive effect that could occur upon the assumed exercise of issued stock options using the Treasury Stock method. Anti-dilutive shares are common stock equivalents with average exercise prices in excess of the weighted average market price for the period presented. Anti-dilutive stock options, not included in the computation below, were -0- and 26,065 for the years ended 2018 and 2017, respectively. Unallocated common shares held by the ESOP are not included in the weighted-average number of common shares outstanding for purposes of calculating earnings per common share until they are committed to be released to plan participants.

The following table sets forth the calculation of basic and diluted earnings per share.

	Years	ended	
	Decem	ber 31	,
(In thousands, except per share data)	2018		2017
Basic Earnings Per Common Share			
Net income available to common shareholders	\$ 4,031	\$	3,491
Weighted average common shares outstanding	4,171		4,081
Basic earnings per common share	\$ 0.97	\$	0.86
Diluted Earnings Per Common Share			
Net income available to common shareholders	\$ 4,031	\$	3,491
Weighted average common shares outstanding	4,171		4,081
Effect of assumed exercise of stock options	95		108
Diluted weighted average common shares outstanding	4,266		4,189
Diluted earnings per common share	\$ 0.94	\$	0.83

NOTE 4: INVESTMENT SECURITIES

The amortized cost and estimated fair value of investment securities are summarized as follows:

	December 31, 2018									
				Gross		Gross		Estimated		
		Amortized		Unrealized		Unrealized		Fair		
(In thousands)		Cost		Gains		Losses		Value		
Available-for-Sale Portfolio										
Debt investment securities:										
US Treasury, agencies and GSEs	\$	17,171	\$	18	\$	(158)	\$	17,031		
State and political subdivisions		23,661		6		(602)		23,065		
Corporate		17,389		220		(409)		17,200		
Asset backed securities		18,243		13		(137)		18,119		
Residential mortgage-backed - US agency		32,409		34		(777)		31,666		
Collateralized mortgage obligations - US agency		48,101		31		(1,691)		46,441		
Collateralized mortgage obligations - Private label		24,317		17		(398)		23,936		
Total		181,291		339		(4,172)		177,458		
Equity investment securities:										
Common stock - financial services industry		206		-		-		206		
Total		206		-		-		206		
Total available-for-sale	\$	181,497	\$	339	\$	(4,172)	\$	177,664		
Held-to-Maturity Portfolio										
Debt investment securities:										
US Treasury, agencies and GSEs	\$	3,987	\$	-	\$	(35)	\$	3,952		
State and political subdivisions		5,089		22		(84)		5,027		
Corporate		9,924		4		(182)		9,746		
Asset backed securities		1,509		-		(13)		1,496		
Residential mortgage-backed - US agency		11,601		124		(47)		11,678		
Collateralized mortgage obligations - US agency		13,972		93		(13)		14,052		
Collateralized mortgage obligations - Private label		7,826		17		(25)		7,818		
Total held-to-maturity	\$	53,908	\$	260	\$	(399)	\$	53,769		

	December 31, 2017									
				Gross		Gross		Estimated		
		Amortized		Unrealized		Unrealized		Fair		
(In thousands)		Cost		Gains		Losses		Value		
Available-for-Sale Portfolio										
Debt investment securities:										
US Treasury, agencies and GSEs	\$	41,489	\$	1	\$	(154)	\$	41,336		
State and political subdivisions		13,960		12		(291)		13,681		
Corporate		8,584		108		(92)		8,600		
Asset backed securities		6,662		12		(30)		6,644		
Residential mortgage-backed - US agency		36,214		23		(495)		35,742		
Collateralized mortgage obligations - US agency		54,481		-		(1,133)		53,348		
Collateralized mortgage obligations - Private label		11,193		62		(203)		11,052		
Total		172,583		218		(2,398)		170,403		
Equity investment securities:										
Common stock - financial services industry		663		72		-		735		
Total		663		72		-		735		
Total available-for-sale	\$	173,246	\$	290	\$	(2,398)	\$	171,138		
Held-to-Maturity Portfolio										
Debt investment securities:										
US Treasury, agencies and GSEs	\$	4,948	\$	14	\$	(14)	\$	4,948		
State and political subdivisions		35,130		641		(311)		35,460		
Corporate		8,311		151		(159)		8,303		
Residential mortgage-backed - US agency		6,853		53		(10)		6,896		
Collateralized mortgage obligations - US agency		7,574		83		(215)		7,442		
Collateralized mortgage obligations - Private label		3,380		7		(10)		3,377		
Total held-to-maturity	\$	66,196	\$	949	\$	(719)	\$	66,426		

The majority of the Company's investments in mortgage-backed securities include pass-through securities and collateralized mortgage obligations issued and guaranteed by Fannie Mae, Freddie Mac, and Ginnie Mae. At December 31, 2018, the Company also held a total of 21 private-label mortgage-backed securities or collateralized mortgage obligations with an aggregate book balance of \$32.1 million and 14 private-label asset backed securities collateralized by consumer loans with an aggregate book balance of \$19.8 million. At December 31, 2017, the Company held a total of 17 private-label mortgage-backed securities or collateralized mortgage obligations with an aggregate book balance of \$25.2 million and six private-label asset backed securities collateralized by consumer loans with an aggregate book balance of \$6.0 million. These investments are relatively short-duration securities with significant credit enhancements. The Company's investments in state and political obligation securities are generally municipal obligations that are categorized as general obligations of the issuer that are supported by the overall taxing authority of the issuer, and in some cases are insured. The obligations issued by school districts are generally supported by state administered insurance funds or credit enhancement programs.

The amortized cost and estimated fair value of debt investments at December 31, 2018 by contractual maturity are shown below. Expected maturities may differ from contractual maturities because borrowers may have the right to call or prepay obligations with or without penalties.

	 Available	e-for-	Sale	 Held-to-	Matu	ırity
	Amortized		Estimated	Amortized		Estimated
(In thousands)	Cost		Fair Value	Cost		Fair Value
Due in one year or less	\$ 10,490	\$	10,397	\$ 3,111	\$	3,111
Due after one year through five years	22,893		22,858	7,794		7,734
Due after five years through ten years	24,128		23,677	6,775		6,694
Due after ten years	18,953		18,483	2,829		2,682
Sub-total	76,464		75,415	20,509		20,221
Residential mortgage-backed - US agency	32,409		31,666	11,601		11,678
Collateralized mortgage obligations - US agency	48,101		46,441	13,972		14,052
Collateralized mortgage obligations - Private label	24,317		23,936	7,826		7,818
Totals	\$ 181,291	\$	177,458	\$ 53,908	\$	53,769

The Company's investment securities' gross unrealized losses and fair value, aggregated by investment category and length of time that individual securities have been in a continuous unrealized loss position, is as follows:

	December 31, 2018														
	Less	than T	welve Mo	onth	ıs	Tw	elve	Months or	Mor	e	Total				
	Number of					Number of					Number of				
	Individual	Unr	ealized		Fair	Individual		Unrealized		Fair	Individual	Uı	nrealized		Fair
(Dollars in thousands)	Securities		Losses		Value	Securities		Losses		Value	Securities		Losses		Value
Available-for-Sale Portfolio															
US Treasury, agencies and GSE's	1	\$	(22)	\$	977	2		\$ (136)	\$	12,017	3	\$	(158)	\$	12,994
State and political subdivisions	5		(76)		5,213	26		(526)		14,206	31		(602)		19,419
Corporate	10		(137)		8,266	4		(272)		3,374	14		(409)		11,640
Asset backed securities	7		(91)		10,470	2		(46)		3,059	9		(137)		13,529
Residential mortgage-backed - US agency	6		(83)		3,519	21		(694)		24,154	27		(777)		27,673
Collateralized mortgage obligations - US agency	3		(98)		2,792	28		(1,593)		35,765	31		(1,691)		38,557
Collateralized mortgage obligations - Private label	7		(275)		14,011	5		(123)		5,907	12		(398)		19,918
Totals	39	\$	(782)	\$	45,248	88		\$ (3,390)	\$	98,482	127	\$	(4,172)	\$	143,730
Held-to-Maturity Portfolio															
US Treasury, agencies and GSE's	1	\$	(8)	\$	982	3		\$ (27)	\$	2,970	4	\$	(35)	\$	3,952
State and political subdivisions	-		-		-	6		(84)		2,310	6		(84)		2,310
Corporate	4		(41)		3,214	2		(141)		2,507	6		(182)		5,721
Asset backed securities	1		(13)		1,496	-		-		-	1		(13)		1,496
Residential mortgage-backed - US agency	3		(8)		1,447	2		(39)		1,769	5		(47)		3,216
Collateralized mortgage obligations - US agency	4		(13)		3,972	-		-		-	4		(13)		3,972
Collateralized mortgage obligations - Private label	-		-		-	2		(25)		1,874	2		(25)		1,874
Totals	13	\$	(83)	\$	11,111	15		\$ (316)	\$	11,430	28	\$	(399)	\$	22,541

							DCC	cinoci 51, 2	01/							
	Less	than T	welve Mo	onths	S	Tv	elve	Months or	Mor	9	Total					
	Number of					Number o	Ī				Number of					
	Individual	Uni	ealized		Fair	Individua		Unrealized		Fair	Individual	Ur	nrealized		Fair	
(Dollars in thousands)	Securities		Losses		Value	Securities		Losses		Value	Securities		Losses		Value	
Available-for-Sale Portfolio																
US Treasury, agencies and GSE's	5	\$	(105)	\$	27,359	4		\$ (49)	\$	13,957	9	\$	(154)	\$	41,316	
State and political subdivisions	18		(24)		2,480	12		(267)		5,041	30		(291)		7,521	
Corporate	2		(19)		1,791	1		(73)		1,727	3		(92)		3,518	
Asset backed securities	2		(17)		3,123	1		(13)		742	3		(30)		3,865	
Residential mortgage-backed - US agency	15		(159)		21,551	g		(336)		10,463	24		(495)		32,014	
Collateralized mortgage obligations - US agency	14		(195)		23,790	21		(938)		25,395	35		(1,133)		49,185	
Collateralized mortgage obligations - Private label	4		(203)		7,439	-		-		-	4		(203)		7,439	
Totals	60	\$	(722)	\$	87,533	48		\$ (1,676)	\$	57,325	108	\$	(2,398)	\$	144,858	
Held-to-Maturity Portfolio																
US Treasury, agencies and GSE's	2	\$	(2)	\$	1,990	1		\$ (12)	\$	988	3	\$	(14)	\$	2,978	
State and political subdivisions	8		(55)		5,668	11		(256)		8,644	19		(311)		14,312	
Corporate	3		(10)		1,412	1		(149)		2,087	4		(159)		3,499	
Residential mortgage-backed - US agency	2		(10)		1,909	-		-		-	2		(10)		1,909	
Collateralized mortgage obligations - US agency	2		(215)		4,418	-		-		-	2		(215)		4,418	
Collateralized mortgage obligations - Private label	1		(10)		1,119	-		-		-	1		(10)		1,119	
Totals	18	\$	(302)	\$	16,516	13		\$ (417)	\$	11,719	31	\$	(719)	\$	28,235	

December 31, 2017

The Company conducts a formal review of investment securities on a quarterly basis for the presence of OTTI. The Company assesses whether OTTI is present when the fair value of a debt security is less than its amortized cost basis at the statement of condition date. Under these circumstances, OTTI is considered to have occurred (1) if we intend to sell the security; (2) if it is "more likely than not" we will be required to sell the security before recovery of its amortized cost basis; or (3) the present value of expected cash flows is not anticipated to be sufficient to recover the entire amortized cost basis. The guidance requires that credit-related OTTI is recognized in earnings while non-credit-related OTTI on securities not expected to be sold is recognized in other comprehensive income ("OCI"). Non-credit-related OTTI is based on other factors, including illiquidity and changes in the general interest rate environment. Presentation of OTTI is made in the consolidated statement of income on a gross basis, including both the portion recognized in earnings as well as the portion recorded in OCI. The gross OTTI would then be offset by the amount of non-credit-related OTTI, showing the net as the impact on earnings.

Management does not believe any individual unrealized loss in other securities within the portfolio as of December 31, 2018 represents OTTI. There were a total of 88 securities classified as available-for-sale and 15 securities classified as held-to-maturity that were in an unrealized loss position for 12 months or longer at December 31, 2018. Each security which has been in an unrealized loss position for 12 months or more has been analyzed and is not considered to be impaired. These securities have unrealized losses primarily due to changes in general interest rates that occurred since the securities were acquired or due to changes in certain assumptions related to the securities' such as the timing of projected prepayment activity. Of the 103 securities in an unrealized loss position for 12 months or more at December 31, 2018, 56 securities, representing 68.68% of the unamortized cost of the total securities in an unrealized loss position for 12 months or more, are issued by United States agencies or government sponsored enterprises and consist of mortgage-backed securities, collateralized mortgage obligations and direct agency financings. These positions in US government agency and government-sponsored enterprises are deemed to have no credit impairment, thus, the disclosed unrealized losses relate primarily to changes in interest rates subsequent to the acquisition of the individual securities. In addition to these securities, the Company held the following issuances that were in an unrealized loss position for 12 or more months at December 31, 2018:

26 securities issued by state and local political subdivisions, classified as available-for-sale, with aggregate losses of \$526,000, or 3.57%. These securities were either unrated at issuance (and are generally notes of \$250,000 or less, issued by political subdivisions within the Company's general market area) or are rated at or above the lowest investment grade by one or more nationally-recognized statistical rating organization (NRSRO) and none of the securities are deemed to be impaired at December 31, 2018.

Four securities issued by corporations, classified as available-for-sale, with aggregate losses of \$272,000, or 7.46%. These securities were rated at or above the lowest investment grade by one or more NRSRO and none of these securities are deemed to be impaired at December 31, 2018.

Two securities issued by private entities, backed by pooled assets other than residential or commercial mortgages, classified as available-for-sale, with aggregate losses of \$46,000, or 1.48%. These asset-backed securities were either unrated at issuance or

are rated at or above the lowest investment grade by one or more NRSRO. Asset-backed securities (ABS) that are held by the Company that were unrated at issuance are the most senior securities in the securitization structure of that overall issuance and have substantial credit enhancements and/or credit enhancement mechanisms in place. Accordingly, none of these securities are deemed to be impaired at December 31, 2018.

Five securities issued by private entities, backed by pooled residential or commercial mortgages, classified as available-for-sale, with aggregate losses of \$123,000, or 2.08%. These mortgage-backed securities (MBS) were either unrated at issuance or are rated at or above the lowest investment grade by one or more NRSRO. Securities of this type that are held by the Company that were unrated at issuance are the most senior securities in the securitization structure of that overall issuance and have substantial credit enhancements and/or credit enhancement mechanisms in place. Accordingly, none of these securities are deemed to be impaired at December 31, 2018.

Six securities issued by state and local political subdivisions, classified as held-to-maturity, with aggregate losses of \$84,000, or 3.51%. These securities were either unrated at issuance (and are generally notes of \$250,000 or less, issued by political subdivisions within the Company's general market area) or are rated at or above the lowest investment grade by one or more nationally-recognized statistical rating organization (NRSRO) and none of the securities are deemed to be impaired at December 31, 2018.

The Company held two securities issued by corporations, classified as held-to-maturity, with aggregate losses of \$141,000, or 5.32%. These securities were rated at or above the lowest investment grade by one or more NRSRO and none of these securities are deemed to be impaired at December 31, 2018.

The Company held two securities issued by private entities, backed by pooled residential or commercial mortgages, classified as held-to-maturity, with aggregate losses of \$25,000, or 1.32%. These MBS were either unrated at issuance or are rated at or above the lowest investment grade by one or more NRSRO. Securities of this type that are held by the Company that were unrated at issuance are the most senior securities in the securitization structure of that overall issuance and have substantial credit enhancements and/or credit enhancement mechanisms in place. Accordingly, none of these securities are deemed to be impaired at December 31, 2018.

The Company does not intend to sell any of the securities in an unrealized loss position for 12 or months nor is it more likely than not that the Company will be required to sell these securities prior to the recovery of the amortized cost.

Proceeds of \$35.6 million and \$67.6 million, respectively on sales and redemptions of securities for the years ended December 31 resulted in gross realized gains (losses) detailed below:

(In thousands)	2018	2017
Realized gains on investments	\$ 242 \$	427
Realized gains on hedging activity	-	428
Realized losses on investments	(424)	(366)
	\$ (182) \$	489

The Company adopted ASU 2017-12: Derivatives and Hedging [Topic 815]: Targeted Improvements to Accounting for Hedging Activities, effective January 1, 2018, in the second quarter of 2018. The amended guidance within this Update expands and clarifies hedge accounting for nonfinancial and financial risk components, aligns the recognition and presentation of the effects of the hedging instrument and hedged item in the financial statements, and simplifies the requirements for assessing effectiveness in a hedging relationship. The Company did not have any hedging activities in 2018, but expects to utilize hedging in the future to improve the management of its risk profiles. In order to facilitate potential future hedging activities, the Company transferred 52 investment securities with an aggregate amortized cost before transfer of \$35.2 million from the held-to-maturity classification to the available-for-sale classification at the date of adoption.

As of December 31, 2018 and December 31, 2017, securities with a fair value of \$69.8 million and \$113.0 million, respectively, were pledged to collateralize certain municipal deposit relationships. As of the same dates, securities with a fair value of \$19.5 million and \$19.9 million were pledged against certain borrowing arrangements.

Management has reviewed its loan and mortgage-backed securities portfolios and determined that, to the best of its knowledge, little or no exposure exists to sub-prime or other high-risk residential mortgages. The Company is not in the practice of investing in, or originating, these types of investments or loans.

NOTE 5: LOANS

Major classifications of loans are as follows:

	December 31,	December 31,
(In thousands)	2018	2017
Residential mortgage loans:		
1-4 family first-lien residential mortgages	\$ 232,523	\$ 216,793
Construction	7,121	5,558
Total residential mortgage loans	239,644	222,351
Commercial loans:		
Real estate	212,314	192,525
Lines of credit	44,235	51,285
Other commercial and industrial	63,359	50,097
Tax exempt loans	9,320	10,405
Total commercial loans	329,228	304,312
Consumer loans:		
Home equity and junior liens	26,109	25,935
Other consumer	25,424	28,646
Total consumer loans	51,533	54,581
Total loans	620,405	581,244
Net deferred loan fees	(135)	(413)
Less allowance for loan losses	(7,306)	(7,126)
Loans receivable, net	\$ 612,964	\$ 573,705

The Company originates residential mortgage, commercial and consumer loans largely to customers throughout Oswego, Onondaga and surrounding counties. Although the Company has a diversified loan portfolio, a substantial portion of its borrowers' abilities to honor their contracts is dependent upon the counties' employment and economic conditions.

Although the Bank may occasionally purchase or fund loan participation interests outside of its primary market areas, the Bank generally originates residential mortgage, commercial, and consumer loans largely to customers throughout Oswego and Onondaga counties. Although the Bank has a diversified loan portfolio, a substantial portion of its borrowers' abilities to honor their loan contracts is dependent upon the counties' employment and economic conditions.

The Bank acquired \$15.6 million and \$10.2 million of loans originated by an unrelated financial institution, located outside of the Bank's market area, in January 2017 and April 2017, respectively. The acquired loan pools represented a 90% participating interest in a total of 1,231 loans secured by liens on automobiles with maturities ranging primarily from two to six years. These loans will be serviced through their respective maturities by the originating financial institution. At December 31, 2018 and December 31, 2017, there were 909 loans outstanding with a remaining carrying value of \$13.3 million, and 1,082 loans outstanding with a remaining outstanding carrying value of \$19.6 million, respectively. Since the acquisition of these loan pools, a total of 20 loans had cumulative net charge-offs totaling \$120,000 with \$75,000 in net charge-offs for the twelve months ended December 31, 2018.

As of December 31, 2018 and December 31, 2017, residential mortgage loans with a carrying value of \$154.9 million and \$148.1 million, respectively, have been pledged by the Company to the Federal Home Loan Bank of New York ("FHLBNY") under a blanket collateral agreement to secure the Company's line of credit and term borrowings.

Loan Origination / Risk Management

The Company has lending policies and procedures in place that are designed to maximize loan income within an acceptable level of risk. Management and the board of directors reviews and approves these policies and procedures on a regular basis. A reporting system supplements the review process by frequently providing management with reports related to loan production, loan quality, loan delinquencies, nonperforming and potential problem loans. Diversification in the loan portfolio is a means of managing risk associated with fluctuations in economic conditions.

Risk Characteristics of Portfolio Segments

Each portfolio segment generally carries its own unique risk characteristics.

The residential mortgage loan segment is impacted by general economic conditions, unemployment rates in the Bank's service area, real estate values and the forward expectation of improvement or deterioration in economic conditions.

The commercial loan segment is impacted by general economic conditions but, more specifically, the industry segment in which each borrower participates. Unique competitive changes within a borrower's specific industry, or geographic location could cause significant changes in the borrower's revenue stream, and therefore, impact its ability to repay its obligations. Commercial real estate is also subject to general economic conditions but changes within this segment typically lag changes seen within the consumer and commercial segment. Included within this portfolio are both owner occupied real estate, in which the borrower occupies the majority of the real estate property and upon which the majority of the sources of repayment of the obligation is dependent upon, and non-owner occupied real estate, in which several tenants comprise the repayment source for this portfolio segment. The composition and competitive position of the tenant structure may cause adverse changes in the repayment of debt obligations for the non-owner occupied class within this segment.

The consumer loan segment is impacted by general economic conditions, unemployment rates in the geographic areas in which borrowers and loan collateral are located, and the forward expectation of improvement or deterioration in economic conditions.

Real estate loans, including residential mortgages, commercial real estate loans and home equity, comprise 77% of the portfolio in 2018, substantially identical to the composition in 2017, where such loans represented 76% of total loans. Loans secured by real estate generally provide strong collateral protection and thus significantly reduce the inherent credit risk in the portfolio.

Management has reviewed its loan portfolio and determined that, to the best of its knowledge, little or no exposure exists to sub-prime or other high-risk residential mortgages. The Company is not in the practice of originating these types of loans.

Description of Credit Quality Indicators

The Company utilizes an eight tier risk rating system to evaluate the quality of its loan portfolio. Loans that are risk rated "1" through "4" are considered "Pass" loans. In accordance with regulatory guidelines, loans rated "5" through "8" are termed "criticized" loans and loans rated "6" through "8" are termed "classified" loans. A description of the Company's credit quality indicators follows.

For Commercial Loans:

- 1. <u>Prime</u>: A loan that is fully secured by properly margined Pathfinder Bank deposit account(s) or an obligation of the US Government. It may also be unsecured if it is supported by a very strong financial condition and, in the case of a commercial loan, excellent management. There exists an unquestioned ability to repay the loan in accordance with its terms.
- 2. <u>Strong</u>: Desirable relationship of somewhat less stature than Prime grade. Possesses a sound documented repayment source, and back up, which will allow repayment within the terms of the loan. Individual loans backed by solid assets, character and integrity. Ability of individual or company management is good and well established. Probability of serious financial deterioration is unlikely.
- 3. <u>Satisfactory</u>: Stable financial condition with cash flow sufficient for debt service coverage. Satisfactory loans of average strength having some deficiency or vulnerability to changing economic or industry conditions but performing as agreed with documented evidence of repayment capacity. May be unsecured loans to borrowers with satisfactory credit and financial strength. Satisfactory provisions for management succession and a secondary source of repayment exists.

- 4. <u>Satisfactory Watch:</u> A four is not a criticized or classified credit. These credits do not display the characteristics of a criticized asset as defined by the regulatory definitions. A credit is given a Satisfactory Watch designation if there are matters or trends observed deserving attention somewhat beyond normal monitoring. Borrowing obligations may be handled according to agreement but could be adversely impacted by developing factors such as industry conditions, operating problems, pending litigation of a significant nature or declining collateral quality and adequacy.
- 5. <u>Special Mention</u>: A warning risk grade that portrays one or more weaknesses that may be tolerated in the short term. Assets in this category are currently protected but are potentially weak. This loan would not normally be booked as a new credit, but may have redeeming characteristics persuading the Bank to continue working with the borrower. Loans accorded this classification have potential weaknesses which may, if not checked or corrected, weaken the company's assets, inadequately protect the Bank's position or effect the orderly, scheduled reduction of the debt at some future time.
- 6. <u>Substandard</u>: The relationship is inadequately protected by the current net worth and cash flow capacity of the borrower, guarantor/endorser, or of the collateral pledged. Assets have a well-defined weakness or weaknesses that jeopardize the orderly liquidation of the debt. The relationship shows deteriorating trends or other deficient areas. The loan may be nonperforming and expected to remain so for the foreseeable future. Relationship balances may be adequately secured by asset value; however a deteriorated financial condition may necessitate collateral liquidation to effect repayment. This would also include any relationship with an unacceptable financial condition requiring excessive attention of the officer due to the nature of the credit risk or lack of borrower cooperation.
- 7. <u>Doubtful</u>: The relationship has all the weaknesses inherent in a credit graded 5 with the added characteristic that the weaknesses make collection on the basis of currently existing facts, conditions and value, highly questionable or improbable. The possibility of some loss is extremely high, however its classification as an anticipated loss is deferred until a more exact determination of the extent of loss is determined. Loans in this category must be on nonaccrual.
- 8. <u>Loss</u>: Loans are considered uncollectible and of such little value that continuance as bankable assets is not warranted. It is not practicable or desirable to defer writing off this basically worthless asset even though partial recovery may be possible in the future.

For Residential Mortgage and Consumer Loans:

Residential mortgage and consumer loans are assigned a "Pass" rating unless the loan has demonstrated signs of weakness as indicated by the ratings below.

- 5. <u>Special Mention</u>: All loans sixty days past due are classified Special Mention. The loan is not upgraded until it has been current for six consecutive months.
- 6. <u>Substandard</u>: All loans 90 days past due are classified Substandard. The loan is not upgraded until it has been current for six consecutive months.
- 7. <u>Doubtful</u>: The relationship has all the weaknesses inherent in a credit graded 5 with the added characteristic that the weaknesses make collection on the basis of currently existing facts, conditions and value, highly questionable or improbable. The possibility of some loss is extremely high.

The risk ratings for classified loans are evaluated at least quarterly for commercial loans or when credit deficiencies arise, such as delinquent loan payments, for commercial, residential mortgage or consumer loans. See further discussion of risk ratings in Note 1.

The following table presents the segments and classes of the loan portfolio summarized by the aggregate pass rating and the criticized and classified ratings of special mention, substandard and doubtful within the Company's internal risk rating system:

	As of December 31, 2018									
				Special						
(In thousands)		Pass		Mention	Su	bstandard		Doubtful		Total
Residential mortgage loans:										
1-4 family first-lien residential mortgages	\$	228,563	\$	999	\$	1,190	\$	1,771	\$	232,523
Construction		7,121		-		-		-		7,121
Total residential mortgage loans		235,684		999		1,190		1,771		239,644
Commercial loans:										
Real estate		201,997		8,299		1,947		71		212,314
Lines of credit		42,489		1,491		233		22		44,235
Other commercial and industrial		59,344		3,268		612		135		63,359
Tax exempt loans		9,320		-		-		-		9,320
Total commercial loans		313,150		13,058		2,792		228		329,228
Consumer loans:										
Home equity and junior liens		25,706		144		173		86		26,109
Other consumer		25,294		95		35		-		25,424
Total consumer loans		51,000		239		208		86		51,533
Total loans	\$	599,834	\$	14,296	\$	4,190	\$	2,085	\$	620,405
				As o	of Dec	ember 31,	2017			
				Special						
(In thousands)		Pass		Mention	Su	bstandard		Doubtful		Total
Residential mortgage loans:										
1-4 family first-lien residential mortgages	\$	211,825	\$	891	\$	1,869	\$	2,208	\$	216,793
Construction		5,558		-		-		-		5,558
Total residential mortgage loans		217,383		891		1,869		2,208		222,351
Commercial loans:										
Real estate		187,073		1,372		2,024		2,056		192,525
Lines of credit		50,507		195		523		60		51,285
Other commercial and industrial		48,738		407		532		420		50,097
Tax exempt loans		10,405		-		-		-		10,405
Total commercial loans		296,723		1,974		3,079		2,536		304,312
Consumer loans:										
Home equity and junior liens		25,396		61		304		174		25,935
0.1		20 50 4				_				20 040

28,584

53,980

568,086

\$

55

116

2,981

7

311

5,259

28,646

54,581

581,244

174

4,918

Other consumer

Total consumer loans

Total loans

Nonaccrual and Past Due Loans

Total loans

Loans are placed on nonaccrual when the contractual payment of principal and interest has become 90 days past due or management has serious doubts about further collectability of principal or interest, even though the loan may be performing.

Loans are considered past due if the required principal and interest payments have not been received within thirty days of the payment due date.

An age analysis of past due loans, not including net deferred loan costs, segregated by portfolio segment and class of loans, for the years ended December 31, are detailed in the following tables:

	As of December 31, 2018											
		30-59 Days		60-89 Days		90 Days		Total			7	Total Loans
(In thousands)		Past Due		Past Due		and Over		Past Due		Current		Receivable
Residential mortgage loans:												
1-4 family first-lien residential mortgages	\$	1,507	\$	505	\$	1,176	\$	3,188	\$	229,335	\$	232,523
Construction		-		-		-		-		7,121		7,121
Total residential mortgage loans		1,507		505		1,176		3,188		236,456		239,644
Commercial loans:												
Real estate		4,261		364		323		4,948		207,366		212,314
Lines of credit		1,033		111		22		1,166		43,069		44,235
Other commercial and industrial		814		44		387		1,245		62,114		63,359
Tax exempt loans		-		-		-		-		9,320		9,320
Total commercial loans		6,108		519		732		7,359		321,869		329,228
Consumer loans:												
Home equity and junior liens		247		6		35		288		25,821		26,109
Other consumer		226		65		107		398		25,026		25,424
Total consumer loans		473		71		142		686		50,847		51,533
Total loans	\$	8,088	\$	1,095	\$	2,050	\$	11,233	\$	609,172	\$	620,405
		<u> </u>		<u> </u>								·
				· · · · · ·	A	s of Deceml	oer 31	1, 2017				
		30-59 Days		60-89 Days	Α	as of Decemb	oer 3í	1, 2017 Total			7	Total Loans
(In thousands)		30-59 Days Past Due			A		oer 3			Current		-
(In thousands) Residential mortgage loans:	_			60-89 Days	A	90 Days	oer 3í	Total		Current		Total Loans
<u>`</u>	\$		\$	60-89 Days	\$	90 Days	oer 32	Total	\$	Current 212,741		Total Loans
Residential mortgage loans:	\$	Past Due	\$	60-89 Days Past Due		90 Days and Over		Total Past Due	\$			Total Loans Receivable
Residential mortgage loans: 1-4 family first-lien residential mortgages	\$	Past Due	\$	60-89 Days Past Due		90 Days and Over		Total Past Due 4,052	\$	212,741		Total Loans Receivable 216,793
Residential mortgage loans: 1-4 family first-lien residential mortgages Construction	\$	Past Due 1,196	\$	60-89 Days Past Due 925		90 Days and Over 1,931		Total Past Due 4,052	\$	212,741 5,558		Fotal Loans Receivable 216,793 5,558
Residential mortgage loans: 1-4 family first-lien residential mortgages Construction Total residential mortgage loans	\$	Past Due 1,196	\$	60-89 Days Past Due 925		90 Days and Over 1,931		Total Past Due 4,052	\$	212,741 5,558		Fotal Loans Receivable 216,793 5,558
Residential mortgage loans: 1-4 family first-lien residential mortgages Construction Total residential mortgage loans Commercial loans:	\$	Past Due 1,196 - 1,196	\$	60-89 Days Past Due 925 - 925		90 Days and Over 1,931 - 1,931		Total Past Due 4,052 - 4,052	\$	212,741 5,558 218,299		Total Loans Receivable 216,793 5,558 222,351
Residential mortgage loans: 1-4 family first-lien residential mortgages Construction Total residential mortgage loans Commercial loans: Real estate	\$	Past Due 1,196 - 1,196 720	\$	60-89 Days Past Due 925 - 925 2,171		90 Days and Over 1,931 - 1,931		Total Past Due 4,052 - 4,052 4,321	\$	212,741 5,558 218,299 188,204		Total Loans Receivable 216,793 5,558 222,351
Residential mortgage loans: 1-4 family first-lien residential mortgages Construction Total residential mortgage loans Commercial loans: Real estate Lines of credit	\$	Past Due 1,196 - 1,196 720 1,482	\$	60-89 Days Past Due 925 - 925 2,171 31		90 Days and Over 1,931 - 1,931 1,430 132		Total Past Due 4,052 - 4,052 4,052 4,321 1,645	\$	212,741 5,558 218,299 188,204 49,640		Total Loans Receivable 216,793
Residential mortgage loans: 1-4 family first-lien residential mortgages Construction Total residential mortgage loans Commercial loans: Real estate Lines of credit Other commercial and industrial	\$	Past Due 1,196 - 1,196 720 1,482	\$	60-89 Days Past Due 925 - 925 2,171 31		90 Days and Over 1,931 - 1,931 1,430 132		Total Past Due 4,052 - 4,052 4,321 1,645 1,401	\$	212,741 5,558 218,299 188,204 49,640 48,696		Total Loans Receivable 216,793 5,558 222,351 192,525 51,285 50,097
Residential mortgage loans: 1-4 family first-lien residential mortgages Construction Total residential mortgage loans Commercial loans: Real estate Lines of credit Other commercial and industrial Tax exempt loans Total commercial loans Consumer loans:	\$	Past Due 1,196 - 1,196 720 1,482 575	\$	60-89 Days Past Due 925 - 925 2,171 31 60		90 Days and Over 1,931 - 1,931 1,430 132 766		Total Past Due 4,052 - 4,052 4,321 1,645 1,401 -	\$	212,741 5,558 218,299 188,204 49,640 48,696 10,405		Total Loans Receivable 216,793
Residential mortgage loans: 1-4 family first-lien residential mortgages Construction Total residential mortgage loans Commercial loans: Real estate Lines of credit Other commercial and industrial Tax exempt loans Total commercial loans	\$	Past Due 1,196 - 1,196 720 1,482 575	\$	60-89 Days Past Due 925 - 925 2,171 31 60		90 Days and Over 1,931 - 1,931 1,430 132 766 - 2,328		Total Past Due 4,052 - 4,052 4,321 1,645 1,401 -	\$	212,741 5,558 218,299 188,204 49,640 48,696 10,405		Total Loans Receivable 216,793
Residential mortgage loans: 1-4 family first-lien residential mortgages Construction Total residential mortgage loans Commercial loans: Real estate Lines of credit Other commercial and industrial Tax exempt loans Total commercial loans Consumer loans:	\$	Past Due 1,196 - 1,196 720 1,482 575 - 2,777	\$	60-89 Days Past Due 925 - 925 2,171 31 60 - 2,262		90 Days and Over 1,931 - 1,931 1,430 132 766 - 2,328		Total Past Due 4,052 - 4,052 4,321 1,645 1,401 - 7,367	\$	212,741 5,558 218,299 188,204 49,640 48,696 10,405 296,945		Total Loans Receivable 216,793

3,311

\$

4,584

12,154

569,090

\$

581,244

\$

4,259

\$

Year-end nonaccrual loans, segregated by class of loan, were as follows:

	December 31,	December 31,
(In thousands)	2018	2017
Residential mortgage loans:		
1-4 family first-lien residential mortgages	\$ 1,176	\$ 2,088
	1,176	2,088
Commercial loans:		
Real estate	415	1,545
Lines of credit	28	132
Other commercial and industrial	387	766
	830	2,443
Consumer loans:		
Home equity and junior liens	35	300
Other consumer	107	63
	142	363
Total nonaccrual loans	\$ 2,148	\$ 4,894

There were no loans past due ninety days or more and still accruing interest at December 31, 2018 or 2017.

The Company is required to disclose certain activities related to Troubled Debt Restructurings ("TDR") in accordance with accounting guidance. Certain loans have been modified in a TDR where economic concessions have been granted to a borrower who is experiencing, or expected to experience, financial difficulties. These economic concessions could include a reduction in the loan interest rate, extension of payment terms, reduction of principal amortization, or other actions that it would not otherwise consider for a new loan with similar risk characteristics.

The Company is required to disclose new TDRs for each reporting period for which an income statement is being presented. Pre-modification outstanding recorded investment is the principal loan balance less the provision for loan losses before the loan was modified as a TDR. Post-modification outstanding recorded investment is the principal balance less the provision for loan losses after the loan was modified as a TDR. Additional provision for loan losses is the change in the allowance for loan losses between the pre-modification outstanding recorded investment and post-modification outstanding recorded investment.

The table below details loans that had been modified as TDRs for the year ended December 31, 2018.

		For the year ended December 31, 2018										
			Pre-modification outstanding recorded			Post-modification outstanding recorded			Additional provision for loan			
(In thousands)	Number of loans		investment			investment			losses			
Other commercial and industrial loans	1	\$	3	300	\$	30	0	\$		-		
Commercial real estate loans	1	\$	1	123	\$	13	7	\$		14		

The TDRs individually evaluated for impairment have been classified as TDRs due to economic concessions granted, which consisted of additional funds advanced without associated increases in collateral and/or an extended maturity date that will result in a delay in payment from the original contractual maturity. The Company was required to increase the specific reserves against the commercial real estate loan individually reviewed for impairment by \$14,000, which was a component of the provision of loan losses in the fourth quarter of 2018.

The Company had one loan that had been modified as a TDR for the year ended December 31, 2017, which subsequently paid off in the fourth quarter of 2017. Both the pre-modification and post-modification recorded investment in the commercial real estate loan was \$2.0 million as a result of economic concessions granted, which included extended interest only payment terms. The Company was not required to increase the specific reserves against this loan during the third quarter of 2017.

The Company is required to disclose loans that have been modified as TDRs within the previous 12 months in which there was payment default after the restructuring. The Company defines payment default as any loans 90 days past due on contractual payments.

The Company had no loans that had been modified as TDRs during the twelve months prior to December 31, 2018, which had subsequently defaulted during the year ended December 31, 2018.

The Company had no loans that had been modified as TDRs during the twelve months prior to December 31, 2017, which had subsequently defaulted during the year ended December 31, 2017.

When the Company modifies a loan within a portfolio segment that is individually evaluated for impairment, a potential impairment is analyzed either based on the present value of the expected future cash flows discounted at the interest rate of the original loan terms or the fair value of the collateral less costs to sell. If it is determined that the value of the loan is less than its recorded investment, then impairment is recognized as a component of the provision for loan losses, an associated increase to the allowance for loan losses or as a charge-off to the allowance for loan losses in the current period.

Impaired Loans

The following table summarizes impaired loans information by portfolio class:

	December 31, 2018					December 31, 2017					
				Unpaid					Unpaid		
		Recorded		Principal		Related	Recorded		Principal		Related
(In thousands)	Ir	ivestment		Balance		Allowance	Investment		Balance		Allowance
With no related allowance recorded:											
1-4 family first-lien residential mortgages	\$	1,221	\$	1,226	\$	-	\$ 900	\$	909	\$	-
Commercial real estate		2,387		2,448		-	3,314		3,360		-
Commercial lines of credit		228		228		-	507		507		-
Other commercial and industrial		451		452		-	523		524		-
Home equity and junior liens		-		-		-	80		80		-
With an allowance recorded:											
1-4 family first-lien residential mortgages		606		606		108	958		958		210
Commercial real estate		486		486		100	2,186		2,187		320
Commercial lines of credit		28		28		28	40		40		40
Other commercial and industrial		373		373		255	525		525		391
Home equity and junior liens		207		207		140	210		210		142
Total:											
1-4 family first-lien residential mortgages		1,827		1,832		108	1,858		1,867		210
Commercial real estate		2,873		2,934		100	5,500		5,547		320
Commercial lines of credit		256		256		28	547		547		40
Other commercial and industrial		824		825		255	1,048		1,049		391
Home equity and junior liens		207		207		140	290		290		142
Totals	\$	5,987	\$	6,054	\$	631	\$ 9,243	\$	9,300	\$	1,103

The following table presents the average recorded investment in impaired loans for years ended December 31:

(In thousands)	2018	2017
1-4 family first-lien residential mortgages	\$ 1,842	\$ 1,553
Commercial real estate	4,555	5,097
Commercial lines of credit	343	447
Other commercial and industrial	965	976
Home equity and junior liens	224	283
Total	\$ 7,929	\$ 8,356

The following table presents the cash basis interest income recognized on impaired loans for the years ended December 31:

(In thousands)	2018	2017
1-4 family first-lien residential mortgages	\$ 61	\$ 71
Commercial real estate	175	247
Commercial lines of credit	28	27
Other commercial and industrial	38	30
Home equity and junior liens	12	13
Total	\$ 314	\$ 388

NOTE 6: ALLOWANCE FOR LOAN LOSSES

Changes in the allowance for loan losses for the years ended December 31, 2018 and 2017 and information pertaining to the allocation of the allowance for loan losses and balances of the allowance for loan losses and loans receivable based on individual and collective impairment evaluation by loan portfolio class at the indicated dates are summarized in the tables below. An allocation of a portion of the allowance to a given portfolio class does not limit the Company's ability to absorb losses in another portfolio class.

				Dec	ember 31, 2018		
	 1-4 family first-lien						Other
	residential				Commercial	Commercial	commercial
(In thousands)	mortgage		Construction		real estate	lines of credit	and industrial
Allowance for loan losses:							
Beginning Balance	\$ 865	\$	-	\$	3,589	\$ 735	\$ 1,214
Charge-offs	(245)		-		(643)	(102)	(207)
Recoveries	21		-		-	66	-
Provisions	125		-		632	31	278
Ending balance	\$ 766	\$	-	\$	3,578	\$ 730	\$ 1,285
Ending balance: related to loans							
individually evaluated for impairment	\$ 108	\$	-	\$	100	\$ 28	\$ 255
Ending balance: related to loans							
collectively evaluated for impairment	\$ 658	\$	-	\$	3,478	\$ 702	\$ 1,030
Loans receivables:							
Ending balance	\$ 232,523	\$	7,121	\$	212,314	\$ 44,235	\$ 63,359
Ending balance: individually							
evaluated for impairment	\$ 1,827	\$	-	\$	2,873	\$ 256	\$ 824
Ending balance: collectively							
evaluated for impairment	\$ 230,696	\$	7,121	\$	209,441	\$ 43,979	\$ 62,535
			Home equity		Other		
	Tax exempt	a	nd junior liens		consumer	Unallocated	Total
Allowance for loan losses:							
Beginning Balance	\$ 1	\$	514	\$	208	\$ -	\$ 7,126
Charge-offs	-		(17)		(248)	-	\$ (1,462)
Recoveries	-		7		51	-	\$ 145
Provisions (credits)	_		(95)		374	152	\$ 1 497

				Dec	ember 31, 2017			
	 1-4 family							
	first-lien							Other
	residential				Commercial	Commercial		commercial
(In thousands)	mortgage		Construction		real estate	lines of credit		and industrial
Allowance for loan losses:								
Beginning Balance	\$ 759	\$	-	\$	2,935	\$ 397	\$	1,658
Charge-offs	(166)		-		(505)	(60)		(22)
Recoveries	13		-		-	-		15
Provisions (credits)	259		-		1,159	398		(437)
Ending balance	\$ 865	\$	-	\$	3,589	\$ 735	\$	1,214
Ending balance: related to loans								
individually evaluated for impairment	\$ 210		-	\$	320	\$ 40	\$	391
Ending balance: related to loans								
collectively evaluated for impairment	\$ 655		-	\$	3,269	\$ 695	\$	823
Loans receivables:								
Ending balance	\$ 216,793	\$	5,558	\$	192,525	\$ 51,285	\$	50,097
Ending balance: individually								
evaluated for impairment	\$ 1,858	\$	-	\$	5,500	\$ 547	\$	1,048
Ending balance: collectively								
evaluated for impairment	\$ 214,935	\$	5,558	\$	187,025	\$ 50,738	\$	49,049
			Home equity		Other			
	Tax exempt	aı	nd junior liens		consumer	Unallocated		Total
Allowance for loan losses:								
Beginning Balance	\$ 1	\$	331	\$	166	\$ -	\$	6,247
Charge-offs	-		(69)		(142)	-		(964)
Recoveries	-		6		40	-		74
Provisions	-		246		144	-		1,769
Ending balance	\$ 1	\$	514	\$	208	\$ -	\$	7,126
Ending balance: related to loans								
individually evaluated for impairment	\$ -	\$	142	\$	-	-	\$	1,103
Ending balance: related to loans								
collectively evaluated for impairment	\$ 1	\$	372	\$	208	-	\$	6,023
Loans receivables:								
Ending balance	\$ 10,405	\$	25,935	\$	28,646		\$	581,244
Ending balance: individually								
1 10		-		-			-	0.0.40

The Company's methodology for determining its allowance for loan losses includes an analysis of qualitative factors that are added to the historical loss rates in arriving at the total allowance for loan losses needed for this general pool of loans. The qualitative factors include:

10,405

\$

290

28,646

572,001

25,645

- Changes in national and local economic trends;
- The rate of growth in the portfolio;
- Trends of delinquencies and nonaccrual balances;
- Changes in loan policy; and

evaluated for impairment

Ending balance: collectively

evaluated for impairment

• Changes in lending management experience and related staffing.

Each factor is assigned a value to reflect improving, stable or declining conditions based on management's best judgment using relevant information available at the time of the evaluation. These qualitative factors, applied to each product class, make the evaluation inherently subjective, as it requires material estimates that may be susceptible to significant revision as more information becomes available. Adjustments to the factors are supported through documentation of changes in conditions in a narrative accompanying the allowance for loan losses analysis and calculation.

The allocation of the allowance for loan losses summarized on the basis of the Company's calculation methodology was as follows:

					Dec	ember 31, 2018				
		1-4 family first-lien residential				Commercial		Commercial		Other commercial
(In thousands)		mortgage		Construction		real estate		lines of credit		and industrial
Specifically reserved	\$	108	\$	Construction	\$	100	\$	28	\$	255
Historical loss rate	Ψ	87	Ψ	_	Ψ	85	Ψ	20	Ψ	24
Qualitative factors		571		_		3,393		682		1,006
Total	\$	766	\$	-	\$	3,578	\$	730	\$	1,285
				Home equity		Other				
		Tax exempt	a	and junior liens		consumer		Unallocated		Total
Specifically reserved	\$	-	\$	140	\$	_	\$	-	\$	631
Historical loss rate		-		15		155		-		386
Qualitative factors		1		254		230		-		6,137
Other		-		-		-		152		152
Total		1		409		385		152		7,306
					Dec	ember 31, 2017				
		1-4 family			Dec	einber 51, 2017				
		first-lien								Other
		residential				Commercial		Commercial		commercial
(In thousands)		mortgage		Construction		real estate		lines of credit		and industrial
Specifically reserved	\$	210	\$	-	\$	320	\$	40	\$	391
Historical loss rate		104	•	-		103		40	•	15
Qualitative factors		551		-		3,166		655		808
Total	\$	865	\$	-	\$	3,589	\$	735	\$	1,214
				Home equity		Other				
		Tax exempt	a	and junior liens		consumer		Unallocated		Total
Specifically reserved	\$	-	\$	142	\$	-	\$	-	\$	1,103
Historical loss rate		-		41		59		-		362
Qualitative factors		1		331		149		_		5,661

\$

208

\$

\$

\$

Total

NOTE 7: SERVICING

Loans serviced for others are not included in the accompanying consolidated statements of condition. At December 31, 2018 and 2017, the Bank serviced 206 and 231 residential mortgage loans for others, respectively. The unpaid principal balances of mortgage loans serviced for others were \$11.9 million and \$14.3 million at December 31, 2018 and 2017, respectively. The balance of capitalized servicing rights included in other assets at December 31, 2018 and 2017, was \$16,000 and \$28,000, respectively.

The following summarizes mortgage servicing rights capitalized and amortized:

(In thousands)	2018	2017
Mortgage servicing rights capitalized	\$ - \$	-
Mortgage servicing rights amortized	\$ 12 \$	12

NOTE 8: PREMISES AND EQUIPMENT

A summary of premises and equipment at December 31, is as follows:

(In thousands)	2018	2017
Land	\$ 2,205	\$ 2,205
Buildings	16,094	14,917
Furniture, fixtures and equipment	15,029	13,515
Construction in progress	3,599	650
	36,927	31,287
Less: Accumulated depreciation	16,304	15,170
	\$ 20,623	\$ 16,117

Depreciation expense in 2018 and 2017 was \$1.2 million and \$1.0 million, respectively.

NOTE 9: FORECLOSED REAL ESTATE

The Company is required to disclose the carrying amount of foreclosed residential real estate properties held at each reporting period as a result of obtaining physical possession of the property.

	Number of	December 31,	Number of	December 31,
(Dollars in thousands)	properties	2018	properties	2017
Foreclosed residential real estate	2 \$	73	5 \$	468

At December 31, 2018 and 2017, the Company reported \$951,000 and \$805,000, respectively, in residential real estate loans in the process of foreclosure.

NOTE 10: GOODWILL AND INTANGIBLE ASSETS

Goodwill represents the excess cost of an acquisition over the fair value of the net assets acquired. Goodwill is not amortized, but is evaluated annually for impairment or between annual evaluations in certain circumstances. Management performs an annual assessment of the Company's goodwill to determine whether or not any impairment of the carrying value may exist.

Of the \$4.5 million of goodwill carried on the Company's books as of December 31, 2018, \$3.8 million of this amount was due to prior periods acquisitions of bank branches and \$696,000 was due to the 2013 acquisition of the FitzGibbons Agency by Pathfinder Risk Management Company, Inc. and the 2015 acquisition of the Huntington Agency.

The Company is permitted to assess qualitative factors to determine if it is more likely than not that the fair value of the reporting unit is less than the carrying value. Based on the results of the assessment, management has determined that the carrying value of goodwill in the amount of \$4.5 million is not impaired as of December 31, 2018.

The identifiable intangible asset of \$165,000 as of December 31, 2018 was due to the acquisition of the FitzGibbons and Huntington Agencies and represents the amortized carrying amount of the customer lists intangible. The weighted average remaining amortization period of this intangible asset is 5.7 years.

The gross carrying amount and annual amortization for this identifiable intangible asset are as follows:

	Decem	31,	
(In thousands)	 2018		2017
Gross carrying amount	\$ 243	\$	243
Accumulated amortization	(78)		(61)
Net amortizing intangibles	\$ 165	\$	182

The estimated amortization expense for each of the five succeeding years ended December 31, is as follows:

(In thousands)	
2019	\$ 16
2020	16
2021	16
2022	16
2023	16
Thereafter	85
Total	\$ 165

NOTE 11: DEPOSITS

A summary of deposits at December 31 is as follows:

(In thousands)	2018	2017
Savings accounts	\$ 80,545	\$ 80,587
Time accounts	199,598	160,736
Time accounts of \$250,000 or more	77,224	52,691
Money management accounts	13,180	14,905
MMDA accounts	189,679	253,088
Demand deposit interest-bearing	57,407	66,093
Demand deposit noninterest-bearing	103,124	89,783
Mortgage escrow funds	6,303	5,720
Total Deposits	\$ 727,060	\$ 723,603

At December 31, 2018, the scheduled maturities of time deposits are as follows:

(In thousands)

(In thousands)	
Year of Maturity:	
2019	\$ 187,044
2020	75,453
2021	5,488
2022	4,528
2023	1,768
Thereafter	2,541
Total	\$ 276,822

In addition to deposits obtained from its business operations within its target market areas, the Bank also obtains brokered deposits through various programs administered by Promontory Interfinancial Network.

		At December 31,										
				2018			2017					
(In thousands)	N	Ion-Brokered		Brokered		Total		Non-Brokered		Brokered		Total
Savings accounts	\$	80,545	\$	-	\$	80,545	\$	80,587	\$	-	\$	80,587
Time accounts		158,207		41,391	\$	199,598		109,666		51,070		160,736
Time accounts of \$250,000 or more		77,224		-	\$	77,224		52,691		-		52,691
Money management accounts		13,180		-	\$	13,180		14,905		-		14,905
MMDA accounts		189,625		54	\$	189,679		159,032		94,056		253,088
Demand deposit interest-bearing		57,407		-	\$	57,407		66,093		-		66,093
Demand deposit noninterest-bearing		103,124		-	\$	103,124		89,783		-		89,783
Mortgage escrow funds		6,303		=	\$	6,303		5,720		-		5,720
Total Deposits	\$	685,615	\$	41,445	\$	727,060	\$	578,477	\$	145,126	\$	723,603

On May 24, 2018, The Economic Growth, Regulatory Relief and Consumer Protection Act of 2018 (the "EGRRCPA") was enacted, which repealed or modified certain provisions of the Dodd-Frank Act and eased regulations on all financial institutions with the exception of the largest banks. The EGRRCPA's provisions include, among other items, clarifying that, subject to various conditions, reciprocal deposits of another depository institution obtained using a deposit broker through a deposit placement network for purposes of obtaining maximum deposit insurance would not be considered brokered deposits subject to the FDIC's brokered-deposit regulations. At December 31, 2018, the Bank held \$41.4 million in deposits that under the EGRRCPA were categorized as brokered deposits. At December 31, 2017, the Bank had \$145.1 million in deposits that were categorized under the then-applicable regulations as brokered deposits. Of the \$145.1 million in deposits categorized as brokered deposits at December 31, 2017, \$59.5 million would be considered to be brokered deposits under the EGRRCPA regulations in effect at December 31, 2018.

NOTE 12: BORROWED FUNDS

The composition of borrowings (excluding subordinated loans) at December 31 is as follows:

(In thousands)	2018	2017
Short-term:		
FHLB Advances	\$ 39,000	\$ 30,600
Total short-term borrowings	\$ 39,000	\$ 30,600
Long-term:		
FHLB advances	\$ 79,534	\$ 43,288
Total long-term borrowings	\$ 79,534	\$ 43,288

The principal balances, interest rates and maturities of the outstanding long-term borrowings, all of which are at a fixed rate, at December 31, 2018 are as follows:

Term	Principal	Rates
(<u>Dollars in thousands)</u>		
Advances with FHLB		
Due within 1 year	\$ 31,227	1.16 - 2.00%
Due within 2 years	30,193	1.62 - 3.03%
Due within 10 years	18,114	2.03 - 3.17%
Total advances with FHLB	\$ 79,534	
Total long-term fixed rate borrowings	\$ 79,534	

At December 31, 2018, scheduled repayments of long-term debt are as follows:

(In thousands)	
2019	\$ 31,227
2020	30,193
2021	15,289
2022	2,000
2023	825
Thereafter	-
Total	\$ 79,534

The Company has access to FHLBNY advances, under which it can borrow at various terms and interest rates. Residential mortgage loans with a carrying value of \$154.9 million and FHLB stock with a carrying value of \$5.9 million have been pledged by the Company under a blanket collateral agreement to secure the Company's borrowings at December 31, 2018. The total outstanding indebtedness under borrowing facilities with the FHLB cannot exceed the total value of the assets pledged under the blanket collateral agreement. The Company has a \$19.5 million line of credit available at December 31, 2018 with the Federal Reserve Bank of New York through its Discount Window and has pledged various corporate and municipal securities against the line. The Company has \$15.0 million in lines of credit available with two other correspondent banks. \$10.0 million of that line of credit is available on an unsecured basis and the remaining \$5.0 million must be collateralized with marketable investment securities. Interest on the lines is determined at the time of borrowing.

NOTE 13: SUBORDINATED LOANS

The Company has a non-consolidated subsidiary trust, Pathfinder Statutory Trust II, of which the Company owns 100% of the common equity. The Trust issued \$5,000,000 of 30-year floating rate Company-obligated pooled capital securities of Pathfinder Statutory Trust II ("Floating-Rate Debentures"). The Company borrowed the proceeds of the capital securities from its subsidiary by issuing floating rate junior subordinated deferrable interest debentures having substantially similar terms. The capital securities mature in 2037 and are treated as Tier 1 capital by the FDIC and FRB. The capital securities of the trust are a pooled trust preferred fund of Preferred Term Securities VI, Ltd., whose interest rate resets quarterly, and are indexed to the 3-month LIBOR rate plus 1.65%. These securities have a five-year call provision. The Company paid \$199,000 and \$149,000 in interest expense related to this issuance in 2018 and 2017, respectively. The Company guarantees all of these securities.

The Company's equity interest in the trust subsidiary is included in other assets on the Consolidated Statements of Financial Condition at December 31, 2018 and 2017. For regulatory reporting purposes, the Federal Reserve has indicated that the preferred securities will continue to qualify as Tier 1 Capital subject to previously specified limitations, until further notice. If regulators make a determination that Trust Preferred Securities can no longer be considered in regulatory capital, the securities become callable and the Company may redeem them.

On October 15, 2015, the Company executed a \$10.0 million non-amortizing Subordinated Loan with an unrelated third party that is scheduled to mature on October 1, 2025. The Company has the right to prepay the Subordinated Loan at any time after October 15, 2020 without penalty. The annual interest rate charged to the Company will be 6.25% through the maturity date of the subordinated loan. The Subordinated Loan is senior in the Company's credit repayment hierarchy only to the Company's common equity and, as a result, qualifies as Tier 2 capital for all future periods when applicable. The Company paid \$172,000 in origination and legal fees as part of this transaction. These fees will be amortized over the life of the Subordinated Loan through its first call date using the effective interest method. The effective cost of funds related to this transaction is 6.44% calculated under this method. Accordingly, interest expense of \$647,000 and \$645,000 were recorded in the years ended December 31, 2018 and 2017, respectively.

The composition of subordinated loans at December 31 is as follows:

(In thousands)	2018	2017
Subordinated loans:		
Junior subordinated debenture	\$ 5,155	\$ 5,155
Subordinated loan	9,939	9,904
Total subordinated loans	\$ 15,094	\$ 15,059

The principal balances, interest rates and maturities of the subordinated loans at December 31, 2018 are as follows:

Term	Principal	Rates
(<u>Dollars in thousands)</u>		
Subordinated loans:		
Due within 10 years	\$ 9,939	6.48%
Due within 19 years	5,155	3-Month Libor + 1.65%
Total subordinated loans	\$ 15,094	

At December 31, 2018, scheduled repayments of the subordinated loans:

(In thousands)	
2019	\$ -
2020	-
2021	-
2022	-
2023	-
Thereafter	15,094
Total	\$ 15,094

NOTE 14: EMPLOYEE BENEFITS AND DEFERRED COMPENSATION AND SUPPLEMENTAL RETIREMENT PLANS

The Company has a noncontributory defined benefit pension plan covering substantially all employees. The plan provides defined benefits based on years of service and final average salary. On May 14, 2012, the Company informed its employees of its decision to freeze participation and benefit accruals under the plan, primarily to reduce some of the volatility in earnings that can accompany the maintenance of a defined benefit plan. The plan was frozen on June 30, 2012. Compensation earned by employees up to June 30, 2012 is used for purposes of calculating benefits under the plan but there will be no future benefit accruals after this date. Participants as of June 30, 2012 will continue to earn vesting credit with respect to their frozen accrued benefits as they continue to work. In addition, the Company provides certain health and life insurance benefits for a limited number of eligible retired employees. The healthcare plan is contributory with participants' contributions adjusted annually; the life insurance plan is noncontributory. Employees with less than 14 years of service as of January 1, 1995, are not eligible for the health and life insurance retirement benefits.

The following tables set forth the changes in the plans' benefit obligations, fair value of plan assets and the plans' funded status as of December 31:

	Pension Benefits				Postretirement Benefits			
(In thousands)	 2018		2017		2018	2017		
Change in benefit obligations:								
Benefit obligations at beginning of year	\$ 10,469	\$	9,323	\$	481 \$	154		
Service cost	-		-		-	-		
Interest cost	473		473		21	8		
Plan participants' contribution	-		-		9	-		
Actuarial (gain) loss	(581)		916		(16)	332		
Benefits paid	(266)		(243)		(41)	(13)		
Benefit obligations at end of year	10,095		10,469		454	481		
Change in plan assets:								
Fair value of plan assets at beginning of year	14,956		13,634		-	-		
Actual return on plan assets	(993)		1,565		-	-		
Benefits paid	(266)		(243)		(41)	(13)		
Plan participants' contribution	-		-		9	-		
Employer contributions	825		-		32	13		
Fair value of plan assets at end of year	14,522		14,956		-	-		
Funded (unfunded) status - asset (liability)	\$ 4,427	\$	4,487	\$	(454) \$	(481)		

The funded status of the pension was recorded within other assets on the statement of condition. The unfunded status of the postretirement plan is recorded as a liability on the statement of condition.

Amounts recognized in accumulated other comprehensive loss as of December 31 are as follows:

	 Pension Benefits				Postretirement Benefits			
(In thousands)	2018		2017		2018		2017	
Net loss	\$ 4,112	\$	2,827	\$	151	\$	176	
Tax Effect	1,074		1,131		40		70	
	\$ 3,038	\$	1,696	\$	111	\$	106	

Gains and losses in excess of 10% of the greater of the benefit obligation or the fair value of assets are amortized over the average remaining service period of active participants.

The Company utilized the actual projected cash flows of the participants in both plans for the years ended December 31, 2018 and December 31, 2017. The following points address the approach taken.

- 1. An analysis of the defined benefit pension plan's expected future cash flows and high-quality fixed income investments currently available and expected to be available during the period to maturity of the pension benefits yielded a single discount rate of 4.97% at December 31, 2018.
- 2. An analysis of the postretirement health plan's expected future cash flows and high-quality fixed-income investments currently available and expected to be available during the period to maturity of the retiree medical benefits yielded a single discount rate of 4.97% at December 31, 2018.
- 3. Each discount rate was developed by matching the expected future cash flows of the Bank to high quality bonds. Every bond considered has earned ratings of at least AA by Fitch Group, AA by Standard & Poor's, or Aa2 by Moody's Investor Services.

The accumulated benefit obligation for the defined benefit pension plan was \$10.1 million and \$10.5 million at December 31, 2018 and 2017, respectively. The postretirement plan had an accumulated benefit obligation of \$454,000 and \$481,000 at December 31, 2018 and 2017, respectively.

The significant assumptions used in determining the benefit obligations as of December 31, are as follows:

	Pension Benef	its	Postretirement Benefits		
	2018	2017	2018	2017	
Weighted average discount rate	4.97%	4.58%	4.97%	4.58%	
Rate of increase in future compensation levels	-	-	-	-	

Assumed health care cost trend rates have a significant effect on the amounts reported for the postretirement health care plan. The annual rates of increase in the per capita cost of covered medical and prescription drug benefits for future years were assumed to be 5.00% for 2019, gradually decreasing to 4.25% in 2022 and remain at that level thereafter.

The composition of the net periodic benefit plan cost for the years ended December 31 is as follows:

	Pension Benefits			Postretirement Benefits			
(In thousands)		2018	20	17	2018		2017
Service cost	\$	-	\$	- 5	-	\$	-
Interest cost		473	2	73	21		8
Expected return on plan assets		(1,037)	(9	45)	-		-
Amortization of transition obligation		-		-	-		-
Amortization of net losses/(gains)		164	1	.54	13		(3)
Amortization of unrecognized past service liability		-		-	(5)		(5)
Net periodic benefit plan (benefit) cost	\$	(400)	\$ (3	318) 5	5 29	\$	-

The significant assumptions used in determining the net periodic benefit plan cost for years ended December 31, were as follows:

	Pension Benefi	its	Postretirement Benefits		
	2018	2017	2018	2017	
Weighted average discount rate	4.97%	4.58%	4.97%	4.58%	
Expected long term rate of return on plan assets	6.50%	7.00%	-	-	
Rate of increase in future compensation levels	-	-	-	-	

The long term rate of return on assets assumption was set based on historical returns earned by equities and fixed income securities, adjusted to reflect expectations of future returns as applied to the plan's target allocation of asset classes. Equities and fixed income securities were assumed to earn real rates of return in the ranges of 6.0%-8.0% and 3.0%-5.0%, respectively. The long-term inflation rate was estimated to be 2.5%. When these overall return expectations are applied to the plan's target allocation, the expected rate of return was determined to be in the range of 5.0% to 7.0%. Management chose to use a 6.5% expected long-term rate of return in 2018 and a 6.5% expected long-term rate of return in 2019 reflecting current economic conditions and expected rates of return. Based on the \$14.5 million fair value of plan assets at December 31, 2018, each 50 basis point decrease in the expected long-term rate of return would reduce after tax net income at 2019 expected marginal tax rate of 21.0% by approximately \$57,000.

The estimated net actuarial loss that will be amortized from accumulated other comprehensive loss into net periodic benefit plan income during 2019 is \$328,000. The estimated amortization of the unrecognized transition obligation and actuarial loss for the postretirement health plan in 2019 is \$12,000. The expected net periodic benefit plan benefit for 2019 is estimated to be \$83,000 for both retirement plans in aggregate.

Plan assets are invested in three diversified investment funds of the Pentegra Retirement Trust (the "Trust", formerly known as RSI Retirement Trust). The Trust has been given discretion by the Plan Sponsor to determine the appropriate strategic asset allocation versus plan liabilities, as governed by the Trust's Investment Policy Statement. The Plan is structured to utilize a Liability Driven Investment (LDI) approach which seeks to fund the current and future liabilities of the Plan and aims to mitigate funded status and contribution volatility.

The Plan's asset allocation targets to hold 48% of assets in equity securities via investment in the Long-Term Growth – Equity Portfolio ('LTGE'), 16% in intermediate-term investment grade bonds via investment in the Long-Term Growth – Fixed-Income Portfolio ('LTGFI'), 35% in long duration bonds via the Liability Focused Fixed-Income Portfolio ('LFFI'), and 1% in a cash equivalents portfolio (for liquidity).

LTGE is a diversified portfolio that invests in a number of actively and passively managed equity-focused mutual funds and collective investment trusts. The Portfolio holds a diversified mix of equity funds in order to gain exposure to the U.S. and non-U.S. equity markets. LTGFI is a diversified portfolio that invests in a number of fixed-income mutual funds and collective investment trusts. The Portfolio invests primarily in intermediate-term bond funds with a focus on Core Plus fixed-income investment approaches. LFFI is a diversified high quality fixed-income portfolio that currently invests in passively managed collective investment trusts that hold long duration bonds.

The investment objectives, investment strategies and risk of each of the daily valued and unitized Portfolios and the funds held within the Portfolios are detailed in the Private Placement Memorandum and the Trust's Investment Policy Statement.

The overall long-term investment objectives are to maintain plan assets at a level that will sufficiently cover long-term obligations and to generate a return on plan assets that will meet or exceed the rate at which long-term obligations will grow. The LTGE and LTGFI Portfolios are designed to provide long-term growth of equity and fixed-income assets with the objective of achieving an investment return in excess of the cost of funding the active life, deferred vested, and all 30-year term and longer obligations of retired lives in the Trust. The LFFI Portfolio is designed to fund the Trust's estimated retired lives class of liabilities for 30 years. Risk/volatility is further managed by the distinct investment objectives of each of the Trust's Portfolios.

In addition, significant consideration is paid to the plan's funding levels when determining the overall asset allocation. If the plan is considered to be well-funded, approximately 65% of the plan's assets are allocated to equities and approximately 35% allocated to fixed-income. Asset rebalancing normally occurs when the equity and fixed-income allocations vary by more than 10% from their respective targets (i.e., a 10% policy range guideline).

		At December 31, 2018							
(In thousands)		Level 1		Level 2		Level 3		Total Fair Value	
Asset Category:									
Mutual Funds - Equity									
Large-cap value (a)	\$	-	\$	1,132	\$	-	\$	1,132	
Large-cap Growth (b)		-		1,157		-		1,157	
Large-cap Core (c)		-		821		-		821	
Mid-cap Value (d)		-		242		-		242	
Mid-cap Growth (e)		-		247		-		247	
Mid-cap Core (f)		-		250		-		250	
Small-cap Value (g)		-		193		-		193	
Small-cap Growth (h)		-		337		-		337	
Small-cap Core (i)		-		189		-		189	
International Equity (j)		-		1,409		-		1,409	
Equity -Total		-		5,977		-		5,977	
Fixed Income Funds									
Fixed Income-US Core (k)		-		2,207		-		2,207	
Intermediate Duration (l)		-		3,255		-		3,255	
Long Duration (m)		-		2,521		-		2,521	
Fixed Income-Total		-		7,983		-		7,983	
Company Common Stock		-		-		-		-	
Cash Equivalents-Money market*		271		291		-		562	
Total	\$	271	\$	14,251	\$	-	\$	14,522	

	At December 31, 2017							
(In thousands)	 Level 1		Level 2		Level 3		Total Fair Value	
Asset Category:								
Mutual Funds - Equity								
Large-cap value (a)	\$ -	\$	1,058	\$	-	\$	1,058	
Large-cap Growth (b)	-		1,102		-		1,102	
Large-cap Core (c)	-		733		-		733	
Mid-cap Value (d)	-		236		-		236	
Mid-cap Growth (e)	-		223		-		223	
Mid-cap Core (f)	-		239		-		239	
Small-cap Value (g)	-		178		-		178	
Small-cap Growth (h)	-		169		-		169	
Small-cap Core (i)	-		349		-		349	
International Equity (j)	 -		1,419		-		1,419	
Equity -Total	-		5,706		-		5,706	
Fixed Income Funds								
Fixed Income-US Core (k)	-		1,713		-		1,695	
Intermediate Duration (l)	-		3,075		-		2,932	
Long Duration (m)	-		2,630		-		2,474	
Fixed Income-Total	-		7,418		_		7,418	
Long/Short Equity (n)	-		1,533		-		1,533	
Company Common Stock	-		-		-		-	
Cash Equivalents-Money market*	58		241		-		299	
Total	\$ 58	\$	14,898	\$	_	\$	14,956	

*Includes cash equivalents investments in equity and fixed income strategies

- a) This category contains large-cap stocks with above-average yield. The portfolio typically holds between 60 and 70 stocks.
- b) This category seeks long-term capital appreciation by investing primarily in large growth companies based in the U.S.
- c) This fund tracks the performance of the S&P 500 index by purchasing the securities represented in the index in approximately the same weightings as the index.
- d) This category employs an indexing investment approach designed to track the performance of the CRSP US Mid-Cap Value Index.
- e) This category employs an indexing investment approach designed to track the performance of the CRSP US Mid-Cap Growth Index.
- f) This category seeks to track the performance of the S&P Midcap 400 Index.
- g) This category consists of a selection of investments based on the Russell 2000 Value Index.
- h) This category consists of a mutual fund invested in smallcap growth companies along with a fund invested in a selection of investments based on the Russell 2000 Growth Index.
- i) This category consists of a mutual fund investing in readily marketable securities of U.S. companies with market capitalizations within the smallest 10% of the market universe, or smaller than the 1000th largest US company.
- j) This category has investments in medium to large non-US companies, including high quality, durable growth companies and companies based in countries with stable economic and political systems. A portion of this category consists of an index fund designed to track the MSC ACWI ex-US Net Dividend Return Index.
- k) This category currently includes equal investments in three mutual funds, two of which usually hold at least 80% of fund assets in investment grade fixed income securities, seeking to outperform the Barclays US Aggregate Bond Index while maintaining a similar duration to that index. The third fund targets investments of 50% or more in mortgage-backed securities guaranteed by the US government and its agencies.
- l) This category consists mostly of a fund which seeks to track the Barclays Capital US Corporate A or Better 5-20 Year, Bullets only Index, along with a diversified mutual fund holding fixed income securities rated A or better.
- m) This category consists of a fund that seeks to approximate the performance of the Barclays Capital US Corporate A or Better, 20+ Year Bullets Only Index over the long term.
- n) This category currently invests in three long/short equity hedge funds.

For the fiscal year ending December 31, 2019, the Company expects to contribute approximately \$35,000 to the postretirement plan.

The following benefit payments, which reflect expected future service, as appropriate, are expected to be paid from both retirement plans:

		Pension		Postretirement		
(In thousands)	В	Benefits		Benefits		Total
Years ending December 31:						
2019	\$	305	\$	35	\$	340
2020		325		37		362
2021		343		38		381
2022		369		40		409
2023		447		29		476
Years 2024-2028		2,887		143		3,030

The Company also offers a 401(k) plan to its employees. Contributions to this plan by the Company were \$371,000 and \$333,000 for 2018 and 2017, respectively.

In addition, the Company made \$273,000 and \$244,000 of safe harbor contributions to the plan in 2018 and 2017, respectively.

The Company maintains optional deferred compensation plans for its directors and certain executive officers, whereby fees and income normally received are deferred and paid by the Company based upon a payment schedule commencing between the ages of 65 and 70 and continuing monthly for 10 years. At December 31, 2018 and 2017, other liabilities include approximately \$2.7 million and \$2.6 million, respectively, relating to deferred compensation. Deferred compensation expense for the years ended December 31, 2018 and 2017 amounted to approximately \$258,000 and \$351,000, respectively.

To assist in the funding of the Company's benefits under the supplemental executive retirement plan and deferred compensation plans, the Company is the owner of single premium life insurance policies on selected participants. At December 31, 2018 and 2017, the cash surrender values of these policies were \$16.9 million and \$11.7 million, respectively.

The Bank adopted a Defined Contribution Supplemental Executive Retirement Plan (the "SERP"), effective January 1, 2014. The SERP benefits certain key senior executives of the Bank who are selected by the Board to participate, including our Named Executive Officers. The SERP is intended to provide a benefit from the Bank upon retirement, death, disability or voluntary or involuntary termination of service (other than "for cause"), subject to the requirements of Section 409A of the Internal Revenue Code. Accordingly, the SERP obligates the Bank to make a contribution to each executive's account on the last business day of each calendar year. In addition, the Bank, may, but is not required to, make additional discretionary contributions to the executive's accounts from time to time. All executives currently participating in the plan, including the Named Executive Officers, are fully vested in the Bank's contribution to the plan. In the event the executive is terminated involuntarily or resigns for good reason within 24 months following a change in control, the Bank is required to make additional annual contributions the lesser of: (1) three years or (2) the number of years remaining until the executive's benefit age, subject to potential reduction to avoid an excess parachute payment under Code Section 280G. In the event of the executive's death, disability or termination within 24 months after a change in control, the executive's account will be paid in a lump sum to the executive or his beneficiary, as applicable. In the event the executive is entitled to a benefit from the SERP due to retirement or other termination of employment, the benefit will be paid either in a lump sum or in 10 annual installments as detailed in his or her participant agreement. At December 31, 2018 and 2017, other liabilities included \$745,000 and \$631,000, respectively, accrued under this plan.

NOTE 15: STOCK BASED COMPENSATION PLANS

All share and per share values have been adjusted, where appropriate, by the 1.6472 exchange rate used in the Conversion and Offering that occurred on October 16, 2014.

April 2010 Stock Option Grants

In June 2011, the board of directors of the Company approved the grant of stock option awards to its directors and executive officers under the 2010 Stock Option Plan that had 247,080 shares authorized for award. A total of 74,124 stock option awards were granted to the nine directors of the Company, at that time, and 123,540 stock option awards, in total, were granted to the Chief Executive Officer and the Company's then four senior vice presidents. The awards will vest ratably over five years (20% per year for each year of the participant's service with the Company) and will expire ten years from the date of the grant, or June 2021. The fair value of each option grant was established at the date of grant using the Black-Scholes option pricing model. The Black-Scholes model used the following weighted average assumptions: risk-free interest rate of 2.2%; volatility factors of the expected market price of the Company's common stock of 0.45; weighted average expected lives of the options of 7.0 years: cash dividend yield of 1.49%. Based upon these assumptions, the weighted average fair value of options granted was \$2.29.

In July 2013, the board of directors of the Company approved the grant of 16,472 stock option awards in total to two newly elected directors of the Company. The awards will vest ratably over five years (20% per year for each year of the participant's service with the Company) and will expire ten years from the date of the grant, or July 2023. The fair value of each option grant was established at the date of grant using the Black-Scholes option pricing model. The Black-Scholes model used the following weighted average assumptions: risk-free interest rate of 2.0%; volatility factors of the expected market price of the Company's common stock of 0.45; weighted average expected lives of the options of 7.0 years: cash dividend yield of 1.0%. Based upon these assumptions, the weighted average fair value of options granted was \$3.69.

In November 2015, the board of directors of the Company approved the grant of 16,472 stock option awards in total to two newly elected directors of the Company. The awards will vest ratably over five years (20% per year for each year of the participant's service with the Company) and will expire ten years from the date of the grant, or November 2025. The fair value of each option grant was established at the date of grant using the Black-Scholes option pricing model. The Black-Scholes model used the following weighted average assumptions: risk-free interest rate of 1.9%; volatility factors of the expected market price of the Company's common stock of 0.23; weighted average expected lives of the options of 7.0 years: cash dividend yield of 1.4%. Based upon these assumptions, the weighted average fair value of options granted was \$2.56.

In April 2016, the board of directors of the Company approved the grant of 47,768 stock option awards in total to three officers and one recently promoted senior officer. The awards will vest ratably over five years (20% per year for each year of the participant's service with the Company) and will expire ten years from the date of the grant, or April 2026. The fair value of

each option grant was established at the date of grant using the Black-Scholes option pricing model. The Black-Scholes model used the following weighted average assumptions: risk-free interest rate of 1.6%; volatility factors of the expected market price of the Company's common stock of 0.32; weighted average expected lives of the options of 7.0 years: cash dividend yield of 1.55%. Based upon these assumptions, the weighted average fair value of options granted was \$3.17.

May 2016 Stock Option Grants

In May 2016, the board of directors of the Company approved the grant of stock option awards to its directors, executive officers, senior officers and officers under the 2016 Equity Incentive Plan that was approved at the Annual Meeting of Shareholders on May 4, 2016 when 263,605 shares were authorized for award.

A total of 79,083 stock option awards were granted to the nine directors of the Company and 44,812 stock option awards, in total, were granted to thirteen officers. The awards will vest ratably over five years (20% per year for each year of the participant's service with the Company) and will expire ten years from the date of the grant, or May 2026. The fair value of each option grant was established at the date of grant using the Black-Scholes option pricing model. The Black-Scholes model used the following weighted average assumptions: risk-free interest rate of 1.6%; volatility factors of the expected market price of the Company's common stock of 0.32; weighted average expected lives of the options of 7.0 years: cash dividend yield of 1.55%. Based upon these assumptions, the weighted average fair value of options granted was \$3.32.

A total of 92,261 stock option awards were granted to the Chief Executive Officer, two executive officers and three senior officers. The awards will vest ratably over seven years (approximately 14.28% per year for each year of the participant's service with the Company) with the exception of one senior officer whose awards vested upon retirement on August 1, 2017 and will expire ten years from the date of the grant, or May 2026. The fair value of each option grant was established at the date of grant using the Black-Scholes option pricing model. The Black-Scholes model used the following weighted average assumptions: risk-free interest rate of 1.7%; volatility factors of the expected market price of the Company's common stock of 0.32; weighted average expected lives of the options of 7.0 years: cash dividend yield of 1.55%. Based upon these assumptions, the weighted average fair value of options granted was \$3.59.

Activity in the stock option plans is as follows:

	Options O	Options Outstanding			Shares Exercisable				
	Number of	W	Veighted Average	Number of	V	Veighted Average			
(Shares in thousands)	Shares		Exercise Price	Shares		Exercise Price			
Outstanding at December 31, 2016	423	\$	9.41	139	\$	5.80			
Granted	-	\$	-	-	\$	-			
Newly vested	-		10.92	57		-			
Exercised	(28)		-	(28)		-			
Expired	-		-	-		-			
Outstanding at December 31, 2017	395	\$	9.68	168	\$	7.61			
Granted	-	\$	-	-	\$	-			
Newly vested	-		11.05	52		-			
Exercised	(67)		-	(67)		-			
Expired	(3)		11.35	-		-			
Outstanding at December 31, 2018	325	\$	10.50	153	\$	9.65			

The aggregate intrinsic value of a stock option represents the total pre-tax intrinsic value (the amount by which the current market value of the underlying stock exceeds the exercise price of the option) that would have been received by the option holders had all option holders exercised their options prior to the expiration date. The intrinsic value can change based on fluctuations in the market value of the Company's stock. At December 31, 2018, the intrinsic value of the stock options was \$1.7 million. At December 31, 2017, the intrinsic value of the stock options was \$2.3 million.

At December 31, 2018, the average remaining contractual life of outstanding options and shares exercisable were 6.7 years and 6.0 years, respectively.

May 2016 Restricted Stock Unit Grants

In May 2016, the board of directors of the Company approved the grant of restricted stock units to its directors, executive officers, senior officers and officers under the 2016 Equity Incentive Plan that was approved at the Annual Meeting of Shareholders on May 4, 2016 when 105,442 shares were authorized for award. A total of 31,635 restricted stock units were granted to the nine directors of the Company and 8,436 restricted stock units, in total, were granted to two officers. The units will vest ratably over five years (20% per year for each year of the participant's service with the Company).

A total of 46,570 restricted stock units, in total, were granted to the Chief Executive Officer, two executive officers and three senior officers. The units will vest ratably over seven years (approximately 14.28% per year for each year of the participant's service with the Company) with the exception of one senior officer whose units vested upon retirement on August 1, 2017.

The compensation expense of the stock option awards and restricted stock units is based on the fair value of the instruments on the date of grant. The Company recorded compensation expense in the amount of \$398,000 and \$345,000 in 2018 and 2017, respectively, and is expected to record \$293,000, \$291,000, \$153,000, \$92,000 and \$31,000 in 2019 through 2023.

NOTE 16: EMPLOYEE STOCK OWNERSHIP PLAN

The Bank established the Pathfinder Bank Employee Stock Ownership Plan ("Plan") to purchase stock of the Company for the benefit of its employees. In July 2011, the Plan received a \$1.1 million loan from Community Bank, N.A., guaranteed by the Company, to fund the Plan's purchase of 125,000 shares of the Company's treasury stock. The loan was being repaid in equal quarterly installments of principal plus interest over ten years beginning October 1, 2011. Interest accrued at the Wall Street Journal Prime Rate plus 1.00%, and was secured by the unallocated shares of the ESOP stock. This loan was refinanced in connection with the Conversion and Offering that occurred on October 16, 2014.

In connection with the Conversion and Offering, the ESOP purchased 105,442 shares issued in the offering by obtaining a loan from the Company which was used to purchase both the additional shares and refinance the remaining outstanding balance on the loan from Community Bank N.A. There were 138,982.5 shares associated with the refinanced loan resulting in a total of 244,424.5 shares associated with the new loan provided by the Company.

The ESOP loan from the Company has a ten year term and is being repaid in equal payments of principal and interest under a fixed rate of interest equal to 3.25% which was the prime rate of interest on the date of the closing of the offering. This ESOP loan from the Company, also referred to as an internally leveraged ESOP, does not appear as a liability on the Company's consolidated statement of condition as of December 31, 2018 in accordance with ASC 718-40-25-9d.

In accordance with the payment of principal on the loan, a proportionate number of shares are allocated to the employees over the ten year time horizon of the loan. Participants' vesting interest in the shares of Company stock is at the rate of 20% per year. Compensation expense is recorded based on the number of shares released to the participants times the average market value of the Company's stock over that same period. Dividends on unallocated shares, recorded as compensation expense on the income statement, are made available to the participants' account. The Company recorded \$411,000 and \$404,000 in compensation expense in 2018 and 2017, respectively, including \$36,000 and \$37,000 for dividends on unallocated shares in these same time periods. At December 31, 2018, there were 140,544 unearned ESOP shares with a fair value of \$2.2 million.

NOTE 17: INCOME TAXES

The provision for income taxes for the years ended December 31, is as follows:

(In thousands)		2018		2017
Current	\$	203	\$	1,022
Deferred		343		(100)
	\$	546	\$	922
The provision for income taxes includes the follow (<i>In thousands</i>)	ving	2018		2017
Federal Income Tax	\$	714	\$	741
State Tax		(168)		181
	•	546	¢	922

The components of the net deferred tax asset, included in other assets as of December 31, are as follows:

(In thousands)	2018	2017
Assets:		
Deferred compensation	\$ 895	\$ 847
Allowance for loan losses	1,909	1,862
Postretirement benefits	119	126
Subordinated loan interest	23	23
Investment securities	1,002	551
Loan origination fees	35	108
Held-to-maturity securities	21	153
Stock-based compensation	166	103
Community service activities	153	30
Other	374	79
Total	4,697	3,882
Liabilities:		
Prepaid pension	(1,157)	(1,173)
Depreciation	(1,441)	(968)
Accretion	(177)	(120)
Intangible assets	(1,004)	(1,004)
Mortgage servicing rights	(4)	(7)
Prepaid expenses and transaction fees	(69)	(79)
Total	(3,852)	(3,351)
Net deferred tax asset	\$ 845	\$ 531

Realization of deferred tax assets is dependent upon the generation of future taxable income or the existence of sufficient taxable income within the carry back period. A valuation allowance is provided when it is more likely than not that some portion, or all of the deferred tax assets, will not be realized. In assessing the need for a valuation allowance, management considers the scheduled reversal of the deferred tax liabilities, the level of historical taxable income and the projected future level of taxable income over the periods in which the temporary differences comprising the deferred tax assets will be deductible.

Deferred income tax assets and liabilities are determined using the liability method. Under this method, the net deferred tax asset or liability is recognized for the future tax consequences. This is attributable to the differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases as well as net operating and capital loss carry forwards. Deferred tax assets and liabilities are measured using enacted tax rates applied to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in income tax expense in the period that includes the enactment date. If current available evidence about the future raises doubt about the likelihood of a deferred tax asset being realized, a valuation allowance is established. The judgment about the level of future taxable income, including that which is considered capital, is inherently

subjective and is reviewed on a continual basis as regulatory and business factors change. Prior to 2017, management believed that it may not have been able to generate sufficient future taxable income in the form of capital gains to offset its capital loss carry forward position before those potential tax benefits expired, and accordingly established a valuation allowance. During 2017, the Company recognized sufficient net capital gains of \$428,000, effectively utilizing all capital loss carryforward tax benefits established in prior years and thereby eliminating the need for any valuation allowance related to the future utilization of those carryforwards at December 31, 2017. As a result, the Company maintained no valuation allowance related to future tax benefits related to the utilization of capital loss carryforwards at December 31, 2017. On December 22, 2017 the Tax Act was signed into law. The Tax Act instituted significant changes to various sections of the Internal Revenue Code that effects the Company. Most notably, the Tax Act reduces the Company's marginal federal income tax rate from 34% to 21% starting January 1, 2018. Generally Accepted Accounting Principles ("GAAP") requires that the impact of the provisions of the Tax Act be accounted for in the period of enactment. Accordingly, the Company recorded an income tax benefit in the fourth quarter of 2017 related to the Tax Act in the amount of \$155,000. The reduction in income tax expense was largely attributable to the reduction in the value of net deferred tax assets and liabilities reflecting lower future tax obligations resulting from the Tax Act's enacted lower federal corporate tax rate. Banking corporations operating in New York State are taxed under the New York State General Business Corporation Franchise Tax provisions. Under this New York State tax law, the tax rate on the business income base is 6.5%. However, various modifications are available to community banks (defined as banks with less than \$8 billion in total assets) regarding certain deductions associated with interest income. Commencing on January 1, 2018, the Company changed its elected interest income modification methodology under which its New York State income tax expense is calculated. This change in the Company's interest income modification election was adopted following changes to the New York State Tax Code enacted in 2015 and resulted in a reduction of the Company's effective income tax rate in New York State in 2018. It is anticipated that the Company's New York effective income tax rate will remain substantially at 0.0% in future periods under current law.

A reconciliation of the federal statutory income tax rate to the effective income tax rate for the years ended December 31, is as follows:

	2018	2017
Federal statutory income tax rate	21.0 %	34.0 %
State tax, net of federal benefit	(3.7)	2.9
Tax-exempt interest income	(4.3)	(11.2)
Increase in value of bank owned life insurance less premiums paid	(1.9)	(2.0)
Change in valuation allowance	-	(3.5)
Remeasurement of net deferred tax assets for tax rate reduction - Tax Cuts & Jobs Act	-	(3.5)
Other	0.9	4.5
Effective income tax rate - Pathfinder Bancorp, Inc.	12.0 %	21.2 %
Minority interest	(0.1)	(0.6)
Effective income tax rate	11.9 %	20.6 %

NOTE 18: COMMITMENTS AND CONTINGENCIES

The Company is a party to financial instruments with off-balance sheet risk in the normal course of business to meet the financing needs of its customers. These financial instruments include commitments to extend credit and standby letters of credit. Such commitments involve, to varying degrees, elements of credit risk in excess of the amount recognized in the consolidated statement of condition. The contractual amount of those commitments to extend credit reflects the extent of involvement the Company has in this particular class of financial instrument. The Company's exposure to credit loss in the event of nonperformance by the other party to the financial instrument for commitments to extend credit is represented by the contractual amount of the instrument. The Company uses the same credit policies in making commitments as it does for on-balance sheet instruments.

At December 31, 2018 and 2017, the following financial instruments were outstanding whose contract amounts represent credit risk:

	Contract Ai	mount
(In thousands)	2018	2017
Commitments to grant loans	\$ 37,354	58,235
Unfunded commitments under lines of credit	74,284	62,879
Unfunded commitments related to construction loans in progress	5,058	3,506
Standby letters of credit	2,007	2,153

Commitments to extend credit are agreements to lend to a customer as long as there is no violation of any condition established in the contract. Commitments generally have fixed expiration dates or other termination clauses and may require payment of a fee. Since some of the commitment amounts are expected to expire without being drawn upon, the total commitment amounts do not necessarily represent future cash requirements. The Company evaluates each customer's creditworthiness on a case-by-case basis. The amount of collateral obtained, if deemed necessary by the Company upon extension of credit, is based on management's credit evaluation of the counter party. Collateral held varies but may include residential real estate and income-producing commercial properties. Loan commitments outstanding at December 31, 2018 with fixed interest rates amounted to approximately \$10.5 million. Loan commitments, including unused lines of credit and standby letters of credit, outstanding at December 31, 2018 with variable interest rates amounted to approximately \$103.2 million. These outstanding loan commitments carry current market rates.

Unfunded commitments under standby letters of credit, revolving credit lines and overdraft protection agreements are commitments for possible future extensions of credit to existing customers. These lines of credit usually do not contain a specified maturity date and may not be drawn upon to the total extent to which the Company is committed.

Letters of credit written are conditional commitments issued by the Company to guarantee the performance of a customer to a third party. Generally, all letters of credit, when issued have expiration dates within one year. The credit risk involved in issuing letters of credit is essentially the same as those that are involved in extending loan facilities to customers. The Company generally holds collateral and/or personal guarantees supporting these commitments. Management believes that the proceeds obtained through a liquidation of collateral and the enforcement of guarantees would be sufficient to cover the potential amount of future payments required under the corresponding guarantees.

In addition to pledging investment securities to secure public funds deposits, the Bank has entered into an agreement with the FHLBNY whereby the FHLBNY agreed to issue letters of credit for the benefit of securing public funds as an alternate form of collateral for those deposits. In the event the FHLB makes a payment under this agreement, such payment will constitute an advance to the Bank and shall be immediately due and payable. The Bank has pledged unencumbered mortgage-related assets to secure letters of credit from the FHLBNY. As of December 31, 2018 and 2017, the Bank had letters of credit outstanding with the FHLBNY of \$12.0 million and \$26.0 million, respectively.

The Company leases land and leasehold improvements under agreements that expire in various years with renewal options over the next 30 years. Rental expense, included in building occupancy expense, amounted to \$198,000 for 2018 and \$166,000 for 2017.

Approximate minimum rental commitments for non-cancelable operating leases are as follows:

Years Ending December 31:

(<u>In thousands)</u>	_
2019	204
2020	200
2021	175
2022	166
2023	104
Thereafter	237
Total minimum lease payments	\$ 1,086

NOTE 19: DIVIDENDS AND RESTRICTIONS

The Company's ability to pay dividends to its shareholders is largely dependent on the Bank's ability to pay dividends to the Company. In addition to state law requirements and the capital requirements discussed in Note 20, federal statutes, regulations and policies limit the circumstances under which the Bank may pay dividends. The amount of retained earnings legally available under these regulations approximated \$13.0 million as of December 31, 2018. Dividends paid by the Bank to the Company would be prohibited if the effect thereof would cause the Bank's capital to be reduced below applicable minimum capital requirements. The Bank made no dividend payments to the Company in the years ended December 31, 2018, December 31, 2017 or December 31, 2016.

Capital adequacy is evaluated primarily by the use of ratios which measure capital against total assets, as well as against total assets that are weighted based on defined risk characteristics. The Company's goal is to maintain a strong capital position, consistent with the risk profile of its banking operations. This strong capital position serves to support growth and expansion activities while at the same time exceeding regulatory standards. At December 31, 2018, the Bank met the regulatory definition of a "well-capitalized" institution, i.e. a leverage capital ratio exceeding 5%, a Tier 1 risk-based capital ratio exceeding 8%, Tier 1 common equity exceeding 6.5%, and a total risk-based capital ratio exceeding 10%.

In addition to establishing the minimum regulatory capital requirements, the regulations limit capital distributions and certain discretionary bonus payments to management if the institution does not hold a "capital conservation buffer" consisting of 2.5% of common equity Tier 1 capital to risk-weighted assets above the amount necessary to meet its minimum risk-based capital requirements. The buffer is separate from the capital ratios required under the Prompt Corrective Action ("PCA") standards. In order to avoid these restrictions, the capital conservation buffer effectively increases the minimum the following capital to risk-weighted assets ratios: (1) Core Capital, (2) Total Capital and (3) Common Equity. The capital conservation buffer requirement began being phased in beginning January 1, 2016 at 0.625% of risk-weighted assets and increasing each year until fully implemented at 2.5% on January 1, 2019. At December 31, 2018, the Bank exceeded all current and projected regulatory required minimum capital ratios, including the maximum capital buffer level that was required on January 1, 2019.

NOTE 20: REGULATORY MATTERS

The Bank is 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 Company's 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 its 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 Bank to maintain amounts and ratios (set forth in the table below) of total and Tier 1 capital (as defined in the regulations) to risk-weighted assets (as defined), and of Tier 1 capital (as defined) to average assets (as defined).

As of December 31, 2018, the Bank's most recent notification from the Federal Deposit Insurance Corporation categorized the Bank as "well-capitalized", under the regulatory framework for prompt corrective action. To be categorized as "well-capitalized", the Bank must maintain total risk-based, Tier 1 risk-based and Tier 1 leverage ratios as set forth in the tables below. There are no conditions or events since that notification that management believes have changed the Bank's category.

As noted above, the regulations also impose a "capital conservation buffer" consisting of 2.5% of common equity Tier 1 capital to risk-weighted assets above the amount necessary to meet its minimum risk-based capital requirements. The buffer is separate from the capital ratios required under the Prompt Corrective Action ("PCA") standards and imposes restrictions on dividend distributions and discretionary bonuses. In order to avoid these restrictions, the capital conservation buffer effectively increases the minimum the following capital to risk-weighted assets ratios: (1) Core Capital, (2) Total Capital and (3) Common Equity. The capital conservation buffer requirement began being phased in beginning January 1, 2016 at 0.625% of risk-weighted assets and increasing each year until fully implemented at 2.5% on January 1, 2019. At December 31, 2018, the Bank exceeded all current and projected regulatory required minimum capital ratios, including the maximum capital buffer level that was required on January 1, 2019.

The Bank's actual capital amounts and ratios as of December 31, 2018 and 2017 are presented in the following table.

					Minimur	n To Be	Minimu	ım for
			Minimu	m For	"Well-Ca _l	pitalized"	Capital A	dequacy
			Capital A	dequacy	Under l	Prompt	With Buff	er, Fully
	Actu	ıal	Purpo	ses	Corrective	Provisions	Phased I	n 2019
(Dollars in thousands)	Amount	Ratio	Amount	Ratio	Amount	Ratio	Amount	Ratio
As of December 31, 2018:								
Total Core Capital (to Risk-Weighted Assets)	\$ 83,177	13.69%	\$ 48,593	8.00%	\$ 60,741	10.00%	\$ 63,778	10.50%
Tier 1 Capital (to Risk-Weighted Assets)	\$ 75,871	12.49%	\$ 36,445	6.00%	\$ 48,593	8.00%	\$ 51,630	8.50%
Tier 1 Common Equity (to Risk-Weighted Assets)	\$ 75,871	12.49%	\$ 27,334	4.50%	\$ 39,482	6.50%	\$ 42,519	7.00%
Tier 1 Capital (to Assets)	\$ 75,871	8.31%	\$ 36,522	4.00%	\$ 45,652	5.00%	\$ 45,652	5.00%
As of December 31, 2017:								
Total Core Capital (to Risk-Weighted Assets)	\$ 78,105	13.97%	\$ 44,733	8.00%	\$ 55,916	10.00%	\$ 58,712	10.50%
Tier 1 Capital (to Risk-Weighted Assets)	\$ 71,114	12.72%	\$ 33,550	6.00%	\$ 44,733	8.00%	\$ 47,529	8.50%
Tier 1 Common Equity (to Risk-Weighted Assets)	\$ 71,114	12.72%	\$ 25,162	4.50%	\$ 36,345	6.50%	\$ 39,141	7.00%
Tier 1 Capital (to Assets)	\$ 71,114	8.16%	\$ 34,863	4.00%	\$ 43,579	5.00%	\$ 43,579	5.00%

The Company's goal is to maintain a strong capital position, consistent with the risk profile of its subsidiary banks that supports growth and expansion activities while at the same time exceeding regulatory standards. At December 31, 2018, the Bank exceeded all regulatory required minimum capital ratios and met the regulatory definition of a "well-capitalized" institution, i.e. a leverage capital ratio exceeding 5%, a Tier 1 risk-based capital ratio exceeding 6% and a total risk-based capital ratio exceeding 10%.

The Bank is required to maintain average balances on hand or with the Federal Reserve Bank. At December 31, 2018 and 2017, these reserve balances amounted to \$4.0 million and \$6.3 million, respectively and are included in cash and due from banks in the statement of condition.

NOTE 21: INTEREST RATE DERIVATIVE

Derivative instruments are entered into primarily as a risk management tool of the Company. Financial derivatives are recorded at fair value as other liabilities. The accounting for changes in the fair value of a derivative depends on whether it has been designated and qualifies as part of a hedging relationship. For a fair value hedge, changes in the fair value of the derivative instrument and changes in the fair value of the hedged asset or liability are recognized currently in earnings. For a cash flow hedge, changes in the fair value of the derivative instrument, to the extent that it is effective, are recorded in other comprehensive income and subsequently reclassified to earnings as the hedged transaction impacts net income. Any ineffective portion of a cash flow hedge is recognized currently in earnings. See Note 22 for further discussion of the fair value of the interest rate derivative.

On five occasions during 2017, the Company sold, and subsequently repurchased, U.S. Treasury securities in the approximate amount of \$40.0 million for each transaction. These transactions were intended to act as hedges against rising short-term interest rates. The Company was in controlling possession of, but did not own, the securities at the time of each sale. The securities had been received by the Company, under industry-standard repurchase agreements, from an unrelated third party as collateral for a series of 30-day loans of approximately \$40.0 million on each occasion which were made at market rates of interest to that third party. The security sale on each occasion provided the funds necessary to advance the loan to the third party and placed the Company in what is generally described as a "short position" with respect to the sold U.S. Treasury security. These transactions acted as a hedge against rising short-term interest rates because the price of each sold security would be expected to decline in a rising short-term interest rate environment and could therefore be reacquired at the conclusion of each 30-day loan period at a price lower than the price at which the securities were originally sold. Short-term rates rose over the combined duration of these transactions and, consequently, the Company recognized aggregate gains on the sale and repurchase of the securities in the amounts of \$428,000 in 2017. The transactions' gains were characterized as capital gains for tax purposes. These capital gains utilized existing, previously reserved-for, capital loss tax carryforwards that were established in 2013. The Company recognized tax benefits related to these transactions of \$150,000 in 2017. The tax benefits arose from the reversal of valuation allowances were originally established due to the uncertainty at that time related to the Company's ability to generate future capital gain income within the five-year statutory life

of the capital loss carryforward position under the Internal Revenue Code. The recognized tax benefit from the reversal of those valuation allowances reduced the Company's effective tax rate from what would have been 24.0% to 20.6 % in 2017 without regard to the effects of the one-time charge related to the enactment on December 22, 2017 of the Tax Cuts and Jobs Act of 2017 (the "Tax Act").

The capital gain income and the additional recognized tax benefits derived from these transactions were partially offset by an additional \$368,000 in after-tax interest expense on borrowings from additional pre-tax interest expense on those borrowings of \$598,000 that reduced pretax net interest margin by that amount in 2017. In total, after-tax net income increased by \$178,000 for the twelve months ended December 31, 2017 as a result of these hedging transactions. The Company did not have any hedging activities during the twelve months ended December 31, 2018.

The Company adopted ASU 2017-12: Derivatives and Hedging [Topic 815]: Targeted Improvements to Accounting for Hedging Activities, effective January 1, 2018, in the second quarter of 2018. The amended guidance within this Update expands and clarifies hedge accounting for nonfinancial and financial risk components, aligns the recognition and presentation of the effects of the hedging instrument and hedged item in the financial statements, and simplifies the requirements for assessing effectiveness in a hedging relationship. The Company did not have any hedging activities in 2018, but expects to utilize hedging in the future to improve the management of its risk profiles. In order to facilitate potential future hedging activities, the Company transferred 52 investment securities with an aggregate amortized cost before transfer of \$35.2 million from the held-to-maturity classification to the available-for-sale classification at the date of adoption.

NOTE 22: FAIR VALUE MEASUREMENTS AND DISCLOSURES

Accounting guidance related to fair value measurements and disclosures specifies a hierarchy of valuation techniques based on whether the inputs to those valuation techniques are observable or unobservable. Observable inputs reflect market data obtained from independent sources, while unobservable inputs reflect the Company's market assumptions. These two types of inputs have created the following fair value hierarchy:

- Level 1 Quoted prices (unadjusted) for identical assets or liabilities in active markets that the entity has the ability to access as of the measurement date.
- Level 2 Quoted prices for similar assets and liabilities in active markets; quoted prices for identical or similar assets or liabilities in markets that are not active; and model-derived valuations in which all significant inputs and significant value drivers are observable in active markets.
- Level 3 Model-derived valuations in which one or more significant inputs or significant value drivers are unobservable.

An asset's or liability's level within the fair value hierarchy is based on the lowest level of input that is significant to the fair value measurement.

In determining fair value, the Company utilizes valuation techniques that maximize the use of observable inputs, minimize the use of unobservable inputs, to the extent possible, and considers counterparty credit risk in its assessment of fair value.

The Company used the following methods and significant assumptions to estimate fair value:

Investment securities: The fair values of securities available-for-sale are obtained from an independent third party and are based on quoted prices on nationally recognized securities exchanges where available (Level 1). If quoted prices are not available, fair values are measured by utilizing matrix pricing, which is a mathematical technique used widely in the industry to value debt securities without relying exclusively on quoted prices for specific securities but rather by relying on the securities' relationship to other benchmark quoted securities (Level 2). Management made no adjustment to the fair value quotes that were received from the independent third party pricing service. Level 3 securities are assets whose fair value cannot be determined by using observable measures, such as market prices or pricing models. Level 3 assets are typically very illiquid, and fair values can only be calculated using estimates or risk-adjusted value ranges. Management applies known factors, such as currently applicable discount rates, to the valuation of those investments in order to determine fair value at the reporting date.

Impaired loans: Impaired loans are those loans in which the Company has measured impairment based on the fair value of the loan's collateral or the discounted value of expected future cash flows. Fair value is generally determined based upon market value evaluations by third parties of the properties and/or estimates by management of working capital collateral or discounted cash flows based upon expected proceeds. These appraisals may include up to three approaches to value: the sales comparison approach, the income approach (for income-producing property), and the cost approach. Management modifies the appraised values, if needed, to take into account recent developments in the market or other factors, such as, changes in absorption rates or

market conditions from the time of valuation and anticipated sales values considering management's plans for disposition. Such modifications to the appraised values could result in lower valuations of such collateral. Estimated costs to sell are based on current amounts of disposal costs for similar assets. These measurements are classified as Level 3 within the valuation hierarchy. Impaired loans are subject to nonrecurring fair value adjustment upon initial recognition or subsequent impairment. A portion of the allowance for loan losses is allocated to impaired loans if the value of such loans is deemed to be less than the unpaid balance.

Foreclosed real estate: Fair values for foreclosed real estate are initially recorded based on market value evaluations by third parties, less costs to sell ("initial cost basis"). Any write-downs required when the related loan receivable is exchanged for the underlying real estate collateral at the time of transfer to foreclosed real estate are charged to the allowance for loan losses. Values are derived from appraisals, similar to impaired loans, of underlying collateral or discounted cash flow analysis. Subsequent to foreclosure, valuations are updated periodically and assets are marked to current fair value, not to exceed the initial cost basis. In the determination of fair value subsequent to foreclosure, management also considers other factors or recent developments, such as, changes in absorption rates and market conditions from the time of valuation and anticipated sales values considering management's plans for disposition. Either change could result in adjustment to lower the property value estimates indicated in the appraisals. These measurements are classified as Level 3 within the fair value hierarchy.

The following tables summarize assets measured at fair value on a recurring basis as of December 31, segregated by the level of valuation inputs within the hierarchy utilized to measure fair value:

December 31, 2018

Takal Dain

							,	Total Fair
(In thousands)	Le	evel 1]	Level 2		Level 3		Value
Available-for-Sale Portfolio								
Debt investment securities:								
US Treasury, agencies and GSEs	\$	-	\$	17,031	\$	-	\$	17,031
State and political subdivisions		-		23,065		-		23,065
Corporate		-		17,200		-		17,200
Asset backed securities		-		18,119		-		18,119
Residential mortgage-backed - US agency		-		31,666		-		31,666
Collateralized mortgage obligations - US agency		-		46,441		-		46,441
Collateralized mortgage obligations - Private label		-		23,936		-		23,936
Total available-for-sale securities	\$	-	\$	177,458	\$	-	\$	177,458
Marketable equity securities	\$	-	\$	453	\$	-	\$	453
				Docombo	. 21 -	0017		
				Decembe	r 31, 2	2017		Total Eaix
(In thousands)		Level 1		December	r 31, 2	2017 Level 3		Total Fair Value
(In thousands) Available-for-Sale Portfolio		Level 1			r 31, 2			
	_	Level 1			r 31, 2			
Available-for-Sale Portfolio	\$	Level 1	\$		r 31, 2		\$	
Available-for-Sale Portfolio Debt investment securities:	\$	Level 1	\$	Level 2			\$	Value
Available-for-Sale Portfolio Debt investment securities: US Treasury, agencies and GSEs	\$	Level 1	\$	Level 2 41,336			\$	Value 41,336
Available-for-Sale Portfolio Debt investment securities: US Treasury, agencies and GSEs State and political subdivisions	\$	Level 1	\$	Level 2 41,336 13,681			\$	Value 41,336 13,681
Available-for-Sale Portfolio Debt investment securities: US Treasury, agencies and GSEs State and political subdivisions Corporate	\$	Level 1	\$	Level 2 41,336 13,681 8,600			\$	Value 41,336 13,681 8,600
Available-for-Sale Portfolio Debt investment securities: US Treasury, agencies and GSEs State and political subdivisions Corporate Asset backed securities	\$	-	\$	Level 2 41,336 13,681 8,600 6,644			\$	Value 41,336 13,681 8,600 6,644
Available-for-Sale Portfolio Debt investment securities: US Treasury, agencies and GSEs State and political subdivisions Corporate Asset backed securities Residential mortgage-backed - US agency	\$	- - - -	\$	Level 2 41,336 13,681 8,600 6,644 35,742		Level 3	\$	Value 41,336 13,681 8,600 6,644 35,742
Available-for-Sale Portfolio Debt investment securities: US Treasury, agencies and GSEs State and political subdivisions Corporate Asset backed securities Residential mortgage-backed - US agency Collateralized mortgage obligations - US agency	\$		\$	41,336 13,681 8,600 6,644 35,742 53,348		Level 3	\$	Value 41,336 13,681 8,600 6,644 35,742 53,348

\$

\$

170,403

515

\$

170,918

Total available-for-sale securities

The changes in Level 3 assets and liabilities measured at estimated fair value on a recurring basis as of December 31 were as follows:

	on Stock - al Services
(In thousands)	lustry
Balance - December 31, 2017	\$ 515
Total gains realized/unrealized:	
Included in earnings	-
Included in other comprehensive income	-
Settlements	-
Sales	-
Transfers to Level 2	(515)
Balance - December 31, 2018	\$
Changes in unrealized gains included in earnings related to assets still held at December 31, 2018	-

The following table summarizes the valuation techniques and significant unobservable inputs used for the Company's investments that are categorized within Level 3 of the fair value hierarchy at the indicated dates:

(In thousands)	ands) At December 31, 2017					
Investment Type	Fair	Value	Valuation Techniques	Unobservable Input	Weight	
Common Stock - Financial						
Services Industry	\$	515	Inputs to comparables	Weight ascribed to comparable companies	100%	

Certain assets and liabilities are measured at fair value on a nonrecurring basis; that is, the instruments are not measured at fair value on an ongoing basis but are subject to fair value adjustments in certain circumstances (for example, when there is evidence of impairment).

The following tables summarize assets measured at fair value on a nonrecurring basis as of December 31, segregated by the level of valuation inputs within the hierarchy utilized to measure fair value:

			Decembe	r 31, 2	2018	
						Total Fair
(In thousands)		Level 1	Level 2		Level 3	Value
Impaired loans	\$	-	\$ -	\$	1,098	\$ 1,098
Foreclosed real estate	\$	-	\$ -	\$	1,173	\$ 1,173
			Decembe	r 31, 2	2017	
						Total Fair
(In thousands)		Level 1	Level 2		Level 3	Value
Impaired loans	\$	-	\$ -	\$	4,887	\$ 4,887
Foreclosed real estate	\$	-	\$ -	\$	434	\$ 434
	_ 110 _					

The following table presents additional quantitative information about assets measured at fair value on a nonrecurring basis and for which Level 3 inputs were used to determine fair value.

	Q	quantitative Information about Level 3 Fair Value Measureme	nts
	Valuation	Unobservable	Range
	Techniques	Input	(Weighted Avg.)
At December 31, 2018			
Impaired loans	Appraisal of collateral	Appraisal Adjustments	5% - 15% (6%)
	(Sales Approach)	Costs to Sell	5% - 13% (11%)
	Discounted Cash Flow		
Foreclosed real estate	Appraisal of collateral	Appraisal Adjustments	15% - 15% (15%)
	(Sales Approach)	Costs to Sell	6% - 8% (7%)
	Q	uantitative Information about Level 3 Fair Value Measureme	nts
	Valuation	Unobservable	Range
	Techniques	Input	(Weighted Avg.)
At December 31, 2017			
Impaired loans	Appraisal of collateral	Appraisal Adjustments	5% - 30% (9%)
	(Sales Approach)	Costs to Sell	7% - 13% (11%)
	Discounted Cash Flow		
Foreclosed real estate	Appraisal of collateral	Appraisal Adjustments	15% - 15% (15%)
	(Sales Approach)	Costs to Sell	6% - 8% (7%)

The Company owns a small percentage of the common stock of a single, otherwise unaffiliated, financial institution with a fair market value of \$453,000 at December 31, 2018. This financial institution had been recently formed, was relatively limited in the scope of its business activities, and was relatively small in asset size at the time the shares of common stock were initially acquired by the Company. The shares of this financial institution are not, and have never been, listed on any public stock exchange. Through December 31, 2017, the Company determined the fair market value of these shares using Level 3 methodologies. The relatively unique characteristics of the institution precluded the use of significant inputs and value drivers observable in active markets through that date. During the three months ended March 31, 2018, the Company's management reevaluated the fair value methodology it had previously used with respect to this investment and determined that the institution's increased size and current business activities had become reasonably comparable over time with applicable peer institutions. Consequently, relevant significant inputs and value drivers observable in active markets were deemed to be present and available beginning with the three months ended March 31, 2018. Accordingly, the Company transferred this asset from Level 3 to Level 2 at March 31, 2018 for purposes of the accompanying fair value disclosure. The investment was valued using Level 2 methodologies at December 31, 2018 and it is expected to be valued using Level 2 methodologies prospectively.

Required disclosures include fair value information of financial instruments, whether or not recognized in the consolidated statement of condition, for which it is practicable to estimate that value. In cases where quoted market prices are not available, fair values are based on estimates using present value or other valuation techniques. Those techniques are significantly affected by the assumptions used, including the discount rate and estimates of future cash flows. In that regard, the derived fair value estimates cannot be substantiated by comparison to independent markets and, in many cases, could not be realized in immediate settlement of the instrument.

The Company has various processes and controls in place to ensure that fair value is reasonably estimated. The Company performs due diligence procedures over third-party pricing service providers in order to support their use in the valuation process.

While the Company believes its valuation methods are appropriate and consistent with other market participants, the use of different methodologies or assumptions to determine the fair value of certain financial instruments could result in a different estimate of fair value at the reporting date.

Management uses its best judgment in estimating the fair value of the Company's financial instruments; however, there are inherent weaknesses in any estimation technique. Therefore, for substantially all financial instruments, the fair value estimates herein are not necessarily indicative of the amounts the Company could have realized in a sales transaction on the dates

indicated. The estimated fair value amounts have been measured as of their respective period-ends, and have not been re-evaluated or updated for purposes of these financial statements subsequent to those respective dates. As such, the estimated fair values of these financial instruments subsequent to the respective reporting dates may be different than the amounts reported at each period-end.

The following information should not be interpreted as an estimate of the fair value of the entire Company since a fair value calculation is only provided for a limited portion of the Company's assets and liabilities. Due to a wide range of valuation techniques and the degree of subjectivity used in making the estimates, comparisons between the Company's disclosures and those of other companies may not be meaningful. The Company, in estimating its fair value disclosures for financial instruments, used the following methods and assumptions:

Cash and cash equivalents – The carrying amounts of these assets approximate their fair value and are classified as Level 1.

Interest earning time deposits – The carrying amounts of these assets approximate their fair value and are classified as Level 1.

Investment securities – The fair values of securities available-for-sale and held-to-maturity are obtained from an independent third party and are based on quoted prices on nationally recognized exchange where available (Level 1). If quoted prices are not available, fair values are measured by utilizing matrix pricing, which is a mathematical technique used widely in the industry to value debt securities without relying exclusively on quoted prices for specific securities, but rather by relying on the securities' relationship to other benchmark quoted securities (Level 2). Management made no adjustment to the fair value quotes that were received from the independent third party pricing service. Level 3 securities are assets whose fair value cannot be determined by using observable measures, such as market prices or pricing models. Level 3 assets are typically very illiquid, and fair values can only be calculated using estimates or risk-adjusted value ranges. Management applies known factors, such as currently applicable discount rates, to the valuation of those investments in order to determine fair value at the reporting date.

Federal Home Loan Bank stock – The carrying amount of these assets approximates their fair value and are classified as Level 2.

Net loans – For variable-rate loans that re-price frequently, fair value is based on carrying amounts. The fair value of other loans (for example, fixed-rate commercial real estate loans, mortgage loans, and commercial and industrial loans) is estimated using discounted cash flow analysis, based on interest rates currently being offered in the market for loans with similar terms to borrowers of similar credit quality. Loan value estimates include judgments based on expected prepayment rates. The measurement of the fair value of loans, including impaired loans, is classified within Level 3 of the fair value hierarchy.

Accrued interest receivable and payable – The carrying amount of these assets approximates their fair value and are classified as Level 1.

Deposits – The fair values disclosed for demand deposits (e.g., interest-bearing and noninterest-bearing checking, passbook savings and certain types of money management accounts) are, by definition, equal to the amount payable on demand at the reporting date (i.e., their carrying amounts) and are classified within Level 1 of the fair value hierarchy. Fair values for fixed-rate certificates of deposit are estimated using a discounted cash flow calculation that applies interest rates currently being offered in the market on certificates of deposits to a schedule of aggregated expected monthly maturities on time deposits. Measurements of the fair value of time deposits are classified within Level 2 of the fair value hierarchy.

Borrowings – Fixed/variable term "bullet" structures are valued using a replacement cost of funds approach. These borrowings are discounted to the FHLBNY advance curve. Option structured borrowings' fair values are determined by the FHLB for borrowings that include a call or conversion option. If market pricing is not available from this source, current market indications from the FHLBNY are obtained and the borrowings are discounted to the FHLBNY advance curve less an appropriate spread to adjust for the option. These measurements are classified as Level 2 within the fair value hierarchy.

Subordinated Loans – The Company secures quotes from its pricing service based on a discounted cash flow methodology or utilizes observations of recent highly-similar transactions which result in a Level 2 classification.

The carrying amounts and fair values of the Company's financial instruments as of December 31 are presented in the following table:

		December 31, 2018				December 31, 2017		
	Fair Value		Carrying		Estimated	Carrying		Estimated
(In thousands)	Hierarchy		Amounts		Fair Values	Amounts		Fair Values
Financial assets:								
Cash and cash equivalents	1	\$	26,316	\$	26,316	\$ 21,991	\$	21,991
Investment securities - available-for-sale	2		177,458		177,458	170,623		170,623
Investment securities - available-for-sale	3		-		-	515		515
Investment securities - marketable equity	2		453		453	-		-
Investment securities - held-to-maturity	2		53,908		53,769	66,196		66,426
Federal Home Loan Bank stock	2		5,937		5,937	3,855		3,855
Net loans	3		612,964		601,789	573,705		570,439
Accrued interest receivable	1		3,068		3,068	3,047		3,047
Financial liabilities:								
Demand Deposits, Savings, NOW and MMDA	1	\$	450,267	\$	450,267	\$ 510,176	\$	510,176
Time Deposits	2		276,793		275,727	213,427		212,453
Borrowings	2		118,534		118,379	73,888		73,575
Subordinated loans	2		15,094		14,485	15,059		14,953
Accrued interest payable	1		304		304	186		186

NOTE 23: PARENT COMPANY – FINANCIAL INFORMATION

The following represents the condensed financial information of Pathfinder Bancorp, Inc. as of and for the years ended December 31:

Statements of Condition	2018	2017
(<u>In thousands)</u>		
Assets		
Cash	\$ 3,063	\$ 5,004
Investments	453	515
Investment in bank subsidiary	74,769	71,883
Investment in non-bank subsidiary	193	155
Other assets	1,961	117
Total assets	\$ 80,439	\$ 77,674
Liabilities and Shareholders' Equity		_
Accrued liabilities	\$ 886	\$ 471
Subordinated loans	15,094	15,059
Shareholders' equity	64,459	62,144
Total liabilities and shareholders' equity	\$ 80,439	\$ 77,674

Statements of Income	2018	2017
(<u>In thousands)</u>		
Income		
Dividends from non-bank subsidiary	\$ 6	\$ 4
Loss on marketable equity securities	(62)	-
Realized gains on available-for sale investment securities	-	428
Operating, net	-	15
Total (loss) income	(56)	447
Expenses		
Interest	846	1,371
Operating, net	175	169
Total expenses	1,021	1,540
Loss before taxes and equity in undistributed net		
income of subsidiaries	(1,077)	(1,093)
Tax benefit	340	262
Loss before equity in undistributed net income of subsidiaries	(737)	(831)
Equity in undistributed net income of subsidiaries	4,768	4,322
Net income	\$ 4,031	\$ 3,491
Statements of Cash Flows	2018	2017
(<u>In thousands)</u>	2018	2017
(<u>In thousands)</u> Operating Activities		
(<u>In thousands)</u> Operating Activities Net Income	\$ 4,031	\$ 3,491
(<u>In thousands)</u> Operating Activities Net Income Equity in undistributed net income of subsidiaries	\$ 4,031 (4,768)	\$ 3,491 (4,322)
(In thousands) Operating Activities Net Income Equity in undistributed net income of subsidiaries Stock based compensation and ESOP expense	\$ 4,031 (4,768) 773	\$ 3,491 (4,322) 712
(In thousands) Operating Activities Net Income Equity in undistributed net income of subsidiaries Stock based compensation and ESOP expense Amortization of deferred financing from subordinated loan	\$ 4,031 (4,768) 773 35	\$ 3,491 (4,322) 712 34
(In thousands) Operating Activities Net Income Equity in undistributed net income of subsidiaries Stock based compensation and ESOP expense Amortization of deferred financing from subordinated loan Net change in other assets and liabilities	\$ 4,031 (4,768) 773 35 (1,372)	\$ 3,491 (4,322) 712 34 822
(In thousands) Operating Activities Net Income Equity in undistributed net income of subsidiaries Stock based compensation and ESOP expense Amortization of deferred financing from subordinated loan Net change in other assets and liabilities Net cash flows from operating activities	\$ 4,031 (4,768) 773 35	\$ 3,491 (4,322) 712 34
(In thousands) Operating Activities Net Income Equity in undistributed net income of subsidiaries Stock based compensation and ESOP expense Amortization of deferred financing from subordinated loan Net change in other assets and liabilities Net cash flows from operating activities Investing Activities	\$ 4,031 (4,768) 773 35 (1,372)	\$ 3,491 (4,322) 712 34 822 737
(In thousands) Operating Activities Net Income Equity in undistributed net income of subsidiaries Stock based compensation and ESOP expense Amortization of deferred financing from subordinated loan Net change in other assets and liabilities Net cash flows from operating activities Investing Activities Net gain on hedging transaction	\$ 4,031 (4,768) 773 35 (1,372)	\$ 3,491 (4,322) 712 34 822 737
(In thousands) Operating Activities Net Income Equity in undistributed net income of subsidiaries Stock based compensation and ESOP expense Amortization of deferred financing from subordinated loan Net change in other assets and liabilities Net cash flows from operating activities Investing Activities Net gain on hedging transaction Net cash flows from investing activities	\$ 4,031 (4,768) 773 35 (1,372)	\$ 3,491 (4,322) 712 34 822 737
(In thousands) Operating Activities Net Income Equity in undistributed net income of subsidiaries Stock based compensation and ESOP expense Amortization of deferred financing from subordinated loan Net change in other assets and liabilities Net cash flows from operating activities Investing Activities Net gain on hedging transaction Net cash flows from investing activities Financing activities	\$ 4,031 (4,768) 773 35 (1,372) (1,301)	\$ 3,491 (4,322) 712 34 822 737 (428) (428)
(In thousands) Operating Activities Net Income Equity in undistributed net income of subsidiaries Stock based compensation and ESOP expense Amortization of deferred financing from subordinated loan Net change in other assets and liabilities Net cash flows from operating activities Investing Activities Net gain on hedging transaction Net cash flows from investing activities Financing activities Proceeds from exercise of stock options	\$ 4,031 (4,768) 773 35 (1,372) (1,301)	\$ 3,491 (4,322) 712 34 822 737 (428) (428)
(In thousands) Operating Activities Net Income Equity in undistributed net income of subsidiaries Stock based compensation and ESOP expense Amortization of deferred financing from subordinated loan Net change in other assets and liabilities Net cash flows from operating activities Investing Activities Net gain on hedging transaction Net cash flows from investing activities Financing activities Proceeds from exercise of stock options Cash dividends paid to common shareholders	\$ 4,031 (4,768) 773 35 (1,372) (1,301) - - - 385 (1,025)	\$ 3,491 (4,322) 712 34 822 737 (428) (428) 155 (884)
(In thousands) Operating Activities Net Income Equity in undistributed net income of subsidiaries Stock based compensation and ESOP expense Amortization of deferred financing from subordinated loan Net change in other assets and liabilities Net cash flows from operating activities Investing Activities Net gain on hedging transaction Net cash flows from investing activities Financing activities Proceeds from exercise of stock options Cash dividends paid to common shareholders Net cash flows from financing activities	\$ 4,031 (4,768) 773 35 (1,372) (1,301) - - - 385 (1,025) (640)	\$ 3,491 (4,322) 712 34 822 737 (428) (428) 155 (884) (729)
(In thousands) Operating Activities Net Income Equity in undistributed net income of subsidiaries Stock based compensation and ESOP expense Amortization of deferred financing from subordinated loan Net change in other assets and liabilities Net cash flows from operating activities Investing Activities Net gain on hedging transaction Net cash flows from investing activities Financing activities Proceeds from exercise of stock options Cash dividends paid to common shareholders Net cash flows from financing activities Change in cash and cash equivalents	\$ 4,031 (4,768) 773 35 (1,372) (1,301) - - - 385 (1,025) (640) (1,941)	\$ 3,491 (4,322) 712 34 822 737 (428) (428) (428) (55 (884) (729) (420)
(In thousands) Operating Activities Net Income Equity in undistributed net income of subsidiaries Stock based compensation and ESOP expense Amortization of deferred financing from subordinated loan Net change in other assets and liabilities Net cash flows from operating activities Investing Activities Net gain on hedging transaction Net cash flows from investing activities Financing activities Proceeds from exercise of stock options Cash dividends paid to common shareholders Net cash flows from financing activities	\$ 4,031 (4,768) 773 35 (1,372) (1,301) - - - 385 (1,025) (640) (1,941) 5,004	\$ 3,491 (4,322) 712 34 822 737 (428) (428) 155 (884) (729)

NOTE 24: RELATED PARTY TRANSACTIONS

In the ordinary course of business, the Company has granted loans to certain directors, executive officers and their affiliates (collectively referred to as "related parties"). These loans were made on substantially the same terms, including interest rates and collateral, as those prevailing at the time for comparable transactions with other unaffiliated parties and do not involve more than normal risk of collectability.

The following represents the activity associated with loans to related parties during the year ended December 31, 2018:

(In thousands)

Balance at the beginning of the year	\$ 9,272
Originations and Officer additions	3,207
Principal payments and Officer removals	(1,967)
Balance at the end of the year	\$ 10,512

Deposits of related parties at December 31, 2018 and December 31, 2017 were \$3.9 million and \$3.2 million, respectively.

NOTE 25: CONVERSION AND REORGANIZATION

On October 16, 2014, the former Pathfinder Bancorp ("former Pathfinder") completed the conversion and reorganization pursuant to which Pathfinder Bancorp, MHC converted to the stock holding company form of organization under a "second step" conversion (the "Conversion"), and the Bank reorganized from the two-tier mutual holding company structure to the stock holding company structure. Prior to the completion of the Conversion, the MHC owned approximately 60.4% of the common stock of the Company. The Company, the new stock holding company for Pathfinder Bank, sold 2,636,053 shares of common stock at \$10.00 per share, for gross offering proceeds of \$26.4 million in its stock offering. In addition, \$197,000 in cash was received by the Company from the MHC upon it ceasing to exist.

Concurrent with the completion of the offering, shares of common stock of the Company owned by the public were exchanged for shares of the Company's common stock so that the shareholders now own approximately the same percentage of the Company's common stock as they owned of the former Pathfinder's common stock immediately prior to the Conversion. Shareholders of the former Pathfinder received 1.6472 shares of the Company's common stock for each share of the former Pathfinder's common stock that they owned immediately prior to completion of the transaction. As a result of the offering and the exchange of shares, the Company had 4,353,850 shares outstanding at December 31, 2014. The Company has 4,280,227 and 4,362,328 shares outstanding at December 31, 2017 and December 31, 2018, respectively.

The Conversion was accounted for as a change in corporate form with no resulting change in the historical basis of the Company's assets, liabilities, and equity. Costs related to the offering were primarily marketing fees paid to the Company's investment banking firm, legal and professional fees, registration fees, printing and mailing costs and totaled \$1.5 million. Accordingly, net proceeds were \$24.9 million. In addition, as part of the Conversion and dissolution of the MHC, the Company received \$197,000 of cash previously held by the MHC. As a result of the Conversion and Offering, Pathfinder Bancorp, Inc., a federal corporation, was succeeded by a new fully public Maryland corporation with the same name and the MHC ceased to exist.

The shares of common stock sold in the offering and issued began trading on the NASDAQ Capital Market on October 17, 2014 under the trading symbol "PBHC."

In accordance with Board of Governors of the Federal Reserve System regulations, at the time of the reorganization, the Company substantially restricted retained earnings by establishing a liquidation account. The liquidation account will be maintained for the benefit of eligible account holders who continue to maintain their accounts at the Bank after conversion. The Bank will establish a parallel liquidation account to support the Company's liquidation account in the event the Company does not have sufficient assets to fund its obligations under its liquidation account. The liquidation accounts will be reduced annually to the extent that eligible account holders have reduced their qualifying deposits. Subsequent increases will not restore an eligible account holder's interest in the liquidation accounts. In the event of a complete liquidation of the Bank or the Company, each account holder will be entitled to receive a distribution in an amount proportionate to the adjusted qualifying account balances then held.

The Bank may not pay dividends if those dividends would reduce equity capital below the required liquidation account amount.

NOTE 26: ACCUMULATED OTHER COMPREHENSIVE INCOME (LOSS)

Changes in the components of accumulated other comprehensive income (loss) ("AOCI"), net of tax, for the periods indicated are summarized in the table below.

	For the years ended December 31, 2018						
						Unrealized Loss	
				Unrealized Gains		on Securities	
				and Losses on		Transferred to	
		Retirement		Available-for-		Held-to-	
(In thousands)		Plans		Sale Securities		Maturity	Total
Beginning balance	\$	(2,220)	\$	(1,558)	\$	(430)	\$ (4,208)
Other comprehensive income before reclassifications		(1,058)		(1,471)		129	(2,400)
Amounts reclassified from AOCI		126		134		-	260
Cumulative effect of change in measurement of							
equity securities (1)		-		(53)		-	(53)
Cumulative effect of change in investment securities							
transfer (2)		-		116		243	359
Ending balance	\$	(3,152)	\$	(2,832)	\$	(58)	\$ (6,042)

- (1) Cumulative effect of unrealized gain on marketable equity securities based on the adoption of ASU 2016-01 Financial Instruments Overall (Subtopic 825-10): Recognition and Measurement of Financial Assets and Liabilities.
- (2) Cumulative effect of unrealized gains on the transfer of 52 investment securities from held-to-maturity classification to available-for-sale classification based on the adoption of ASU 2017-12: Derivatives and Hedging (Topic 815): Targeted Improvements to Accounting for Hedging Activities.

	For the years ended December 31, 2017						
	·					Unrealized Loss	
				Unrealized Gains		on Securities	
				and Losses on		Transferred to	
		Retirement		Available-for-		Held-to-	
(In thousands)		Plans		Sale Securities		Maturity	Total
Beginning balance	\$	(1,513)	\$	(1,845)	\$	(464)	\$ (3,822)
Other comprehensive income before reclassifications		(379)		872		115	608
Amounts reclassified from AOCI		89		(293)		=	(204)
Reclassification of effect of tax rate change (1)		(417)		(292)		(81)	(790)
Ending balance	\$	(2,220)	\$	(1,558)	\$	(430)	\$ (4,208)

⁽¹⁾ Reclassification from accumulated other comprehensive loss to retained earnings for stranded tax effects resulting from the newly enacted Federal corporate income tax rate reduction from 34% to 21%.

The following table presents the amounts reclassified out of each component of AOCI for the indicated annual period:

(In thousands)	For the years ended						
Details about AOCI¹ components	December :	31, 2018	December 31, 2017	Affected Line Item in the Statement of Income			
Retirement plan items							
Retirement plan net losses							
recognized in plan expenses2	\$	(171) \$	(150)	Salaries and employee benefits			
		45	61	Provision for income taxes			
	\$	(126) \$	(89)	Net Income			
Available-for-sale securities							
				Net gains on sales and redemptions of investment			
Realized (loss) gain on sale of securities	\$	(182) \$	489	securities			
		48	(196)	Provision for income taxes			
	\$	(134) \$	293	Net Income			

- (1) Amounts in parentheses indicates debits in net income.
- (2) These items are included in net periodic pension cost.

NOTE 27: NONINTEREST INCOME

The Company adopted the revenue recognition guidance effective January 1, 2018, and applied the new accounting guidance using a modified retrospective approach for reporting purposes. A significant amount of the Company's revenues are derived from net interest income on financial assets and liabilities, which are excluded from the scope of the amended guidance.

The Company recognizes revenue as it is earned. The adoption of ASU 2014-09 required that credit card interchange revenue be presented net of rewards expense in noninterest income. For the year ended December 31, 2018 and 2017, the Company recognized credit cards reward program expense as a reduction of noninterest income in the amounts of \$100,000 and \$94,000, respectively.

The Company has included the following table regarding the Company's noninterest income for the periods presented.

	Years Ended December 3	31,
(In thousands)	 2018	2017
Service fees		
Insufficient funds fees	\$ 852 \$	844
Deposit related fees	202	190
ATM fees	94	96
Total service fees	1,148	1,130
Fee Income		
Insurance commissions	831	790
Investment services revenue	288	244
ATM fees surcharge	232	217
Banking house rents collected	134	122
Total fee income	1,485	1,373
Card income		
Debit card interchange fees	576	484
Merchant card fees	72	54
Total card income	648	538
Mortgage fee income and realized gain on sale of loans		
and foreclosed real estate		
Loan servicing fees	170	149
Net gains on sales of loans and foreclosed real estate	50	37
Total mortgage fee income and realized gain on sale of		
loans and foreclosed real estate	220	186
Total	3,501	3,227
Earnings and gain on bank owned life insurance	427	284
Net (losses) gains on sales and redemptions of investment		
securities	(182)	489
Loss on marketable equity securities	(62)	-
Other miscellaneous income	151	85
Total noninterest income	\$ 3,835 \$	4,085

The following is a discussion of key revenues within the scope of the new revenue guidance:

- Service fees Revenue is earned through insufficient funds fees, customer initiated activities or passage of time for deposit related fees, and ATM service fees. Transaction-based fees are recognized at the time the transaction is executed, which is the same time the Company's performance obligation is satisfied. Account maintenance fees are earned over the course of the month as the monthly maintenance performance obligation to the customer is satisfied.
- *Fee income* Revenue is earned through commissions on insurance and securities sales, ATM surcharge fees, and banking house rents collected. The Company earns investment advisory fee income by providing investment management services to customers under investment management contracts. As the direction of investment management accounts is provided over time, the performance obligation to investment management customers is satisfied over time, and therefore, revenue is recognized over time.

- *Card income* Card income consists of interchange fees from consumer debit card networks and other related services. Interchange rates are set by the card networks. Interchange fees are based on purchase volumes and other factors and are recognized as transactions occur.
- Mortgage fee income and realized gain on sale of loans and foreclosed real estate Revenue from mortgage fee income and realized gain on sale
 of loans and foreclosed real estate is earned through the origination of residential and commercial mortgage loans, sales of one-to-four family
 residential mortgage loans, sales of government guarantees portions of SBA loans, and sales of foreclosed real estate, and is earned as the
 transaction occurs.

ITEM 9: CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 9A: CONTROLS AND PROCEDURES

REPORT OF MANAGEMENT'S RESPONSIBILITY

The Company's management, including the Company's principal executive officer and principal financial officer, have evaluated the effectiveness of the Company's "disclosure controls and procedures," as such term is defined in Rule 13a-15(e) promulgated under the Securities Exchange Act of 1934, as amended, (the "Exchange Act"). Based upon their evaluation, the principal executive officer and principal financial officer concluded that, as of the end of the period covered by this report, the Company's disclosure controls and procedures were effective for the purpose of ensuring that the information required to be disclosed in the reports that the Company files or submits under the Exchange Act with the Securities and Exchange Commission (the "SEC") (1) is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms, and (2) is accumulated and communicated to the Company's management, including its principal executive and principal financial officers, as appropriate to allow timely decisions regarding required disclosure.

MANAGEMENT'S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING

Management's report on internal control over financial reporting is contained in "Item 8 – Financial Statements and Supplementary Data" in this Annual Report on Form 10-K.

This Annual Report does not include an attestation report of the Company's independent registered public accounting firm regarding internal control over financial reporting pursuant to the rules of the SEC that exempts the Company from such attestation and requires only management's report.

CHANGES IN INTERNAL CONTROL OVER FINANCIAL REPORTING

There were no changes in the Company's internal control over financial reporting that occurred during the Company's last fiscal quarter that have materially affected, or are reasonably likely to materially affect, the Company's internal control over financial reporting.

ITEM 9B: OTHER INFORMATION

None.

PART III

ITEM 10: DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

- (a) Information concerning the directors of the Company is incorporated herein by reference to Proposal 1 of the Company's Proxy Statement for the Annual Meeting of Shareholders.
- (b) Information concerning the officers and directors compliance with Section 16(a) of the Securities Exchange Act is incorporated herein by reference to the Company's Proxy Statement for the Annual Meeting of Shareholders under the caption "Section 16(a) Beneficial Ownership Reporting Compliance".
- (c) Information concerning the Company's Code of Ethics is incorporated herein by reference to the Company's Proxy Statement for the Annual Meeting of Shareholders under the caption "Code of Ethics".
- (d) Information concerning the Company's Audit Committee and "financial expert" thereof is incorporated herein by reference to the Company's Proxy Statement for the Annual Meeting of Shareholders under the caption "Audit Committee".
- (e) Set forth below is information concerning the Executive Officers of the Company at December 31, 2018.

Name	Age	Positions Held With the Company
Thomas W. Schneider	57	President and Chief Executive Officer
James A. Dowd, CPA	51	Executive Vice President, Chief Operating Officer and Chief Financial Officer (1)
Ronald Tascarella	60	Executive Vice President, Chief Banking Officer
Daniel Phillips	54	Senior Vice President, Chief Information Officer

(1) Walter F. Rusnak, age 65, was appointed the Company's Senior Vice President, Chief Financial Officer on January 23, 2019.

ITEM 11: EXECUTIVE COMPENSATION

- (a) Information with respect to management compensation and transactions required under this item is incorporated by reference hereunder in the Company's Proxy Materials for the Annual Meeting of Shareholders under the caption "Compensation Committee".
- (b) Information concerning director compensation is incorporated herein by reference to the Company's Proxy Statement for the Annual Meeting of Shareholders under the caption "Directors Compensation".

ITEM 12: SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

The information required by this item is incorporated by reference hereunder in the Company's Proxy Materials for the Annual Meeting of Shareholders under the caption "Voting Securities and Principal Holders Thereof."

ITEM 13: CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

The information required by this item is incorporated by reference hereunder in the Company's Proxy Materials for the Annual Meeting of Shareholders under the captions "Independence and Diversity of Directors" and "Transactions with Certain Related Persons".

ITEM 14: PRINCIPAL ACCOUNTING FEES AND SERVICES

The information required by this item is incorporated by reference hereunder in the Company's Proxy Materials for the Annual Meeting of Shareholders under the caption "Audit and Related Fees".

PART IV

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ITEM 15:	EXHIBITS AND FINANCIAL STATEMENT SCHEDULES
(a)(1)	Financial Statements - The Company's consolidated financial statements, for the years ended December 31, 2018 and 2017, together with the Report of Independent Registered Public Accounting Firm are filed as part of this Form 10-K report. See "Item 8: Financial Statements and Supplementary Data."
(a)(2)	Financial Statement Schedules - All financial statement schedules have been omitted as the required information is inapplicable or has been included in "Item 7: Management Discussion and Analysis."
(b)	Exhibits
3.1	Articles of Incorporation of Pathfinder Bancorp, Inc. (Incorporated herein by reference to Exhibit 3.1 to Pathfinder Bancorp, Inc.'s Registration Statement on Form S-1, file no. 333-196676, originally filed on June 11, 2014)
3.2	Bylaws of Pathfinder Bancorp, Inc. (Incorporated herein by reference to Exhibit 3.2 to Pathfinder Bancorp, Inc.'s Registration Statement on Form S-1, file no. 333-196676, filed on June 11, 2014)
4.1	Form of Stock Certificate of Pathfinder Bancorp, Inc. (Incorporated herein by reference to Exhibit 4 to Pathfinder Bancorp, Inc.'s Registration Statement on Form S-1, file no. 333-196676, filed on June 11, 2014)
4.2	Indenture between Pathfinder Bancorp, Inc., a federal corporation, and Wilmington Trust Company, as trustee, dated March 22, 2007 (Incorporated herein by reference to Exhibit 4.1 to Pathfinder Bancorp, Inc.'s Current Report on Form 8-K, file no. 001-36695, filed on October 22, 2014)
4.3	Supplemental Indenture between Pathfinder Bancorp, Inc. and Wilmington Trust Company, as trustee, dated October 16, 2014 (Incorporated herein by reference to Exhibit 4.2 to Pathfinder Bancorp, Inc.'s Current Report on Form 8-K, file no. 001-36695, filed on October 22, 2014)
10.1	2003 Executive Deferred Compensation Plan (Incorporated herein by reference to Exhibit 10.3 to the Company's Annual Report on Form 10-K for the year ended December 31, 2008 file no. 000-23601, filed on March 27, 2009)
10.2	2003 Trustee Deferred Fee Plan (Incorporated herein by reference to Exhibit 10.4 to the Company's Annual Report on Form 10-K for the year ended December 31, 2008 file no. 000-23601, filed on March 27, 2009)
10.3	Employment Agreement between Pathfinder Bank and Thomas W. Schneider, President and Chief Executive Officer (Incorporated by reference to Exhibit 10.5 to Pathfinder Bancorp, Inc.'s Annual Report on Form 10-K for the year ended December 31, 2008, file no. 000-23601, filed on March 27, 2009)
10.4	Executive Supplemental Retirement Plan Agreement between Pathfinder Bank and Thomas W. Schneider effective February 24, 2014 (Incorporated by reference to Exhibit 10.13 to Pathfinder Bancorp, Inc.'s Current Report Form 8-K, file no. 000-23601, filed on February 25, 2014)
10.5	Executive Supplemental Retirement Plan Agreement between Pathfinder Bank and James A. Dowd effective February 24, 2014 (Incorporated by reference to Exhibit 10.15 to Pathfinder Bancorp, Inc.'s Current Report Form 8-K, file no. 000-23601, filed on February 25, 2014)
10.7	Amended and Restated Declaration of Trust among Pathfinder Bancorp, Inc., a federal corporation, as Sponsor, Wilmington Trust Company as Delaware and Institutional Trustee, and the administrative trustees of the Pathfinder Statutory Trust II (Incorporated herein by reference to Exhibit 10.1 to Pathfinder Bancorp, Inc.'s Current Report on Form 8-K, file no. 001-36695, filed on October 22, 2014)
10.8	Amendment two to the Trustee Deferral Fee Plan (Incorporated by reference to Exhibit 10.17 to Pathfinder Bancorp, Inc.'s Annual Report on Form 10-K, file no. 001-36695, filed on March 18, 2015)

Amendment one to the Executive Deferral Compensation Plan (Incorporated by reference to Exhibit 10.18 to Pathfinder Bancorp, Inc.'s Annual Report on Form 10-K, file no. 001-36695, filed on March 18, 2015)

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10.10 Amendment one to the Supplemental Executive Retirement Plan (Incorporated by reference to Exhibit 10.19 to Pathfinder Bancorp, Inc.'s Annual Report on Form 10-K, file no. 001-36695, filed on March 18, 2015) 10.11 Subordinated Loan Agreement (Incorporated herein by reference to Pathfinder Bancorp, Inc.'s Current Report on Form 8-K, file no. 001-36695, filed on October 19, 2015) 10.12 2016 Pathfinder Bancorp, Inc. Equity Incentive Plan (Incorporated by reference to Appendix A to Pathfinder Bancorp, Inc.'s Proxy Statement, file no. 001-36695, filed on March 29, 2016. 10.13 Executive Supplemental Retirement Plan Agreement between Pathfinder Bank and Ronald Tascarella effective February 24, 2014 (Incorporated by reference to Exhibit 10.14 to Pathfinder Bancorp, Inc.'s Annual Report on Form 10-K, file no. 001-36695, filed on March 30, 2018). Senior Executive Split Dollar Life Insurance Plan (Incorporated by reference to Exhibit 10.1 to Pathfinder Bancorp, Inc.'s Current Report on 10.14 Form 8-K, filed no. 001-36695, filed on January 7, 2019. 10.15 Change of Control Agreement between Pathfinder Bank and James A. Dowd (Incorporated by reference to Exhibit 10.2 to Pathfinder Bancorp, Inc.'s Current Report on Form 8-K, filed no. 001-36695, filed on January 7, 2019. 10.16 Change of Control Agreement between Pathfinder Bank and Ronald Tascarella (Incorporated by reference to Exhibit 10.3 to Pathfinder Bancorp, Inc.'s Current Report on Form 8-K, filed no. 001-36695, filed on January 7, 2019. Code of Ethics (Incorporated by reference to Exhibit 14 to Pathfinder Bancorp, Inc.'s Annual Report on Form 10-K for the year ended 14 December 31, 2003, file no. 000-23601, filed on March 31, 2004) Subsidiaries of Registrant 21 23 Consent of Bonadio & Co., LLP 31.1 Certification of Chief Executive Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 Certification of Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 31.2

Certification of Chief Executive Officer and Chief Financial Officer pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

Interactive data files pursuant to Rule 405 of Regulation S-T: (i) the Consolidated Statements of Condition as of December 31, 2018 and 2017, (ii) the Consolidated Statements of Income for the years ended December 31, 2018 and 2017, (iii) the Consolidated Statements of Comprehensive Income for the years ended December 31, 2018 and 2017, (iv) the Consolidated Statements of Changes in Shareholders' Equity for the years ended December 31, 2018 and 2017, (v) the Consolidated Statements of Cash Flows for the years ended December 31,

2018 and 2017, and (vi) the Notes to the Consolidated Financial Statements

ITEM 16: FORM 10-K SUMMARY

None.

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Signatures

Adam C. Gagas, Director

March 27, 2019

Date:

Pursuant to the requirements of Section 13 of the Securities Exchange Act of 1934, the Company has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

Pathfinder Bancorp, Inc.

Date: March 27, 2019 By: /s/ Thomas W. Schneider

Thomas W. Schneider

President and Chief Executive Officer

Pursuant to the requirements of the Securities Exchange 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.

By:	/s/ Thomas W. Schneider	By:	/s/ Walter F. Rusnak
	Thomas W. Schneider, President and	=	Walter F. Rusnak, Senior Vice President and
	Chief Executive Officer		Chief Financial Officer
	(Principal Executive Officer)		(Principal Financial Officer)
Date:	March 27, 2019	Date:	March 27, 2019
By:	/s/ Lloyd Stemple	By:	/s/ Lisa A. Kimball
	Lloyd Stemple, Director	_	Lisa A. Kimball, Vice President and
Date:	March 27, 2019		Controller (Principal Accounting Officer)
		Date:	March 27, 2019
By:	/s/John P. Funiciello	By:	/s/ William A. Barclay
	John Funiciello, Director	_	William A. Barclay, Director
Date:	March 27, 2019	Date:	March 27, 2019
By:	/s/ David A. Ayoub	By:	/s/ Chris R. Burritt
	David A. Ayoub, Director	_	Chris R. Burritt, Director
Date:	March 27, 2019	Date:	March 27, 2019
By:	/s/ George P. Joyce	By:	/s/ John F. Sharkey
	George P. Joyce, Director	_	John F. Sharkey, Director
Date:	March 27, 2019	Date:	March 27, 2019
By:	/s/ Adam C. Gagas	By:	/s/ Melanie Littlejohn

Date:

Melanie Littlejohn, Director

March 27, 2019

EXHIBIT 21: SUBSIDIARIES OF THE REGISTRANT

Name State of Incorporation

Pathfinder Bank New York (direct)

Pathfinder Statutory Trust II Delaware (direct)

Pathfinder REIT, Inc. (1) New York (indirect)

Whispering Oaks Development Corp. New York (indirect)

Pathfinder Risk Management Company Inc.

New York (indirect)

FitzGibbons Agency, LLC (2) New York (indirect)

(1) Inactive throughout 2018 and formally dissolved in January 2019

(2) Pathfinder Bancorp, Inc. indirectly owns 51% of FitzGibbons Agency, LLC

The Company has evaluated the activities relating to its strategic business units. The controlling interest in the FitzGibbons Agency is dissimilar in nature and management when compared to the Company's other strategic business units which are judged to be similar in nature and management. The Company has determined that the FitzGibbons Agency is below the reporting threshold in size in accordance with Accounting Standards Codification 280. Accordingly, the Company has determined it has no reportable segments.

EXHIBIT 23: CONSENT OF BONADIO & CO., LLP

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Pathfinder Bancorp, Inc. Oswego, New York

We hereby consent to the incorporation by reference in this Annual Report on Form 10-K of Pathfinder Bancorp, Inc. and subsidiaries for the year ended December 31, 2018 of our report dated March 27, 2019 included in its Registration Statements on Form S-8 (No. 333-202081) and (No. 333-224388) relating to the consolidated financial statements for the two years ended December 31, 2018.

/s/ Bonadio & Co., LLP Bonadio & Co., LLP Pittsford, New York March 27, 2019

EXHIBIT 31.1: Rule 13a-14(a) / 15d-14(a) Certification of the Chief Executive Officer

Certification of Chief Executive Officer

Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

I, Thomas W. Schneider, President and Chief Executive Officer, certify that:

- 1. I have reviewed this Annual report on Form 10-K of Pathfinder 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 consolidated financial statements, and other financial information included in this report, fairly present in all material respects the consolidated 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 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 consolidated 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 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:
 - (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.

March 27, 2019

/s/ Thomas W. Schneider Thomas W. Schneider President and Chief Executive Officer

EXHIBIT 31.2: Rule 13a-14(a) / 15d-14(a) Certification of the Chief Financial Officer

Certification of Chief Financial Officer

Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002

I, Walter F. Rusnak, Senior Vice President, Chief Financial Officer, certify that:

- 1. I have reviewed this Annual report on Form 10-K of Pathfinder 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 consolidated financial statements, and other financial information included in this report, fairly present in all material respects the consolidated 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 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 consolidated 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 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:
 - (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.

March 27, 2019

<u>/s/ Walter F. Rusnak</u>
Walter F. Rusnak
Senior Vice President, Chief Financial Officer

EXHIBIT 32 Section 1350 Certification of the Chief Executive and Chief Financial Officers

Certification pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002

Thomas W. Schneider, President and Chief Executive Officer, and Walter F. Rusnak, Senior Vice President, Chief Financial Officer of Pathfinder Bancorp, Inc. (the "Company"), each certify in his capacity as an officer of the Company that he has reviewed the Annual Report of the Company on Form 10-K for the year ended December 31, 2018 and that to the best of his knowledge:

- 1. the report fully complies with the requirements of Sections 13(a) of the Securities Exchange Act of 1934; and
- 2. the information contained in the report fairly presents, in all material respects, the consolidated financial condition and results of operations of the Company.

The purpose of this statement is solely to comply with Title 18, Chapter 63, Section 1350 of the United States Code, as amended by Section 906 of the Sarbanes-Oxley Act of 2002.

March 27, 2019 /s/ Thomas W. Schneider

Thomas W. Schneider

President and Chief Executive Officer

<u>March 27, 2019</u> /s/ <u>Walter F. Rusnak</u>

Walter F. Rusnak

Senior Vice President, Chief Financial Officer