LAKE SHORE BANCORP, INC.
Form 10-K
March 27, 2019

United States

Securities and Exchange Commission

Washington, D.C. 20549

FORM 10-K

(Mark One)

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

For the fiscal year ended December 31, 2018

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

Commission File No.: 000-51821

Lake Shore Bancorp, Inc.

(Exact Name of Registrant as Specified in Its Charter)

United States (State or Other Jurisdiction of Incorporation or Organization)	20-4729288 (I.R.S. Employer Identification No.)

31 East Fourth Street, Dunkirk, NY 14048

(Address of Principal Executive Offices, including zip code)

(716) 366-4070

(Registrant's telephone number, including area code)

Securities registered pursuant to Section 12(b) of the Act: Common Stock, $0.01 par value per share

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

Securities registered pursuant to Section 12(g) of the Act: None.

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act.

Yes [ ] No [X]

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act.

Yes [ ] No [X]

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

Indicate by check mark whether the registrant has submitted electronically every Interactive Data File required to be submitted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit such files). Yes [X]No [ ]

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this chapter) is not contained herein, and will not be contained, to the best of registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. []

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

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

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

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

The aggregate market value of the voting stock held by non-affiliates of the registrant as of June 30, 2018 was $33,585,514 based on the per share closing price as of June 30, 2018 on the Nasdaq Global Market for the registrant’s common stock, which was $17.15.

There were 6,002,550 shares of the registrant’s common stock, $.01 par value per share, outstanding at March 26, 2019.

DOCUMENTS INCORPORATED BY REFERENCE:

	Part of 10-K where incorporated
Portions of the registrant’s Proxy Statement for the 2019 Annual Meeting of Stockholders	III

LAKE SHORE BANCORP, INC.
ANNUAL REPORT ON FORM 10-K
FOR THE FISCAL YEAR ENDED
DECEMBER 31, 2018

TABLE OF CONTENTS

ITEM	PART I	PAGE
1	BUSINESS	1
1A	RISK FACTORS	33
1B	UNRESOLVED STAFF COMMENTS	41
2	PROPERTIES	42
3	LEGAL PROCEEDINGS	43
4	MINE SAFETY DISCLOSURES	43
	PART II	
5	MARKET FOR REGISTRANT’S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES	43
6	SELECTED FINANCIAL DATA	44
7	MANAGEMENT’S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS	46
7A	QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK	62
8	FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA	62
9	CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE	62
9A	CONTROLS AND PROCEDURES	62
9B	OTHER INFORMATION	63
	PART III	
10	DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE	63
11	EXECUTIVE COMPENSATION	63
12	SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS	63
13	CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE	64
14	PRINCIPAL ACCOUNTING FEES AND SERVICES	64
	PART IV	
15	EXHIBITS AND FINANCIAL STATEMENT SCHEDULES	64
16	FORM 10-K SUMMARY	66
	SIGNATURES	67

PART I

Item 1. Business.

General

Lake Shore Bancorp, Inc. ("Lake Shore Bancorp," the "Company," "us," or "we") operates as a mid-tier, federally chartered savings and loan holding company for Lake Shore Savings Bank ("Lake Shore Savings" or the "Bank"). A majority of Lake Shore Bancorp's issued and outstanding common stock (60.6% as of December 31, 2018) is held by Lake Shore, MHC (the "MHC"), a federally chartered mutual holding company, which serves as the parent company to Lake Shore Bancorp. The remaining shares of common stock are owned by public shareholders and Lake Shore Saving Bank's Employee Stock Ownership Plan ("ESOP"). Our common stock is traded on the Nasdaq Global Market under the symbol "LSBK". Unless the context otherwise requires, all references herein to Lake Shore Bancorp or Lake Shore Savings include Lake Shore Bancorp and Lake Shore Savings on a consolidated basis.

Lake Shore, MHC

Lake Shore, MHC was organized in 2006 as a federally chartered mutual holding company. The MHC does not engage in any substantial business activity other than its investment in a majority of the common stock of Lake Shore Bancorp. The Board of Governors of the Federal Reserve System (the "Federal Reserve Board") is the regulator for the MHC. Federal law and regulations require that as long as the MHC is in existence, it must own at least a majority of Lake Shore Bancorp's common stock.

Lake Shore Bancorp, Inc.

Lake Shore Bancorp, Inc. was organized in 2006 for the purpose of acting as the savings and loan holding company for Lake Shore Savings Bank in connection with the Company's initial public stock offering. The Company, a federal corporation, is regulated by the Federal Reserve Board.

Lake Shore Savings Bank

Lake Shore Savings Bank was chartered as a New York savings and loan association in 1891. In 2006, the Bank converted from a New York-chartered mutual savings and loan association to a federal savings bank charter. The Bank is subject to the supervision and regulation of the Office of the Comptroller of the Currency ("OCC").

Lake Shore Savings Bank's principal business consists of attracting retail deposits from the general public in the areas surrounding its branch offices and investing those deposits, together with funds generated from operations, primarily in one- to four-family residential mortgage loans, commercial real estate loans, home equity lines of credit and, to a lesser extent, commercial business loans, consumer loans, and investment securities. Our revenues are principally derived from interest earned on our loans and investment securities. Our primary sources of funds for lending and investments are deposits, borrowings, receipts of principal and interest payments on loans and securities, proceeds from sales of loans or securities, maturities and calls of investment securities and income resulting from operations in prior periods.

Recent Events

On November 26, 2018, Lake Shore Savings Bank filed an application with the OCC seeking approval to convert the bank's charter from a federal savings bank to a national bank under the name "Lake Shore Bank, National Association." Lake Shore Savings Bank's conversion to a national bank charter will enable it to engage in business activities authorized for national banks, including establishing deposit and account relationships with New York municipalities and other public entities. Currently, under New York law, municipalities and public entities within New York State may not deposit funds with either state- or federally-chartered savings banks. In connection with Lake Shore Savings Bank's charter conversion, the Company and the MHC, the majority

stockholder of the Company, have filed applications seeking approval from the Federal Reserve Board to become bank holding companies. In order to become bank holding companies, the Company and the MHC will be required to eliminate their federal charters, and will reincorporate as a Maryland corporation and a Delaware non-stock corporation, respectively. After Lake Shore Savings Bank's charter conversion and the Company's reincorporation in Maryland, the Company will remain in the public mutual holding company structure with the same stock ownership percentages that existed prior to the charter conversions. On February 25, 2019, the OCC approved the charter conversion of Lake Shore Savings Bank. The Federal Reserve Board continues to review the applications filed by the Company and the MHC.

Available Information

Lake Shore Bancorp's annual report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and any amendments to such reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, are made available free of charge on our website, www.lakeshoresavings.com, as soon as reasonably practicable after such reports are electronically filed with, or furnished to, the Securities and Exchange Commission. Such reports are also available on the Securities and Exchange Commission's website at www.sec.gov. Information on our website shall not be considered a part of this Form 10-K.

Market Area

Lake Shore Savings Bank is a community bank that offers a variety of banking products to serve the market areas surrounding our eleven branch offices located within the Western New York region of New York State.

Our geographic market area for loans and deposits is principally located within Erie and Chautauqua Counties, within Western New York. As of 2018, Erie and Chautauqua Counties had a combined population of approximately 1.1 million. Our market area is bounded by Lake Erie to the west and Canada to the north, and includes the city of Buffalo, the second largest city in the State of New York by population. The market area includes 13 hospitals, a medical school and a major cancer research and treatment facility, along with a centralized medical campus to cultivate clinical care, research, education and entrepreneurship. The area has ten colleges and universities, three community colleges and various vocational and technical schools. Western New York is home to professional sports franchises and an international airport. The area hosts a broad diversity of industry, commercial establishments and financial institutions as well as a skilled and productive workforce.

New York State currently has several incentive programs for businesses to invest in the Western New York region. One example is the "Start-Up NY" program, which offers tax incentives to start, expand or relocate a qualified business to a tax-free area within the state, primarily near a university or community college campus, in order to access top talent and research facilities. Qualified businesses for this program include advance materials & manufacturing, biotech & life sciences, tech & electronics, and optics & imaging. This program has generated significant interest in Western New York for new business development, due to its proximity to Canada, history of being a strong industrial and manufacturing center, and the number of quality colleges and universities in the area.

The Erie County region and the City of Buffalo have recently experienced economic expansion led by major growth in the health care and education sectors, and resurgence in the central business district, which has led to an influx of private investment in development of hotels and housing in the downtown sector. Major construction projects have been recently completed or are currently underway. The Buffalo Niagara Medical Campus has grown significantly

with the construction of a new children's hospital, expansion of an existing cancer/research hospital and construction of a new medical school by the State University of New York at Buffalo. Development on the waterfront has centered on redevelopment of property for mixed use, including public access and private development that includes office space, ice rinks, hotels and restaurants. The economic development within the region also impacts the small business and middle-market customers that we focus on and we believe we will be able to capitalize on opportunities created by economic growth in this section of our market area.

Our primary market area has historically been stable, with a diversified base of employers and employment sectors. The local economies that we serve are not dependent on one key employer. Transportation equipment is a large manufacturing industry in the Buffalo area, as well as production of automobile component parts. The principal employment sectors are service-related, wholesale and retail trade, and durable-goods manufacturing.

Our future growth will be influenced by the strength of our regional economy, other demographic trends and the competitive environment. We believe that we have developed lending products and marketing strategies to address the credit-related needs of the residents and small businesses in our local market area.

Competition

We face intense competition both in making loans and attracting deposits. Western New York has a significant number of financial institutions, many of which are branches of large money centers and regional and super regional banks which have resulted from the consolidation of the banking industry in New York and surrounding states. Some of these competitors have greater resources than we do and may offer services that we do not or cannot provide. For example, we do not offer trust or investment services. Customers who seek “one stop shopping” may be drawn to our competitors who offer such services. We also face significant competition from online service providers who offer financial services, including loan and deposit products.

Our competition for loans comes principally from commercial banks, savings banks, mortgage banking companies, credit unions, online retail mortgage lenders and other financial service companies. The most direct competition for deposits comes from commercial banks, savings banks, credit unions, and online banks. We face additional competition for deposits from non-depository competitors such as mutual funds, securities and brokerage firms and insurance companies. We are significantly smaller than many of the financial institution competitors in our market area. Some of our competitors are not subject to the same degree of regulation as that imposed on federal savings banks or federally insured institutions, and these other institutions may be able to price loans and deposits more aggressively. We remain very competitive in Chautauqua County, New York and, as of June 30, 2018 (the latest date such information is available), we had 14.7% of total deposits and ranked fifth out of the nine banks in this market area, according to the Federal Deposit Insurance Corporation (“FDIC”) annual deposit market share report. Our deposit market share in Erie County, New York has increased since we entered this market area in 2003 and we had the largest percentage increase in market share (13.6% increase) from June 30, 2017 to June 30, 2018 when compared to the other top ten banks in Erie County. We believe the primary factors in competing for deposits and loans is through personalized service, knowledge of the local market area and its economy factors, local decision making, technological convenience via mobile and online banking and active participation and support of the communities we serve.

Lending Activities

General. Historically, as a thrift institution, we primarily originated residential mortgage loans, including home equity loans. In recent years, we have become more focused on originating commercial real estate and commercial business loans, also known as C&I Lending, to add adjustable rate loans to our portfolio, meet the needs of small business

customers and manage interest rate risk. We retain the majority of loans that we originate. However, we have sold residential mortgage loans into the secondary market, with retention of servicing rights, from time to time in order to manage interest rate risk, and we may do so again in the future, when deemed appropriate. In prior years we have purchased a limited number of equipment loans from a third party broker, which are secured by first liens on the new equipment purchases by small businesses located throughout the Northeastern United States. We have not purchased these types of loans since the first quarter of 2015.

Loan Portfolio. The following table sets forth the composition of our loan portfolio, by type of loan, in dollar amounts and in percentages at the dates indicated. We did not have any loans held for sale as of these dates.

3

	At December 31,									
	2018		2017		2016		2015		2014	
	Amount $	Percent of Total %	Amount $	Percent of Total %	Amount $	Percent of Total %	Amount $	Percent of Total %	Amount $	P o %
	(Dollars in thousands)									
Real Estate loans:										
Residential one- to four-family(1)	$ 155,024	39.49%	$ 144,614	39.60%	$ 149,982	45.98%	$ 157,575	53.21%	$ 168,289	5
Home equity	41,830	10.66%	38,078	10.43%	35,534	10.89%	32,770	11.07%	32,337	1
Commercial	150,475	38.33%	122,747	33.61%	107,243	32.87%	83,967	28.35%	68,238	2
Construction - Commercial	22,252	5.67%	30,802	8.43%	11,712	3.59%	4,581	1.55%	-	-
	369,581	94.15%	336,241	92.07%	304,471	93.33%	278,893	94.18%	268,864	9
Other loans:										
Commercial	21,825	5.56%	27,612	7.56%	20,447	6.27%	15,741	5.31%	13,467	4
Consumer	1,156	0.29%	1,355	0.37%	1,313	0.40%	1,507	0.51%	1,495	0
	22,981	5.85%	28,967	7.93%	21,760	6.67%	17,248	5.82%	14,962	5
Total loans	392,562	100.00%	365,208	100.00%	326,231	100.00%	296,141	100.00%	283,826	1
Net deferred loan costs	3,357		3,138		3,016		2,945		2,948	
Allowance for loan losses	(3,448)		(3,283)		(2,882)		(1,985)		(1,921)	
Loans receivable, net	$ 392,471		$ 365,063		$ 326,365		$ 297,101		$ 284,853	

(1) Includes one- to four-family construction loans.

Loan Maturity. The following table presents the contractual maturity of our loans at December 31, 2018. The table does not include the effect of prepayments or scheduled principal amortization. Loans having no stated repayment schedule or maturity and overdraft loans are reported as being due in one year or less.

	Real Estate				Other Loans		
	Residential, One- to Four-Family(1)	Home Equity	Commercial	Construction - Commercial	Commercial	Consumer	Total
	(Dollars in thousands)						
Amounts due in:							
One year or less	$ 117	$ 929	$ 2,270	$ 713	$ 12,541	$ 643	$ 17,213
After one year through five years	3,159	3,815	32,177	4,549	5,889	401	49,990
Beyond five years	151,748	37,086	116,028	16,990	3,395	112	325,359
Total	$ 155,024	$ 41,830	$ 150,475	$ 22,252	$ 21,825	$ 1,156	$ 392,562
Interest rate terms on amounts due after one year:							
Fixed rate	$ 149,997	$ 3,868	$ 52,795	$ -	$ 6,391	$ 420	$ 213,471
Adjustable rate	4,910	37,033	95,410	21,539	2,893	93	161,878
Total	$ 154,907	$ 40,901	$ 148,205	$ 21,539	$ 9,284	$ 513	$ 375,349

(1) Includes one- to four-family construction loans.

4

The following table presents our loan originations, purchases, sales, and principal repayments for the years indicated.

	For the Year Ended December 31,				
	2018	2017	2016	2015	2014
	(Dollars in thousands)				
Total Loans:					
Balance outstanding at beginning of year	$ 365,208	$ 326,231	$ 296,141	$ 283,826	$ 276,312
Originations:					
Real estate loans:					
Residential, one- to four-family(1)	29,642	21,523	19,259	20,485	17,074
Home equity	20,778	15,755	13,663	9,768	9,565
Commercial	38,299	35,925	36,971	24,017	19,491
Construction – Commercial	11,839	24,604	7,927	5,722	283
Other loans:					
Commercial	29,039	20,058	13,135	8,245	3,317
Consumer	975	1,154	1,094	1,102	1,243
Total originations	130,572	119,019	92,049	69,339	50,973
Loan Purchases - Commercial Loans	-	-	-	242	2,857
Total Originations and Purchases	130,572	119,019	92,049	69,581	53,830
Deduct:					
Principal repayments:					
Real estate loans	64,557	62,142	44,006	39,970	36,118
Commercial and consumer loans	35,534	16,138	12,305	6,253	7,879
Total principal repayments	100,091	78,280	56,311	46,223	43,997
Transfers to foreclosed real estate	1,928	554	369	1,178	448
Loan sales - SONYMA(2) & FHLMC(3)	944	1,069	5,022	9,450	1,737
Loans charged off	255	139	257	415	134
Total deductions	103,218	80,042	61,959	57,266	46,316
Balance outstanding at end of year	$ 392,562	$ 365,208	$ 326,231	$ 296,141	$ 283,826

(1) Includes one- to four-family construction loans.

(2) State of New York Mortgage Agency.

(3) During 2016, 2015 and 2014, we sold $3.9 million, $8.3 million and $1.5 million, respectively, of long-term fixed rate residential mortgage loans with low yields to the Federal Home Loan Mortgage Corporation (“FHLMC”) in order to offset long-term interest rate risk. There were no loans sold to the FHLMC during 2018 and 2017.

One- to Four-Family Residential Mortgage Lending. At December 31, 2018, our one- to four-family residential loans (including construction loans) totaled $155.0 million and represented 39.5% of the total loan portfolio. Our residential mortgage loan originations are obtained from customers, residents of our local communities or referrals from local real estate agents, brokers, attorneys and builders. Lake Shore Savings has historically retained the majority of

residential mortgage loans that it originates. As a result, Lake Shore Savings is exposed to increases in market interest rates, because the yield earned on fixed-rate assets would remain fixed, while the rates paid by Lake Shore Savings for deposits and borrowings may increase, which could result in lower net interest income. In an effort to manage interest rate risk, the Bank may sell long-term fixed rate residential mortgages at origination in the secondary market, with servicing retained, if deemed appropriate.

One- to four-family residential mortgage loan originations are generally for terms up to 30 years; however, we do offer and have successfully originated loans with shorter terms of 10, 15, or 20 years. One- to four-family residential real estate loans may remain outstanding for significantly shorter periods than their contractual terms as borrowers may refinance or prepay loans at their option without penalty. Conventional one- to four-family residential mortgage loans originated by us customarily contain "due-on-sale" clauses that permit us to accelerate the indebtedness of the loan upon transfer of ownership of the mortgaged property. We do not offer "interest only" mortgage loans or "negative amortization" mortgage loans.

Our residential lending policies and procedures ensure that the majority of one- to four-family residential mortgage loans generally conform to secondary market guidelines, although we also originate non-conforming loans. We underwrite all conforming loans (i.e. loans with less than a $453,100 loan balance during 2018) using the criteria required by the Federal Home Loan Mortgage Corporation ("FHLMC"). We originate one- to four-family residential mortgage loans with a loan-to-value ratio up to 97%, and up to 103.5% with our United States Department of Agriculture ("USDA") Rural Development Guaranteed Loan Program ("GLP") mortgage loan product. Mortgages originated with a loan-to-value ratio exceeding 80% normally require private mortgage insurance. After a conforming loan is originated and funded, we may sell the loan to FHLMC. During 2018, we did not sell any loans to FHLMC, but we may do so in the future, if deemed appropriate in order to manage interest rate risk. We also offer loans through programs offered by the State of New York Mortgage Agency ("SONYMA") which are originated for sale. During 2018, we originated and sold $944,000 of one- to four-family residential mortgage loans to SONYMA. We retain all servicing rights for one- to four-family residential mortgage loans that we sell.

We also originate loans above the lending limit for conforming loans, which we refer to as "jumbo loans." We originate jumbo loans with fixed-rates and terms of up to 30 years. At December 31, 2018, jumbo loans totaled $8.6 million, or 5.5% of the one- to four-family residential mortgage portfolio.

We offer adjustable rate mortgage loans with a maximum term of 30 years. When an adjustable rate mortgage is originated, the initial interest rate is established based on market conditions and competitor rates. The rate adjusts annually after one, five, or seven years, depending on the loan product. After the initial fixed rate time period, the interest rate on these loans will re-price based upon a specific U.S. Treasury index plus an additional margin, taking into consideration the cap and floor rates established at the time of loan origination.

The retention of adjustable rate one- to four-family residential mortgage loans in our loan portfolio helps reduce our exposure to changes in interest rates. However, there are unquantifiable credit risks resulting from potential increased costs to the borrower as a result of the pricing of adjustable rate residential mortgage loans. During periods of rising interest rates, the risk of default on one- to four-family residential adjustable rate mortgage loans may increase due to the increase of interest cost to the borrower. Furthermore, changes in the interest rates on adjustable rate mortgages may be limited by an initial fixed-rate period or by contractual limits on periodic interest rate adjustments, and as such adjustable rate loans may not adjust as quickly as our interest-bearing liabilities during a period of rapid increases in interest rates.

One- to four-family real estate loans can be affected by economic conditions and the value of the underlying collateral. The majority of our one- to four-family residential loans are backed by property located in Western New York and are affected by economic conditions in this market area. Western New York's housing market has consistently demonstrated stability in home prices despite economic conditions, resulting in stable collateral value and lower risk of loss.

Home Equity Loans and Lines of Credit. We currently provide all-in-one home equity lines of credit and have provided home equity loans in the past to our customers. Home equity lines of credit are generally made for owner-occupied homes, and are secured by first or second mortgages on residences. At December 31, 2018, home equity loans and lines of credit totaled $41.8 million and represented 10.7% of the total loan portfolio. The all-in-one home equity line of credit must have a minimum line amount of $5,000 up to a maximum of 90% of the total loan-to-value ratio for qualified borrowers. The all-in-one home equity line of credit products have interest rates tied to the prime rate and generally have a 15 year draw period and a 15 year

---

payback period. Since 2010, our adjustable rate home equity loans include limits on decreases in the interest rate of the loan. The decrease in the interest rate may not be below the "floor" rate established at time of origination. A customer has the option to convert either a portion, or the entire line of credit balance, to a term loan at a fixed rate of interest. As the customer pays down the balance on the term loan, the funds available on the line of credit increase by a like amount. All-in-one home equity lines of credit have 30 year maximum terms.

Home equity loans can be affected by economic conditions and the value of the underlying property. Home equity loans may have increased risk of loss if the Company does not hold the first mortgage resulting in the Company being in a secondary position in the event of collateral liquidation. At December 31, 2018, home equity loans and lines of credit where the Company does not hold the first mortgage represented 16.7% of our home equity loan portfolio. During periods of rising interest rates, the risk of default on home equity loans may increase due to the increase of interest cost to the borrower.

Commercial Real Estate Loans. We originate commercial real estate loans to finance the purchase of real property or to refinance real property, which generally consists of developed real estate, such as office buildings, warehouses, retail properties, mixed use properties, self-storage units and multi-family apartment complexes, which are typically held as collateral for the loan. At December 31, 2018, commercial real estate loans totaled $150.5 million and represented 38.3% of the total loan portfolio. In underwriting commercial real estate loans, consideration is given to the property's historic cash flow, paying capacity of the borrower, current and projected occupancy levels, location, and physical condition.

We originate a variety of fixed and adjustable rate commercial real estate loans generally for terms of five to 10 years and payments based on an amortization schedule of up to 20 to 25 years. Adjustable rate loans are typically based on an index with an added spread based on the type, size and risk of the loan and the rate is typically fixed for the first five years. We typically lend up to a maximum loan-to-value ratio of 50% to 80% depending on the type of property being financed. Commercial real estate loans require a minimum debt service coverage ratio ranging from 1.15 to 1.50 depending on the type of property being financed, a first lien on collateral and the personal guarantees of the owners. Loans are typically subject to prepayment penalties if the loan is paid off before the scheduled maturity within five years of origination.

Commercial real estate lending involves additional risks compared with one- to four-family residential lending, because payments on loans secured by commercial real estate properties are often dependent on the successful operation or management of the properties, the borrower's ability to make repayments from the cash flow of the borrower's business or rental income and/or the collateral value of the commercial real estate securing the loan. Repayment of such loans may be subject to adverse conditions in the real estate market or economic conditions to a greater extent than one- to four-family residential mortgage loans. In addition tenancy of the properties needs to be monitored as to occupancy, lease rates, term of lease and tenant worthiness. Also, commercial real estate loans typically involve larger loan balances to single borrowers or groups of related borrowers, which generally require substantially greater evaluation and oversight efforts. Our loan policies limit the amount of loans to a single borrower or group of borrowers to reduce this risk and are designed to set such limits within those prescribed by applicable federal and state statutes and regulations. We engage a third party, once a year, to conduct a credit review of the commercial real estate portfolio, including compliance with the Bank's underwriting standards and policy requirements. In addition we engage a third party annually to perform property site inspections as required by Commercial Loan Policy.

Construction Loans. We originate loans to finance the construction of both one- to four-family homes and commercial real estate. These loans typically have a construction period of up to 12 months for residential

construction and up to 24 months for commercial construction, whereby draws are taken and interest only payments are made. As part of the draw process, inspection and lien checks are required prior to the disbursement of the proceeds. Funds disbursed may not exceed up to 80% of the loan-to-value of land and up to 80% of loan-to-value of improvements at any time during the construction period. Interest rates on disbursed funds are based on the rates and terms set at closing. The majority of our commercial real estate construction loans are variable rate loans with rates tied to prime rate, plus a premium, while the majority of our one- to four-family real estate construction loans are fixed rate loans. A floor rate may also be established in conjunction

---

with a variable rate loan. A minimum of interest only payments on disbursed funds must be made on a monthly basis. At the end of the construction period, the loan automatically converts to either a conventional residential or commercial real estate mortgage, as applicable. At December 31, 2018, construction loans totaled $22.3 million, or 5.7% of the total loan portfolio.

Construction loans can be affected by economic conditions and the value of underlying property. Construction loans may have additional risks related to advancing loan funds during construction due to the uncertain value of the property prior to the completion of construction.

Commercial Loans. In addition to commercial real estate loans, we also engage in commercial business lending, (also known as C&I lending) primarily to small businesses. A commercial business loan may be a business installment loan, line of credit, or other commercial loan. At December 31, 2018, commercial business loans totaled $21.8 million, or 5.6% of the total loan portfolio. Most of our commercial business loans have fixed interest rates, and are for terms generally not in excess of five years. In underwriting commercial business loans, consideration is typically given to the financial condition and the debt service coverage capabilities of the borrower/project, projected cash flows and collateral value. Whenever possible, we collateralize these loans with a first lien on general business assets and a specific lien on the equipment being purchased and require personal guarantees from principals of the borrower. Interest rates on commercial business loans generally have higher yields than rates on one- to four-family residential mortgages. We offer commercial loan services designed to give business owners borrowing opportunities for modernization, inventory, equipment, construction, real estate, purchases or improvements, working capital, vehicle purchases, and the refinancing of existing corporate debt.

Commercial business loans are generally considered to involve a higher degree of risk than residential mortgage loans because the collateral underlying the loans may be in the form of furniture, fixtures, and equipment and/or inventory subject to market obsolescence and accounts receivable which must be monitored. Commercial business loans may also involve relatively large loan balances to single borrowers or groups of related borrowers, with the repayment of such loans typically dependent on the successful operation and income stream of the borrower’s operation. Such risks can be significantly affected by economic conditions. In addition, commercial business lending generally requires substantially greater oversight efforts compared to residential real estate lending. We engage a third party, twice a year, to conduct credit reviews of the commercial business loan portfolio, including compliance with the Bank’s underwriting standards and policy requirements.

Consumer Loans. To a lesser extent, we offer a variety of consumer loans. At December 31, 2018, consumer loans totaled $1.2 million, or less than 1% of the total loan portfolio. Generally, the volume of consumer lending has declined as borrowers have opted for home equity lines of credit, which have lower interest rates, as compared to unsecured loans or loans secured by property other than residential real estate.

The largest component of our consumer loan portfolio are personal consumer loans and overdraft lines of credit, which are available for amounts up to $5,000 for unsecured loans and greater amounts for secured loans depending on the type of loan and value of the collateral. Consumer loans may have terms up to 10 years, depending on the collateral and loan type. Our consumer loan portfolio also consists of vehicle loans, other unsecured consumer loans up to $5,000, loans secured by certificates of deposits, secured and unsecured property improvement loans, and other secured loans.

Consumer loans are generally originated at higher interest rates than residential mortgage loans or home equity loans but also tend to have a higher credit risk due to the loans being either unsecured or secured by rapidly depreciable assets. Furthermore, consumer loan payments are dependent on the borrower’s continuing financial stability, and

therefore are more likely to be adversely affected by job loss, divorce, illness or personal bankruptcy. The application of various federal and state laws, including federal and state bankruptcy and insolvency laws, may limit the amount which can be recovered on consumer loans in the event of a default. Despite these risks, our level of consumer loan delinquencies generally has been low. No assurance can be given, however, that our delinquency rate or losses will continue to remain low in the future.

Loan Participations. From time to time, we may originate a commercial real estate loan or commercial business loan which may exceed our internal lending or concentration limits and sell a portion of the loan to another community bank. The participating bank is typically located in New York State and its lending team is known by our commercial lenders. This allows our Bank to meet the needs of its customers and comply with its internal lending limits. In these circumstances, we follow our customary loan underwriting and approval policies. We have strong relationships with other community banks in our primary market area that may desire to purchase participations, and we may increase our sales of participations in the future, if deemed appropriate. At December 31, 2018, our sold participations in commercial real estate and commercial business loans totaled $9.5 million and $901,000, respectively, all of which were collateralized by properties or business assets within our primary market area in Western New York.

Loan Approval Procedures and Authority. Our lending policies are approved by our Board of Directors. Branch managers may have the authority to originate home equity or consumer loans up to amounts approved by the Board of Directors for each lending officer. Home equity loans and consumer loans secured by real estate in excess of $25,000 and all one- to four-family residential mortgage loans up to $453,100 require approval by the Internal Residential Loan Committee. If these types of loans are between $453,100 and $1.0 million, then the approval of a designated member of management and a member of the Internal Residential Loan Committee is required. If these types of loans are in excess of $1.0 million, then full Board approval is required. Commercial Loan Officers may have the authority to originate commercial real estate and commercial business loans up to amounts approved by the Board of Directors for each lending officer. Commercial loans with total one obligor credit in excess of $100,000 and up to $1.0 million require the approval of two members of the Internal Commercial Loan Committee, one of which must be a designated member of executive management. Commercial loans with total one obligor credit in excess of $1.0 million and up to $3.0 million require majority approval by the Board Loan Committee. Commercial loans with total obligor credit in excess of $3.0 million require full Board approval.

Current Lending Procedures. Upon receipt of a completed loan application from a prospective borrower, we order a credit report and verify certain other information. If necessary, we obtain additional financial or credit related information. We require an appraisal for all residential and commercial real estate loans and home equity loans, including loans made to refinance existing mortgage loans. Appraisals are performed by licensed third-party appraisal firms that have been approved by our Board of Directors. An appraisal management firm has been hired to handle all requests for appraisals on residential real estate loans. We require title insurance on all one- to four-family residential and commercial real estate loans and certain other loans. We also require hazard insurance on all real estate loans, and if applicable, we require borrowers to obtain flood insurance prior to closing. Based on loan-to-value ratios and lending guidelines, escrow accounts may be required for such items as real estate taxes, hazard insurance, flood insurance, and private mortgage insurance premiums.

Asset Quality

One of our key operating objectives has been, and continues to be, maintaining a high level of asset quality. Our high proportion of one- to four-family residential mortgage loans primarily collateralized by property in Western New York state with stable property values, the maintenance of sound credit standards for new loan originations, our loan review procedures, including third party loan reviews, and strong executive management focus on credit quality have been factors in monitoring and managing our levels of credit risk. These factors have contributed to our strong financial condition.

Collection Procedures. We have adopted a loan collection policy to maintain adequate control on the status of delinquent loans and to ensure compliance with the Fair Debt Collection Practices Act, the Dodd-Frank Act and the Consumer Protection Act, along with the New York State Real Property Actions and Proceedings Law. When a borrower fails to make required payments on a residential, home equity, commercial, or consumer loan, we take a number of steps to induce the borrower to cure the delinquency and restore the loan to a current status.

Prior to proceeding with any foreclosure action in the case of a secured loan, we will review the collateral to determine whether its possession would be cost-effective for us. In cases where the collateral fails to fully secure the loan, in addition to repossessing the collateral, we may also sue on the note underlying the loan.

Non-performing Loans and Non-performing Assets. We define non-performing loans as loans that are either non-accruing or accruing whose payments are 90 days or more past due, and non-accruing troubled debt restructurings. Loans are placed on non-accrual status either when reasonable doubt exists as to the full timely collection of interest and principal, or when a loan becomes 90 days past due, unless an evaluation by the internal Asset Classification Committee indicates that the loan is in the process of collection and is either guaranteed or well secured. When our Asset Classification Committee designates loans on which we stop accruing interest income as non-accrual loans, we reverse outstanding interest income that was previously credited. We return a non-accrual loan to accrual status when factors indicating doubtful collection no longer exist.

Real estate acquired as a result of foreclosure is classified as foreclosed real estate until such time as it is sold. We carry foreclosed real estate at its fair value less estimated selling costs at the date of acquisition. If a foreclosure action is commenced and the loan is not brought current, paid in full, or refinanced before the foreclosure sale, the property could be sold at the foreclosure sale (to an outside bidder). If not, and we retain the property, then we will sell the real property securing the loan as soon thereafter as practical.

Troubled debt restructurings ("TDRs") occur when we grant borrowers concessions that we would not otherwise grant but for economic or legal reasons pertaining to the borrower's financial difficulties. A concession is made when the terms of the loan modification are more favorable than the terms the borrower would have received in the current market under similar financial difficulties. These concessions may include, but are not limited to, modifications of the terms of the debt, the transfer of assets or the issuance of an equity interest by the borrower to satisfy all or part of the debt, or the substitution or addition of borrower(s). The Company identifies loans for potential TDRs primarily through direct communication with the borrower and evaluation of the borrower's financial statements, revenue projections, tax returns and credit reports. Even if the borrower is not presently in default, management will consider the likelihood that cash flow shortages, adverse economic conditions, and negative trends may result in a payment default in the near future. Generally, we will not return a TDR to accrual status until the borrower has demonstrated the ability to make principal and interest payments under the restructured terms for at least six consecutive months. Our TDRs are impaired loans, which may result in specific allocations of the allowance for loan losses and subsequent charge-offs if appropriate.

The following table presents information regarding our non-accrual loans, accruing loans delinquent 90 days or more, non-performing loans, foreclosed real estate, and non-performing and performing loans classified as troubled debt restructurings, as of the dates indicated.

	At December 31,				
	2018	2017	2016	2015	2014
	(Dollars in thousands)				
Loans past due 90 days or more but still accruing:					
Real estate loans:					
Residential, one- to four-family	$ 174	$ -	$ 136	$ 47	$ -
Home equity		-	24	88	1
Commercial	-	-	-	-	-
Construction – Commercial and Residential, one- to four-family	-	-	-	-	-
Other loans:					
Commercial	-	-	2	-	-
Consumer	-	-	-	27	9
Total	$ 174	$ -	$ 162	$ 162	$ 10
Loans accounted for on a non-accrual basis:					
Real estate loans:					
Residential, one- to four-family	$ 2,310	$ 2,196	$ 2,165	$ 2,462	$ 2,413
Home equity	337	235	329	361	335
Commercial	382	1,323	2,977	1,545	1,891
Construction – Commercial and Residential, one- to four-family	-	-	-	-	-
Other loans:					
Commercial	15	54	205	132	76
Consumer	-	25	28	6	4
Total non-accrual loans	3,044	3,833	5,704	4,506	4,719
Total non-performing loans	3,218	3,833	5,866	4,668	4,729
Foreclosed real estate	678	435	412	712	401
Total non-performing assets	$ 3,896	$ 4,268	$ 6,278	$ 5,380	$ 5,130
Ratios:					
Non-performing loans as a percent of total loans:	0.82 %	1.05 %	1.80 %	1.57 %	1.66 %
Non-performing assets as a percent of total assets:	0.71 %	0.82 %	1.28 %	1.14 %	1.05 %
Troubled debt restructuring:					
Loans accounted for on a non-accrual basis					
Real estate loans:					
Residential, one- to four-family	$ 34	$ -	$ -	$ -	$ -
Home equity	-	19	19	-	-
Other loans:					
Commercial	-	-	109	-	-
Performing loans					
Real estate loans:					
Residential, one- to four-family	$ 144	$ 184	$ 190	$ 216	$ 224
Home equity	-	2	22	8	10

11

Our recorded investment in non-accrual loans decreased by $800,000 from December 31, 2017 to December 31, 2018, primarily due to a $941,000 decrease in non-performing commercial real estate loans. The decrease was primarily the result of the foreclosure and subsequent sale of one non-performing commercial real estate loan with a balance of $1.0 million during 2018. If all non-accrual loans had been current in accordance with their terms during the years ended December 31, 2018, 2017 and 2016, interest income on such loans would have amounted to $237,000, $265,000 and $366,000, respectively.

Classification of Loans. Federal regulations require us to regularly review and classify our loans. In addition, our regulators have the authority to identify problem loans and, if appropriate, require them to be classified. Management closely monitors the quality of the loan portfolio and has established a loan review process designed to help grade the quality of the Company's loan portfolio. The credit quality grade helps management make a consistent assessment of each loan relationship's credit risk. Consistent with regulatory guidelines, the Company classifies loans and other assets considered of lesser quality. Such ratings coincide with the "Substandard", Doubtful", and "Loss" classifications used by federal regulators in their examination of financial institutions. Regulations also provide for a "special mention" category (i.e. criticized loans), described as loans which do not currently expose us to a sufficient degree of risk to warrant classification but do possess credit deficiencies or potential weaknesses deserving our close attention. For further discussion on how management determines when a loan should be classified, refer to Note 5, Allowance for Loan Losses in the Audited Consolidated Financial Statements located elsewhere in this report.

The allowance for loan losses is established through a provision for loan losses based on management's evaluation of the losses inherent in the loan portfolio. When we classify loans as either substandard or doubtful, we set aside a loss reserve for such loans as we deem prudent. When we classify problem loans as loss, we typically charge-off the loan balance outstanding against the allowance for loan losses reserve. Our determination as to the classification of our loans and the amount of our loss allowances are subject to review by our regulators, which can require that we establish additional loss allowances.

The following table shows the aggregate amounts of our classified and criticized loans at the dates indicated.

	At December 31,	
	2018	2017
	(Dollars in thousands)	
Special mention loans	$ 437	$ 1,959
Substandard loans	6,464	6,550
Loss loans	-	2
Total classified and criticized loans	$ 6,901	$ 8,511

The total classified and criticized loans as of December 31, 2018 and 2017 includes $3.0 million and $3.8 million of nonperforming loans, respectively.

12

Delinquencies. The following table provides information about delinquencies in our loan portfolio at the dates indicated.

	At December 31,					
	2018		2017		2016	
	60-89 Days Past Due	90 + Days Past Due	60-89 Days Past Due	90 + Days Past Due	60-89 Days Past Due	90 + Days Past Due
	(Dollars in thousands)					
Real estate loans:						
Residential, one- to four-family	$ 342	$ 1,361	$ 942	$ 1,233	$ 782	$ 1,038
Home equity	187	333	59	212	206	158
Commercial	-	306	-	1,265	-	2,977
Construction - Commercial and Residential, one-to four-family	-	-	-	-	-	-
Other loans:						
Commercial	-	15	8	54	19	56
Consumer	-	-	2	22	-	28
Total	$ 529	$ 2,015	$ 1,011	$ 2,786	$ 1,007	$ 4,257

Allowance for Loan Losses. The allowance for loan losses is a valuation account that reflects our evaluation of the losses inherent in our loan portfolio, the composition of the loan portfolio, specific impaired loans and current economic conditions. We maintain the allowance through provisions for loan losses that we charge to income. We charge losses on loans against the allowance for loan losses when we believe the collection of the loan is unlikely, and all possible avenues of repayment have been analyzed, including the potential of future cash flow, the value of the underlying collateral, and strength of any guarantors or co-borrowers.

Our evaluation of risk in maintaining the allowance for loan losses includes the review of all loans on which the collectability of principal may not be reasonably assured. We consider the following qualitative and environmental factors as part of this evaluation: historical loan loss experience; payment status; the estimated value of the underlying collateral; changes in lending policies, procedures and loan review system; changes in the experience, ability, and depth of lending management and other relevant staff; trends in loan volume and the nature of the loan portfolio; and national and local economic conditions. There may be other factors that may warrant consideration in maintaining an allowance at a level sufficient to provide for probable loan losses. Although our management believes that it has established and maintained the allowance for loan losses to reflect losses inherent in our loan portfolio, based on its evaluation of the factors noted above, future additions may be necessary if economic and other conditions differ substantially from the current operating environment.

In addition, various regulatory agencies periodically review our allowance for loan losses as an integral part of their examination process. These agencies, including the Office of the Comptroller of the Currency, may require us to increase the allowance for loan losses or the valuation allowance for foreclosed real estate based on their evaluation of the information available to them at the time of their examination.

The allowance consists of allocated, general and unallocated components. The allocated component relates to loans that are classified as doubtful, substandard, loss or special mention. See "Asset Quality – Classification of Loans." For such loans that are also classified as impaired, an allowance is established when the discounted cash flows, collateral value or observable market price of the impaired loan is lower than the carrying value of the loan. The general component covers non-classified loans and is based on historical loss experience adjusted for qualitative and environmental factors, as mentioned above. An unallocated component may be maintained to cover uncertainties that could affect management's estimate of probable losses, such as downturns in the local economy. The unallocated component of the allowance reflects the margin of imprecision

13

---

inherent in the underlying assumptions used in the methodologies for estimating allocated and general losses in the portfolio.

A loan is considered impaired when, based on current information and events, it is probable that we will not be able to collect the scheduled payments of principal and 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. Impairment is measured on a loan-by-loan basis for commercial real estate loans and commercial loans by either the present value of expected future cash flows discounted at the loan's effective interest rate or the fair value of the collateral if the loan is collateral dependent. Large groups of smaller balance homogeneous loans are collectively evaluated for impairment. Accordingly, we do not separately identify individual consumer, home equity or one- to four-family real estate loans for impairment disclosures, unless they are subject to a troubled debt restructuring or part of the assessment of a larger loan relationship. Refer to Note 5 in the Notes to the Audited Consolidated Financial Statements for more information on our impaired loans.

The following table sets forth activity in our allowance for loan losses and other ratios at or for the years indicated:

	At or for the Year Ended December 31,				
	2018	2017	2016	2015	2014
	(Dollars in thousands)				
Balance at beginning of year	$ 3,283	$ 2,882	$ 1,985	$ 1,921	$ 1,813
Provision for loan losses	390	510	1,125	400	222
Charge-offs:					
Real estate loans:					
Residential, one- to four-family	(23)	-	(107)	(64)	(26)
Home equity	-	(3)	(19)	(29)	(39)
Commercial	(181)	(75)	(1)	(267)	-
Construction – Commercial and Residential, one- to four-family	-	-	-	-	-
Other loans:					
Commercial	-	(20)	(76)	(9)	(25)
Consumer	(51)	(41)	(54)	(46)	(44)
Total charge-offs	(255)	(139)	(257)	(415)	(134)
Recoveries:					
Real estate loans:					
Residential, one- to four-family	19	3	12	13	6
Home equity	2	4	1	8	1
Commercial	1	-	-	32	-
Construction – Commercial and Residential, one- to four-family	-	-	-	-	-
Other loans:					
Commercial	1	9	2	18	-
Consumer	7	14	14	8	13
Total recoveries	30	30	29	79	20
Net charge-offs	(225)	(109)	(228)	(336)	(114)
Balance at end of year	$ 3,448	$ 3,283	$ 2,882	$ 1,985	$ 1,921
Average loans outstanding	$ 379,617	$ 352,309	$ 312,359	$ 292,240	$ 276,360
Allowance for loan losses as a percent of total net loans	0.88%	0.90%	0.88%	0.67%	0.67%
Allowance for loan losses as a percent of non-performing loans	107.15%	85.65%	49.13%	42.52%	40.62%
Ratio of net charge-offs to average loans outstanding	0.06%	0.03%	0.07%	0.11%	0.04%

Provision for loan losses decreased by $120,000, or 23.5%, to $390,000 for the year ended December 31, 2018 from $510,000 for the year ended December 31, 2017. The decrease in provision expense was primarily due to a higher provision being recorded during 2017 for the downgrade in loan classification for two commercial loan relationships. As of December 31, 2018, these downgraded loans were performing, and well collateralized by commercial real estate, as well as fixtures and equipment. The ratio of nonperforming loans to total net loans was 0.82% as of December 31, 2018 which was a 23 basis points decrease from 1.05% at December 31, 2017, primarily due to a $941,000 decrease in non-performing commercial real estate loans. The decrease in non-performing commercial real estate loans was primarily due to the foreclosure and subsequent sale in 2018 of one commercial real estate loan which had a loan balance of $1.0 million. The majority of our non-performing loans are one- to four-family residential mortgage loans or commercial real estate loans backed by first lien collateral on real estate held in the Western New York region. Western New York's real estate market has consistently demonstrated price stability.

The following table presents our allocation of the allowance for loan losses by loan category and the percentage of loans in each category to total loans at the years indicated. The allowance for loan losses allocated to each category is not necessarily indicative of inherent losses in any particular category and does not restrict the use of the allowance to absorb losses in other categories.

	At December 31, 2018			2017			2016			2015			2014		
	Amount	% of Allowance to Total Allowance	% of Loans in Category to Total Loans	Amount	% of Allowance to Total Allowance	% of Loans in Category to Total Loans	Amount	% of Allowance to Total Allowance	% of Loans in Category to Total Loans	Amount	% of Allowance to Total Allowance	% of Loans in Category to Total Loans	Amount	% of Allowance to Total Allowance	% of Loans in Category to Total Loans
	(Dollars in thousands)														
Real Estate Loans:															
Residential, one- to four-family(1)	$ 471	13.7%	39.5%	$ [illegible]	[illegible]	[illegible]	$ 431	14.9%	45.8%	$ 351	17.7%	53.1%	$ [illegible]	[illegible]	[illegible]
Home equity	91	2.6%	10.7%	[illegible]	[illegible]	[illegible]	114	4.0%	10.9%	120	6.0%	11.1%	[illegible]	[illegible]	[illegible]
Commercial(2)(3)	2,020	58.6%	38.3%	[illegible]	[illegible]	[illegible]	1,803	62.6%	32.8%	1,204	60.7%	28.4%	[illegible]	[illegible]	[illegible]
Construction - Commercial(4)	250	7.3%	5.6%	[illegible]	[illegible]	[illegible]	150	5.2%	3.8%	59	3.0%	1.6%	[illegible]	[illegible]	[illegible]
	2,832	82.2%	94.1%	[illegible]	[illegible]	[illegible]	2,498	86.7%	93.3%	1,734	87.4%	94.2%	[illegible]	[illegible]	[illegible]
Other loans:															
Commercial(5)	507	14.7%	5.6%	[illegible]	[illegible]	[illegible]	338	11.7%	6.3%	197	9.9%	5.3%	[illegible]	[illegible]	[illegible]
Consumer	25	0.7%	0.3%	[illegible]	[illegible]	[illegible]	28	1.0%	0.4%	22	1.1%	0.5%	[illegible]	[illegible]	[illegible]
	532	15.4%	5.9%	[illegible]	[illegible]	[illegible]	366	12.7%	6.7%	219	11.0%	5.8%	[illegible]	[illegible]	[illegible]
Total allocated	$ 3,364	97.6%	100.0%	$ [illegible]	[illegible]	[illegible]	$ 2,864	99.4%	100.0%	$ 1,953	98.4%	100.0%	$ [illegible]	[illegible]	[illegible]
Total unallocated	84	2.4%		[illegible]	[illegible]		18	0.6%		32	1.6%		[illegible]	[illegible]	
Balance at end of year	$ 3,448	100.0%		$ [illegible]	[illegible]		$ 2,882	100.0%		$ 1,985	100.0%		$ [illegible]	[illegible]	

(1) Includes one- to four-family construction loans.

(2) The increase as of December 31, 2018 was primarily due to growth in our commercial real estate portfolio.

(3) The increase as of December 31, 2016 was primarily due to growth in our commercial real estate portfolio and an increase in reserves set aside for one commercial real estate loan.

(4) The increase as of December 31, 2017 was primarily due to the significant growth in construction loans to finance commercial real estate renovations and construction.

(5) The increase as of December 31, 2017 was primarily due to growth in commercial business loan originations.

Investment Activities

General. The general objectives of the investment portfolio are to provide for the overall asset/liability management of the bank. All of our securities carry market risk, as increases in market rates of interest may cause a decrease in the fair value of the securities. Our investment policy is designed primarily to manage the interest rate sensitivity of our assets and liabilities, to provide collateral for pledging requirements, to generate a

favorable return without incurring undue interest rate or credit risk, to complement our lending activities and to provide and maintain liquidity within established guidelines. Our investment policy outlines the pre-purchase analysis, credit, and interest rate risk assessment guidelines and due diligence documentation required for all permissible investments. In addition, our policy requires management to routinely monitor the investment portfolio as well as the markets for changes which may have a material, negative impact on the credit quality of our holdings. Our Board of Directors reviews and approves our investment policy on an annual basis. The Board of Directors has delegated primary responsibility for ensuring that the guidelines in the investment policy are followed to the Asset-Liability Committee of the Board. The board designates members of executive management with the authority to purchase securities within established plans and guidelines. All transactions are reviewed by the Asset/Liability Committee of the Board of Directors which meets at least quarterly.

In establishing our investment strategies, we consider our interest rate sensitivity, the types of securities to be held, liquidity and other factors. The Company's current investment strategy utilizes a risk management approach of diversified investing among three categories: short-, intermediate-, and long-term. The emphasis of this approach is to increase overall investment securities yields while managing interest rate risk and meeting liquidity needs. The Company has engaged an independent financial advisor to recommend investment securities according to a plan which has been approved by the Asset/Liability Committee and the Board of Directors. Federal savings banks have authority to invest in various types of assets, including U.S. Government obligations, securities of various federal agencies, obligations of states and municipalities, mortgage-backed and asset-backed securities, collateralized-mortgage obligations, certain time deposits of insured banks and savings institutions, certain bankers' acceptances, repurchase agreements, loans of federal funds, and, subject to certain limits, corporate debt and commercial paper.

All of the securities in our portfolio are classified as "available for sale." The securities are reported at fair value, and unrealized gains and losses on the securities are excluded from earnings and reported, net of deferred taxes, as a separate component of equity. Our current securities portfolio consists of collateralized mortgage obligations, mortgage backed securities, asset-backed securities, U.S. Government Agency bonds, and municipal bonds. Nearly all of our mortgage backed securities are directly or indirectly insured or guaranteed by FHLMC, the Government National Mortgage Association ("GNMA") or the Federal National Mortgage Association ("FNMA", or "Fannie Mae"). The municipal securities we invest in have maturities of 20 years or less and many have private insurance guaranteeing repayment. The majority of municipal securities in our portfolio are unlimited general obligation bonds.

We have investments in FHLBNY stock, which must be held as a condition of membership in the Federal Home Loan Bank system. The investment in FHLBNY stock is considered restricted and is reported at cost on the Consolidated Statements of Financial Condition.

Fair values of available for sale securities are based on a market approach. Securities which are fixed income instruments that are not quoted on an exchange, but are traded in active markets, are valued using prices obtained from our custodian, which uses third party data service providers.

Classification of Investments. Federal regulations require us to regularly review and classify our investments based on credit risk in determining credit quality of investment portfolios as well as for calculating risk based capital. A decline in the market value of a security due to interest rate fluctuations is not a basis for adverse classification. Instead, the classification is based on the likelihood of the timely and full collection of principal and interest.

In assessing the credit quality of securities in our investment portfolio, we conduct an internal risk analysis, which includes a review of third party research and analytics. If our research indicates that an issuer of a security does not

have adequate capacity to meet its financial obligations for the life of the asset, the Company will review the security and consider it for classification.

A security may be classified as Substandard, Doubtful or Loss. A “Substandard” classification indicates that the investment is inadequately protected by the sound worth and paying capacity of the obligor or of the

---

collateral pledged. Investments classified as "Substandard" must have a well-defined weakness or weaknesses that jeopardize the liquidation of the debt, and the Company may sustain some loss if deficiencies are not corrected. A "Doubtful" classification has all the weaknesses of a "Substandard" classification with the added characteristic that the weaknesses make collection or liquidation in full highly questionable and improbable. Investments classified as "Loss" are considered uncollectible and their continuance as an asset of the Company is no longer warranted.

Our determination as to the classification of our investments is subject to review by our regulators. We regularly review our investment portfolio to determine whether any investments require classification in accordance with applicable regulations. Our review of our investment portfolio at December 31, 2018 resulted in two private-label asset-backed securities that were considered for classification, as the issuer may not have an adequate capacity to meet its financial commitments over the projected life of the investment or the risk of default by the obligor was possible, resulting in an expectation that the Bank would not receive the full and timely repayment of principal and interest as expected. These two securities had an amortized cost of $0 and fair value of $270,000 at December 31, 2018. These two securities were classified as "Substandard." Five securities were evaluated for other-than-temporary impairment as of December 31, 2018. We concluded that no other than temporary impairment charges needed to be recorded during the years ended December 31, 2018, 2017 and 2016. During the years ended December 31, 2018, 2017 and 2016, we recaptured $145,000, $135,000 and $142,000, respectively, of prior year other-than-temporary impairment charges. The recaptured amounts are reflected in the "recovery on previously impaired investment securities" line item in the Consolidated Statements of Income.

The following table presents the composition of our securities portfolio in dollar amount of each investment type at the dates indicated.

	At December 31,					
	2018		2017		2016	
	Amortized Cost	Fair Value	Amortized Cost	Fair Value	Amortized Cost	Fair Value
	(Dollars in thousands)					
Securities available for sale:						
U.S. Government Agencies	$ 2,012	$ 1,961	$ 2,013	$ 1,987	$ -	$ -
Municipal bonds	44,546	44,942	44,256	45,562	48,869	50,698
Mortgage-backed securities:						
Collateralized mortgage obligations -private label	27	27	30	30	37	37
Collateralized mortgage obligations -government sponsored entities	32,987	32,453	28,195	27,654	29,170	28,830
Government National Mortgage Association	191	199	229	245	306	329
Federal National Mortgage Association	2,367	2,385	2,834	2,929	3,457	3,582
Federal Home Loan Mortgage Corporation	3,833	3,888	1,518	1,553	1,825	1,867
Asset-backed securities-private label	-	270	69	344	484	832
Asset-backed securities-government sponsored entities	43	44	57	60	71	76
Total debt securities	$ 86,006	$ 86,169	$ 79,201	$ 80,364	$ 84,219	$ 86,251
Equity securities	22	24	22	57	22	84
Total securities available for sale	$ 86,028	$ 86,193	$ 79,223	$ 80,421	$ 84,241	$ 86,335

At December 31, 2018, we did not have any non-U.S. Government and Government agency securities that exceeded 10.0% of our equity.

Investment Securities Portfolio, Maturities and Yields. The following table sets forth the scheduled maturities, amortized cost and weighted average yields for our investment portfolio, with the exception of equity securities, at December 31, 2018. Due to repayments of the underlying loans, the average life maturities of

mortgage-backed and asset-backed securities generally are substantially less than the final maturities. Expected maturities for municipal bonds may differ from contractual maturities, because issuers may have the right to call or prepay obligations. The weighted average yield does not include the impact of a tax-equivalent adjustment for bank qualified municipals.

	One year or less		More than One Year through Five Years		More than Five Years through Ten Years		More than Ten Years		Total Securities		
	Amortized Cost	Weighted Average Yield	Amortized Cost	Weighted Average Yield	Amortized Cost	Weighted Average Yield	Amortized Cost	Weighted Average Yield	Amortized Cost	Fair Value	Wei Ave Yie
			(Dollars in thousands)								
ities ble for											
Government cies	$ -	-	$ -	-	$ -	-	$ 2,012	2.89%	$ 2,012	$ 1,961	2.89
cipal bonds	255	4.34%	5,216	3.71%	24,350	3.60%	14,725	3.25%	44,546	44,942	3.50
gage-backed ties	-	-	3	3.32%	3,042	2.77%	36,360	2.66%	39,405	38,952	2.67
-backed ties	-	-	-	-	-	-	43	5.61%	43	314	5.61
securities ble for sale	$ 255	4.34%	$ 5,219	3.71%	$ 27,392	3.51%	$ 53,140	2.83%	$ 86,006	$ 86,169	3.11

Sources of Funds

General. Deposits are our major source of funds for lending and other investment purposes. We may also borrow funds, primarily from the FHLBNY, to supplement the amount of funds available for lending and daily operations. In addition, we derive funds from loan and mortgage-backed securities principal repayments and prepayments and from interest and proceeds from the maturity and call of investment securities. Loans and securities payments are a relatively stable source of funds, while deposit inflows and outflows are significantly influenced by pricing strategies and money market conditions

Deposits. We offer a variety of deposit accounts having a range of interest rates and terms. We currently offer regular savings deposits (consisting of Christmas Club, passbook and statement savings accounts), money market savings and checking accounts, interest bearing and non-interest bearing checking accounts (i.e., demand deposits), health savings accounts, retirement accounts, time deposits and Interest on Lawyer Accounts (“IOLA”). In addition to accounts for individuals, we also offer commercial savings, checking and money market accounts designed for the businesses operating in our market area.

Deposit flows are influenced significantly by general and local economic conditions, changes in prevailing interest rates, pricing of deposits, and competition. Our deposits are obtained from communities surrounding our offices and we rely primarily on paying competitive rates, service, and long-standing relationships with customers to attract and

retain these deposits. We do not rely on brokers to obtain deposits, although we are a participant in the Certificate of Deposit Account Registry Service ("CDARS"). This program offers our depositors enhanced FDIC insurance coverage. On May 24, 2018, the Economic Growth, Regulatory Relief, and Consumer Protection Act of 2018 was signed into law and as a result reciprocal deposits obtained via CDARS are generally not considered brokered deposits. At this time, the funds obtained from CDARS are not considered brokered deposits. At December 31, 2018 and 2017, we had $5.5 million of depositor funds placed in the CDARS program.

When we determine our deposit rates, we consider local competition, U.S. Treasury securities offerings, our liquidity needs, and the rates charged on other sources of funds. We generally review our deposit mix and pricing on a weekly basis. Our deposit pricing strategy has generally been to offer competitive rates to attract funds and to focus on the acquisition of lower cost core deposits as opportunities arise.

The following table presents the distribution of our deposit accounts at the dates indicated by dollar amount and percent of portfolio:

	At December 31, 2018		2017		2016	
	Amount	Percent of total deposits	Amount	Percent of total deposits	Amount	Percent of total deposits
	(Dollars in thousands)					
Deposit type:						
Savings	$ 52,050	12.04%	$ 52,922	13.06%	$ 52,404	13.58%
Money market	119,885	27.72%	99,305	24.51%	78,401	20.32%
Interest bearing demand	50,211	11.61%	49,869	12.31%	52,058	13.49%
Non-interest bearing demand	55,327	12.79%	54,618	13.48%	55,889	14.48%
Total core deposits	277,473	64.16%	256,714	63.36%	238,752	61.87%
Time deposits with original maturities of:						
Three months or less	2,058	0.48%	1,092	0.27%	1,347	0.35%
Over three months to twelve months	25,737	5.95%	29,669	7.32%	29,109	7.54%
Over twelve months to twenty-four months	30,074	6.95%	25,696	6.34%	25,935	6.72%
Over twenty-four months to thirty-six months	20,102	4.65%	7,372	1.82%	7,372	1.91%
Over thirty-six months to forty-eight months	6,512	1.51%	5,078	1.25%	4,476	1.16%
Over forty-eight months to sixty months	70,286	16.25%	79,328	19.58%	78,716	20.40%
Over sixty months	216	0.05%	204	0.06%	186	0.05%
Total time deposits	154,985	35.84%	148,439	36.64%	147,141	38.13%
Total deposits	$ 432,458	100.00%	$ 405,153	100.00%	$ 385,893	100.00%

At December 31, 2018 and 2017, time deposits with remaining terms to maturity of less than one year amounted to $55.2 million and $57.5 million, respectively.

The following table presents our time deposit accounts categorized by interest rates which mature during each of the years set forth below and the amounts of such time deposits by interest rate at December 31, 2018, 2017 and 2016.

Period to maturity at December 31, 2018				At December 31,		
Less than One Year	More than One Year to	More than Two Years to	More than Three Years	2018	2017	2016

		Two Years	Three Years				
	(Dollars in thousands)						
Interest Rate Range							
0.49% and below	$ 22,417	$ 1,444	$ -	$ -	$ 23,861	$ 29,698	$ 36,389
0.50% to 0.99%	5,892	4,067	1,141	-	11,100	14,386	19,515
1.00% to 1.99%	14,662	23,945	18,849	16,646	74,102	100,663	89,065
2.00% to 2.99%	12,227	11,274	9,394	2,638	35,533	3,692	2,172
3.00% to 3.99%	-	264	8,504	1,621	10,389	-	-
Total	$ 55,198	$ 40,994	$ 37,888	$ 20,905	$ 154,985	$ 148,439	$ 147,141

At December 31, 2018, we had $79.3 million in time deposits with balances of $100,000 or more maturing as follows:

Maturity Period	Amount (In thousands)
Three months or less	$ 4,232
Over three months through six months	8,952
Over six months to twelve months	9,845
Over twelve months	56,276
Total	$ 79,305

Additional information regarding our deposits is included in Note 7 in the Notes to our Audited Consolidated Financial Statements beginning on page F-1. Also, refer to “Part II, Item 7. Management’s Discussion and Analysis of Financial Condition and Results of Operations—Liquidity and Capital Resources” for additional information on sources of funds.

Short-term Borrowings. Historically, our borrowings have consisted of a mix of short-term and long-term Federal Home Loan Bank of New York (“FHLBNY”) advances. We did not have any short-term borrowings on our statement of financial condition as of December 31, 2018, 2017 and 2016.

Additional information regarding our borrowings is included in Note 8 in the Notes to our Audited Consolidated Financial Statements beginning on page F-1.

Subsidiary Activities

Lake Shore Savings is the only subsidiary of Lake Shore Bancorp. Lake Shore Savings has no subsidiaries.

Personnel

As of December 31, 2018, we had 112 full-time employees and 3 part-time employees. The employees are not represented by a collective bargaining unit and we consider our relationship with our employees to be good.

Supervision and Regulation

General

Lake Shore Savings Bank, a federally chartered savings bank, is subject to regulation, examination and supervision by the OCC, while Lake Shore Bancorp, Inc. and Lake Shore, MHC, which are federally chartered savings and loan holding companies, are subject to regulation, examination and supervision by the Federal Reserve Board. This regulation and supervision establishes a comprehensive framework of activities in which an institution may engage and is intended primarily for the protection of the FDIC's deposit insurance fund and depositors. Under this system of federal regulation, financial institutions are periodically examined to ensure that they satisfy applicable standards with respect to their capital adequacy, asset quality, management, earnings, liquidity and sensitivity to market interest rates. Lake Shore Savings also is a member of and owns stock in the Federal Home Loan Bank of New York, which is one of the twelve regional banks in the Federal Home Loan Bank System. Lake Shore Savings also is regulated, to a lesser extent, by the FDIC with respect to insurance of deposit accounts and the Federal Reserve Board, with respect to reserves to be maintained against deposits and other matters. Lake Shore Savings' relationship with its depositors and borrowers also is regulated to a great extent by both federal and state laws, especially in matters concerning the ownership of deposit accounts and the form and content of Lake Shore Savings' mortgage documents.

Certain of the regulatory requirements that are applicable to Lake Shore Savings, Lake Shore Bancorp and Lake Shore, MHC are described below. This description of statutes and regulations is not intended to be a

---

complete explanation of such statutes and regulations and their effect on Lake Shore Savings, Lake Shore Bancorp and Lake Shore, MHC and is qualified in its entirety by reference to the actual statutes and regulations.

The Dodd–Frank Wall Street Reform and Consumer Protection Act of 2010 (the "Dodd-Frank Act")

The Dodd-Frank Act created a new Consumer Financial Protection Bureau ("CFPB") as an independent bureau of the Federal Reserve Board. The CFPB assumes responsibility for the implementation of the federal financial consumer protection and fair lending laws and regulations, a function previously assigned to prudential regulators, and has authority to impose new requirements. However, institutions of less than $10 billion in assets, such as the Bank, continue to be examined for compliance with consumer protection and fair lending laws and regulations by, and be subject to the enforcement authority of, their primary regulator rather than the CFPB.

The Dodd-Frank Act, among other things:

- directed changes in the way that institutions are assessed for deposit insurance;
- mandated the imposition of consolidated capital requirements on savings and loan holding companies;
- required originators of securitized loans to retain a percentage of the risk for sold loans;
- regulated 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 shareholder influence over boards of directors by requiring companies to give shareholders a non-binding vote on executive compensation and so called "Golden Parachute" payments. In addition, the CFPB has finalized a rule implementing the "Ability to Repay" requirements of the Dodd-Frank Act. The regulations generally require creditors to make a reasonable, good faith determination as to a borrower's ability to repay most residential mortgage loans. The rule also sets standards for mortgage servicing, loan originator compensation, and requirements for high-cost mortgages, appraisal and escrow standards. The final rule establishes a safe harbor for certain "Qualified Mortgages," which contain certain features deemed less risky and omit certain other characteristics considered to enhance risk. The Ability to Repay final rules were effective January 1, 2014. On October 3, 2015, the new TILA-RESPA Integrated Disclosure ("TRID") rules for mortgage closings took effect for new loan applications. In 2017, the CFPB amended the TRID rule with an effective date of October 1, 2018.

The Economic Growth, Regulatory Relief and Consumer Protection Act of 2018

On May 24, 2018, The Economic Growth, Regulatory Relief and Consumer Protection Act of 2018 (the "EGRRCPA") was enacted, which repeals or modifies certain provisions of the Dodd-Frank Act and eases regulations on all but the largest banks. The EGRRCPA's provisions include, among other things: (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; (vi) providing federal savings associations with less than $20.0 billion in consolidated assets with the option to elect to operate under the same powers as a national bank; and (vii) 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.

Federal Banking Regulation

Business Activities. A federal savings bank derives its lending and investment powers from the Home Owners' Loan Act, as amended, and the regulations of the OCC. Under these laws and regulations, Lake Shore Savings may originate mortgage loans secured by residential and commercial real estate, commercial business loans and consumer loans, and it may invest in certain types of debt securities and certain other assets. Certain types of lending, such as commercial real estate, commercial business and consumer loans, are subject to an aggregate limit calculated as a specified percentage of Lake Shore Savings' capital or assets. Specifically, Lake Shore Savings may invest in non-residential real estate loans which may not in the aggregate exceed 400% of capital, commercial business loans up to 20% of assets in the aggregate and consumer loans up to 35% of assets in the aggregate. Lake Shore Savings also may establish subsidiaries that may engage in activities not otherwise permissible for Lake Shore Savings, including real estate investment and securities and insurance brokerage.

Capital Requirements. Federal regulations require a federal savings bank to meet certain minimum capital standards. In July 2013, the federal banking agencies issued a final rule that revised the leverage and risk-based capital requirements and the method for calculating risk-weighted assets to make them consistent with the agreements that were reached by the Basel Committee on Banking Supervision in "Basel III: A Global Regulatory Framework for More Resilient Banks and Banking Systems" ("Basel III") and with certain provisions of the Dodd-Frank Act, which became effective on January 1, 2015.

The revised rule established a new minimum common equity Tier 1 ("CET1") capital ratio of 4.5% of risk-weighted assets, a uniform minimum leverage ratio of 4%, increased the minimum Tier 1 capital to risk-weighted assets ratio from 4% to 6% of risk-weighted assets and maintained the total capital ratio of at least 8% of risk-weighted assets. Under the new standards, in order to be considered well-capitalized, the Bank must have a CET1 ratio of 6.5%, a Tier 1 ratio of 8%, a total risk-based capital ratio of 10% and a leverage ratio of 5%. The final rule requires unrealized gains and losses on certain "available for sale" securities holdings to be included for purposes of calculating regulatory capital unless a one-time opt-out is exercised. Lake Shore Savings Bank has exercised this one-time opt-out and therefore excluded unrealized gains and losses on certain "available-for-sale" securities holdings for purposes of calculating regulatory capital. Additional restraints are also imposed on the inclusion in regulatory capital of mortgage-servicing assets, deferred tax assets and minority interests.

Core capital is defined as common stockholders' equity (including retained earnings but excluding accumulated other comprehensive income), certain noncumulative perpetual preferred stock and related surplus and minority interests in equity accounts of consolidated subsidiaries, less intangibles other than certain mortgage servicing rights and credit card relationships. The components of supplementary capital currently include cumulative preferred stock, long-term perpetual preferred stock, mandatory convertible securities, subordinated debt and intermediate preferred stock, the allowance for loan and lease losses limited to a maximum of 1.25% of risk-weighted assets and up to 45% of net unrealized gains on available-for-sale equity securities with readily determinable fair market values. Overall, the amount of supplementary capital included as part of total capital cannot exceed 100% of core capital. Additionally, a

savings bank that retains credit risk in connection with an asset sale may be required to maintain additional regulatory capital because of the recourse back to the savings bank. In assessing an institution's capital adequacy, the federal regulators take into consideration not only these numeric factors but also qualitative factors as well, and has the authority to establish higher capital requirements for individual associations where necessary.

In determining the amount of risk-weighted assets, all assets, including certain off-balance sheet assets, are multiplied by a risk-weight factor of 0% to 1,250%, assigned by federal regulations based on the risks believed inherent in the type of asset. The new capital requirements assigns a higher risk weight (150%) to exposures that are more than 90 days past due or are on nonaccrual status and to certain commercial real estate facilities that finance the acquisition, development or construction of real property.

The final rule limits a banking organization's capital distributions and certain discretionary bonus payments if the banking organization does not hold a "capital conservation buffer" consisting of 2.5% of common equity Tier 1 capital to risk-weighted assets in addition to 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% and ending January 1, 2019. The full capital conservation buffer requirement is now in effect.

Notwithstanding the foregoing, pursuant to the EGRRCPA, the OCC 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 OCC's proposed rule is finalized, the Basel III risk-based and leverage ratios remain in effect.

At December 31, 2018, Lake Shore Savings' capital exceeded all applicable minimal capital requirements.

Loans to One Borrower. Generally, a federal savings bank may not make a loan or extend credit to a single or related group of borrowers in excess of 15% of unimpaired capital and surplus. An additional amount may be loaned, equal to 10% of unimpaired capital and surplus, if the loan is secured by readily marketable collateral, which generally does not include real estate. As of December 31, 2018, Lake Shore Savings Bank was in compliance with the loans-to-one borrower limitations.

Qualified Thrift Lender Test. As a federal savings bank, Lake Shore Savings is subject to a qualified thrift lender, or "QTL," requirement by meeting one of two tests: The Home Owners' Loan Act ("HOLA") QTL test or the Internal Revenue Service ("IRS") Domestic Building and Loan Association ("DBLA") test. The federal savings bank may use either test to qualify and may switch from one test to the other.

Under the HOLA QTL test, Lake Shore Savings must maintain at least 65% of its "portfolio assets" in "qualified thrift investments" in at least nine months of the most recent 12-month period. "Portfolio assets" generally means total assets of a savings institution, less the sum of specified liquid assets up to 20% of total assets, goodwill and other intangible assets, and the value of property used in the conduct of the savings bank's business.

"Qualified thrift investments" includes various types of loans made for residential and housing purposes, investments related to such purposes, including certain mortgage-backed and related securities, and loans for personal, family, household and certain other purposes up to a limit of 20% of portfolio assets. "Qualified thrift investments" also include 100% of an institution's credit card loans, education loans and small business loans.

Under the IRS DBLA test, the Bank must meet the business operations test and the 60% of assets test. The business operations test requires that the federal savings bank's business consists primarily of acquiring the savings of the public (75% of its deposits, withdrawable shares, and other obligations must be held by the general public) and investing in loans (more than 75% of its gross income consists of interest on loans and government obligations and various other specified types of operating income that federal savings bank's ordinarily earn). For the 60% of assets test, the Bank must maintain at least 60% of its total in "qualified investments" as of the close of the taxable year or, at the option of the federal savings bank, may be computed on the basis of the average assets outstanding during the

taxable year.

A savings bank that fails the QTL test must either convert to a commercial bank charter or operate under specified restrictions. The Dodd-Frank Act makes noncompliance with the QTL test potentially subject to agency enforcement action for violation of law. At December 31, 2018, Lake Shore Savings Bank opted to utilize the HOLA QTL test and satisfied the requirements of this test for the entire 12-month period.

Capital Distributions. OCC regulations govern capital distributions by a federal savings bank, which include cash dividends, stock repurchases and other transactions charged to the capital account. A savings bank must file an application for approval of a capital distribution if:

- the total capital distributions for the applicable calendar year exceed the sum of the savings bank's net income for that year to date plus the savings bank's retained net income for the preceding two years;
- the savings bank would not be at least adequately capitalized following the distribution;
- the distribution would violate any applicable statute, regulation, agreement or OCC-imposed condition; or
- the savings bank is not eligible for expedited treatment of its filings.

Even if an application is not otherwise required, every federal savings bank that is a subsidiary of a holding company must still file a notice with the Federal Reserve Board at least 30 days before the board of directors declares a dividend or approves a capital distribution.

The Federal Reserve Board may disapprove a notice or application if:

- the savings bank would be undercapitalized following the distribution;
- the proposed capital distribution raises safety and soundness concerns; or
- the capital distribution would violate a prohibition contained in any statute, regulation or agreement.

In addition, the Federal Deposit Insurance Act provides that an insured depository institution shall not make any capital distribution if, after making such distribution, the institution would be undercapitalized.

Liquidity. A federal savings institution is required to maintain a sufficient amount of liquid assets to ensure its safe and sound operation. We seek to maintain a ratio of liquid assets not subject to pledge as a percentage of deposits and borrowings of 15% or greater.

Community Reinvestment Act and Fair Lending Laws. All savings banks have a responsibility under the Community Reinvestment Act and related federal regulations to help meet the credit needs of their communities, including low-and moderate-income neighborhoods. In connection with its examination of a federal savings bank, the OCC is required to assess the savings bank's record of compliance with the Community Reinvestment Act. In addition, the Equal Credit Opportunity Act and the Fair Housing Act prohibit lenders from discriminating in their lending practices on the basis of characteristics specified in those statutes. A savings bank's failure to comply with the provisions of the Community Reinvestment Act could, at a minimum, result in denial of certain corporate applications, such as branches or mergers, or in restrictions on its activities. The failure to comply with the Equal Credit Opportunity Act and the Fair Housing Act could result in enforcement actions by the OCC, as well as other federal regulatory agencies and the Department of Justice. Lake Shore Savings Bank received a "satisfactory" Community Reinvestment Act rating in its most recent federal examination.

Transactions with Related Parties. A federal savings bank's authority to engage in transactions with its "affiliates" is limited by OCC regulations and by Sections 23A and 23B of the Federal Reserve Act. The term "affiliate" for these purposes generally means any company that controls, is controlled by, or is under common control with an insured depository institution such as Lake Shore Savings Bank. Lake Shore Bancorp, Inc. and Lake Shore, MHC are affiliates of Lake Shore Savings Bank. In general, transactions with affiliates must be on terms that are as favorable to the savings bank as comparable transactions with non-affiliates. In addition, certain types of these transactions are restricted to an aggregate percentage of the savings bank's capital. Collateral in specified amounts must usually be provided by affiliates in order to receive loans from the savings bank. In addition, OCC regulations prohibit a savings bank from lending to any of its affiliates that are engaged in activities that are not permissible for bank holding companies and from purchasing the securities of any affiliate, other than a subsidiary. Finally, transactions with affiliates must be consistent with safe and sound banking practices and may not involve low-quality assets. The OCC requires savings banks to maintain detailed records of all transactions with affiliates.

Lake Shore Savings' 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 require that extensions of credit to insiders (i) 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 (ii) 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 Lake Shore Savings Bank's capital. In addition, Lake Shore Savings Bank's board of directors must approve extensions of credit in excess of certain limits. Extensions of credit to executive officers are subject to additional restrictions based on the category of loan.

At December 31, 2018, Lake Shore Savings is in compliance with Regulation O.

Enforcement. The OCC has primary enforcement responsibility over federal savings institutions and has the authority to bring enforcement action against all "institution-affiliated parties," including stockholders, and attorneys, appraisers and accountants who knowingly or recklessly participate in wrongful action likely to have an adverse effect on an insured institution. Formal enforcement action may range from the issuance of a capital directive or cease and desist order, to removal of officers and/or directors of the institution and the appointment of a receiver or conservator. Civil penalties cover a wide range of violations and actions, and range up to $25,000 per day, unless a finding of reckless disregard is made, in which case penalties may be as high as $1.0 million per day. The FDIC also has the authority to terminate deposit insurance or to recommend to the OCC that enforcement action be taken with respect to a particular savings institution. If the OCC does not take action, the FDIC has authority to take action under specified circumstances.

Standards for Safety and Soundness. Federal law requires each federal banking agency to prescribe certain standards for all insured depository institutions. These standards relate to, among other things, internal controls, information systems and audit systems, loan documentation, credit underwriting, interest rate risk exposure, asset growth, compensation, and other operational and managerial standards as the agency deems appropriate. The federal banking agencies adopted Interagency Guidelines Prescribing Standards for Safety and Soundness to implement the safety and soundness standards required under federal law. 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 risk exposure, asset growth, compensation, fees and benefits. 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. If an institution fails to meet these standards, the appropriate federal banking agency may require the institution to submit a compliance plan.

Prompt Corrective Action Regulations. Under the prompt corrective action regulations, the OCC is required and authorized to take supervisory actions against undercapitalized federal savings banks. For this purpose, a savings bank is placed in one of the following five categories based on the savings bank's capital:

- well-capitalized (at least 5% leverage capital, 6.5% common equity Tier 1 risk-based capital, 8% Tier 1 risk-based capital and 10% total risk-based capital);
- adequately capitalized (at least 4% leverage capital, 4.5% common equity Tier 1 risk-based capital, 6% Tier 1 risk-based capital and 8% total risk-based capital);
- undercapitalized (less than 4% leverage capital, 4.5% common equity Tier 1 risk-based capital, 6% Tier 1 risk-based capital or 8% total risk-based capital);

- significantly undercapitalized (less than 3% leverage capital, 3% common equity Tier 1 risk-based capital, 4% Tier 1 risk-based capital or 6% total risk-based capital); and
- critically undercapitalized (less than 2% tangible capital).

As noted above, the EGRRCPA has eliminated the Basel III requirements for banks with less than $10 billion in assets who elect to follow the community bank leverage ratio once the OCC's rule is finalized. The OCC'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.

Generally, the OCC is required to appoint a receiver or conservator for a savings bank that is "critically undercapitalized" within specific time frames. "Undercapitalized" institutions are subject to certain restrictions, such as on capital distributions and growth. The regulations also provide that a capital restoration plan must be filed with the OCC within 45 days of the date a savings bank receives notice that it is "undercapitalized," "significantly undercapitalized" or "critically undercapitalized." The criteria for an acceptable capital restoration plan include, among other things, the establishment of the methodology and assumptions for attaining adequately capitalized status on an annual basis, procedures for ensuring compliance with restrictions imposed by applicable federal regulations, the identification of the types and levels of activities the savings bank will engage in while the capital restoration plan is in effect, and assurances that the capital restoration plan will not appreciably increase the current risk profile of the savings bank. Any holding company for the savings bank required to submit a capital restoration plan must guarantee the lesser of: an amount equal to 5% of the savings bank's assets at the time it was notified or deemed to be undercapitalized by the OCC, or the amount necessary to restore the savings bank to adequately capitalized status. This guarantee remains in place until the OCC notifies the savings bank that it has maintained adequately capitalized status for each of four consecutive calendar quarters. The OCC has the authority to require payment and collect payment under the guarantee. The failure of a holding company to provide the required guarantee will result in certain operating restrictions on the savings bank, such as restrictions on the ability to declare and pay dividends, pay executive compensation and management fees, and increase assets or expand operations. The OCC may also take any one of a number of discretionary supervisory actions against undercapitalized savings banks, including the issuance of a capital directive and the replacement of senior executive officers and directors.

At December 31, 2018, Lake Shore Savings met the criteria for being considered "well-capitalized."

Insurance of Deposit Accounts. Lake Shore Savings is a member of the Deposit Insurance Fund, which is administered by the FDIC. Deposit accounts in the Bank are insured by the FDIC. The Dodd-Frank Act permanently increased the maximum amount of deposit insurance for banks and savings institutions to $250,000 per depositor. The FDIC imposes an assessment for deposit insurance on all depository institutions.

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 with 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%. Insured institutions with assets of $10 billion or more are supposed to fund the increase. 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%.

Assessments for most institutions are now based on financial measures and supervisory ratings derived from statistical modeling estimating the probability of failure within three years. In conjunction with the Deposit Insurance Fund reserve ratio achieving 1.5%, the assessment range (inclusive of possible adjustments) was reduced for most banks and savings banks to 1.5 basis points to 40 basis points.

The FDIC has authority to increase insurance assessments. Any significant increases would have an adverse effect on the operating expenses and results of operations of Lake Shore Savings. 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.

In addition to the FDIC assessments, 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 began to mature in 2017 and will continue to mature through September 2019. For the year ended December 31, 2018, Lake Shore Savings paid $14,000 related to the FICO bonds. For the quarter ended December 31, 2018, the annualized FICO assessment was equal to 0.35 of a basis point of total assets less tangible capital.

Prohibitions Against Tying Arrangements. Federal savings banks are prohibited, subject to some exceptions, from extending credit to or offering any other service, or fixing or varying the consideration for such extension of credit or service, on the condition that the customer obtain some additional service from the institution or its affiliates or not obtain services of a competitor of the institution.

Federal Home Loan Bank System. Lake Shore Savings 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 a member of the Federal Home Loan Bank of New York, Lake Shore Savings is required to acquire and hold shares of capital stock in the Federal Home Loan Bank. As of December 31, 2018, Lake Shore Savings was in compliance with this requirement.

Federal Reserve System. The Federal Reserve Board regulations require savings banks to maintain noninterest-earning reserves against their transaction accounts, such as negotiable order of withdrawal and regular checking accounts. At December 31, 2018, the Bank was in compliance with these reserve requirements.

Other Regulations

Interest and other charges collected or contracted for by Lake Shore Savings are subject to state usury laws and federal laws concerning interest rates. Lake Shore Savings' 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 one- to four-family residential real estate loans receive various disclosures, including good faith estimates of settlement costs, lender servicing and escrow account practices;
- 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; and
- rules and regulations of the various federal agencies charged with the responsibility of implementing such federal laws.

The operations of Lake Shore Savings also are subject to the:

- 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;
- Title III of The Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism Act of 2001 (referred to as the "USA PATRIOT Act"), which requires savings banks 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
- The 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

General. Lake Shore, MHC and Lake Shore Bancorp are savings and loan holding companies within the meaning of the Home Owners' Loan Act. As such, Lake Shore, MHC and Lake Shore Bancorp are registered with the Federal Reserve Board and are subject to Federal Reserve Board regulations, examinations, supervision and reporting requirements. In addition, the Federal Reserve Board has enforcement authority over Lake Shore, MHC and Lake Shore Bancorp, and their non-bank subsidiaries. Among other things, this authority permits the Federal Reserve Board to restrict or prohibit activities that are determined to be a serious risk to the subsidiary savings institution. As federal corporations, Lake Shore, MHC and Lake Shore Bancorp are generally not subject to state business organization laws.

Permitted Activities. Pursuant to Section 10(o) of the Home Owners' Loan Act and Federal Reserve Board regulations and policy, a mutual holding company and a federally chartered mid-tier holding company such as Lake Shore Bancorp may engage in the following activities:

(i) investing in the stock of a savings institution;
(ii) acquiring a mutual savings bank through the merger of such savings institution into a savings institution subsidiary of such holding company or an interim savings bank subsidiary of such holding company;
(iii) merging with or acquiring another holding company, one of whose subsidiaries is a savings institution;

(iv)investing in a corporation, the capital stock of which is available for purchase by a savings institution under federal law or under the law of any state where the subsidiary savings institution or savings institutions share their home offices;
(v)furnishing or performing management services for a savings institution subsidiary of such company;
(vi)holding, managing or liquidating assets owned or acquired from a savings subsidiary of such company;

(vii) holding or managing properties used or occupied by a savings institution subsidiary of such company;
(viii) acting as trustee under deeds of trust;
(ix) any other activity (A) that the Federal Reserve Board, by regulation, has determined to be permissible for bank holding companies under Section 4(c) of the Bank Holding Company Act of 1956, unless the Federal Reserve Board, by regulation, prohibits or limits any such activity for savings and loan holding companies; or (B) in which multiple savings and loan holding companies were authorized (by regulation) to directly engage on March 5, 1987;
(x) any activity permissible for financial holding companies (if such status is elected by the Company) under Section 4(k) of the Bank Holding Company Act, including securities and insurance underwriting; and
(xi) purchasing, holding, or disposing of stock acquired in connection with a qualified stock issuance if the purchase of such stock by such savings and loan holding company is approved by the Federal Reserve Board.

If a mutual holding company acquires or merges with another holding company, the holding company acquired or the holding company resulting from such merger or acquisition may only invest in assets and engage in activities listed in (i) through (xi) above, and has a period of two years to cease any nonconforming activities and divest of any nonconforming investments.

The Home Owners' Loan Act prohibits a savings and loan holding company, including Lake Shore Bancorp and Lake Shore, MHC, directly or indirectly, or through one or more subsidiaries, from acquiring more than 5% of another savings institution or holding company thereof, without prior written approval of the Federal Reserve Board. It also prohibits the acquisition or retention of, with certain exceptions, more than 5% of a non-subsidiary company engaged in activities other than those permitted by the Home Owners' Loan Act; or acquiring or retaining control of an institution that is not federally insured. In evaluating applications by holding companies to acquire savings institutions, the Federal Reserve Board must consider the financial and managerial resources, future prospects of the company and institution involved, the effect of the acquisition on the risk to the insurance fund, the convenience and needs of the community and competitive factors.

The Federal Reserve Board is prohibited from approving any acquisition that would result in a multiple savings and loan holding company controlling savings institutions in more than one state, subject to two exceptions: (i) the approval of interstate supervisory acquisitions by savings and loan holding companies, and (ii) the acquisition of a savings institution in another state if the laws of the state of the target savings institution specifically permit such acquisitions. The states vary in the extent to which they permit interstate savings and loan holding company acquisitions.

Capital. Historically, savings and loan holding companies have not been subject to regulatory capital requirements. The Dodd-Frank Act, however, required the Federal Reserve Board to promulgate consolidated capital requirements for all depository institution holding companies that are no less stringent, both quantitatively and in terms of components of capital, than those applicable to institutions themselves. On January 29, 2015, the Federal Reserve Board revised its Small Bank Holding Company Policy Statement ("Policy Statement") as directed by federal legislation to generally raise the total consolidated asset limit for the exemption from holding company capital requirements from $500 million to $1 billion, and expand the scope of the Policy Statement to include savings and loan holding companies (SLHCs). In 2018, as a result of the enactment of EGRRCPA, the Small Bank Holding

Company Policy Statement exemption was increased from $1.0 billion in consolidated assets to $3.0 billion in consolidated assets. As a result of these revisions, the MHC will be exempt from the regulatory capital requirements until consolidated assets exceed $3.0 billion.

Source of Strength. The Dodd-Frank Act extended the "source of strength" doctrine to savings and loan holding companies. The Federal Reserve Board has promulgated regulations implementing the "source of strength" policy that requires holding companies act as a source of strength to their subsidiary depository institutions by providing capital, liquidity and other support in times of financial stress. Federal Reserve Board policies also provide that holding companies should pay dividends only out of current earnings and only if the

---

prospective rate of earnings retention by the holding company appears consistent with the organization's capital needs, asset quality and overall financial condition. The ability of a holding company to pay dividends may be restricted if a subsidiary bank becomes undercapitalized. These regulatory policies may affect the ability of a savings and loan holding company to pay dividends or otherwise make capital distributions.

Waivers of Dividends by Lake Shore, MHC. The Dodd-Frank Act requires federally-chartered mutual holding companies to give the Federal Reserve Board notice before waiving the receipt of dividends, and provides that in the case of "grandfathered" mutual holding companies, like Lake Shore, MHC, the Federal Reserve Board "may not object" to a dividend waiver if the board of directors of the mutual holding company waiving dividends determines that the waiver: (i) would not be detrimental to the safe and sound operation of the subsidiary savings bank; and (ii) is consistent with the board's fiduciary duties to members of the mutual holding company. To qualify as a grandfathered mutual holding company, a mutual holding company must have been formed, issued stock and waived dividends prior to December 1, 2009. Lake Shore, MHC qualifies as a grandfathered mutual holding company. The Dodd-Frank Act further provides that the Federal Reserve Board may not consider waived dividends in determining an appropriate exchange ratio upon the conversion of a grandfathered mutual holding company to stock form. The Federal Reserve Board has issued an interim final rule that also requires, as a condition to waiving dividends, that each mutual holding company obtain the approval of a majority of the eligible votes of its members within 12 months prior to the declaration of the dividend being waived. Lake Shore, MHC solicited its members (depositors of Lake Shore Savings Bank) to vote on the proposal to waive the MHC's receipt of quarterly cash dividends aggregating up to $0.48 per share to be declared by the Company for the four quarters ending September 30, 2019. On February 6, 2019, the members approved the waiver of dividends. The Board of Directors of Lake Shore, MHC subsequently approved a dividend waiver in accordance with the regulations and submitted it to the Federal Reserve Board for their non-objection. As of March 7, 2019, Lake Shore, MHC received notice of the non-objection of the Federal Reserve Board to waive its right to receive dividends paid by the Company during the twelve months ending February 6, 2020. It is expected that Lake Shore, MHC will continue to waive future dividends, except to the extent dividends are needed to fund Lake Shore, MHC's continuing operations, subject to the ability of Lake Shore, MHC to obtain regulatory approval of its requests to waive dividends and its ability to obtain future member approval of dividend waivers. For more information, see Item 1A, "Risk Factors – Our ability to pay dividends is subject to the ability of Lake Shore Savings to make capital distributions to Lake Shore Bancorp and the waiver of dividends by Lake Shore, MHC."

Conversion of Lake Shore, MHC to Stock Form. Federal Reserve Board regulations permit Lake Shore, MHC to convert from the mutual form of organization to the capital stock form of organization (a "Conversion Transaction"). There can be no assurance when, if ever, a Conversion Transaction will occur, and the board of directors has no current intention or plan to undertake a Conversion Transaction. In a Conversion Transaction, a new stock holding company would be formed as the successor to Lake Shore Bancorp (the "New Holding Company"), Lake Shore, MHC's corporate existence would end, and certain depositors of Lake Shore Savings Bank would receive the right to subscribe for shares of the New Holding Company. In a Conversion Transaction, each share of common stock held by stockholders other than Lake Shore, MHC ("Minority Stockholders") would be automatically converted into a number of shares of common stock of the New Holding Company determined pursuant to an exchange ratio that ensures that Minority Stockholders own the same percentage of common stock in the New Holding Company as they owned in Lake Shore Bancorp immediately prior to the Conversion Transaction. The total number of shares of common stock held by Minority Stockholders after a Conversion Transaction also would be increased by any purchases by Minority Stockholders in the stock offering conducted as part of the Conversion Transaction. Under a provision of the Dodd-Frank Act applicable to Lake Shore, MHC, Minority Stockholders would not be diluted

because of any dividends waived by Lake Shore, MHC (and waived dividends would not be considered in determining an appropriate exchange ratio), in the event Lake Shore, MHC converts to stock form.

Any Conversion Transaction would be subject to approvals by Minority Stockholders and members of Lake Shore, MHC.

Liquidation Rights. Each depositor of Lake Shore Savings has both a deposit account in Lake Shore Savings and a pro rata ownership interest in the net worth of Lake Shore, MHC based upon the deposit balance in his or her account. This ownership interest is tied to the depositor's account and has no tangible market value separate from the deposit account. This interest may only be realized in the unlikely event of a complete liquidation of Lake Shore Savings. Any depositor who opens a deposit account obtains a pro rata ownership interest in Lake Shore, MHC without any additional payment beyond the amount of the deposit. A depositor who reduces or closes his or her account (including reductions to pay for shares of common stock in the stock offering) receives a portion or all, respectively, of the balance in the deposit account but nothing for his or her ownership interest in the net worth of Lake Shore, MHC, which is lost to the extent that the balance in the account is reduced or closed.

In the unlikely event of a complete liquidation of Lake Shore Savings, all claims of creditors of Lake Shore Savings, including those of depositors of Lake Shore Savings (to the extent of their deposit balances), would be paid first. Thereafter, if there were any assets of Lake Shore Savings remaining, these assets would be distributed to Lake Shore Bancorp as Lake Shore Savings' sole stockholder. Then, if there were any assets of Lake Shore Bancorp remaining, depositors of Lake Shore Savings would receive those remaining assets, pro rata, based upon the deposit balances in their deposit account in Lake Shore Savings immediately prior to liquidation.

Federal Securities Laws

Lake Shore Bancorp common stock is registered with the Securities and Exchange Commission under the Securities Exchange Act of 1934, as amended. Lake Shore Bancorp is 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 shares of the common stock in the initial stock offering does not cover the resale of the shares. Shares of the common stock purchased by persons who are not affiliates of Lake Shore Bancorp may be resold without registration. Shares purchased by an affiliate (generally officers, directors and principal shareholders) of Lake Shore Bancorp will be subject to the resale restrictions of Rule 144 under the Securities Act of 1933. If Lake Shore Bancorp meets the current public information requirements of Rule 144 under the Securities Act of 1933, each affiliate of Lake Shore Bancorp who 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 the outstanding shares of Lake Shore Bancorp, or the average weekly volume of trading in the shares during the preceding four calendar weeks. Provision may be made in the future by Lake Shore Bancorp to 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. As directed by the

Sarbanes-Oxley Act, the Chief Executive Officer and Chief Financial Officer of Lake Shore Bancorp, Inc. are required to certify that its quarterly and annual reports filed with the Securities and Exchange Commission do not contain any untrue statement of a material fact. The rules adopted by the Securities and Exchange Commission under the Sarbanes-Oxley Act have several requirements, including having these officers certify that: they are responsible for establishing, maintaining and regularly evaluating the effectiveness of internal control over financial reporting; they have made certain disclosures to its auditors and the audit/risk committee of the Board of Directors about internal control over financial reporting; and they have included information in the quarterly and annual reports about their evaluation and whether there have been changes in internal control over financial reporting or in other factors that could materially affect internal control over financial reporting. Lake Shore Bancorp, Inc. has existing policies, procedures and systems designed to comply with these regulations, and is further enhancing and documenting such policies, procedures and systems to ensure continued compliance with these regulations.

Item 1A. Risk Factors.

In analyzing whether to make or to continue an investment in the Company, investors should consider, among other factors, the following:

Risks Related To Our Business

Our loan portfolio includes loans with a higher risk of loss. We originate commercial real estate loans, commercial business loans, consumer loans, and residential real estate loans (including home equity loans) primarily within our market area. Our business strategy is to increase our commercial real estate and commercial business loan portfolios. Commercial real estate (including commercial construction), commercial business, and consumer loans, which comprised in the aggregate 50.0% of our total loan portfolio at December 31, 2018. These types of loans may expose a lender to greater credit risk than loans secured by residential real estate because the collateral securing these loans may not be sold as easily as residential real estate. In addition, commercial real estate and commercial business loans may also involve relatively large loan balances to individual borrowers or groups of borrowers. These loans also have greater credit risk than residential real estate for the following reasons:

- Commercial Real Estate Loans. Repayment is dependent upon income being generated in amounts sufficient to cover operating expenses and debt service.
- Commercial Business Loans. Repayment is generally dependent upon the successful operation of the borrower's business.
- Consumer Loans. Consumer loans (such as personal lines of credit) may or may not be collateralized with assets that provide an adequate source of payment for the loan due to depreciation, damage, or loss.

Deterioration in economic conditions in our market areas could affect the performance of our loan portfolio. Higher prices for businesses and consumers and high unemployment could negatively affect our loan portfolio, if business owners or consumers are not able to make loan payments. A downturn in the real estate market or our national or local economy could adversely affect the value of the properties securing the loans or revenues from our borrowers' businesses thereby increasing the risk of non-performing loans.

If our allowance for loan losses is not sufficient to cover actual loan losses, our earnings could decrease. Our loan customers may not repay their loans according to their terms and the collateral securing the payment of these loans may be insufficient to pay any remaining loan balance. We therefore may experience significant loan losses, which could have a material adverse effect on our operating results. A downturn in the real estate market or the local economy could exacerbate this risk. We review our allowance for loan losses on a monthly basis to ensure that it is funded adequately to cover any anticipated losses.

Material additions to our allowance for loan losses also would materially decrease our net income, and the charge-off of loans may cause us to increase the allowance for loan losses. We make various assumptions and judgments about the collectability of our loan portfolio, including the creditworthiness of our borrowers and the value of the real estate and other assets serving as collateral for the repayment of many of our loans. We rely on our loan quality reviews, our experience and our evaluation of economic conditions, among other factors, in determining the amount of the allowance for loan losses. If our assumptions prove to be incorrect, our allowance for loan losses may not be sufficient to cover losses inherent in our loan portfolio, resulting in additions to our allowance. The Bank's increased

focus on commercial loan originations has been one of the more significant factors we have taken into account in evaluating our allowance for loan losses and provision for loan losses. If we were to further increase the amount of commercial loans in our portfolio, we may decide to make increased provisions for loan losses. In addition, bank regulators periodically review our allowance for loan losses and may require us to increase our provision for loan losses or recognize further loan charge-offs, which may have a material adverse effect on our financial condition and results of operations.

Low demand for real estate loans may lower our profitability. Making loans secured by real estate, including one- to four-family and commercial real estate, is our primary business and primary source of revenue. If customer demand for real estate loans decreases, our profits may decrease because our alternative investments, primarily securities, generally earn less income than real estate loans. Customer demand for loans secured by real estate could be reduced due to weaker economic conditions, an increase in unemployment, a decrease in real estate values or an increase in interest rates. We experienced commercial loan growth during 2015 through 2018, especially in the Erie County market area, which had a positive impact on net interest income. If rates continue to rise, loan demand may slow down, and deposit expenses may increase, which could lower our profitability.

We have opened new branches and may open additional new branches in the near future. Opening new branches reduces our short-term profitability due to one-time fixed expenses coupled with low levels of income earned by the branches until their customer bases are built. We may continue to expand through de novo branching. The expense associated with a de novo branch will significantly increase our non-interest expense, with compensation, technology and occupancy costs constituting the largest amount of increased costs. Losses are expected from new branches for some time as the expenses associated with it are largely fixed and typically greater than the income earned as a branch builds up its customer base. There can be no assurance that a branch expansion strategy will result in increased earnings, or that it will result in increased earnings within a reasonable period of time. We expect that the success of a branching strategy will depend largely on the ability of our staff to market the deposit and loan products offered by us, as well as by utilizing an integrated multi-channel approach to service our customers. The probability of opening a new branch will depend on available site locations, the economic environment and projected demand in targeted market areas.

The results of our operations may be adversely affected if asset valuations cause other-than-temporary impairment charges. We may be required to record future impairment charges on our investment securities or other assets if they suffer declines in value that are considered other-than-temporary. Numerous factors, including lack of liquidity for re-sales of certain investment securities, absence of reliable pricing information for investment securities, adverse changes in business climate, adverse actions by regulators, or unanticipated changes in the competitive environment could have a negative effect on our investment portfolio or other assets in future periods. If an impairment charge is significant enough it could have a material adverse effect on the Company’s liquidity, its ability to pay dividends to shareholders, and its regulatory capital ratios.

Changes in interest rates could adversely affect our results of operations and financial condition. Our results of operations and financial condition are significantly affected by changes in interest rates. We derive our income mainly from the difference or “spread” between the interest earned on loans, securities and other interest-earning assets and interest paid on deposits, borrowings and other interest-bearing liabilities. In general, the larger the spread, the more we earn. When market rates of interest change, the interest we receive on our assets and the interest we pay on our liabilities will fluctuate. This can cause decreases in our spread and can adversely affect our income.

From an interest rate risk perspective, we have generally been liability sensitive, which indicates that our liabilities generally re-price faster than assets. Our earnings may be adversely impacted by an increase in interest rates because the majority of our interest-earning assets are long-term, fixed rate mortgage-related assets that will not re-price as long-term interest rates increase. As rates rise, we expect loan applications to decrease, prepayment speeds to slow down and the interest rate on our loan portfolio to remain static. Conversely, a majority of our interest-bearing liabilities have much shorter contractual maturities and are expected to re-price, resulting in increased interest expense. A significant portion of our deposits have no contractual maturities and are likely to re-price quickly as short-term interest rates increase. Therefore, in an increasing rate environment, our cost of funds is expected to increase more rapidly than the yields earned on our loan and securities portfolios.

Changes in market interest rates could also reduce the value of our interest-earning assets including, but not limited to, our securities portfolio. In particular, the unrealized gains and losses on securities available for sale are reported, net of tax, in accumulated other comprehensive income which is a component of stockholders' equity. As such, declines in the fair value of such securities resulting from increases in market interest rates may adversely affect stockholders' equity.

In a decreasing interest rate environment, our earnings may increase or decrease. If long-term interest-earning assets do not re-price and interest rates on short-term deposits begin to decrease, earnings may rise. However, low interest rates on loan products may result in an increase in prepayments, as borrowers refinance their loans. If we cannot re-invest the funds received from prepayments at a comparable spread, net interest income could be reduced. Also, in a falling interest rate environment, certain categories of deposits may reach a point where market forces prevent further reduction in interest paid on those products. The net effect of these circumstances is reduced net interest income and possibly net interest rate spread.

The Bank's Asset-Liability Committee which meets quarterly is responsible for balance sheet strategy and for monitoring the impact of changing interest rates on the Bank's operations and financial condition.

We are subject to certain risks with respect to liquidity. "Liquidity" refers to our ability to generate sufficient cash flows to support our operations and to fulfill our obligations, including commitments to originate loans, to repay our wholesale borrowings and other liabilities and to satisfy the withdrawal of deposits by our customers. Our primary source of liquidity is our core deposit base, which is raised through our retail branch network. Core deposits - consisting of savings and money market accounts, time deposits less than $250,000 and demand deposits - comprised approximately 93.0% of total deposits at December 31, 2018. Additional available unused sources of liquidity include borrowings from the Federal Reserve of NY, FHLB, access to brokered deposits and lines of credit with correspondent banks. Liquidity is further provided by unencumbered, or unpledged, investment securities that totaled $69.4 million at December 31, 2018.

An inability to raise funds through deposits, borrowings, the sale of loans and/or investment securities and from other sources could have a substantial negative effect on our liquidity. Our most important source of funds consists of our customer deposits. Such deposit balances can decrease when customers perceive alternative investments, such as the stock market, as providing a better risk/return tradeoff. If customers move money out of bank deposits and into other investments, we could lose a relatively low cost source of funds, which would require us to seek wholesale funding alternatives in order to continue to grow, thereby increasing our funding costs and reducing our net interest income and net income.

Our access to funding sources in amounts adequate to finance our activities could be impaired by factors that affect us specifically or the banking industry in general. Factors that could detrimentally impact our access to liquidity sources include disruptions in the financial markets or negative views and expectations about the prospects for the banking industry.

Any decline in available funding could adversely impact our ability to continue to implement our strategic plan, including originate loans, invest in securities, meet our expenses, pay dividends to our shareholders or to fulfill obligations such as repaying our borrowings or meeting deposit withdrawal demands, any of which could have a material adverse impact on our liquidity, business, financial condition and results of operations.

We depend on our executive officers and key personnel to implement our business strategy and could be harmed by the loss of their services. We believe that our growth and future success will depend in large part upon the skills of our management team. The competition for qualified personnel in the financial services industry is intense, and the loss of our key personnel or an inability to continue to attract, retain and motivate key personnel could adversely affect our business. We cannot assure you that we will be able to retain our existing key personnel or attract additional qualified personnel. Although we have an employment agreement with our President and Chief Executive Officer, that contains a non-compete provision, the loss of the services of one or more of our executive officers and key personnel could impair our ability to continue to develop our business strategy.

Our information systems may experience an interruption or breach in security. We rely heavily on communications and information systems to conduct our business. Any failure, interruption or breach in security of these systems could result in failures or disruptions in our customer accounts, general ledger, deposit, loan and other systems. There have been increasing efforts to breach data security at financial institutions through cyber-attacks. Recently, there have been several instances involving financial services and consumer-based companies reporting the unauthorized disclosure of customer information or the destruction, ransom or theft of

corporate data. We may be unable to proactively address these types of security breaches or to implement adequate preventative measures because the techniques used to cause these breaches change frequently, often are not recognized until launched against a target and may originate from less regulated and remote areas throughout the world. While we have policies and procedures designed to prevent, limit or mitigate the effect of the possible failure, interruption or security breach of our information systems, there can be no assurance that any such failure, interruption or security breach will not occur or, if any does occur, that it will be adequately addressed. We periodically review our security protocols and, as necessary, add additional security measures to our computer systems and network infrastructure to mitigate the possibility of cybersecurity breaches, including firewalls and penetration testing. Additionally, we outsource our data processing to third parties. If the third party provider encounters difficulties or if we have difficulty in communicating with such third party, it will significantly affect our ability to adequately process and account for customer transactions, which would significantly affect our business operations. Furthermore, breaches of such third party's technology may also cause reimbursable loss to our consumer and business customers, through no fault of our own. Fraud attacks targeting customer-controlled devices, plastic payment card terminals, and merchant data collection points provide another source of potential loss, again through no fault of our own. The occurrence of any failures, interruptions or security breaches of information systems used to process customer transactions could damage our reputation, result in a loss of customer business, subject us to additional regulatory scrutiny, or expose us to civil litigation and possible financial liability, any of which could have a material adverse effect on our financial condition, results of operations and cash flows.

We regularly assess and test our systems, including back-up systems, but the risks are substantially escalating. As a result, cybersecurity and the continued enhancement of our controls and processes to protect our systems, data and networks from attacks, unauthorized access or significant damage remains a priority. The Company has developed a disaster recovery plan, which includes plans to maintain or resume operations in the event of an emergency, such as a power outage or natural disaster, and contingency plans in the event that operations or systems cannot be resumed or restored. The disaster recovery plan is periodically reviewed and updated, and components of the disaster recovery plan are periodically tested and validated. The Company also reviews and evaluates the disaster recovery programs of vendors which provide certain third-party systems that the Company considers critical. The Company has obtained insurance protection intended to cover losses due to network security breaches; there is no guarantee, however, that such insurance would cover all costs associated with any breach, damage or failure of our computer systems and network infrastructure.

We continually encounter technological change. The financial services industry is continually undergoing rapid technological change with frequent introductions of new technology-driven products and services. The effective use of technology increases efficiency and enables financial institutions to better serve customers and to reduce costs. Our future success depends, in part, upon our ability to address the needs of our customers by using technology to provide products and services that will satisfy customer demands, as well as to create additional efficiencies in our operations. Our largest competitors have substantially greater resources to invest in technological improvements. Furthermore, new payment services developed and offered by non-financial institution competitors pose an increasing threat to the traditional payment services offered by financial institutions. We may not be able to effectively implement new technology-driven products and services or be successful in marketing these products and services to our customers and we may not be able to effectively deploy new technologies to improve our operational efficiency. Failure to successfully keep pace with technological change affecting the financial services industry could have a material adverse effect on us.

The results of our operations may be adversely affected by environmental conditions. During the course of making loans secured by real estate, we have acquired and may acquire in the future, property securing loans that are in default. There is a risk that we could be required to investigate and clean-up hazardous or toxic substances or chemical releases at such properties after acquisition in a foreclosure action, and that we may be held liable to a governmental entity or third parties for property damage, personal injury and investigation and clean-up costs incurred

by such parties in connection with such contamination. In addition, the owner or former owners of contaminated sites may be subject to common law claims by third parties based on damages and costs resulting from environmental contamination emanating from such property. An environmental assessment of real estate securing commercial loans is completed prior to loan closing. This initial assessment may indicate a higher level of testing is needed. The borrower is then required to have further testing and complete any remedial

---

action recommended. To date, we have not been subject to any environmental claims. There can be no assurance, however, that this will remain the case in the future.

Our ability to grow may be limited. We intend to seek to expand our banking franchise, organically and by acquiring other financial institutions or branches and other financial service providers if the right opportunity occurs. However, we have no specific plans for expansion or acquisitions at this time. Our ability to grow through selective acquisitions of other financial institutions or branches will depend on successfully identifying, acquiring and integrating those institutions or branches. We cannot assure you that we will be able to generate organic growth or identify attractive acquisition candidates, make acquisitions on favorable terms or successfully integrate any acquired institutions or branches.

We expect that our return on equity will be low compared to other financial institutions as a result of our high level of capital. Return on average equity, which equals net income divided by average equity, is a ratio used by many investors to compare the performance of a particular company with other companies. Our return on equity may be low while we continue to leverage capital levels via organic growth of loans and deposits. We may manage excess capital through dividend payments and a stock repurchase program when cash availability and market prices make such purchases appropriate. As we implement our strategic plan to increase net interest income and non-interest income via organic growth, we expect our return on equity ratio to improve. Failure to achieve a competitive return on average equity might make an investment in our common stock unattractive to some investors and might cause our common stock to trade at lower prices than comparable financial institutions with higher returns on average equity.

If we fail to maintain an effective system of internal control over financial reporting, we may not be able to accurately report our financial results or prevent fraud, and, as a result, shareholders and depositors could lose confidence in our financial reporting, which could adversely affect our business, the trading price of our stock and our ability to attract additional deposits. Section 404 of the Sarbanes-Oxley Act of 2002 (the “Sarbanes-Oxley Act”) and the rules and regulations of the Securities and Exchange Commission (the “SEC”), requires us to evaluate our internal control over financial reporting and provide an annual management report on our internal control over financial reporting, including, among other matters, management’s assessment of the effectiveness of internal control over financial reporting. The Company has established a process to document and evaluate its internal controls over financial reporting in order to satisfy the Sarbanes-Oxley Act and related regulations, which require management consideration of the Company’s internal controls over financial reporting on an annual basis. In this regard, management has dedicated internal resources and adopted a detailed work plan to (i) assess and document the adequacy of internal controls over financial reporting, (ii) take steps to improve control processes, where appropriate, (iii) validate through testing that controls are functioning as documented and (iv) maintain a continuous internal reporting and improvement process for internal control over financial reporting. The Company’s management and Audit/Risk Committee have made the Company’s compliance with Section 404 a high priority. The Company cannot be certain that these measures will ensure that the Company implements and maintains adequate controls over its financial processes and reporting in the future. Any failure to implement appropriate new or improved controls in response to changes in financial processes or reporting, or difficulties encountered in their implementation could harm the Company’s operating results or cause the Company to fail to meets its reporting obligations. If the Company fails to correct any significant deficiencies in the design or operating effectiveness of internal controls over financial reporting or fails to prevent fraud, current and potential shareholders and depositors could lose confidence in the Company’s financial reporting, which could harm its business and the trading price of its stock.

Our risk management framework may not be effective in mitigating risk and reducing the potential for significant losses. Our risk management framework is designed to minimize risk and loss to the Company. We seek to identify, measure, monitor, report and control our exposure to risk, including credit, interest rate, liquidity, price, operations, compliance, strategic, and reputation risks. We additionally segregate and assess information technology and human resource risks due to their complexity and over-arching risk profiles. While we deploy a diverse set of risk

monitoring and mitigation techniques, including internal management and third-party engagement in risk processes, risk identification and mitigation processes are inherently limited because they cannot anticipate the existence or future development of currently unanticipated or unknown risks. Recent economic conditions and heightened legislative and regulatory scrutiny of the financial services industry, among

other developments, have increased our level of risk. Accordingly, we could suffer losses as a result of our failure to properly anticipate and manage these risks.

Public shareholders do not exercise voting control over us. A majority of our voting stock is owned by Lake Shore, MHC. Lake Shore, MHC is controlled by its Board of Directors, which consist of those persons who are members of the Board of Directors of Lake Shore Bancorp and Lake Shore Savings. Lake Shore, MHC will determine the outcome of the election of the Board of Directors of Lake Shore Bancorp, and, as a general matter, controls the outcome of most matters presented to the shareholders of Lake Shore Bancorp for resolution by vote. Consequently, Lake Shore, MHC, acting through its Board of Directors, is able to control the business and operations of Lake Shore Bancorp and may be able to prevent any challenge to the ownership or control of Lake Shore Bancorp by shareholders other than Lake Shore, MHC. There is no assurance that Lake Shore, MHC will not take actions that the public shareholders believe are against their interests.

A new accounting standard may require us to increase our allowance for loan losses and may have a material adverse effect on our financial condition and results of operations. The Financial Accounting Standards Board has adopted a new accounting standard that will be effective for the Company and the Bank for our first fiscal year after December 15, 2019. This standard, referred to as Current Expected Credit Loss, or “CECL”, will require financial institutions to determine periodic estimates of lifetime expected credit losses on loans, and recognize the expected credit losses as allowances for loan losses. This will change the current method of providing allowances for loan losses that are probable, which may require us to increase our allowance for loan losses, and to greatly increase the types of data we will need to collect and review to determine the appropriate level of the allowance for loan losses. Any increase in our allowance for loan losses or expenses incurred to determine the appropriate level of the allowance for loan losses may have a material adverse effect on our financial condition and results of operations.

Risks Related To Recent Developments And The Banking Industry Generally

Changes in laws and regulations and the cost of regulatory compliance with new laws and regulations may adversely affect our operations and/or increase our costs of operations. Lake Shore Savings, Lake Shore Bancorp and Lake Shore, MHC are subject to extensive regulation, supervision and examination by the OCC and the Federal Reserve Board. Such regulation and supervision governs the activities in which an institution and its holding companies may engage and are intended primarily for the protection of federal deposit insurance funds and the depositors and borrowers of Lake Shore Savings, rather than for our stockholders. Regulatory authorities have extensive discretion in their supervisory and enforcement activities, including the imposition of restrictions on our operations, the classification of our assets and determination of the level of our allowance for loan losses. These regulations, along with existing tax, accounting, securities, insurance and monetary laws, rules, standards, policies, and interpretations control the methods by which financial institutions conduct business, implement strategic initiatives and tax compliance, and govern financial reporting and disclosures. Any change in such regulation and oversight, whether in the form of regulatory policy, regulations, legislation or supervisory action, may have a material impact on our operations. Further, changes in accounting standards can be both difficult to predict and involve judgment and discretion in their interpretation by us and our independent accounting firms. These changes could materially impact, potentially even retroactively, how we report our financial condition and results of operations, and our interpretation of those changes.

Our ability to pay dividends is subject to the ability of Lake Shore Savings to make capital distributions to Lake Shore Bancorp and the waiver of dividends by Lake Shore, MHC. The value of Lake Shore Bancorp's common stock is significantly affected by our ability to pay dividends to our public shareholders. Our long-term ability to pay dividends to our shareholders is based primarily upon the ability of the Bank to make capital distributions to Lake Shore Bancorp, and also the availability of cash at the holding company level in the event earnings are not sufficient to pay dividends. Under OCC safe harbor regulations, the Bank may distribute capital to Lake Shore Bancorp in an amount not exceeding net income for the current calendar period and the prior two calendar years. Our ability to pay dividends and the amount of such dividends is also affected by the ability of Lake Shore, MHC, our mutual holding company and majority shareholder of Lake Shore Bancorp, to waive the receipt of dividends declared by Lake Shore Bancorp. Lake Shore, MHC waived its right to receive most of its

dividends on its shares of Lake Shore Bancorp since its inception in 2006. The ability to waive dividends meant that Lake Shore Bancorp had more cash resources to pay dividends to its public shareholders than if Lake Shore, MHC accepted such dividends. Lake Shore, MHC is now required to obtain a waiver from the Federal Reserve Board allowing it to waive its right to dividends.

Under Section 239.8(d) of the Federal Reserve Board's Regulation MM governing dividend waivers, a mutual holding company may waive its right to dividends on shares of its subsidiary if the mutual holding company gives written notice of the waiver to the Federal Reserve Board and the Federal Reserve Board does not object. For a company such as Lake Shore, MHC, that was formed, issued stock and waived dividends prior to December 1, 2009, the Federal Reserve Board may not object to a dividend waiver if such waiver would not be detrimental to the safety and soundness of the savings bank subsidiary and the board of directors of the mutual holding company expressly determines that such dividend waiver is consistent with the board's fiduciary duties to the members of the mutual holding company. Regulation MM also requires as a condition to waiving dividends, that a mutual holding company obtain the approval of a majority of the eligible votes of its members within 12 months prior to the declaration of the dividend being waived.

Lake Shore, MHC solicited its members (the depositors of Lake Shore Savings Bank) to vote on the proposal to waive dividends and on February 6, 2019, the members approved the waiver of dividends. The Board of Directors of Lake Shore, MHC subsequently approved a dividend waiver in accordance with the regulations and submitted it to the Federal Reserve Board for its non-objection. As of March 7, 2019, Lake Shore, MHC received notice of the non-objection of the Federal Reserve Board to waive its right to receive dividends paid by the Company during the twelve months ending February 6, 2020. It is expected that Lake Shore, MHC will continue to waive future dividends, except to the extent dividends are needed to fund Lake Shore, MHC's continuing operations, subject to the ability of Lake Shore, MHC to obtain regulatory approval of its requests to waive dividends and its ability to obtain future member approval of dividend waivers.

While Lake Shore, MHC is grandfathered for purposes of the dividend waiver provisions of Regulation MM and has complied with all additional requirements imposed, we cannot predict whether the Federal Reserve Board will grant a dividend waiver request and, if granted, there can be no assurance as to the conditions, if any, the Federal Reserve Board will place on future dividend waiver requests by grandfathered mutual holding companies such as Lake Shore, MHC. If Lake Shore, MHC is unable to waive the receipt of dividends, our ability to pay dividends to our shareholders may be substantially impaired and the amounts of any such dividends may be significantly reduced.

We are subject to more stringent capital requirements, which may adversely impact our return on equity, require us to raise additional capital or constrain us from paying dividends or repurchasing shares. In July 2013, the federal banking agencies approved a new rule that substantially amended the regulatory risk-based capital rules applicable to us. The final rule implements the "Basel III" regulatory capital reforms and changes required by the Dodd-Frank Act.

The final rule included new minimum risk-based capital and leverage ratios, which became effective for Lake Shore Savings on January 1, 2015 and refined the definition of what constitutes "capital" for purposes of calculating these ratios. Refer to "Supervision and Regulation, Capital Rights" and Note 14 in Audited Consolidated Financial Statements for description of revised minimum capital regulations. The minimum capital requirements are: (i) a new common equity Tier 1 capital ratio of 4.5%; (ii) a Tier 1 capital ratio of 6% (increased from 4%); (iii) a total capital ratio of 8% (unchanged from current rules); and (iv) a Tier 1 leverage ratio of 4%. The final rule also established a "capital conservation buffer" of 2.5%, and will result in the following minimum ratios: (i) a common equity Tier 1 capital ratio of 7.0%, (ii) a Tier 1 to risk-based assets capital ratio of 8.5%, and (iii) a total capital ratio of 10.5%. The new capital conservation buffer requirement was phased in beginning in January 2016 at 0.625% of risk-weighted assets and was fully implemented in January 2019. An institution is subject to limitations on paying dividends, engaging in share repurchases, and paying discretionary bonuses if its capital level falls below the buffer amount.

These limitations will establish a maximum percentage of eligible retained income that can be utilized for such actions.

39

Notwithstanding the foregoing, pursuant to EGRRCPA, the OCC 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 replace 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. The OCC'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. Until the OCC's proposed rule is finalized, the Basel III risk-based and leverage ratios remain in effect.

The application of more stringent capital requirements for Lake Shore Savings could, among other things, result in lower returns on equity, require the raising of additional capital, and result in regulatory actions such as the inability to pay dividends or repurchase shares if we were to be unable to comply with such requirements.

Our local economy may affect our future growth possibilities. Our success significantly depends upon the growth in population, income levels, deposits and housing starts in our current market area, which is primarily located in Western New York, in particular within Erie and Chautauqua counties. Unlike many larger institutions, we are not able to spread the risks of unfavorable local economic conditions across a large number of diversified economies and geographic locations. If the communities in which we operate do not grow, or if prevailing economic conditions locally or nationally are unfavorable, our business may be negatively affected. A weak economy could lead to a deterioration of the credit quality of our loan portfolio and reduce our level of customer deposits, which in turn would hurt our business. Moreover, the value of real estate or other collateral that may secure our loans could be adversely affected.

Competition in our primary market area may reduce our ability to attract and retain deposits and originate loans. We operate in a competitive market for both attracting deposits, which is our primary source of funds, and originating loans. Our most direct competition for savings deposits has come from commercial banks, credit unions, savings banks and online banks. Competition has increased in our market areas as a result of new entrants to the Erie County market area. We face additional competition for depositors from non-depository competitors such as the mutual fund industry, securities and brokerage firms, and insurance companies. Our competition for loans comes principally from commercial banks, savings banks, mortgage banking companies, credit unions, online retail mortgage lenders and other financial service companies. Competition for loan originations and deposits may limit our future growth and earnings prospects. Some of the institutions with which we compete have substantially greater resources than we have and may offer services that we do not provide. We expect competition to increase in the future as a result of legislative, regulatory and technological changes and the continuing trend of consolidation in the financial services industry. Our profitability will depend upon our continued ability to compete successfully in our market areas.

Changes in the Federal Reserve Board's monetary or fiscal policies could adversely affect our results of operations and financial condition. Our earnings will be affected by domestic economic conditions and the monetary and fiscal policies of the United States government and its agencies. The Federal Reserve Board has, and is likely to continue to have, an important impact on the operating results of banks through its power to implement national monetary policy, among other things, in order to curb inflation or combat a recession. The Federal Reserve Board affects the levels of bank loans, investments and deposits through its control over the issuance of United States government securities, its regulation of the discount rate applicable to member banks and its influence over reserve requirements to which member banks are subject. We cannot predict the nature or impact of future changes in monetary and fiscal policies.

Our stock price may be volatile due to limited trading volume. Our common stock is traded on the NASDAQ Global Market. However, the average daily trading volume in Lake Shore Bancorp's common stock has been relatively small,

averaging less than 2,000 shares per day during 2018. As a result, trades involving a relatively small number of shares may have a significant effect on the market price of the common stock, and it

---

may be difficult for investors to acquire or dispose of large blocks of stock without significantly affecting the market price.

We may be adversely affected by recent changes in U.S. tax laws and regulations. Changes in tax laws contained in the Tax Cuts and Jobs Act, which was enacted in December 2017, include a number of provisions that will have an impact on the banking industry, borrowers and the market for single-family residential real estate. Included in this legislation is a reduction of the Company's corporate income tax rate from 34% to 21% for tax years beginning after December 31, 2017. In addition, other changes include (i) a lower limit on the deductibility of mortgage interest on single-family residential mortgage loans, (ii) a limitation on interest deductions for home equity loans not used for home improvement, (iii) a limitation on the deductibility of business interest expense and (iv) a limitation on the deductibility of property taxes and state and local income taxes. These recent changes in the tax laws may have an adverse effect on the market for, and valuation of, residential properties, and on the demand for such loans in the future, and could make it harder for borrowers to make their loan payments. In addition, these recent changes may also have a disproportionate effect on taxpayers in states with high residential home prices and high state and local taxes, such as New York. If home ownership becomes less attractive, demand for mortgage loans could decrease. The value of the properties securing loans in our loan portfolio may be adversely impacted as a result of the changing economics of home ownership, which could require an increase in our provision for loan losses, which would reduce our profitability and could materially adversely affect our business, financial condition and results of operations.

Item 1B. Unresolved Staff Comments.

None.

Item 2. Properties.

We conduct our business through our corporate headquarters, administrative offices, and eleven branch offices. At December 31, 2018, the net book value of our buildings and premises was $8.3 million and the net book value of the computer equipment and other furniture and fixtures, and equipment at our offices totaled $1.1 million. For more information, see Note 6 and Note 9 in the Notes to our Audited Consolidated Financial Statements.

Location	Leased or Owned	Original Date Acquired
Corporate Headquarters		
31 East Fourth Street		
Dunkirk, NY 14048	Owned	2003
Branch Offices:		
Chautauqua County branches		
128 East Fourth Street		
Dunkirk, NY 14048	Owned/Leased(1)	1926
30 East Main Street		
Fredonia, NY 14063	Owned	1996
1 Green Avenue, WE		
Jamestown, NY 14701	Owned/Leased(2)	1996
115 East Fourth Street		
Jamestown, NY 14701	Owned	1997
106 East Main Street		
Westfield, NY 14787	Owned/Leased(3)	1998
Erie County branches		
5751 Transit Road		
East Amherst, NY 14051	Owned	2003
3111 Union Road		
Orchard Park, NY 14127	Owned(4)	2003
59 Main Street		
Hamburg, NY 14075	Leased(5)	2005
3438 Delaware Avenue		
Kenmore, NY 14217	Owned	2008
570 Dick Road		
Depew, NY 14043	Leased(6)	2009
4950 Main Street		
Snyder, NY 14226	Owned	2012
Administrative Offices:		
125 East Fourth Street		
Dunkirk, NY 14048	Owned	1995
123 East Fourth Street		
Dunkirk, NY 14048	Owned	2001
415 Washington Avenue		
Dunkirk, NY 14048	Owned	2010

(1) The building is owned. Additional parking lot is leased. The lease expires in 2019 with contract extension negotiations expected to begin in the 3rd quarter of 2019. Management plans to request a new 5 year lease.
(2) The building is owned. The land is leased. The lease expires in 2020, but has an option for a five-year renewal.
(3) The building is owned. Additional parking lot is leased. The lease expires in 2019, but has an automatic one-year renewal option.
(4) This building was purchased in 2017 when the lease expired. An addition to the building was also constructed during 2017.

(5) The lease expires in 2028.

(6) The lease expires in 2019, but has an option for a five-year renewal at expiration.

Item 3. Legal Proceedings.

At December 31, 2018, we are not involved in any pending legal proceedings other than routine legal proceedings occurring in the ordinary course of business. We believe that these routine legal proceedings, in the aggregate, are immaterial to our financial condition and results of operations.

Item 4. Mine Safety Disclosures.

Not applicable.

PART II

Item 5. Market for Registrant's Common Equity and Related Stockholder Matters.

Market Information

Lake Shore Bancorp, Inc. common stock trades on the Nasdaq Global Market under the symbol "LSBK".

The Board of Directors intends to review the payment of dividends quarterly and plans to continue to maintain a regular quarterly dividend, dependent upon certain factors such as our earnings, financial condition, capital requirements, regulatory limitations on the payment of dividends, and other relevant factors. No assurance can be given that dividends will be declared or, if declared, what the amount of dividends will be, or whether such dividends will continue. Refer to Part I, Item 1. "Business – Supervision and Regulation - Federal Banking Regulations - Capital Distributions" and "Business – Supervision and Regulation - Holding Company Regulation - Source of Strength and Waivers of Dividends by Lake Shore, MHC" and Part I, Item 1a. "Risk Factors – Risks Related to Recent Developments and The Banking Industry Generally" above for information on the possible restriction of dividend payments and MHC dividend waivers.

As of March 21, 2019, there were 751 stockholders of record (excluding the number of persons or entities holding stock in street name through various brokerage firms) of Lake Shore Bancorp, Inc. common stock.

The following table reports information regarding repurchases by Lake Shore Bancorp of its common stock in each month of the quarter ended December 31, 2018.

Period	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Maximum Number of Shares that May Yet be Purchased Under the Plans or Programs (1)
October 1 through October 31, 2018	26,900	$ 16.14	26,900	81,190
November 1 through November 30, 2018	-	-	-	81,190
December 1 through December 31, 2018	15,255	15.30	13,000	68,190
Total	42,155	$ 15.84	39,900	68,190

(1) On May 16, 2017, our Board of Directors approved a new stock repurchase plan pursuant to which we can repurchase up to 121,190 shares of our outstanding common stock. This amount represented approximately 5% of our outstanding common stock not owned by the MHC as of May 16, 2017. The repurchase plan does not have an expiration date and superseded the prior Board of Directors approved stock repurchase plan from December 11, 2015 which had 34,101 shares remaining available for purchase at May 15, 2017.

Item 6. Selected Financial Data.

Our selected consolidated financial and other operational data is set forth below, which is derived in part from, and should be read in conjunction with, our audited consolidated financial statements and notes thereto as of December 31, 2018 and 2017 and for the years ended December 31, 2018, 2017 and 2016, beginning on page F-1 of this Form 10-K. Our selected consolidated financial and other operational data as of December 31, 2016, 2015 and 2014 and for the years ended December 31, 2015 and 2014 are from audited consolidated financial statements and notes not included in this Form 10-K.

	As of December 31,				
	2018	2017	2016	2015	2014
	(Dollars in thousands)				
Selected financial condition data:					
Total assets	$ 545,708	$ 518,977	$ 489,174	$ 473,385	$ 487,471
Loans, net	392,471	365,063	326,365	297,101	284,853
Securities available for sale	86,193	80,421	86,335	113,213	138,202
Federal Home Loan Bank stock	1,545	1,631	1,340	1,454	1,375
Total cash and cash equivalents	30,751	40,913	45,479	34,227	35,811
Total deposits	432,458	405,153	385,893	369,155	386,939
Long-term debt	24,650	26,950	18,950	21,150	18,950
Total stockholders' equity	79,804	78,375	76,030	73,876	71,630
Allowance for loan losses	3,448	3,283	2,882	1,985	1,921
Non-performing loans	3,218	3,833	5,866	4,668	4,729
Non-performing assets	3,896	4,268	6,278	5,380	5,130

	For the year ended December 31,				
	2018	2017	2016	2015	2014
	(Dollars in thousands, except per share data)				
Selected operating data:					
Interest income	$ 21,536	$ 19,408	$ 17,518	$ 17,587	$ 17,879
Interest expense	3,602	2,630	2,294	2,757	3,348
Net interest income	17,934	16,778	15,224	14,830	14,531
Provision for loan losses	390	510	1,125	400	222
Net interest income after provision for loan losses	17,544	16,268	14,099	14,430	14,309
Total non-interest income	2,474	2,655	4,070	2,707	2,235
Total non-interest expense	15,433	14,360	13,879	13,083	12,819
Income before income taxes	4,585	4,563	4,290	4,054	3,725
Income taxes	585	1,185	775	716	567
Net income	$ 4,000	$ 3,378	$ 3,515	$ 3,338	$ 3,158
Basic earnings per common share	$ 0.66	$ 0.55	$ 0.58	$ 0.57	$ 0.55

Diluted earnings per common share	$ 0.66	$ 0.55	$ 0.58	$ 0.56	$ 0.55
Dividends declared per share	$ 0.40	$ 0.32	$ 0.28	$ 0.28	$ 0.28

	At or for the year ended December 31,				
	2018	2017	2016	2015	2014
Selected financial ratios and other data					
Performance ratios:					
Return on average assets	0.75%	0.67%	0.74%	0.70%	0.65%
Return on average equity	5.07%	4.34%	4.58%	4.57%	4.58%
Dividend payout ratio(1)	60.61%	58.18%	48.28%	50.00%	50.91%
Interest rate spread(2)	3.43%	3.45%	3.29%	3.18%	3.06%
Net interest margin(3)	3.61%	3.61%	3.44%	3.34%	3.21%
Efficiency ratio(4)	75.62%	73.89%	71.93%	74.60%	76.46%
Non-interest expense to average total assets	2.88%	2.86%	2.91%	2.73%	2.63%
Average interest-earning assets to average interest-bearing liabilities	125.68%	128.07%	129.18%	125.03%	120.93%
Book value per share(5)	$ 13.29	$ 12.85	$ 12.49	$ 12.31	$ 11.96
Capital ratios:					
Common Equity Tier 1 capital to risk-weighted assets(6)(7)	19.70%	20.82%	22.23%	24.21%	n/a
Total risk-based capital to risk-weighted assets(6)	20.59%	21.75%	23.15%	24.93%	25.71%
Tier 1 risk-based capital to risk-weighted assets(6)	19.70%	20.82%	22.23%	24.21%	24.95%
Tangible capital to tangible assets(6)	13.99%	14.40%	14.73%	14.31%	13.16%
Tier 1 leverage (core) capital to adjustable tangible assets(6)	13.99%	14.40%	14.73%	14.31%	13.16%
Equity to total assets	14.62%	15.10%	15.54%	15.61%	14.69%
Asset quality ratios:					
Non-performing loans as a percent of total net loans	0.82%	1.05%	1.80%	1.57%	1.66%
Non-performing assets as a percent of total assets	0.71%	0.82%	1.28%	1.14%	1.05%
Allowance for loan losses as a percent of total net loans	0.88%	0.90%	0.88%	0.67%	0.67%
Allowance for loan losses as a percent of non-performing loans	107.15%	85.65%	49.13%	42.52%	40.62%
Other data:					
Number of full service offices	11	11	11	11	11
Number of full-time equivalent employees	114	111	106	109	108

(1)Represents dividends declared per share as a percent of diluted earnings per share. This calculation does not take into account the waiver of dividends by Lake Shore, MHC.

(2)Represents the difference between the weighted-average yield on interest-earning assets and the weighted-average cost of interest-bearing liabilities for the year.

(3)Represents the net interest income as a percent of average interest-earning assets for the year.

(4)Represents non-interest expense divided by the sum of net interest income and non-interest income.

(5)Represents shareholders equity divided by outstanding shares.

(6)Represents the capital ratios of Lake Shore Savings Bank since Lake Shore Bancorp, Inc., as a savings and loan holding company with less than $3.0 billion in consolidated assets is not subject to formula-based capital requirements at the holding company level.

(7)Effective January 1, 2015, Lake Shore Savings Bank became subject to new capital requirements adopted by the OCC. The new requirements resulted in the creation of a new required ratio for Common Equity Tier 1 (“CET1”) capital.

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations.

This discussion and analysis reflects our consolidated financial statements and other relevant statistical data and is intended to enhance your understanding of our consolidated financial condition and results of operations. You should read the information in this section in conjunction with our audited consolidated financial statements and accompanying notes to the audited consolidated financial statements beginning on page F-1 of this Form 10-K, and the other statistical data provided in this Form 10-K.

Important Note Regarding Forward-Looking Statements

Certain statements in this annual report are "forward-looking" within the meaning of the Private Securities Litigation Reform Act of 1995, which statements generally can be identified by the use of forward-looking terminology, such as "may," "will," "expect," "estimate," "anticipate," "believe," "target," "plan," "project" or "continue" or the negatives thereof o variations thereon or similar terminology, and are made on the basis of management's current plans and analyses of our business and the industry in which we operate as a whole. These forward-looking statements are subject to risks and uncertainties, including, but not limited to, economic conditions, competition, interest rate sensitivity and exposure to regulatory and legislative changes, and the other risks and uncertainties identified in Part I, Item 1A "Risk Factors." These factors in some cases have affected, and in the future could affect, our financial performance and could cause actual results to differ materially from those expressed in or implied by such forward-looking statements. We do not undertake to publicly update or revise our forward-looking statements if future changes make it clear that any projected results expressed or implied therein will not be realized.

General Overview of the Company's Activities and Risks

Our results of operations depend primarily on our net interest income, which is the difference between the interest income we earn on loans and investments and the interest expense we pay on deposits, borrowings and other interest-bearing liabilities. Net interest income is affected by the relative amounts of interest-earning assets and interest-bearing liabilities and the interest rates we earn or pay on these balances.

Our operations are also affected by non-interest income, such as service charges and fees and gains and losses on the sales of securities and loans, our provision for loan losses and non-interest expenses which include salaries and employee benefits, occupancy and equipment costs, data processing, professional services, advertising and other general and administrative expenses.

Financial institutions like us, in general, are significantly affected by economic conditions, competition, and the monetary and fiscal policies of the federal government. Lending activities are influenced by the demand for and supply of housing and commercial real estate, competition among lenders, interest rate conditions, and funds availability. Our operations and lending are principally concentrated in the Western New York area, and our operations and earnings are influenced by local economic conditions. Deposit balances and cost of funds are influenced by prevailing market rates on competing investments, customer preferences, and levels of personal income and savings in our primary market area. Operations are also significantly impacted by government policies and actions

of regulatory authorities. Future changes in applicable law, regulations or government policies may materially impact the Company.

To operate successfully, we must manage various types of risk, including but not limited to, interest rate risk, credit risk, liquidity risk, operational and information technology risks, strategic risk, reputation risk and compliance risk. A significant form of market risk for the Company is interest rate risk, as the Company's assets and liabilities are sensitive to changes in interest rates. Interest rate risk is the exposure of our net interest income to adverse movements in interest rates. Net interest income is our primary source of revenue and interest rate risk is a significant non-credit related risk to which our Company is exposed. Net interest income is affected by changes in interest rates as well as fluctuations in the level and duration of our assets and liabilities. In addition to directly impacting net interest income, changes in interest rates can also affect the amount of new loan originations, the ability of borrowers and debt issuers to repay loans and debt securities, the volume of loan

repayments and refinancings, the flow and mix of deposits and the fair value of available for sale securities. In recent years, the Company has adjusted its strategies to manage interest rate risk by originating a greater volume of shorter-term, adjustable rate commercial real estate and commercial business loans and increasing its concentration of core deposits, which are less interest rate sensitive. In the third quarter of 2018, the Company entered into an interest rate swap arrangement with a notional amount of $3.0 million to convert a portion of its fixed rate residential, one- to four-family real estate loans into adjustable rate interest-earning assets, to better manage its exposure to movements in interest rates.

Credit risk is also a significant form of risk for the Company. Credit risk is the risk to our earnings and stockholders' equity that results from customers, to whom loans have been made, and from issuers of debt securities in which the Company has invested, failing to repay their obligations. The magnitude of risk depends on the capacity and willingness of borrowers and debt issuers to repay and the sufficiency of the value of collateral obtained to secure the loans made or investments purchased. This risk is managed by policies approved by the Company's Board of Directors, review of compliance with the policies and periodic reporting and evaluation of loans or securities that are non-performing or demonstrate other characteristics of potential loss.

Management Strategy

Our Reputation. Our primary management strategy has been to maintain our position as an authentic community bank, locally headquartered in Western New York, with over 127 years of service to our community. Our management team strives to accomplish this goal by continuing to emphasize our exceptional individualized customer service and financial strength, continued community involvement, effective risk management, strong capital levels, technological services and penetration in our market areas via organic growth of loans and deposits.

Branding and Marketing. We currently operate eleven full-service branch offices throughout Western New York, where our branch teams initiate and develop both consumer and commercial customer relationships in and around the surrounding market areas. We offer concierge banking services, together with our online and mobile customer conveniences, creating a truly individualized approach for customers to manage their finances whenever, wherever and however they wish. As a true local bank, we pride ourselves on offering competitive products delivered with the individualized service our customers have come to expect. Our experienced team of commercial bankers can meet the needs of nearly any type of business through a variety of checking and credit products, and banking services. Our team members live and work right here in our Western New York communities and can fully understand the specific challenges and opportunities our customers face daily. As the banking industry continues to evolve to meet the rapidly increasing demands of those we serve, specifically in the area of technological conveniences, we must continually listen keenly to our customers, and remain proactive in our efforts to provide the unparalleled service they have come to expect. From local decision-making, responding quickly and efficiently to customer needs, and utilizing technology to level the playing field with our competitors, we are committed to developing long-term relationships with our customers. Staying true to our local roots and mission of "Putting People First" continues to uniquely position us as a bank of choice in Western New York.

Technology. An important strategic objective is to continue to evaluate and enhance the technology supporting our customer service. We are committed to making investments in technology and we believe that it represents an efficient way to deploy a portion of our capital. To this end, the Company has developed a five year plan for the implementation of cost effective and efficient digital services to meet our customer's technology needs, to focus on attracting new customers, and to improve our operational efficiencies. Although we remain committed to expanding

our retail branch footprint whenever it makes strategic sense, we will be concentrating our near term efforts on expanding our digital footprint.

Our People. A large part of our success is related to customer service and customer satisfaction. Having employees who understand and value our clientele and their business is a key component to our success. We believe that our present staff is one of our competitive strengths, and thus the retention of such persons and our ability to continue to attract quality personnel is a high priority.

Lending. Our strategy is to grow our loan portfolio with emphasis on the origination of short-term adjustable rate commercial real estate, commercial business and home equity loans, while maintaining strong underwriting and asset quality. Historically, our lending portfolio has consisted predominantly of residential one- to four-family mortgage loans. At December 31, 2018 and 2017, residential one- to four-family mortgage loans (including loans to finance the construction of one- to four-family homes) constituted 39.5% and 39.6%, respectively, of our total loan portfolio at such respective dates. In the past, we have sold low-yield long-term conforming fixed rate one- to four-family residential loans that we originated on the secondary market, as part of our interest rate risk strategy and asset/liability management, and may do so in the future, if it is deemed appropriate. We typically retain servicing rights when we sell one- to four-family residential mortgage loans.

Due to the interest rate risk inherent in holding long-term, fixed rate one- to four-family real estate loans in our portfolio, we have been strategically focused on increasing the originations of commercial real estate loans to finance the purchase of real property, which generally consists of developed real estate. We have also focused on commercial business lending to small businesses, including business installment loans, lines of credit and other commercial loans. These types of commercial loans are generally made at higher interest rates and for shorter terms than one- to four-family real estate loans, which reduces the Bank’s interest rate risk. At December 31, 2018 and 2017, our commercial real estate loan portfolio (including loans to finance the construction of commercial real estate) represented the largest holdings in our loan portfolio at 44.0% and 42.0%, respectively, of total loans.

Commercial business loans, home equity loans and consumer loans provide diversification to our loan portfolio while meeting the needs of our customers. As of December 31, 2018 and 2017, our commercial business loan portfolio represented 5.6% and 7.6%, respectively, of total loans, while the home equity loan portfolio represented 10.7% and 10.4%, of total loans, respectively.

Asset Quality. We remain committed to maintaining prudent underwriting standards and aggressively monitoring our loan portfolio to maintain asset quality. We introduce loan products only when we are confident that our staff has the necessary expertise to originate and administer such loans, and that sound underwriting and collection procedures are in place. Our goal is to continue to improve our asset quality through prudent underwriting standards and the diligence of our loan collection personnel. At December 31, 2018, our ratio of non-performing loans to total net loans was 0.82% as compared to 1.05% at December 31, 2017.

Investment Portfolio. Our investment policy is designed primarily to complement our lending and deposit activities and to provide and maintain liquidity within established guidelines, to generate a favorable return without incurring undue interest rate and credit risk, and to manage the interest rate sensitivity of our assets and liabilities. We employ a third party financial advisor to assist us in managing our investment portfolio and developing balance sheet strategies.

At December 31, 2018 and 2017, we had $86.2 million and $80.4 million, respectively, invested in securities available for sale, the majority of which are agency collateralized mortgage obligation securities (“CMOs”), agency mortgage-backed securities and municipal securities. At December 31, 2018, we had a $165,000, net unrealized gain

on the investment portfolio as compared to a $1.2 million net unrealized gain as of December 31, 2017. The decrease in the net unrealized gain during 2018 was due to an increase in market interest rates, which had a negative impact on the market value of our securities portfolio as demand increased for new-issue securities with higher rates.

Asset Liability Management. As mentioned earlier in this report, our business consists primarily of originating commercial real estate loans and one- to four-family residential real estate loans secured by properties in our market area and investing in residential mortgage backed securities, CMOs and municipal securities. One- to four-family residential real estate loans generally involve a lower degree of credit risk and carry a lower yield than commercial real estate and commercial business loans. The average maturity of residential real estate loans is longer than that for commercial loans. Our loans are primarily funded by core deposits (i.e. checking, savings and money market accounts) and time deposits (which typically mature within 2 to 3 years on average). As a

result, we are exposed to interest rate risk, as our interest-bearing liabilities will mature or re-price more quickly than our interest-earning assets in a rising rate environment. A key part of our business strategy is to manage interest rate risk and reduce the exposure of our net interest income to changes in market interest rates. The Asset and Liability Committee of the Board of Directors is responsible for evaluating the interest rate risk inherent in our balance sheet, for determining the level of risk that is appropriate given our business strategy, operating environment, capital, liquidity and performance objectives and for managing this risk consistent with the guidelines approved by the Board of Directors. Senior management monitors the level of interest rate risk and the Asset and Liability Committee meets at least quarterly to review the interest rate risk position.

Although we plan to continue to originate one- to four-family residential mortgage loans going forward, we have been and intend to continue to increase our focus on the origination of commercial real estate loans and commercial business loans. Commercial loans generally have adjustable rates, higher returns and shorter durations than one- to four-family residential real estate loans, thereby reducing interest rate risk levels. As part of our asset liability strategy, we review the duration of assets on our balance sheet, and if necessary, we may sell loans or securities to help manage our interest rate risk.

Our strategy also involves managing interest expense. In recent years, we have decreased the amount of higher-cost fixed rate time deposits and have concentrated on building lower-cost core deposits. We offer competitive rates on a variety of deposit products to meet the needs of our customers and to meet asset-liability goals. We also consider borrowed funds or brokered deposits to supplement our deposit portfolio or liquidity requirements, as needed.

We are actively involved in managing our balance sheet through the direction of our Asset-Liability Committee and the assistance of a third party advisor. Historic economic conditions have underscored the importance of a strong balance sheet. We strive to achieve this through managing our interest rate risk and maintaining strong capital levels, putting aside adequate loan loss reserves and keeping liquid assets on hand. In the third quarter of 2018, the Company entered into an interest rate swap arrangement with a notional amount of $3.0 million to convert a portion of its fixed rate residential, one- to four-family real estate loans into adjustable rate interest-earning assets, to better manage its exposure to movements in interest rates. In addition to the interest rate swap arrangement, we have diversified our asset mix during the last three years, which may result in improved net interest margins and reduced exposure of our net interest income and earnings to interest rate risk. We will continue to manage our interest rate risk by diversifying the type and maturity of assets in our loan and investment portfolios and monitoring the maturities in our deposit portfolio and borrowing facilities.

Critical Accounting Policies

It is management's opinion that accounting estimates covering certain aspects of our business have more significance than others due to the relative importance of those areas to overall performance, or the level of subjectivity required in making such estimates.

Allowance for loan losses. Management considers the accounting policy relating to the allowance for loan losses to be a critical accounting policy given the uncertainty in evaluating the level of the allowance for loan losses required for probable credit losses and the material effect that such judgments can have on the results of operations. Management's monthly evaluation of the adequacy of the allowance considers our historical loan loss experience, review of specific loans that are past due or where management has knowledge of possible credit problems, current economic conditions, and such other factors considered appropriate to estimate loan losses. Management uses presently available

information to estimate probable losses on loans; however, future additions to the allowance may be necessary based on changes in estimates, assumptions, or economic conditions. Significant factors that could give rise to changes in these estimates include, but are not limited to, changes in economic conditions in our local market areas, concentrations of risk or a decline in local property values. The Company's determination as to the amount of its allowance for loan losses is subject to review by its bank regulators, which can require the establishment of additional loss allowances. Refer to Note 5 of the Notes to Audited Consolidated Financial Statements for more information on the allowance for loan losses.

Investment Valuations. In management's opinion, the accounting policy relating to the valuation of investments is a critical accounting policy. We use a third party vendor to provide independent pricing of the securities in our investment portfolio. The third party vendor utilizes public quotations, third party dealer quotes and pricing models. The determination of fair value pricing on investments may require significant judgment or estimation, particularly when liquid markets do not exist for the item being valued. The use of different assumptions for these valuations could produce significantly different results which may have material positive or negative effects on the results of our operations. Refer to Note 13 of the Notes to Audited Consolidated Financial Statements for more information on fair value.

Impairment of Investments. Management also considers the accounting policy relating to the impairment of investments to be a critical accounting policy due to the subjectivity and judgment involved and the material effect an impairment loss could have on the consolidated results of income. The credit portion of a decline in the fair market value of investments below cost deemed to be other-than-temporary ("OTTI") may be charged to earnings resulting in the establishment of a new cost basis for an asset. Management continually reviews the current value of its investments for evidence of OTTI. Refer to Note 3 of the Notes to Audited Consolidated Financial Statements for more information on OTTI.

These critical policies and their application are reviewed periodically by our Audit/Risk Committee and our Board of Directors. All accounting policies are important, and as such, we encourage the reader to review each of the policies included in the notes to the Audited Consolidated Financial Statements to better understand how our financial performance is reported.

Analysis of Net Interest Income

Net interest income represents the difference between the interest we earn on our interest-earning assets, such as commercial and residential mortgage loans and investment securities, and the expense we pay on interest-bearing liabilities, such as deposits and borrowings. Net interest income depends on both the volume of our interest-earning assets and interest-bearing liabilities and the interest rates we earn or pay on them.

Average Balances, Interest and Average Yields. The following table sets forth certain information relating to our average balance sheets and reflects the average yield on interest-earning assets and average cost of interest-bearing liabilities, interest earned and interest paid for the years indicated. Such yields and costs are derived by dividing income or expense by the average balance of interest-earning assets or interest-bearing liabilities, respectively, for the years presented. Average balances are derived from daily balances over the years indicated. The average balances for loans are net of allowance for loan losses, but include non-accrual loans. The loan yields include net amortization of certain deferred fees and costs that are considered adjustments to

yields. Interest income on securities does not include a tax equivalent adjustment for bank qualified municipal bonds.

	For the Year Ended December 31, 2018			For the Year Ended December 31, 2017			For the Year Ended December 31, 2016		
	Average Balance	Interest Income/ Expense	Yield/ Rate	Average Balance	Interest Income/ Expense	Yield/ Rate	Average Balance	Interest Income/ Expense	Yield/ Rate
	(Dollars in thousands)								
Interest-earning assets:									
Interest-earning deposits & federal funds sold	$ 32,109	$ 572	1.78%	$ 31,632	$ 270	0.85%	$ 31,810	$ 114	0.36%
Securities(1)	84,419	2,641	3.13%	80,536	2,448	3.04%	98,613	2,901	2.94%
Loans	379,617	18,323	4.83%	352,309	16,690	4.74%	312,359	14,503	4.64%
Total interest-earning assets	496,145	21,536	4.34%	464,477	19,408	4.18%	442,782	17,518	3.96%
Other assets	39,849			37,527			34,366		
Total assets	$ 535,994			$ 502,004			$ 477,148		
Interest-bearing liabilities									
Demand & NOW accounts	$ 50,790	$ 58	0.11%	$ 50,543	$ 63	0.12%	$ 45,584	$ 37	0.08%
Money market accounts	114,212	825	0.72%	86,517	283	0.33%	77,649	153	0.20%
Savings accounts	52,740	30	0.06%	53,874	31	0.06%	48,402	28	0.06%
Time deposits	150,550	2,064	1.37%	147,764	1,703	1.15%	150,889	1,612	1.07%
Borrowed funds & other interest-bearing liabilities	26,486	625	2.36%	23,969	550	2.29%	20,231	464	2.29%
Total interest-bearing liabilities	394,778	3,602	0.91%	362,667	2,630	0.73%	342,755	2,294	0.67%
Other non-interest bearing liabilities	62,304			61,521			57,714		
Stockholders' equity	78,912			77,816			76,679		
Total liabilities & stockholders' equity	$ 535,994			$ 502,004			$ 477,148		
Net interest income		$ 17,934			$ 16,778			$ 15,224	
Interest rate spread			3.43%			3.45%			3.29%

Net interest margin	3.61%	3.61%	3.44%

(1) The tax equivalent adjustment for bank qualified municipal securities results in rates of 3.63%, 4.09% and 3.88% for the years ended December 31, 2018, 2017 and 2016, respectively.

Rate Volume Analysis. The following table analyzes the dollar amount of changes in interest income and interest expense for major components of interest-earning assets and interest-bearing liabilities. The table shows the amount of the change in interest income or expense caused by either changes in outstanding balances (volume) or changes in interest rates. The effect of a change in volume is measured by applying the average rate during the first year to the volume change between the two years. The effect of changes in rate is measured by applying the change in rate between the two years to the average volume during the first year. Changes attributable to both rate and volume, which cannot be segregated, have been allocated proportionately to the absolute value of the change due to volume and the change due to rate.

	Year Ended December 31, 2018 Compared to Year Ended December 31, 2017			Year Ended December 31, 2017 Compared to Year Ended December 31, 2016		
	Rate	Volume	Net Change	Rate	Volume	Net Change
	(Dollars in thousands)					
Interest-earning assets:						
Interest-earning deposits & federal funds sold	$ 298	$ 4	$ 302	$ 157	$ (1)	$ 156
Securities	73	120	193	94	(547)	(453)
Loans, including fees	320	1,313	1,633	300	1,887	2,187
Total interest-earning assets	691	1,437	2,128	551	1,339	1,890
Interest-bearing liabilities:						
Demand & NOW accounts	(5)	-	(5)	22	4	26
Money market accounts	428	114	542	111	19	130
Savings accounts	-	(1)	(1)	-	3	3
Time deposits	328	33	361	125	(34)	91
Total deposits	751	146	897	258	(8)	250
Other interest-bearing liabilities:						
Borrowed funds & other interest-bearing liabilities	26	49	75	17	69	86
Total interest-bearing liabilities	777	195	972	275	61	336
Total change in net interest income	$ (86)	$ 1,242	$ 1,156	$ 276	$ 1,278	$ 1,554

Comparison of Financial Condition at December 31, 2018 and December 31, 2017

Total assets at December 31, 2018 were $545.7 million, an increase of $26.7 million, or 5.2%, from $519.0 million at December 31, 2017. The increase in total assets was primarily due to a $27.4 million increase in net loans receivable, a $5.8 million increase in securities available for sale and a $3.4 million increase in bank owned life insurance, partially offset by a $10.2 million decrease in cash and cash equivalents.

Cash and cash equivalents decreased by $10.2 million, or 24.8%, from $40.9 million at December 31, 2017 to $30.8 million at December 31, 2018. The decrease was primarily due to a net cash outflow of $30.1 million relating to net loan originations and principal collections and a net cash outflow of $6.7 million for purchases, sales and maturities on the investment portfolio, partially offset by a $27.3 million increase in deposits during the year ended December 31, 2018.

Securities available for sale increased by $5.8 million, or 7.2%, to $86.2 million at December 31, 2018 compared to $80.4 million at December 31, 2017. The increase was primarily due to $16.2 million of new securities purchased, partially offset by the receipt of $9.4 million for maturities, prepayments and calls of securities and $1.0 million of unrealized losses on the securities portfolio during the year ended December 31, 2018. The unrealized losses on the securities portfolio were primarily due to an increase in market interest rates during the year ended December 31, 2018.

Net loans receivable increased during the year ended December 31, 2018 as shown in the table below:

	At December 31,		Change	
	2018	2017	$	%
	(Dollars in thousands)			
Real Estate Loans:				
Residential, one- to four-family(1)	$ 155,024	$ 144,614	$ 10,410	7.2 %
Home equity	41,830	38,078	3,752	9.9 %
Commercial	150,475	122,747	27,728	22.6 %
Construction - Commercial	22,252	30,802	(8,550)	(27.8)%
Total real estate loans	369,581	336,241	33,340	9.9 %
Other Loans:				
Commercial	21,825	27,612	(5,787)	(21.0)%
Consumer	1,156	1,355	(199)	(14.7)%
Total gross loans	392,562	365,208	27,354	7.5 %
Allowance for loan losses	(3,448)	(3,283)	(165)	5.0 %
Net deferred loan costs	3,357	3,138	219	7.0 %
Loans receivable, net	$ 392,471	$ 365,063	$ 27,408	7.5 %

(1) Includes one- to four-family construction loans.

During 2018, we continued to remain strategically focused on originating shorter duration, adjustable rate commercial real estate loans to diversify our asset mix, to reduce interest rate risk and to increase our net interest margin.

Bank owned life insurance increased by $3.4 million, or 18.8%, to $21.5 million at December 31, 2018 as compared to $18.1 million at December 31, 2017. During the year ended December 31, 2018, the Company purchased an additional $3.0 million of bank owned life insurance to offset the costs of benefits provided under an employee retention agreement entered into during 2018.

The table below shows changes in deposit balances by type of deposit account between December 31, 2018 and December 31, 2017:

	At December 31,	At December 31,	Change

	2018	2017	$	%
	(Dollars in thousands)			
Core Deposits				
Demand deposits and NOW accounts:				
Non-interest bearing	$ 55,327	$ 54,618	$ 709	1.3 %
Interest bearing	50,211	49,869	342	0.7 %
Money market	119,885	99,305	20,580	20.7 %
Savings	52,050	52,922	(872)	(1.6) %
Total core deposits	277,473	256,714	20,759	8.1 %
Non-core Deposits				
Time deposits	154,985	148,439	6,546	4.4 %
Total deposits	$ 432,458	$ 405,153	$ 27,305	6.7 %

The increase in total deposits was primarily due to growth in core deposits. During 2018 the Company strategically offered competitive rates on money market products as a way to raise funds for loan growth and to shift our deposit mix away from longer duration, fixed rate time deposits in an effort to manage interest rate risk. As the Federal Reserve raised short term interest rates by 100 basis points during 2018, all banks experienced an increase in the cost of funds, as consumers preferred higher rates and longer terms on deposit products, resulting in an increase in time deposits.

Our borrowings, consisting of advances from the FHLBNY, decreased by $2.3 million, or 8.5%, from $27.0 million at December 31, 2017 to $24.7 million at December 31, 2018. The decrease was due to the use of excess liquidity to pay off long-term debt which matured during the year ended December 31, 2018.

Total stockholders' equity increased by $1.4 million, or 1.8%, from $78.4 million at December 31, 2017 to $79.8 million at December 31, 2018. The increase in stockholders' equity was primarily due to net income of $4.0 million and a $197,000 increase in additional paid in capital attributed to stock based compensation, partially offset by $1.4 million of treasury stock repurchases, $880,000 in cash dividends paid and $818,000 in other comprehensive losses during the year ended December 31, 2018.

Comparison of Results of Operations for the Years Ended December 31, 2018 and 2017

General. Net income was $4.0 million for the year ended December 31, 2018, or $0.66 per diluted share, an increase of $662,000, or 18.4%, compared to net income of $3.4 million, or $0.55 per diluted share, for the year ended December 31, 2017. Net income for the year ended December 31, 2018 reflected a $1.2 million increase in net interest income, a $600,000 decrease in income tax expense and a $120,000 decrease in provision for loan losses which was partially offset by a $1.1 million increase in non-interest expenses and a $181,000 decrease in non-interest income when compared to the year ended December 31, 2017.

Net Interest Income. Net interest income increased by $1.2 million, or 6.9%, to $17.9 million for the year ended December 31, 2018 compared to $16.8 million for the year ended December 31, 2017. Interest income and interest expense both increased for the year ended December 31, 2018 when compared to the year ended December 31, 2017. Interest rate spread and net interest margin were 3.43% and 3.61%, respectively, for the year ended December 31, 2018 compared to 3.45% and 3.61%, respectively, for the year ended December 31, 2017.

Interest Income. Interest income increased by $2.1 million, or 11.0%, to $21.5 million for the year ended December 31, 2018 compared to $19.4 million for the year ended December 31, 2017 primarily due to an increase in loan interest income. Loan interest income increased by $1.6 million, or 9.8%, to $18.3 million for the year ended December 31, 2018 compared to the year ended December 31, 2017, primarily due to a $27.3 million, or 7.8%, increase in the average balance of loans from $352.3 million for the year ended December 31, 2017 to $379.6 million for the year ended December 31, 2018. The increase in the average balance of loans was primarily due to an increase in the average balance of commercial real estate, commercial business and home equity loans, partially offset by a

decrease in the average balance of residential one-to four-family loans. The average yield on the loan portfolio was 4.83% for the year ended December 31, 2018 compared to 4.74% for the year ended December 31, 2017. The 2018 increase in the average yield was primarily due to an increase in higher yielding commercial real estate loans and an increase in market interest rates. The 2018 increase in average yield was partially impacted by the prior year receipt of $202,000 of interest income on one non-performing commercial real estate loan which paid off during 2017. The average yield on the loan portfolio would have been 4.68% for the year ended December 31, 2017 if the $202,000 of interest income received on the non-performing loan payoff was excluded.

Investment income increased $193,000, or 7.9%, to $2.6 million for the year ended December 31, 2018 compared to the year ended December 31, 2017. The average balance and average yield on the investment portfolio increased from $80.5 million and 3.04% for the year ended December 31, 2017 to $84.4 million and 3.13% for the year ended December 31, 2018. The increase in the average balance and average yield of the

investment portfolio was primarily due to the purchase of higher yielding securities, which was partially offset by paydowns received on lower yielding securities since December 31, 2017.

Other interest income increased by $302,000, or 111.9%, to $572,000 for the year ended December 31, 2018 compared to the year ended December 31, 2017. This increase was primarily due to a 93 basis points increase in the average yield on the interest earning deposits and federal funds sold portfolio. The average yield increased from 0.85% for the year ended December 31, 2017 to 1.78% for the year ended December 31, 2018. The average yield increased as a result of a 100 basis points increase in the fed funds rate by the Federal Reserve since December 31, 2017.

Interest Expense. Interest expense increased by $972,000, or 37.0%, to $3.6 million for the year ended December 31, 2018 when compared to the year ended December 31, 2017 primarily due to an increase in interest paid on deposits. Interest paid on deposits increased by $897,000, or 43.1%, to $3.0 million for the year ended December 31, 2018 when compared to the year ended December 31, 2017. Interest expense was primarily impacted by a 39 and 22 basis points increase, respectively, in the average interest rates paid on money market and time deposit accounts as a result of the increase in short term market interest rates since December 31, 2017. The increase in deposit interest expense was also due to an increase in the average balance of deposits since December 31, 2017; specifically a $27.7 million increase in average money market account balances and a $2.8 million increase in average time deposit balances. The increase in the average balance of money market accounts was primarily due to competitive rates being offered on these products in an effort to attract funds for loan growth.The average balance and average yield of the deposit portfolio during the year ended December 31, 2018 was $368.3 million and 0.81%, respectively, as compared to $338.7 million and 0.61%, respectively, for the year ended December 31, 2017.

The interest expense related to advances from the FHLBNY increased $80,000, or 17.1%, to $548,000 for the year ended December 31, 2018 when compared to the year ended December 31, 2017 primarily due to an increase in the average balance and average rate of FHLBNY advances. The average balance of advances from the FHLBNY for the year ended December 31, 2018 was $25.7 million with an average rate of 2.13% compared to an average balance of $23.1 million and an average rate of 2.03% for the year ended December 31, 2017. The Bank increased borrowings in order to take advantage of low cost fixed-rates to fund loan growth. The increase in the average rate paid on borrowings was primarily due to the increase in market interest rates since the year ended December 31, 2017.

Provision for Loan Losses. A $390,000 provision to the allowance for loan losses was recorded during the year ended December 31, 2018, which was a $120,000, or 23.5%, decrease in comparison to the provision recorded during the year ended December 31, 2017. The decrease in provision expense was primarily due to a higher provision being recorded for the downgrade in loan classification for two commercial loan relationships during the year ended December 31, 2017. As of December 31, 2018, these specific commercial loans were performing, and well collateralized by commercial real estate, as well as fixtures and equipment.

The $390,000 provision recorded during the year ended December 31, 2018 was a result of a comprehensive evaluation that is completed on a quarterly basis. The quarterly evaluations reflect analyses of individual borrowers and historical loss experience, supplemented as necessary by credit judgment that considers observable trends, conditions, and other relevant environmental and economic factors. The evaluation for the year ended December 31, 2018 consisted of the following:

- $537,000 net provision for commercial real estate loans, which included a:
  - $326,000 general allowance on performing commercial real estate loans; primarily due to a $27.7 million, or 22.6%, increase in this segment of the loan portfolio since December 31, 2017, to reflect inherent losses within the portfolio;
  - $181,000 specific allowance related to charge-offs on two previously impaired commercial real estate loans that were foreclosed upon during the year ended December 31, 2018; and a
  - $30,000 specific allowance related to the impairment of one commercial real estate loan during the year ended December 31, 2018;
- $97,000 credit provision on construction – commercial real estate loans as a result of an $8.6 million, or 27.8%, decrease in this segment of the loan portfolio since December 31, 2017;
- $38,000 credit provision for commercial business loans, which included a:
  - $59,000 credit provision as a result of a $5.8 million, or 21.0%, decrease in this segment of the loan portfolio since December 31, 2017; which was partially offset by a
  - $21,000 net provision to reflect an increase in reserves on criticized and classified commercial business loans;
- $35,000 net credit provision on one-to four-family, home equity, construction – one- to four- family and consumer loans which reflected a:
  - $77,000 credit provision for changes in the related environmental factors used to qualitatively assess inherent loan losses;
  - $18,000 credit provision to reflect a decrease in the historical average net charge-off rate for these loan types over the last five years; which was partially offset by a
  - $14,000 provision associated with the net $14.0 million, or 7.6%, increase in loan growth for these loan types during 2018 to reflect inherent losses on new loan originations; and a
  - $46,000 specific provision related to net charge-offs recorded on these loan types during the year ended December 31, 2018; and a
- $23,000 unallocated provision for loan losses to reflect the margin of imprecision inherent in the underlying assumptions used in the methodologies for estimating allocated and general losses in the portfolio.

During the year ended December 31, 2017, the Company recorded a $510,000 provision to the allowance for loan losses. The provision consisted of the following:

- $217,000 provision on commercial business loans, primarily due to a $7.2 million, or 35.0%, increase in the commercial business loan portfolio since December 31, 2016, to reflect inherent losses on new loan originations. The provision was also due to a $865,000 increase in criticized and classified loans in this portfolio since December 31, 2016;
- $197,000 general allowance on performing construction loans, primarily due to an $18.5 million, or 149.6%, increase in the construction loan portfolio since December 31, 2016, to reflect inherent losses within the portfolio;
- $65,000 credit provision for commercial real estate loans, which included a:
  - $390,000 decrease in reserves for impaired commercial real estate loans, primarily due to an increase in the estimated value of collateral for one impaired commercial real estate loan, as a result of an increase in the occupancy rate;
  - $176,000 credit provision for changes in the related environmental factors used to qualitatively assess inherent loan losses on commercial real estate loans; partially offset by a:
  - $211,000 provision to reflect inherent risk associated with growth in commercial real estate loan originations. The commercial real estate loan portfolio increased by $15.5 million, or 14.5%, since December 31, 2016;
  - $215,000 provision for the downgrade of certain performing commercial loan relationships; and a

o $75,000 charge-off on one foreclosed loan during the year ended December 31, 2017;

· $118,000 provision for one-to four-family, home equity and consumer loans to reflect an increase in the historical average net charge-offs for these loan types over the last five years and for net charge-offs recorded during the year ended December 31, 2017; and

- $43,000 unallocated provision for loan losses, to reflect the margin of imprecision inherent in the underlying assumptions used in the methodologies for estimating allocated and general losses in the portfolio.

Refer to Note 5 of the Notes to the Audited Consolidated Financial Statements for additional details on the provision for loan losses.

Non-interest Income. Non-interest income decreased by $181,000, or 6.8%, from $2.7 million for the year ended December 31, 2017 to $2.5 million for the year ended December 31, 2018. The decrease was primarily attributed to there being no sales of securities during the year ended December 31, 2018 as compared to a $244,000 pre-tax realized gain on the sale of securities during the year ended December 31, 2017. The decrease was also due to a $37,000 decrease in other income which was partially offset by a $56,000 increase in service charges and fees and a $34,000 increase in earnings on bank owned life insurance during the year ended December 31, 2018.

Non-interest Expenses. Non-interest expenses increased by $1.1 million, or 7.5%, from $14.4 million for the year ended December 31, 2017 to $15.4 million for the year ended December 31, 2018. Salaries and employee benefits increased by $752,000, or 9.9%, primarily due to annual salary increases and increases in health insurance and retirement benefits. Professional services increased by $109,000, or 12.5%, primarily due to an increase in legal expenses during 2018. Data processing increased by $70,000, or 5.6%, primarily due to implementation of new technology and growth in deposit and loan accounts. Occupancy and equipment increased by $64,000, or 2.8%, primarily due to increases in repair and building maintenance costs and software and technology maintenance costs. Other expenses increased by $77,000, or 5.9%, primarily due to increases in training costs and collection and foreclosure expenses.

Income Tax Expense. Income tax expense decreased by $600,000, or 50.6%, from $1.2 million for the year ended December 31, 2017 to $585,000 for the year ended December 31, 2018. The decrease in income tax expense was primarily due to a reduction in the effective tax rate to 12.8% for the year ended December 31, 2018 from 26.0% for the year ended December 31, 2017 as a result of the Tax Act, which lowered the federal corporate tax rate from 34% to 21% as of January 1, 2018. The Tax Act was enacted during the fourth quarter of 2017 and generally accepted accounting principles required that the impact of the provisions in the Tax Act be accounted for in the period of enactment. As such, the Company was required to revalue its net deferred tax asset as of December 31, 2017, to reflect the reduction in the corporate tax rate, resulting in a one-time $262,000 net income tax expense adjustment during the fourth quarter of 2017. The impact of the lower corporate tax rate during 2018 was partially offset by a decrease in the mix of tax-exempt income derived from our municipal bond portfolio and bank-owned life insurance in relation to our pre-tax income for the current year.

Comparison of Results of Operations for the Years Ended December 31, 2017 and 2016

General. Net income was $3.4 million for the year ended December 31, 2017, or $0.55 per diluted share, a decrease of $137,000, or 3.9%, compared to net income of $3.5 million, or $0.58 per diluted share, for the year ended December 31, 2016. Net income for the year ended December 31, 2017 reflected a $1.4 million decrease in non-interest income, a $481,000 increase in non-interest expense and a $410,000 increase in income tax expense, which was partially offset by a $1.6 million increase in net interest income and a $615,000 decrease in the provision for loan losses, when compared to the year ended December 31, 2016. The decrease in non-interest income for the year ended December 31, 2017 was primarily due to a $1.6 million pre-tax realized gain on the sale of securities during the year ended December 31, 2016 as compared to a $244,000 pre-tax realized gain on the sale of securities during the year ended December 31, 2017. The increase in income tax expense during the year ended December 31,

2017 was partially due to the recognition of a $262,000 net tax expense as a result of the reduction in the U.S. corporate income tax rate from 34% to 21% under the Tax Act enacted in December 2017. The reduction in the corporate income tax rate required revaluation of net deferred tax assets

57

---

at the time of enactment. The remaining increase in income tax expense was attributed to an increase in pre-tax income for the year ending December 31, 2017.

Net Interest Income. Net interest income increased by $1.6 million, or 10.2%, to $16.8 million for the year ended December 31, 2017 compared to $15.2 million for the year ended December 31, 2016. Interest income and interest expense both increased for the year ended December 31, 2017 when compared to the year ended December 31, 2016. Interest rate spread and net interest margin were 3.45% and 3.61%, respectively, for the year ended December 31, 2017 compared to 3.29% and 3.44%, respectively, for the year ended December 31, 2016. The increase in the interest rate spread and net interest margin for the year ended December 31, 2017 as compared to the year ended December 31, 2016 was primarily due to a 22 basis point increase in the average interest rate received on interest-earning assets partially offset by a 6 basis points increase in the average interest rate paid on interest-bearing liabilities.

Interest Income. Interest income increased by $1.9 million, or 10.8%, to $19.4 million for the year ended December 31, 2017 compared to $17.5 million for the year ended December 31, 2016 primarily due to an increase in loan interest income. Loan interest income increased by $2.2 million, or 15.1%, to $16.7 million for the year ended December 31, 2017 compared to the year ended December 31, 2016, primarily due to a $39.9 million, or 12.8%, increase in the average balance of loans from $312.4 million for the year ended December 31, 2016 to $352.3 million for the year ended December 31, 2017. The increase in the average balance of loans was primarily due to an increase in the average balance of commercial real estate, home equity and commercial business loans, partially offset by a decrease in the average balance of one- to four-family residential loans. The increase in loan interest income was also due to the receipt of $202,000 of interest income on one non-performing commercial real estate loan which paid off during the year ended December 31, 2017. The payoff of this non-performing commercial loan was the primary factor for the increase in the average yield on the loan portfolio, which increased from 4.64% for the year ended December 31, 2016 to 4.74% for the year ended December 31, 2017. The average yield on the loan portfolio would have been 4.68% for the year ended December 31, 2017 if the $202,000 of interest income received on the non-performing loan payoff was excluded.

Investment interest income decreased $453,000, or 15.6%, to $2.4 million for the year ended December 31, 2017 compared to the year ended December 31, 2016, primarily due to a decrease in the average balance of the investment portfolio from $98.6 million for the year ended December 31, 2016 to $80.5 million for the year ended December 31, 2017. The decrease in the average balance of the investment portfolio was primarily due to the Company's strategy to reinvest sale proceeds and paydowns received on the securities portfolio into loan originations, primarily commercial loans. The purpose of this strategy was to shorten the duration of interest earning assets in order to be in a better position to take advantage of future increases in market interest rates as well as to manage interest rate risk. The average yield on the investment portfolio increased 10 basis points from 2.94% for the year ended December 31, 2016 to 3.04% for the year ended December 31, 2017 primarily due to paydowns and sales of lower yielding securities.

Other interest income increased by $156,000, or 136.8%, to $270,000 for the year ended December 31, 2017 compared to the year ended December 31, 2016, primarily due to a 49 basis points increase in the average yield on the interest earning deposits and federal funds sold portfolio. The average yield increased from 0.36% for the year ended December 31, 2016 to 0.85% for the year ended December 31, 2017. The increase in average yield was primarily due to a 75 basis points increase in the fed funds rate since December 31, 2016. The average balance of the interest-earning deposits and federal funds sold portfolio decreased by $178,000, or 0.6%, from $31.8 million for the year ended December 31, 2016 to $31.6 million for the year ended December 31, 2017.

Interest Expense. Interest expense was $2.6 million, an increase of $336,000, or 14.6%, for the year ended December 31, 2017, when compared to the year ended December 31, 2016. Interest paid on deposits increased by $250,000, or

13.7%, to $2.1 million for the year ended December 31, 2017 when compared to the year ended December 31, 2016. Interest expense was impacted by a four, 13 and eight basis points increase, respectively, in the average interest rates paid on demand deposit, money market and time deposit accounts, as well as a $19.3 million increase in average core deposits since the year ended December 31, 2016, partially offset by a $3.1 million decrease in average time deposits during the year ended December 31, 2017 as a result of the

---

Company's continued strategic focus on growing low-cost core deposits. The average balance of deposits for the year ended December 31, 2017 was $338.7 million with an average rate of 0.61% compared to the average balance of deposits of $322.5 million and an average rate of 0.57% for the year ended December 31, 2016. The interest expense related to advances from the FHLBNY increased $95,000, or 25.5%, to $468,000 for the year ended December 31, 2017 when compared to the year ended December 31, 2016 as a result of increases in the average balance and average rate of FHLBNY advances. The average balance of advances from the FHLBNY for the year ended December 31, 2017 was $23.1 million with an average rate of 2.03% compared to an average balance of FHLBNY advances of $19.3 million and an average rate of 1.94% for the year ended December 31, 2016. The increase in the average balance was due to additional borrowings that allowed the Bank to take advantage of the low fixed-rates in order to fund loan growth.

Provision for Loan Losses. A $510,000 provision to the allowance for loan losses was recorded during the year ended December 31, 2017, which was a $615,000, or 54.7%, decrease as compared to the provision recorded during the year ended December 31, 2016. The decrease in provision expense was primarily due to a decrease in provision set aside for impaired loans during 2017, as well as an improvement in the non-performing loan ratios during the year ended December 31, 2017.

The $510,000 provision recorded during the year ended December 31, 2017 consisted of the following:

- $217,000 provision on commercial business loans, primarily due to a $7.2 million, or 35.0%, increase in the commercial business loan portfolio since December 31, 2016, to reflect inherent losses on new loan originations. The provision was also due to a $865,000 increase in criticized and classified loans in this portfolio since December 31, 2016;
- $197,000 general allowance on performing construction loans, primarily due to an $18.5 million, or 149.6%, increase in the construction loan portfolio since December 31, 2016, to reflect inherent losses within the portfolio;
- $65,000 credit provision for commercial real estate loans, which included a:
  - $390,000 decrease in reserves for impaired commercial real estate loans, primarily due to an increase in the estimated value of collateral for one impaired commercial real estate loan, as a result of an increase in the occupancy rate; and
  - $176,000 credit provision for changes in the related environmental factors used to qualitatively assess inherent loan losses on commercial real estate loans; partially offset by a:
  - $211,000 provision to reflect inherent risk associated with growth in commercial real estate loan originations. The commercial real estate loan portfolio increased by $15.5 million, or 14.5%, since December 31, 2016;
  - $215,000 provision for the downgrade of certain performing commercial loan relationships; and a
  - $75,000 charge-off on one foreclosed loan during the year ended December 31, 2017;
- $118,000 provision for one-to four-family, home equity and consumer loans to reflect an increase in the historical average net charge-offs for these loan types over the last five years and for net charge-offs recorded during the year ended December 31, 2017; and
- $43,000 unallocated provision for loan losses, to reflect the margin of imprecision inherent in the underlying assumptions used in the methodologies for estimating allocated and general losses in the portfolio.

During the year ended December 31, 2016, the Company recorded a $1.1 million provision to the allowance for loan losses. The provision consisted of the following:

· $600,000 provision for commercial real estate loans consisting of:

o $390,000 for a specific reserve set aside for the impairment of one commercial real estate loan during the fourth quarter of 2016; and

o $311,000 for a general allowance being set aside on performing loans, resulting from the substantial growth in this portfolio during 2016. The commercial real estate loan portfolio increased by 27.7% during the year ended December 31, 2016; which was partially offset by a

59

- o $101,000 credit attributed to a $2.0 million reduction in classified commercial real estate loans when compared to the year ended December 31, 2015;
- · $232,000 provision on performing construction and commercial business loans, primarily due to a 59.3% increase in these types of loans, to reflect inherent losses within the portfolio;
- · $74,000 provision to reflect net charge-offs recorded on commercial business loans during the year ended December 31, 2016;
- · $153,000 provision for one-to four-family, home equity and consumer loans to reflect net charge-offs;
- · $80,000 net provision related to changes in qualitative factors on one-to four-family, home equity and consumer loans to reflect an increase in historical losses and changes in related environmental factors used to qualitatively assess inherent loan losses; and
- · $14,000 unallocated credit to reflect the margin of imprecision inherent in the underlying assumptions used in the methodologies for estimating allocated and general losses in the portfolio.

Refer to Note 5 of the Notes to the Audited Consolidated Financial Statements for additional details on the provision for loan losses.

Non-interest Income. Non-interest income decreased by $1.4 million, or 34.8%, from $4.1 million for the year ended December 31, 2016 to $2.7 million for the year ended December 31, 2017. The decrease was primarily due to a $1.6 million pre-tax realized gain on the sale of securities during the year ended December 31, 2016 as compared to a $244,000 pre-tax realized gain on the sale of securities during the year ended December 31, 2017. The decrease was also due to a $107,000, or 88.4%, decrease in gains on sales of loans during the year ended December 31, 2017 as a result of a fourth quarter 2016 strategic decision to generally retain, rather than sell, all residential loans that we originate due to the stabilization of the Bank's interest rate risk levels. These decreases were partially offset by an increase in earnings on bank owned life insurance which increased $77,000, or 27.4%, primarily due to the purchase of an additional $2.5 million in bank owned life insurance in the fourth quarter of 2016.

Non-interest Expenses. Non-interest expenses increased by $481,000, or 3.5%, from $13.9 million for the year ended December 31, 2016 to $14.4 million for the year ended December 31, 2017. Salaries and employee benefits increased by $380,000, or 5.2%, primarily due to annual salary increases and grants of stock awards, partially offset by lower health insurance costs and supplemental retirement benefit plan expenses. Data processing costs increased by $138,000, or 12.3%, primarily due to implementation of internet and mobile technology associated with expanded product features and growth in deposit and loan accounts. Other expenses increased $91,000, or 7.4%, primarily due to an increase in donations, expenses related to loan originations and collection and foreclosure expenses. Advertising expenses increased $60,000, or 11.2%, primarily due to additional marketing campaigns during 2017. The increase in non-interest expense for the year ended December 31, 2017 as compared to the prior year was partially offset by a $127,000, or 12.7%, decrease in professional services for the year ended December 31, 2017 as compared to 2016, due to lower consulting and legal costs. FDIC insurance assessments decreased $49,000, or 24.7%, for the year ended December 31, 2017 as compared to 2016 due to changes during the fourth quarter of 2016 in how the FDIC assesses insurance costs which is more favorable to smaller community banks.

Income Tax Expense. Income tax expense increased by $410,000, or 52.9%, from $775,000 for the year ended December 31, 2016 to $1.2 million for the year ended December 31, 2017. The increase in income tax expense during the year ended December 31, 2017 was primarily due to the recognition of a $262,000 net income tax expense for the revaluation of net deferred tax assets due to the reduction in the U.S. corporate tax rate enacted under the Tax Act. The Tax Act lowered the corporate tax rate from 34% to 21% for the Company's tax years beginning after December 31, 2017. The Tax Act was enacted during the fourth quarter of 2017 and generally accepted accounting

principles require that the impact of the provisions in the Tax Act be accounted for in the period of enactment. As such, the Company was required to revalue its net deferred tax asset as of December 31, 2017, to reflect the reduction in the corporate tax rate. The increase in income tax expense was also due to higher pre-tax income during the year ended December 31, 2017 when compared to the year ended December 31, 2016. Without the impact of the net deferred tax asset revaluation, the effective tax rate would have increased to 20.2% for the year ended December 31, 2017 as compared to an effective tax rate of 18.1%

for the year ended December 31, 2016. This increase would have been primarily a result of a decrease in the mix of tax-exempt income derived from our municipal bond portfolio related to the pre-tax income for 2017.

Liquidity and Capital Resources

Liquidity describes our ability to meet the financial obligations that arise during the ordinary course of business. Liquidity is primarily needed to fund loan commitments, to pay the deposit withdrawal requirements of our customers as well as to fund current and planned expenditures. Our primary sources of funds consist of deposits, fed funds balances, scheduled amortization and prepayments of loans and securities, maturities and sales of investments and loans, interest earning deposits at other financial institutions and funds provided from operations. We have written agreements with the FHLBNY, which allows us to borrow the maximum lending values designated by the type of collateral pledged. As of December 31, 2018, the maximum amount that we can borrow from the FHLBNY was $107.8 million and was collateralized by a pledge of certain fixed-rate residential, one- to four-family loans. At December 31, 2018, we had outstanding advances under this agreement of $24.7 million. We have a written agreement with the Federal Reserve Bank discount window for overnight borrowings which is collateralized by a pledge of our securities, and allows us to borrow up to the value of the securities pledged, which was equal to a book value of $11.0 million and a fair value of $11.2 million as of December 31, 2018. There were no balances outstanding with the Federal Reserve Bank at December 31, 2018. We have also established lines of credits with correspondent banks for $22.0 million, of which $20.0 million is unsecured and the remaining $2.0 million will be secured by a pledge of our securities when a draw is made. There were no borrowings on these lines as of December 31, 2018.

While maturities and scheduled amortization of loans and securities are predictable sources of funds, deposit outflows, calls of investment securities, and prepayments of loans and mortgage-backed securities are strongly influenced by interest rates, general and local economic conditions, and competition in the marketplace. These factors reduce the predictability of the timing of these sources of funds.

Our primary investing activities include the origination of loans and the purchase of investment securities. For the year ended December 31, 2018, we originated loans of approximately $130.6 million as compared to approximately $119.0 million of loans originated during the year ended December 31, 2017. Loan originations exceeded principal repayments and other deductions in 2018 by $30.1 million. Purchases of investment securities totaled $16.2 million and $13.2 million for the years ended December 31, 2018 and 2017, respectively. These activities were funded primarily through deposit growth, principal payments received on loans and securities, borrowings and cash reserves.

As described elsewhere in this report, the Company has loan commitments to borrowers and borrowers have unused overdraft lines of protection, unused home equity lines of credit and unused commercial lines of credit that may require funding at a future date. The Company believes it has sufficient funds to fulfill these commitments, including sources of funds available through the use of FHLBNY advances or other liquidity sources. Total deposits were $432.5 million at December 31, 2018, as compared to $405.2 million at December 31, 2017. The increase in total deposits was due to growth in net core deposits and time deposits during the year ended December 31, 2018. The Company's strategic focus is on growing lower-cost core deposits among its retail and commercial customers in an effort to manage interest expenses. Time deposit accounts scheduled to mature within one year were $55.2 million at December 31, 2018. Based on our deposit retention experience, current pricing strategy, and competitive pricing policies, we anticipate that a significant portion of these time deposits will remain with us following their maturity.

We are committed to maintaining a strong liquidity position; therefore, we monitor our liquidity position on a daily basis. We anticipate that we will have sufficient funds to meet our current funding commitments. The marginal cost of new funding, however, whether from deposits or borrowings from the FHLBNY, will be carefully considered as we monitor our liquidity needs. Therefore, in order to minimize our cost of funds, we may consider additional borrowings from the FHLBNY in the future.

We do not anticipate any material capital expenditures in 2019. We do not have any balloon or other payments due on any long-term obligations, other than the borrowing agreements noted above.

Off-Balance Sheet Arrangements

Our off-balance sheet items include loan commitments as described in Note 16 in the Notes to our Audited Consolidated Financial Statements and, as of December 31, 2018, an interest swap agreement for a notional amount of $3.0 million, which is not designated as a hedging instrument and does not have a material impact on our Consolidated Statements of Income. At December 31, 2018, we had loan commitments to borrowers of approximately $41.9 million and overdraft lines of protection, unused home equity lines of credit, and unused commercial lines of credit of approximately $52.4 million. We do not have any other off-balance sheet arrangements that have or are reasonably likely to have a current or future effect on our financial condition, revenues or expenses, results of operations, liquidity, capital expenditures, or capital resources that is material to investors.

Accounting Polices, Standards and Pronouncements

Refer to Note 2 in the Notes to our Audited Consolidated Financial Statements for a discussion of significant accounting policies, the impact of the adoption of new accounting standards and recent accounting pronouncements.

Item 7A. Quantitative and Qualitative Disclosures About Market Risk

Disclosure not required for smaller reporting companies.

Item 8. Financial Statements and Supplementary Data.

See pages F - 1 through F - 54 following the signature page of this Annual Report on Form 10-K.

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

None.

Item 9A. Controls and Procedures.

Disclosure Controls and Procedures

The Company maintains disclosure controls and procedures designed to ensure that the information required to be disclosed in the reports that it files or submits under the Securities Exchange Act of 1934, as amended, are recorded,

processed, summarized and reported within the time periods specified in the SEC’s rules and forms. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information required to be disclosed by an issuer in the reports that it files or submits under the Securities Exchange Act of 1934 is accumulated and communicated to the issuer’s management, including its principal executive and principal financial officers, or persons performing similar functions, as appropriate to allow timely decisions regarding required disclosure. The Company’s management, with the participation of its Chief Executive Officer and Chief Financial Officer, evaluated the effectiveness of the Company’s disclosure controls and procedures (as defined in Rules 13(a)-15(e) and 15d-15(e) under the Securities Exchange Act of 1934) as of the end of the period covered by this report. Based upon such evaluation, the Company’s Chief Executive Officer and Chief Financial Officer have concluded that, as of the end of such period, the Company’s disclosure controls and procedures were effective.

Management's Report on Internal Control over Financial Reporting

Our management is responsible for establishing and maintaining adequate internal control over financial reporting for the Company. Our internal control over financial reporting is a process designed under the supervision of our Chief Executive Officer and Chief Financial Officer to provide reasonable assurance regarding the reliability of financial reporting and the preparation of our financial statements for external purposes in accordance with U.S. generally accepted accounting principles.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

Our management has made a comprehensive review, evaluation, and assessment of our internal control over financial reporting as of December 31, 2018. In making its assessment of internal control over financial reporting, management used the criteria issued by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO") in Internal Control-Integrated Framework (2013). Based on that assessment, management concluded that, as of December 31, 2018, our internal control over financial reporting was effective.

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 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 have not been any changes in the Company's internal control over financial reporting (as such term is defined in Rules 13a-15(f) and 15d-15(f) under the Securities Exchange Act of 1934) during the quarter ended December 31, 2018 to which this report relates that have materially affected, or are reasonably likely to materially affect, internal control over financial reporting.

Item 9B. Other Information.

None.

PART III

Item 10. Directors, Executive Officers and Corporate Governance.

The information required by this item is incorporated herein by reference to our Proxy Statement for our 2019 Annual Meeting of Shareholders, which will be filed with the Securities and Exchange Commission within 120 days of our December 31, 2018 fiscal year end.

Item 11. Executive Compensation.

The information required by this item is incorporated herein by reference to our Proxy Statement for our 2019 Annual Meeting of Shareholders, which will be filed with the Securities and Exchange Commission within 120 days of our December 31, 2018 fiscal year end.

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

The information required by this item is incorporated herein by reference to our Proxy Statement for our 2019 Annual Meeting of Shareholders, which will be filed with the Securities and Exchange Commission within 120 days of our December 31, 2018 fiscal year end.

Item 13. Certain Relationships and Related Transactions, and Director Independence.

The information required by this item is incorporated herein by reference to our Proxy Statement for our 2019 Annual Meeting of Shareholders, which will be filed with the Securities and Exchange Commission within 120 days of our December 31, 2018 fiscal year end.

Item 14. Principal Accounting Fees and Services.

The information required by this item is incorporated herein by reference to our Proxy Statement for our 2019 Annual Meeting of Shareholders, which will be filed with the Securities and Exchange Commission within 120 days of our December 31, 2018 fiscal year end.

PART IV

Item 15. Exhibits and Financial Statement Schedules.

15(a)(1) Financial Statements. The following are included in Item 8 of Part II of this Annual Report on Form 10-K.

- Report of Independent Registered Public Accounting Firm
- Consolidated Statements of Financial Condition as of December 31, 2018 and 2017
- Consolidated Statements of Income for the years ended December 31, 2018, 2017 and 2016
- Consolidated Statements of Comprehensive Income for the years ended December 31, 2018, 2017 and 2016
- Consolidated Statements of Stockholders' Equity for the years ended December 31, 2018, 2017 and 2016
- Consolidated Statements of Cash Flows for the years ended December 31, 2018, 2017 and 2016
- Notes to Consolidated Financial Statements

15(a)(2) Financial Statement Schedules. Schedules are omitted because they are not required or the information is provided elsewhere in the Consolidated Financial Statements or Notes thereto included in Item 8 of Part II of this Annual Report on Form 10-K.

15(a)(3) Exhibits. The following exhibits are filed as part of this Annual Report on Form 10-K or are incorporated herein by reference.

3.1	Charter of Lake Shore Bancorp, Inc.1
3.2	Amended and Restated Bylaws of Lake Shore Bancorp, Inc.2
4.1	Form of Stock Certificate of Lake Shore Bancorp, Inc.3
4.2	Form of Restricted Stock Award Notice4
4.3	Form of Stock Option Certificate4
10.1	Amended and Restated Employment Agreement between Daniel P. Reininga and Lake Shore Savings Bank and Lake Shore Bancorp, Inc.5
10.2	Change in Control Agreement between Jeffery M. Werdein and Lake Shore Savings Bank and Lake Shore Bancorp, Inc.6
10.3	Amended and Restated Change of Control Agreement between Rachel A. Foley and Lake Shore Savings Banks and Lake Shore

	Bancorp, Inc.7
10.4	Amended and Restated Severance Pay Plan of Lake Shore Savings Bank8
10.5	2015 Executives Supplemental Benefit Plan I9
10.6	Amended and Restated 2015 Executives Supplemental Benefit Plan II10
10.7	2015 Directors Supplemental Benefit Plan I11
10.8	Amended and Restated 2015 Directors Supplemental Benefit Plan II12
10.9	Lake Shore Bancorp, Inc. 2006 Stock Option Plan13
10.10	Lake Shore Bancorp, Inc. 2006 Recognition and Retention Plan13
10.11	Amended and Restated 2017 Supplemental Executive Retirement Plan for Daniel P. Reininga14
10.12	2015 Executives Supplemental Benefit Plan II amended and restated joinder agreement for Rachel A. Foley15
10.13	2015 Executives Supplemental Benefit Plan II

	joinder agreement for Jeffery M. Werdein16
10.14	Lake Shore Bancorp, Inc. 2012 Equity Incentive Plan17
10.15	Retention Agreement between Lake Shore Savings Bank and Jeffrey Werdein18
21.1	Subsidiaries of Lake Shore Bancorp, Inc.*
23.1	Consent of Baker Tilly Virchow Krause, LLP*
31.1	Certification by the Chief Executive Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002*
31.2	Certification by the Chief Financial Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002*
32.1	Certification by the Chief Executive Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002*
32.2	Certification by the Chief Financial Officer

	Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002*
101.INS	XBRL Instance Document*
101.SCH	XBRL Taxonomy Extension Schema Document*
101.CAL	XBRL Taxonomy Calculation Linkbase Document*
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document*
101.LAB	XBRL Taxonomy Label Linkbase Document*
101.PRE	XBRL Taxonomy Presentation Linkbase Document*

---

*Filed herewith.

[1] Incorporated herein by reference to the Exhibits to the Registration Statement on Form S-1, filed with the Securities and Exchange Commission on November 4, 2005 (Registration No. 333-129439).

[2] Incorporated herein by reference to Exhibit 3.2 to Form 8-K, filed with the Securities and Exchange Commission on May 18, 2017.

[3] Incorporated herein by reference to the Exhibits to Amendment No. 2 to the Registration Statement on Form S-1/A, filed with the Securities and Exchange Commission on February 8, 2006 (Registration No. 333-129439).

[4] Incorporated herein by reference to the Exhibits to the Registration Statement on Form S-8, filed with the Securities and Exchange Commission on April 3, 2007 (Registration No. 333-141829).

[5] Incorporated herein by reference to Exhibit 10.1 to Form 8-K, filed with the Securities and Exchange Commission on January 27, 2017.
[6] Incorporated herein by reference to Exhibit 10.1 to Form 8-K, filed with the Securities and Exchange Commission on January 29, 2018.
[7] Incorporated herein by reference to Exhibit 10.2 to Form 8-K, filed with the Securities and Exchange Commission on January 29, 2018.
[8] Incorporated herein by reference to the Exhibits to Form 8-K, filed with the Securities and Exchange Commission on November 16, 2007.
[9] Incorporated herein by reference to Exhibit 10.5 to Form 10-K, filed with the Securities and Exchange Commission on March 25, 2016.
[10] Incorporated herein by reference to Exhibits 10.6 to Form 10-K, filed with the Securities and Exchange Commission on March 25, 2016.
[11] Incorporated herein by reference to Exhibit 10.7 to Form 10-K, filed with the Securities and Exchange Commission on March 25, 2016.
[12] Incorporated herein by reference to Exhibit 10.8 to Form 10-K, filed with the Securities and Exchange Commission on March 25, 2016.
[13] Incorporated herein by reference to the Proxy Statement for our October 24, 2006 special meeting of shareholders filed with the Securities and Exchange Commission on September 7, 2006.
[14] Incorporated herein by reference to Exhibit 10.2 to Form 8-K, filed with the Securities and Exchange Commission on January 27, 2017.
[15] Incorporated herein by reference to Exhibit 10.1 to Form 8-K, filed with the Securities and Exchange Commission on May 23, 2016.
[16] Incorporated herein by reference to Exhibit 10.2 to Form 8-K, filed with the Securities and Exchange Commission on May 23, 2016.
[17] Incorporated herein by reference to Appendix A to the Proxy Statement for our May 23, 2012 annual meeting of shareholders filed with the Securities and Exchange Commission on April 11, 2012.
[18] Incorporated herein by reference to Exhibit 10.1 to Form 8-K, filed with the Securities and Exchange Commission on April 4, 2018.

Item 16. Form 10-K Summary.

None.

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized, on March 27, 2019.

Lake Shore Bancorp, Inc.
By:/s/ Daniel P. Reininga
Daniel P. Reininga
President and Chief Executive Officer

Date: March 27, 2019

Pursuant to the requirements of the Securities Act of 1933, as amended, and any rules and regulations promulgated there under, this Annual Report on Form 10-K, has been signed by the following persons in the capacities and on the dates indicated.

Name	Title	Date
/s/ Susan C. Ballard	Director	
Susan C. Ballard		March 27, 2019
/s/ Tracy S. Bennett	Director	
Tracy S. Bennett		March 27, 2019
/s/ Sharon E. Brautigam	Director	
Sharon E. Brautigam		March 27, 2019
/s/ David C. Mancuso	Director	
David C. Mancuso		March 27, 2019
/s/ Jack L. Mehltretter	Director	
Jack L. Mehltretter		March 27, 2019
/s/ Daniel P. Reininga	President, Chief Executive Officer and Director (Principal Executive Officer)	March 27, 2019

Daniel P. Reininga		
/s/ Kevin M. Sanvidge	Vice Chairman of the Board	
Kevin M. Sanvidge		March 27, 2019
/s/ Gary W. Winger	Chairman of the Board	
Gary W. Winger		March 27, 2019
/s/ Nancy L. Yocum	Director	
Nancy L. Yocum		March 27, 2019
/s/ Rachel A. Foley	Chief Financial Officer and Treasurer (Principal Financial Officer)	
Rachel A. Foley		March 27, 2019
/s/ Steven W. Schiavone	Principal Accounting Officer	
Steven W. Schiavone		March 27, 2019

Table of Contents

Financial Statements	Page
Report of Independent Registered Public Accounting Firm	F - 2
Consolidated Statements of Financial Condition	F - 3
Consolidated Statements of Income	F - 4
Consolidated Statements of Comprehensive Income	F - 5
Consolidated Statements of Stockholders' Equity	F - 6
Consolidated Statements of Cash Flows	F - 7
Notes to Consolidated Financial Statements	F - 9

Report of Independent Registered Public Accounting Firm

To the shareholders and the board of directors of Lake Shore Bancorp, Inc:

Opinion on the Financial Statements

We have audited the accompanying consolidated statements of financial condition of Lake Shore Bancorp, Inc. and subsidiary (the "Company") as of December 31, 2018 and 2017, the related consolidated statements of income, comprehensive income, stockholders' equity, and cash flows for each of the three years in the 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 three years in the 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.

/s/Baker Tilly Virchow Krause, LLP

We have served as the Company's auditor since 2005.

Pittsburgh, Pennsylvania

March 27, 2019

F - 2

Lake Shore Bancorp, Inc. and Subsidiary

Consolidated Statements of Financial Condition

	December 31, 2018	December 31, 2017
	(Dollars in thousands, except share data)	
Assets		
Cash and due from banks	$ 8,880	$ 7,709
Interest earning deposits	3,244	6,570
Federal funds sold	18,627	26,634
Cash and Cash Equivalents	30,751	40,913
Securities available for sale	86,193	80,421
Federal Home Loan Bank stock, at cost	1,545	1,631
Loans receivable, net of allowance for loan losses 2018 $3,448; 2017 $3,283	392,471	365,063
Premises and equipment, net	9,417	9,373
Accrued interest receivable	1,913	1,801
Bank owned life insurance	21,469	18,077
Other assets	1,949	1,698
Total Assets	$ 545,708	$ 518,977
Liabilities and Stockholders' Equity		
Liabilities		
Deposits:		
Interest bearing	$ 377,131	$ 350,535
Non-interest bearing	55,327	54,618
Total Deposits	432,458	405,153
Long-term debt	24,650	26,950
Advances from borrowers for taxes and insurance	3,134	3,000
Other liabilities	5,662	5,499
Total Liabilities	$ 465,904	$ 440,602
Stockholders' Equity		
Common stock, $0.01 par value per share, 25,000,000 shares authorized; 6,827,741 shares issued and 6,004,664 shares outstanding at December 31, 2018 and 6,827,741 shares issued and 6,098,323 shares outstanding at December 31, 2017	$ 68	$ 68
Additional paid-in capital	30,916	30,719
Treasury stock, at cost (823,077 shares at December 31, 2018 and 729,418 shares at December 31, 2017)	(8,805)	(7,309)
Unearned shares held by ESOP	(1,449)	(1,535)
Unearned shares held by compensation plans	(200)	(540)

Retained earnings	59,145	56,181
Accumulated other comprehensive income	129	791
Total Stockholders' Equity	79,804	78,375
Total Liabilities and Stockholders' Equity	$ 545,708	$ 518,977

See notes to consolidated financial statements.

Lake Shore Bancorp, Inc. and Subsidiary

Consolidated Statements of Income

	Years Ended December 31,		
	2018	2017	2016
	(Dollars in thousands, except per share data)		
Interest Income			
Loans, including fees	$ 18,323	$ 16,690	$ 14,503
Investment securities, taxable	1,050	800	1,101
Investment securities, tax-exempt	1,591	1,648	1,800
Other	572	270	114
Total Interest Income	21,536	19,408	17,518
Interest Expense			
Deposits	2,977	2,080	1,830
Long-term debt	548	468	373
Other	77	82	91
Total Interest Expense	3,602	2,630	2,294
Net Interest Income	17,934	16,778	15,224
Provision for Loan Losses	390	510	1,125
Net Interest Income after Provision for Loan Losses	17,544	16,268	14,099
Non-Interest Income			
Service charges and fees	1,853	1,797	1,791
Earnings on bank owned life insurance	392	358	281
Unrealized gain on equity securities	2	-	-
Recovery on previously impaired investment securities	145	135	142
Gain on sale of securities available for sale	-	244	1,636
Net gain on sale of loans	12	14	121
Other	70	107	99
Total Non-Interest Income	2,474	2,655	4,070
Non-Interest Expenses			
Salaries and employee benefits	8,379	7,627	7,247
Occupancy and equipment	2,350	2,286	2,298
Data processing	1,328	1,258	1,120
Professional services	981	872	999
Advertising	606	596	536
Postage and supplies	248	257	257
FDIC Insurance	149	149	198
Other	1,392	1,315	1,224
Total Non-Interest Expenses	15,433	14,360	13,879
Income before Income Taxes	4,585	4,563	4,290
Income Tax Expense	585	1,185	775
Net Income	$ 4,000	$ 3,378	$ 3,515
Basic and diluted earnings per common share	$ 0.66	$ 0.55	$ 0.58
Dividends declared per share	$ 0.40	$ 0.32	$ 0.28

See notes to consolidated financial statements.

Lake Shore Bancorp, Inc. and Subsidiary

Consolidated Statements of Comprehensive Income

	Years Ended December 31,		
	2018	2017	2016
	(Dollars in thousands)		
Net Income	$ 4,000	$ 3,378	$ 3,515
Other Comprehensive Loss, net of tax benefit:			
Unrealized holding losses on securities available for sale, net of tax benefit	(703)	(341)	(287)
Reclassification adjustments related to:			
Recovery on previously impaired investment securities included in net income, net of tax expense	(115)	(89)	(94)
Net gain on sale of securities included in net income, net of tax expense	-	(161)	(1,080)
Total Other Comprehensive Loss	(818)	(591)	(1,461)
Total Comprehensive Income	$ 3,182	$ 2,787	$ 2,054

See notes to consolidated financial statements.

Lake Shore Bancorp, Inc. and Subsidiary

Consolidated Statements of Stockholders' Equity

Years Ended December 31, 2018, 2017 and 2016

	Common Stock	Additional Paid-In Capital	Treasury Stock	Unearned Shares Held by ESOP	Unearned Shares Held by Compensation Plans	Retained Earnings	Accumulated Other Comprehensive Income	Total
	(Dollars in thousands, except share and per share data)							
Balance - January 1, 2016	$ 67	$ 29,359	$ (7,026)	$ (1,706)	$ (580)	$ 50,919	$ 2,843	$ 73,876
Net income	-	-	-	-	-	3,515	-	3,515
Other comprehensive loss, net of tax benefit of $752	-	-	-	-	-	-	(1,461)	(1,461)
Stock options exercised (99,808 shares)	1	1,117	-	-	-	-	-	1,118
ESOP shares earned (7,935 shares)	-	22	-	86	-	-	-	108
Stock based compensation	-	9	-	-	-	-	-	9
Compensation plan shares granted (20,354 shares)	-	-	197	-	(197)	-	-	-
Compensation plan shares forfeited (1,704 shares)	-	-	(16)	-	16	-	-	-
Compensation plan shares earned (16,762 shares)	-	25	-	-	183	-	-	208
Purchase of treasury stock, at cost (33,200 shares)	-	-	(455)	-	-	-	-	(455)
Cash dividends declared ($0.28 per share)	-	-	-	-	-	(888)	-	(888)
Balance - December 31, 2016	$ 68	$ 30,532	$ (7,300)	$ (1,620)	$ (578)	$ 53,546	$ 1,382	$ 76,030
Net income	-	-	-	-	-	3,378	-	3,378
Other comprehensive loss, net of tax benefit of $305	-	-	-	-	-	-	(591)	(591)

Stock options exercised (505 shares)	-	4	-	-	-	-	-	4
ESOP shares earned (7,935 shares)	-	41	-	85	-	-	-	126
Stock based compensation	-	44	-	-	-	-	-	44
Compensation plan shares granted (27,348 shares)	-	-	270	-	(270)	-	-	-
Compensation plan shares forfeited (1,104 shares)	-	-	(10)	-	10	-	-	-
Compensation plan shares earned (27,909 shares)	-	98	-	-	298	-	-	396
Purchase of treasury stock, at cost (17,100 shares)	-	-	(269)	-	-	-	-	(269)
Cash dividends declared ($0.32 per share)	-	-	-	-	-	(743)	-	(743)
Balance - December 30, 2017	$ 68	$ 30,719	$ (7,309)	$ (1,535)	$ (540)	$ 56,181	$ 791	$ 78,375
Net income	-	-	-	-	-	4,000	-	4,000
Other comprehensive loss, net of tax benefit of $217	-	-	-	-	-	-	(818)	(818)
Reclassification of the Income Tax Effects of the Tax Cuts and Jobs Act from AOCI	-	-	-	-	-	(156)	156	-
ESOP shares earned (7,935 shares)	-	44	-	86	-	-	-	130
Stock based compensation	-	45	-	-	-	-	-	45
Compensation plan shares granted (5,329 shares)	-	-	50	-	(50)	-	-	-
Compensation plan shares forfeited (10,433 shares)	-	-	(98)	-	98	-	-	-
Compensation plan shares earned (28,315 shares)	-	108	-	-	292	-	-	400
Purchase of treasury stock, at cost (88,555 shares)	-	-	(1,448)	-	-	-	-	(1,448)
Cash dividends declared ($0.40 per share)	-	-	-	-	-	(880)	-	(880)
Balance - December 31, 2018	$ 68	$ 30,916	$ (8,805)	$ (1,449)	$ (200)	$ 59,145	$ 129	$ 79,804

See notes to consolidated financial statements.

Lake Shore Bancorp, Inc. and Subsidiary

Consolidated Statements of Cash Flows

	Years Ended December 31,		
	2018	2017	2016
	(Dollars in thousands)		
CASH FLOWS FROM OPERATING ACTIVITIES			
Net income	$ 4,000	$ 3,378	$ 3,515
Adjustments to reconcile net income to net cash provided by operating activities:			
Net amortization of investment securities	83	110	180
Net amortization of deferred loan costs	576	622	569
Provision for loan losses	390	510	1,125
Recovery on previously impaired investment securities	(145)	(135)	(142)
Unrealized gain on equity securities	(2)	-	-
Gain on sale of investment securities	-	(244)	(1,636)
Originations of loans held for sale	(944)	(1,069)	(5,022)
Proceeds from sales of loans held for sale	956	1,083	5,143
Gain on sale of loans held for sale	(12)	(14)	(121)
Depreciation and amortization	774	852	865
Deferred income tax expense (benefit)	135	219	(222)
Increase in bank owned life insurance, net	(392)	(358)	(281)
ESOP shares committed to be released	130	126	108
Stock based compensation expense	445	440	217
(Increase) decrease in accrued interest receivable	(112)	(201)	48
Decrease in other assets	29	62	280
Writedowns of foreclosed real estate	40	65	12
Increase (decrease) in other liabilities	163	381	(344)
Net Cash Provided by Operating Activities	6,114	5,827	4,294
CASH FLOWS FROM INVESTING ACTIVITIES			
Activity in available for sale securities:			
Sales	-	6,510	14,406
Maturities, prepayments and calls	9,426	12,002	11,857
Purchases	(16,169)	(13,225)	-
Purchases of Federal Home Loan Bank Stock	(20)	(375)	(5)
Redemptions of Federal Home Loan Bank Stock	106	84	119
Loan origination and principal collections, net	(30,122)	(40,309)	(31,281)
Proceeds from sale of foreclosed real estate	1,510	331	619
Additions to premises and equipment	(818)	(1,480)	(468)
Purchase of bank owned life insurance	(3,000)	-	(2,500)
Net Cash Used in Investing Activities	(39,087)	(36,462)	(7,253)
CASH FLOWS FROM FINANCING ACTIVITIES			

Net increase in deposits	27,305	19,260	16,738
Net increase (decrease) in advances from borrowers for taxes and insurance	134	(183)	(102)
Proceeds from issuance of long-term debt	1,500	9,700	-
Repayment of long-term debt	(3,800)	(1,700)	(2,200)
Proceeds from stock options exercised	-	4	1,118
Purchase of treasury stock	(1,448)	(269)	(455)
Cash dividends paid	(880)	(743)	(888)
Net Cash Provided by Financing Activities	22,811	26,069	14,211
Net (Decrease) Increase in Cash and Cash Equivalents	(10,162)	(4,566)	11,252
CASH AND CASH EQUIVALENTS - BEGINNING	40,913	45,479	34,227
CASH AND CASH EQUIVALENTS - ENDING	$ 30,751	$ 40,913	$ 45,479

	Years Ended December 31,		
	2018	2017	2016
	(Dollars in thousands)		
SUPPLEMENTARY CASH FLOWS INFORMATION			
Interest paid	$ 3,596	$ 2,605	$ 2,299
Income taxes paid	$ 529	$ 920	$ 910
SUPPLEMENTARY SCHEDULE OF NONCASH INVESTING ACTIVITIES			
Foreclosed real estate acquired in settlement of loans	$ 1,928	$ 554	$ 369

See notes to consolidated financial statements.

Lake Shore Bancorp, Inc. and Subsidiary

Notes to Consolidated Financial Statements

Note 1 - Organization and Nature of Operations

Organizational Structure

Lake Shore Bancorp, Inc. (the “Company,” “us,” “our,” or “we”) and the parent mutual holding company, Lake Shore, MHC (the “MHC”) were formed on April 3, 2006 to serve as the stock holding companies for Lake Shore Savings Bank (the “Bank”) as part of the Bank’s conversion and reorganization from a New York State chartered mutual savings and loan association to the federal mutual holding company form of organization.

The MHC, whose activity is not included in these consolidated financial statements, held 3,636,875 shares, or 60.6% of the Company’s outstanding common stock as of December 31, 2018.

Charter

Lake Shore Bancorp, Inc. and the parent mutual holding company, Lake Shore, MHC are federally chartered and regulated by the Federal Reserve Board. Lake Shore Savings Bank, subsidiary of Lake Shore Bancorp, Inc., is a federally chartered savings bank and regulated by the Office of the Comptroller of the Currency (the “OCC”).

Regulations of the Board of Governors of the Federal Reserve System (the “Federal Reserve”) prohibit the waiver of dividends by the MHC unless the waiver has been approved by its members, consisting of depositors of the Bank. The MHC held a special meeting on February 6, 2019 of its members to vote on a proposal to authorize the MHC to waive its right to receive dividends aggregating up to $0.48 per share that may be declared by the Company in the twelve months subsequent to the approval of the proposal by members. At the special meeting, a majority of the eligible member votes of the MHC approved the waiver of the receipt of dividends on shares owned by the MHC. Lake Shore, MHC submitted the results of this vote along with other information to the Federal Reserve for final approval of the dividend waiver. As of March 7, 2019, Lake Shore, MHC received notice of the non-objection of the Federal Reserve Board to waive its right to receive dividends paid by the Company during the twelve months ending

February 6, 2020. In prior periods, the MHC elected to waive its right to receive cash dividends upon receipt of the non-objection of the Federal Reserve Board. The waiving of dividends by the MHC will increase Company resources available for stock repurchases, payment of dividends to minority stockholders, and investments. As of December 31, 2018, the MHC elected to waive approximately $10.8 million on a cumulative basis. The dividends waived by the MHC are considered a restriction on the retained earnings of the Company.

Nature of Business

The Company's primary business is the ownership and operation of its subsidiary, the Bank. The Bank is engaged primarily in the business of retail banking through eleven branch offices located in Erie and Chautauqua Counties of New York State. Its primary deposit products are checking, savings and term certificate accounts and its primary lending products are residential mortgages and commercial real estate loans.

Note 2 - Summary of Significant Accounting Policies

Basis of Presentation

The consolidated financial statements include the accounts of the Company and the Bank. All material inter-company accounts and transactions have been eliminated. The accompanying consolidated financial statements have been prepared in conformity with generally accepted accounting principles in the United States of America ("GAAP").

Use of Estimates

To prepare these consolidated financial statements in conformity with GAAP, management of the Company made a number of estimates and assumptions relating to the reporting of assets and liabilities, the reporting of revenue and expenses and notes to the consolidated financial statements. Actual results could differ from those estimates. Material estimates that are particularly susceptible to significant change in the near term relate to the determination of the allowance for loan losses, securities valuation estimates, evaluation of impairment of securities, income taxes and deferred compensation liabilities.

Cash and Cash Equivalents

Cash and cash equivalents include cash on hand, amounts due from banks, interest earning deposits at other financial institutions and overnight federal funds sold which are generally sold for one to three-day periods.

Investment Securities

All investment securities are classified as available for sale and are carried at fair value with unrealized gains and losses, net of the related deferred income tax effect, excluded from earnings and reported as a separate component of accumulated other comprehensive income until realized. Realized gains and losses are determined using the specific identification method.

Declines in the fair value of available for sale securities are evaluated for other-than-temporary impairment ("OTTI") on a quarterly basis. Impairment is assessed at the individual security level. This assessment considers factors such as the severity, length of time and anticipated recovery period of the impairment, recent events specific to the issuer, including investment downgrades by rating agencies and economic conditions of its industry, and the issuer's financial condition, capital strength, the presence of credit enhancements, if any, and near-term prospects. The Company also considers its intent and ability to retain the security for a period of time sufficient to allow for a recovery in fair value, or until maturity. The assessment of a security's ability to recover any decline in fair value, the ability of the issuer to meet contractual obligations, and the Company's intent and ability to retain the security require considerable judgment.

All securities are reviewed for OTTI under the guidance of the Financial Accounting Standards Board ("FASB") Accounting Standards Codification ("ASC") Topic 320, "Investments - Debt and Equity Securities" ("ASC 320"). When impairment of a debt security is considered other-than-temporary, the amount of OTTI recorded as a loss within non-interest income and thereby recognized in earnings depends on whether the Company intends to sell the security or whether it is more likely than not that the Company will be required to sell the security before recovery of its amortized cost basis. If the Company intends to (has decided to) sell the debt security or more likely than not will be required to sell the security before recovery of its amortized cost basis, OTTI is recognized in earnings equal to the entire difference between the investment's amortized cost basis and its fair value. If the Company does not intend to sell the debt security and it is not more likely than not the Company will be required to sell the security before recovery of its amortized cost basis, OTTI is separated into the amount representing credit loss and the amount related to all other market factors. The amount related to credit loss is recognized against earnings. The amount related to other market factors is recognized in other comprehensive income, net of applicable taxes. For equity securities, the entire amount of OTTI is recognized in earnings.

Federal Home Loan Bank Stock

Federal law requires a member institution of the Federal Home Loan Bank ("FHLB") system to hold restricted stock of its district Federal Home Loan Bank according to a predetermined formula. This stock is restricted in that it can only be sold to the FHLB or to another member institution and all sales of FHLB stock must be at par. As a result of these

restrictions, FHLB stock is carried at cost.

Loans Receivable

Loans receivable that management has the intent and ability to hold until maturity or payoff are stated at their outstanding unpaid principal balances, net of allowance for loan losses and any deferred fees and costs. Interest income is accrued on the unpaid principal balance. Loan origination fees and costs are deferred and recognized as an adjustment of the yield (interest income) of the related loans. The Company is generally amortizing these amounts over the contractual life of the loan.

Management considers a loan to be in delinquency status when the contractual payment of principal or interest has become greater than 30 days past due. The accrual of interest is generally 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 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 in the current year. Interest received on non-accrual 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, and the ultimate collectability of the total contractual principal and interest is no longer in doubt.

Allowance for Loan Losses

The allowance for loan losses is established through provisions for loan losses charged against income. Loans deemed to be uncollectible are charged against the allowance for loan losses, and subsequent recoveries, if any, are credited to the allowance.

Management estimates the allowance for loan losses pursuant to FASB ASC Topic 450, "Contingencies" ("ASC 450"), and FASB ASC Topic 310, "Receivables" ("ASC 310"). Commercial and commercial real estate loans that are considered impaired as defined in ASC 310 are reviewed individually to assess the likelihood and severity of loss exposure. 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 and interest when due according to the contractual terms of the loan agreement. Management determines the significance of payment delays and payment shortfalls on a case-by-case basis. Factors considered by management in determining impairment include payment status, collateral value, cash flow and the probability of collecting scheduled principal and interest payments when due. Loans subject to individual review are, where appropriate, reserved for according to the present value of expected future cash flows available to repay the loan or the estimated fair value less estimated selling costs of the collateral, if the loan is collateral dependent. Commercial loans excluded from individual assessment, as well as smaller balance homogeneous loans, such as consumer, residential real estate and home equity loans, are evaluated for loss exposure under ASC 450 based upon historical loss rates for each of these categories of loans, adjusted for qualitative factors. The Company does not separately identify individual consumer, home equity, or residential real estate loans for impairment disclosure, unless the loan has been modified as a troubled debt restructuring.

The Company records cash receipts on impaired loans that are non-performing as a reduction to principal before applying amounts to interest or late charges unless specifically directed otherwise by the Bankruptcy Court. The Company may continue to recognize interest income on impaired loans where there is no confirmed loss.

Loans may be periodically modified in a troubled debt restructuring ("TDR") to make concessions to help a borrower remain current on the loan and/or to avoid foreclosure, in accordance with FASB Accounting Standard Update ("ASU") 2012-02, "Receivables ("Subtopic 310"): A Creditor's Determination of Whether a Restructuring is a Troubled Debt Restructuring" ("ASU 2012-02"). Generally, we do not forgive principal or interest on a loan or modify the interest rate on loans that are below market rates. When we modify loans in a TDR, we evaluate any possible impairment similar to other impaired loans. If we determine that the value of a modified loan is less than the recorded investment in the loan, impairment is recognized through a specific allowance estimate or charge-off to the allowance.

The allowance for loan losses is maintained at a level to provide for losses that are inherent within the loan portfolio. This evaluation is inherently subjective as it requires material estimates that may be susceptible to significant change, including the amounts and timing of future cash flows expected to be received on impaired loans.

The allowance consists of specific, general and unallocated components. The specific component relates to loans that are classified as either special mention, doubtful, substandard or loss. For such loans that are also classified as impaired, an allowance is established when the discounted cash flows (or collateral value or observable market price) of the impaired loan is lower than the carrying value for that loan. The general component covers non-classified loans and is based on historical loss experience adjusted for qualitative factors. An 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.

Premises and Equipment

Land is carried at cost. Buildings, improvements, furniture and equipment are carried at cost, net of accumulated depreciation. Depreciation is computed on the straight-line basis over the estimated useful lives of assets (generally thirty-nine years for buildings and three to fifteen years for furniture and equipment). Leasehold improvements are amortized on the straight-line method over the lesser of the life of the improvements or the lease term. Maintenance and repairs are charged to expense as incurred, while major improvements are capitalized and amortized to operating expense over the identified useful life.

Transfers of Financial Assets

Transfers of financial assets 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 transferee 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.

Foreclosed Real Estate

Foreclosed real estate consists of property acquired in settlement of loans which is carried at its fair value less estimated selling costs. Write-downs from cost to fair value less estimated selling costs are recorded at the date of acquisition or repossession and are charged to the allowance for loan losses. Subsequent write-downs to fair value, net of estimated selling costs, are recorded in non-interest expense along with direct operating expenses. Gains or losses not previously recognized, resulting from the sale of foreclosed assets are recognized in non-interest expense on the date of sale.

Foreclosed real estate was $678,000 and $435,000 at December 31, 2018 and 2017, respectively, and was included as a component of other assets in the consolidated statement of financial condition. Proceeds from the sale of foreclosed real estate for the years ended December 31, 2018, 2017 and 2016 were $1.5 million, $331,000, and $619,000, respectively. This resulted in a net gain on sale of $44,000, $8,000 and $9,000 for the years ended December 31, 2018, 2017 and 2016, respectively, and was included as a component of other non-interest expenses in the consolidated statement of income.

Bank Owned Life Insurance

The Company invests in bank owned life insurance (“BOLI”) as a source of funding for employee benefit obligations. BOLI involves the purchase of life insurance by the Company on a chosen group of employees. The Company is the owner and beneficiary of the policies. This life insurance investment is carried at the cash surrender value of the underlying policies. Income from the increase in the cash surrender value of the underlying policies is included in non-interest income in the consolidated statements of income.

Advertising Costs

The Company follows the policy of charging the costs of advertising to expense as incurred. Total advertising expense for the years ended December 31, 2018, 2017 and 2016 was $606,000, $596,000, and $536,000, respectively.

Income Taxes

The Company files a consolidated federal income tax return. The provision for federal and state income taxes is based on income reported on the consolidated financial statements, rather than the amounts reported on the respective income tax returns. Deferred taxes are recorded using the liability method whereby deferred tax assets are recognized for deductible temporary differences and deferred tax liabilities are recognized for taxable temporary differences. Temporary differences are the differences between the reported amounts of assets and liabilities and their tax basis. Deferred tax assets are reduced by a valuation allowance when, in the opinion of management, it is more likely than not that some portion of the deferred tax assets will not be realized. Deferred tax assets and liabilities are adjusted for the effects of changes in tax laws and rates on the date of enactment and the effect of a change in tax rates is recognized in income at that time. In the fourth quarter of 2017, the Tax Cuts and Jobs Act (the "Tax Act") was signed into law which required the deferred tax assets and liabilities to

be revalued using the 21% federal tax rate enacted for tax years beginning after December 31, 2017 from the previous valuation under the prior federal tax rate of 34%. The effect of the revaluation was $262,000 and was recorded in the fourth quarter 2017 tax provision. Refer to Note 10 for more information on the impact of the Tax Act.

The Company makes certain estimates and judgments in determining income tax expense for financial statement purposes. These estimates and judgments are applied in the calculation of certain tax credits and in the calculation of deferred income tax expense or benefit associated with certain deferred tax assets and liabilities. Significant changes to these estimates may result in an increase or decrease to the Company’s tax provision in a subsequent period. The Company recognizes interest and/or penalties related to income tax matters in income tax expense.

The Company periodically reviews its tax positions and applies a “more likely than not” recognition threshold for all tax uncertainties. The amount recognized is the largest amount of tax benefit that is greater than 50% likely of being realized on examination. For tax positions not meeting the “more likely than not” test, no tax benefit is recorded.

Employee Stock Ownership Plan (“ESOP”)

Compensation expense is recognized based on the current market price of shares committed to be released to employees. All shares released and committed to be released are deemed outstanding for purposes of earnings per share calculations. Dividends declared and paid on allocated shares held by the ESOP are charged to retained earnings. The value of unearned shares to be allocated to ESOP participants for future services not yet performed is reflected as a reduction of stockholders’ equity. Dividends declared on unallocated shares held by the ESOP are recorded as a reduction of the ESOP’s loan payment to the Company.

Stock Compensation Plans

At December 31, 2018, the Company had stock-based employee and non-employee compensation plans, which are described more fully in Note 12. The Company accounts for these plans under FASB ASC Topic 718 “Compensation – Stock Compensation” (“ASC Topic 718”). The Company accounts for the plans using a fair value-based method, which measures compensation cost at the grant date based on the fair value of the award. Compensation is then recognized over the service period, which is usually the vesting period. The fair value of stock option grants are estimated on the date of grant using the Black-Scholes options-pricing model. Common shares are issued from the Company’s authorized common shares when a share option is exercised. Common shares awarded as restricted stock are expensed based on the fair market value at the grant date. The stock option plan, restricted stock plan and equity incentive plan expenses are recognized in salaries and employee benefits expense on the consolidated statement of income.

Earnings per Common Share

Basic earnings per share is computed by dividing net income by the weighted average number of common shares outstanding, less unallocated shares held by the Company’s ESOP, 2006 Recognition and Retention Plan (“RRP”) and 2012 Equity Incentive Plan (“EIP”), during the period. Diluted earnings per share reflects additional common shares that would have been outstanding if dilutive potential common shares had been issued, as well as any adjustment to income that would result from the assumed conversion. Potential common shares that may be issued by the Company relate solely to outstanding stock options and restricted stock awards, and are determined using the treasury stock method.

Off-Balance Sheet Credit Related Financial Instruments

In the ordinary course of business, the Company has entered into commitments to extend credit. Such commitments are recorded in the consolidated statement of financial condition when they are funded.

Comprehensive Income

Accounting principles generally require that recognized revenue, expenses, gains, and losses be included in net income. Although certain changes in assets and liabilities, such as unrealized gains and losses on available for sale securities and OTTI related to non-credit factors, are reported as a separate component of the stockholders’

equity section of the consolidated statement of financial condition, such items, along with net income, are components of comprehensive income.

Restrictions on Cash and Due from Banks

The Company is required to maintain reserve funds in cash or on deposit with the Federal Reserve Bank. The required reserve at December 31, 2018 and 2017 was $2,790,000 and $2,738,000, respectively.

Subsequent Events

The Company evaluated events occurring subsequent to December 31, 2018 through the date the consolidated financial statements are being issued, and other than as set forth in Note 22, did not identify any subsequent events requiring disclosure pursuant to the provisions of FASB ASC Topic 855.

Impact of Adoption of Recent Accounting Standards

The Company adopted FASB ASU 2014-09 "Revenue from Contracts with Customers (Topic 606)" ("ASU 2014-09") on January 1, 2018. The objective of ASU 2014-09 is to align the recognition of revenue with the transfer of promised goods or services provided to customers in an amount that reflects consideration which the entity expects to be entitled in exchange for those goods or services. The guidance in this update supersedes the revenue recognition requirements in ASC Topic 605 "Revenue Recognition", and most industry-specific guidance throughout the industry topics of Codification. Based on management's evaluation of ASU 2014-09, substantially all of the Company's interest income and non-interest income were not impacted by the adoption of ASU 2014-09 because the revenue from those contracts with customers is covered by other guidance in U.S. GAAP or the revenue recognition outcomes are similar to the Company's current revenue recognition practices. The Company evaluated certain noninterest revenue streams, including, deposit related fees, service and interchange fees, merchant income and gains (losses) on the sale of owned real estate ("OREO") to determine the potential impact of the guidance on the Company's consolidated financial statements. The Company concluded that a prior period adjustment was not needed upon adoption of ASU 2014-09 using the modified retrospective method. Since the guidance does not apply to revenue associated with financial instruments, the adoption of ASU 2014-09 did not have a material effect on the Company's consolidated financial statements. The additional disclosures required by ASU 2014-09 have been included in Note 21.

The Company adopted FASB ASU 2016-01 "Financial Instruments – Overall (Subtopic 825-10): Recognition and Measurement of Financial Assets and Financial Liabilities" ("ASU 2016-01") on January 1, 2018. The update enhances the reporting model for financial instruments to provide users of financial statements with more decision-useful information by updating certain aspects of recognition, measurement, presentation and disclosure of financial instruments. Among other changes, the update requires public business entities to: a) use the exit price notion when measuring the fair value of financial instruments for disclosure purposes; b) requires equity investments (except those accounted for under the equity method of accounting or those that result in consolidation of the investee) to be measured at fair value with changes in fair value recognized in net income; and c) clarifies that entities should evaluate the need for a valuation allowance on a deferred tax asset related to available for sale securities in combination with the entities' other deferred tax assets. The requirement to use the exit price method for the fair value measurement of financial instruments did not have an impact on the Company's consolidated financial statements upon adoption of ASU 2016-01, as the Company had elected to use this method in prior reporting periods. The requirement to record changes in the fair value of equity securities in net income did not have a material impact on the Company's consolidated financial statements upon adoption of ASU 2016-01. The adoption of ASU 2016-01 did not have any impact on the valuation allowance of deferred tax assets related to available for sale securities.

The Company adopted FASB ASU 2018-02, “Income Statement – Reporting Comprehensive Income (Topic 220): Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income” (ASU 2018-02) on January 1, 2018. ASU 2018-02 was issued to address the income tax accounting treatment of the stranded tax effects within other comprehensive income. This issue came about from the enactment of the Tax Act on December 22, 2017 that changed the Company’s tax rate from 34% to 21%. ASU 2018-02 allowed an entity to elect a reclassification from accumulated other comprehensive income (“AOCI”) to retained earnings for stranded tax effects resulting from the Tax Act. The amount of that reclassification includes the effect of tax rate changes on the deferred tax amount, any related valuation allowance and other income tax effects on the items in AOCI. Upon adoption of ASU 2018-02, the Company reclassified the income tax effect of the Tax Act

from AOCI to retained earnings. The reclassification increased AOCI and decreased retained earnings by $156,000, with zero net effect on total stockholders' equity. The Company uses the individual security approach for all available for sale securities when releasing income tax effects remaining in AOCI.

New Accounting Standards

The following are new accounting standards that have been previously disclosed but not yet adopted and includes additional information on the impact the adoption of the standard will have on the Company's consolidated financial statements:

In February 2016, the FASB issued ASU 2016-02 "Leases (Topic 842)" ("ASU 2016-02"). The guidance in the update supersedes the requirements in ASC Topic 840, Leases. The guidance is intended to increase transparency and comparability among organizations by recognizing lease assets and lease liabilities on the balance sheet for leases with lease terms of more than 12 months. For public companies, this update will be effective for interim and annual periods beginning after December 15, 2018, and can be applied on a modified retrospective or a transition approach basis. The Company expects to use the transition approach basis, which will allow us to apply ASU 2016-02 at the adoption date, as opposed to applying ASU 2016-02 at the beginning of the earliest period presented. The Company currently has two operating leases that will result in recognition of lease assets and lease liabilities on the consolidated statements of financial condition. The amount of assets and liabilities added to the consolidated statements of financial condition are not expected to have a material impact on the Company's consolidated financial statements per preliminary estimates.

In June 2016, the FASB issued ASU 2016-13, "Financial Instruments – Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments" (ASU 2016-13). ASU 2016-13 requires credit losses on most financial assets measured at amortized cost and certain other instruments to be measured using an expected credit loss model (referred to as the current expected credit loss ("CECL") model). Under the CECL model entities will estimate credit losses over the entire contractual term of the instrument (considering estimated prepayments, but not expected extensions or modifications unless reasonable expectation of a troubled debt restructuring exists) from the date of initial recognition of that instrument. Further, ASU 2016-13 made certain targeted amendments to the existing impairment standards for available for sale ("AFS") debt securities. For an AFS debt security for which there is neither the intent nor a more-likely-than-not requirement to sell, an entity will record credit losses as an allowance rather than a write-down of the amortized cost basis. ASU 2016-13 is effective for public companies that are U.S. Securities and Exchange Commission ("SEC") filers for fiscal periods beginning after December 15, 2019, including interim reporting periods within those periods. An entity will apply the amendments in ASU 2016-13 through a cumulative-effect adjustment to retained earnings as of the beginning of the first reporting period in which the guidance is effective. The Company is developing its approach for determining the expected credit losses under the new guidance. Alternative methodologies are being considered, data requirements and integrity are being reviewed and enhancements to the current process are being considered. We expect that the new guidance will result in an increase to the allowance for loan losses given that the allowance will be required to cover the full remaining expected life of the portfolio, rather than the incurred loss under the current accounting standard. The extent of this increase is still being evaluated. We are also reviewing the impact of additional disclosures required under ASU 2016-13 on our ongoing financial reporting procedures.

Reclassifications

Certain amounts in the 2017 and 2016 consolidated financial statements have been reclassified to conform with the 2018 presentation format. These reclassifications had no effect on net income.

Note 3 – Investment Securities

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

	December 31, 2018			
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
	(Dollars in thousands)			
SECURITIES AVAILABLE FOR SALE:				
Debt Securities				
U.S. Government Agencies	$ 2,012	$ -	$ (51)	$ 1,961
Municipal bonds	44,546	521	(125)	44,942
Mortgage-backed securities:				
Collateralized mortgage obligations-private label	27	-	-	27
Collateralized mortgage obligations-government sponsored entities	32,987	152	(686)	32,453
Government National Mortgage Association	191	8	-	199
Federal National Mortgage Association	2,367	41	(23)	2,385
Federal Home Loan Mortgage Corporation	3,833	64	(9)	3,888
Asset-backed securities-private label	-	270	-	270
Asset-backed securities-government sponsored entities	43	1	-	44
Total Debt Securities	$ 86,006	$ 1,057	$ (894)	$ 86,169
Equity Securities	22	2	-	24
Total Securities Available for Sale	$ 86,028	$ 1,059	$ (894)	$ 86,193

	December 31, 2017			
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
	(Dollars in thousands)			
SECURITIES AVAILABLE FOR SALE:				
Debt Securities				
U.S. Government Agencies	$ 2,013	$ -	$ (26)	$ 1,987
Municipal bonds	44,256	1,312	(6)	45,562
Mortgage-backed securities:				
Collateralized mortgage obligations-private label	30	-	-	30
Collateralized mortgage obligations-government sponsored entities	28,195	28	(569)	27,654
Government National Mortgage Association	229	16	-	245
Federal National Mortgage Association	2,834	95	-	2,929
Federal Home Loan Mortgage Corporation	1,518	35	-	1,553
Asset-backed securities-private label	69	276	(1)	344
Asset-backed securities-government sponsored entities	57	3	-	60
Total Debt Securities	$ 79,201	$ 1,765	$ (602)	$ 80,364
Equity Securities	22	35	-	57
Total Securities Available for Sale	$ 79,223	$ 1,800	$ (602)	$ 80,421

Debt Securities

All of our collateralized mortgage obligations are backed by one- to four-family residential mortgages.

At December 31, 2018, thirty-two municipal bonds with a cost of $11.0 million and fair value of $11.2 million were pledged under a collateral agreement with the Federal Reserve Bank ("FRB") of New York for liquidity borrowing. At December 31, 2017, thirty-three municipal bonds with a cost of $11.3 million and fair value of $11.7 million were pledged with the FRB. In addition, at December 31, 2018, twenty-two municipal bonds with a cost and fair value of $5.6 million were pledged as collateral for customer deposits in excess of Federal Deposit Insurance Corporation ("FDIC") insurance limits. At December 31, 2017, twenty municipal bonds with a cost of $5.1 million and fair value of $5.3 million were pledged as collateral for customer deposits in excess of FDIC insurance limits.

The following table sets forth the Company's investment in securities available for sale with gross unrealized losses of less than twelve months and gross unrealized losses of twelve months or more and associated fair values as of the dates indicated:

	Less than 12 months		12 months or more		Total	
	Fair Value	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses	Fair Value	Gross Unrealized Losses
	(Dollars in thousands)					
December 31, 2018						
U.S. Government Agencies	$ -	$ -	$ 1,961	$ (51)	$ 1,961	$ (51)
Municipal bonds	1,531	(5)	4,299	(120)	5,830	(125)
Mortgage-backed securities	736	(5)	23,065	(713)	23,801	(718)
	$ 2,267	$ (10)	$ 29,325	$ (884)	$ 31,592	$ (894)
December 31, 2017						
U.S. Government Agencies	$ 1,987	$ (26)	$ -	$ -	$ 1,987	$ (26)
Municipal bonds	491	(6)	-	-	491	(6)
Mortgage-backed securities	7,547	(57)	17,602	(512)	25,149	(569)
Asset-backed securities -private label	68	(1)	-	-	68	(1)
	$ 10,093	$ (90)	$ 17,602	$ (512)	$ 27,695	$ (602)

The Company reviews all investment securities on an ongoing basis for the presence of OTTI with formal reviews performed quarterly.

At December 31, 2018, the Company’s investment portfolio included several debt securities in the “unrealized losses less than twelve months” category. The debt securities were not evaluated further for OTTI as the unrealized losses on the individual securities were less than 20% of book value, which management deemed to be immaterial, the securities were issued by government sponsored enterprises and management has the intent and ability to hold these securities.

At December 31, 2018, the Company had several securities in the “unrealized losses twelve months or more” category. These securities were not evaluated further for OTTI, as the unrealized losses were less than 20% of book value and management has the intent and ability to hold these securities. Management believes the temporary impairments were due to declines in fair value resulting from changes in interest rates and/or increased credit liquidity spreads since the securities were purchased.

Management completed an OTTI analysis for two private label asset-backed securities, which did not have unrealized losses as of December 31, 2018. Management concluded that there was a limited risk of principal losses for these securities and that additional OTTI charges were not required as of December 31, 2018 on these securities.

The unrealized losses on debt securities shown in the previous tables were recorded as a component of other comprehensive loss, net of tax benefit on the Company's consolidated statements of stockholders' equity.

The following table presents a summary of the credit-related OTTI charges recognized as components of income:

	For The Years Ended December 31,	
	2018	2017
	(Dollars in thousands)	
Beginning balance	$ 435	$ 554
Additions:		
Credit loss not previously recognized	-	-
Reductions:		
Losses realized during the period on OTTI previously recognized	-	-
Receipt of cash flows on previously recorded OTTI	(88)	(119)
Ending balance	$ 347	$ 435

A deterioration in credit quality and/or other factors that may limit the liquidity of a security in our portfolio might adversely affect the fair values of the Company's investment portfolio and may increase the potential that certain unrealized losses will be designated as "other-than-temporary" and that the Company may incur additional write-downs in future periods.

During the year ended December 31, 2018, the Company did not sell any available for sale debt securities. During the year ended December 31, 2017, the Company sold eighteen municipal bonds for total proceeds of $6.5 million resulting in realized gains of $244,000. During the year ended December 31, 2016, the Company sold nine U.S. Treasury Bonds for total proceeds of $14.4 million resulting in realized gains of $1.6 million.

Equity Securities

At December 31, 2018 and 2017, available for sale equity securities consisted of 22,368 shares of Federal Home Loan Mortgage Corporation ("FHLMC") common stock. During the year ended December 31, 2018, the Company recognized an unrealized gain of $2,000 on the equity securities, which was recorded in non-interest income in the consolidated statements of income. There were no sales of equity securities during the years ended December 31, 2018, 2017 or 2016.

Scheduled contractual maturities of available for sale securities are as follows:

	Amortized Cost	Fair Value
	(Dollars in thousands)	
December 31, 2018:		
Less than one year	$ 255	$ 255
After one year through five years	5,216	5,307
After five years through ten years	24,350	24,656
After ten years	16,737	16,685
Mortgage-backed securities	39,405	38,952
Asset-backed securities	43	314
Equity securities	22	24
	$ 86,028	$ 86,193

Note 4 - Loans Receivable

Loans receivable, net consists of the following:

	December 31,	
	2018	2017
	(Dollars in thousands)	
Real Estate Loans:		
Residential, one- to four-family(1)	$ 155,024	$ 144,614
Home equity	41,830	38,078
Commercial	150,475	122,747
Construction - Commercial	22,252	30,802
	369,581	336,241
Commercial	21,825	27,612
Consumer	1,156	1,355
Total Loans	392,562	365,208
Allowance for loan losses	(3,448)	(3,283)
Net deferred loan costs	3,357	3,138
Loans Receivable, net	$ 392,471	$ 365,063

(1) Includes one- to four-family construction loans.

Residential real estate loans serviced for others by the Company totaled $20.1 million and $21.8 million at December 31, 2018 and 2017, respectively.

At December 31, 2018, $107.8 million of one- to four-family residential real estate loans were pledged as collateral for advances from the FHLB.

Most loans made by the Company are secured by borrowers' personal or business assets. The Company considers a concentration of credit to a particular industry to exist when the aggregate credit exposure to a borrower or group of borrowers in that industry exceeds 25% of the Bank's capital plus reserves or 10% of total loans. At December 31, 2018, the Company held concentrations of credit in the particular industries noted below:

•$73.7 million in investor owned multifamily real estate loans, which equated to 92.4% of the Bank's capital reserves; and

•$32.4 million in real estate loans on office properties, which equated to 40.6% of the Bank's capital reserves.

Although these loan categories exceeded the concentration parameter, borrowers within these loan types are diversified and the properties are located in various locations throughout western New York.

The ability of the Company's residential and consumer borrowers to honor their repayment commitments is generally dependent on the level of overall economic activity within the geographical area they reside. Commercial borrowers' ability to repay is generally dependent upon the general health of the economy. Substantially all of the Company's loans are in western New York State and, accordingly, the ultimate collectability of a substantial portion of the loans is susceptible to changes in market conditions in this primary market area.

Note 5 - Allowance for Loan Losses

Management segregates the loan portfolio into loan types and analyzes the risk level for each loan type when determining its allowance for loan losses. The loan types are as follows:

Real Estate Loans:

- One- to Four-Family – are loans secured by first lien collateral on residential real estate primarily held in the Western New York region. These loans can be affected by economic conditions and the value of underlying properties. Western New York's housing market has consistently demonstrated stability in home prices despite economic conditions. Furthermore, the Company has conservative underwriting standards and its residential lending policies and procedures ensure that its one- to four-family residential mortgage loans generally conform to secondary market guidelines.
- Home Equity - are loans or lines of credit secured by first or second liens on owner-occupied residential real estate primarily held in the Western New York region. These loans can also be affected by economic conditions and the values of underlying properties. Home equity loans may have increased risk of loss if the Company does not hold the first mortgage resulting in the Company being in a secondary position in the event of collateral liquidation. The Company does not originate interest only home equity loans.
- Commercial Real Estate – are loans used to finance the purchase of real property, which generally consists of developed real estate that is held as first lien collateral for the loan. These loans are secured by real estate properties that are primarily held in the Western New York region. Commercial real estate lending involves additional risks compared with one- to four-family residential lending, because payments on loans secured by commercial real estate properties are often dependent on the successful operation or management of the properties, and/or the collateral value of the commercial real estate securing the loan, and repayment of such loans may be subject to adverse conditions in the real estate market or economic conditions to a greater extent than one- to four-family residential mortgage loans. Also, commercial real estate loans typically involve relatively large loan balances concentrated with single borrowers or groups of related borrowers.
- Construction – are loans to finance the construction of either one- to four-family owner occupied homes or commercial real estate. At the end of the construction period, the loan automatically converts to either a one- to four-family or commercial mortgage, as applicable. Risk of loss on a construction loan depends largely upon the accuracy of the initial estimate of the value of the property at completion compared to the actual cost of construction. The Company limits its risk during construction as disbursements are not made until the required work for each advance has been completed and an updated lien search is performed. The completion of the construction progress is verified by a Company loan officer or inspections performed by an independent appraisal firm. Construction loans also expose us to the risk of construction delays which may impair the borrower's ability to repay the loan.

Other Loans:

- Commercial – includes business installment loans, lines of credit, and other commercial loans. Most of our commercial loans have fixed interest rates, and are for terms generally not in excess of 5 years. Whenever possible, we collateralize these loans with a lien on business assets and equipment and require the personal guarantees from principals of the borrower. Commercial loans generally involve a higher degree of credit risk. As commercial loans can involve relatively large loan balances to a single borrower or groups of related borrowers, with the repayment of such loans typically dependent on the successful operation of the commercial business and the income stream of the borrower. Such risks can be significantly affected by economic conditions. Although commercial loans may be collateralized by equipment or other business assets, the liquidation of collateral in the event of a borrower default may be an insufficient source of repayment because the equipment or other business assets may be obsolete or of limited use, among other things. Accordingly, the repayment of a commercial loan depends primarily on the credit worthiness of the borrowers (and any guarantors), while liquidation of collateral is a secondary and often insufficient source of repayment.
-

Consumer – consist of loans secured by collateral such as an automobile or a deposit account, unsecured loans and lines of credit. Consumer loans tend to have a higher credit risk due to the loans being either unsecured or secured by rapidly depreciable assets. Furthermore, consumer loan payments are dependent on the borrower's continuing financial stability, and therefore are more likely to be adversely affected by job loss, divorce, illness or personal bankruptcy.

The allowance for loan losses is a valuation account that reflects the Company's evaluation of the losses inherent in its loan portfolio. In order to determine the adequacy of the allowance for loan losses, the Company estimates

losses by loan type using historical loss factors, as well as other environmental factors, such as trends in loan volume and loan type, loan concentrations, changes in the experience, ability and depth of the Company's lending management, and national and local economic conditions. The Company's determination as to the classification of loans and the amount of loss allowances are subject to review by bank regulators, which can require the establishment of additional loss allowances.

The Company also reviews all loans on which the collectability of principal may not be reasonably assured, by reviewing payment status, financial conditions and estimated value of loan collateral. These loans are assigned an internal loan grade, and the Company assigns an amount of loss allowances to these classified loans based on loan grade.

Although the allocations noted below are by loan type, the allowance for loan losses is general in nature and is available to offset losses from any loan in the Company's portfolio. The unallocated component of the allowance for loan losses reflects the margin of imprecision inherent in the underlying assumptions used in the methodologies for existing specific and general losses in the portfolio.

The following tables summarize the activity in the allowance for loan losses for the years ended December 31, 2018, 2017 and 2016 and the distribution of the allowance for loan losses and loan receivable by loan portfolio class and impairment method as of December 31, 2018 and December 31, 2017:

	Real Estate Loans				Other Loans			
	One- to Four-Family (2)	Home Equity	Commercial	Construction - Commercial	Commercial	Consumer	Unallocated	Total
	(Dollars in thousands)							
December 31, 2018								
Allowance for Loan Losses:								
Balance – January 1, 2018	$ 511	$ 122	$ 1,663	$ 347	$ 544	$ 35	$ 61	$ 3,283
Charge-offs	(23)	-	(181)	-	-	(51)	-	(255)
Recoveries	19	2	1	-	1	7	-	30
Provision (Credit)	(36)	(33)	537	(97)	(38)	34	23	390
Balance – December 31, 2018	$ 471	$ 91	$ 2,020	$ 250	$ 507	$ 25	$ 84	$ 3,448
Ending balance: individually evaluated for impairment	$ -	$ -	$ 30	$ -	$ -	$ -	$ -	$ 30
	$ 471	$ 91	$ 1,990	$ 250	$ 507	$ 25	$ 84	$ 3,418

Ending balance: collectively evaluated for impairment								
Gross Loans Receivable (1):								
Ending balance	$ 155,024	$ 41,830	$ 150,475	$ 22,252	$ 21,825	$ 1,156	$ -	$ 392,562
Ending balance: individually evaluated for impairment	$ 178	$ -	$ 382	$ -	$ -	$ -	$ -	$ 560
Ending balance: collectively evaluated for impairment	$ 154,846	$ 41,830	$ 150,093	$ 22,252	$ 21,825	$ 1,156	$ -	$ 392,002

(1) Gross Loans Receivable does not include allowance for loan losses of $(3,448) or deferred loan costs of $3,357.
(2) Includes one- to four-family construction loans.

	Real Estate Loans				Other Loans			
	One- to Four-Family(2)	Home Equity	Commercial	Construction - Commercial	Commercial	Consumer	Unallocated	Total
	(Dollars in thousands)							
December 31, 2017								
Allowance for Loan Losses:								
Balance – January 1, 2017	$ 431	$ 114	$ 1,803	$ 150	$ 338	$ 28	$ 18	$ 2,882
Charge-offs	-	(3)	(75)	-	(20)	(41)	-	(139)
Recoveries	3	4	-	-	9	14	-	30
Provision (Credit)	77	7	(65)	197	217	34	43	510
Balance – December 31, 2017	$ 511	$ 122	$ 1,663	$ 347	$ 544	$ 35	$ 61	$ 3,283
Ending balance: individually evaluated for impairment	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Ending balance: collectively evaluated for impairment	$ 511	$ 122	$ 1,663	$ 347	$ 544	$ 35	$ 61	$ 3,283
Gross Loans Receivable (1):								
Ending Balance	$ 144,614	$ 38,078	$ 122,747	$ 30,802	$ 27,612	$ 1,355	$ -	$ 365,208
Ending balance: individually evaluated for impairment	$ 184	$ 21	$ 1,498	$ -	$ 54	$ -	$ -	$ 1,757
Ending balance: collectively evaluated for impairment	$ 144,430	$ 38,057	$ 121,249	$ 30,802	$ 27,558	$ 1,355	$ -	$ 363,451

(1) Gross Loans Receivable does not include allowance for loan losses of $(3,283) or deferred loan costs of $3,138.
(2) Includes one- to four-family construction loans.

Real Estate Loans				Other Loans			
One- to Four-Family(1)	Home Equity	Commercial	Construction -	Commercial	Consumer	Unallocated	Total

(Dollars in thousands)				Commercial				
December 31, 2016 Allowance for Loan Losses:								
Balance – January 1, 2016	$ 351	$ 120	$ 1,204	$ 59	$ 197	$ 22	$ 32	$ 1,985
Charge-offs	(107)	(19)	(1)	-	(76)	(54)	-	(257)
Recoveries	12	1	-	-	2	14	-	29
Provision (Credit)	175	12	600	91	215	46	(14)	1,125
Balance – December 31, 2016	$ 431	$ 114	$ 1,803	$ 150	$ 338	$ 28	$ 18	$ 2,882

(1) Includes one- to four family construction loans.

A loan is considered impaired when, based on current information and events, it is probable that the Company will not be able to collect the scheduled payments of principal and interest when due according to the contractual terms of the loan agreement. Factors considered in determining impairment include payment status, collateral value and the probability of collecting scheduled payments when due. Impairment is measured on a loan-by-loan basis for commercial real estate loans and commercial loans. Larger groups of smaller balance homogeneous loans are collectively evaluated for impairment. Accordingly, the Company does not separately identify individual consumer, home equity, or one- to four-family loans for impairment disclosure, unless they are subject to a troubled debt restructuring.

The following is a summary of information pertaining to impaired loans at or for the periods indicated:

	Recorded Investment	Unpaid Principal Balance	Related Allowance	Average Recorded Investment	Interest Income Recognized
	At December 31, 2018 (Dollars in thousands)			For the Year Ended December 31, 2018	
With no related allowance recorded:					
Residential, one- to four-family	$ 178	$ 178	$ -	$ 180	$ 12
Home equity(1)	-	-	-	17	-
Commercial real estate	134	134	-	356	-
Commercial loan(1)	-	-	-	59	1
Total impaired loans with no related allowance	312	312	-	612	13
With an allowance recorded:					
Commercial real estate(2)	248	248	30	1,249	4
Total impaired loans with an allowance	248	248	30	1,249	4
Total of impaired loans:					
Residential, one- to four-family	178	178	-	180	12
Home equity	-	-	-	17	-
Commercial real estate	382	382	30	1,605	4
Commercial loans	-	-	-	59	1
Total impaired loans	$ 560	$ 560	$ 30	$ 1,861	$ 17

(1) These loans were either paid off or foreclosed upon during the year ended December 31, 2018.

(2) Two commercial real estate loans with a combined recorded investment of $1.4 million and a related allowance of $60,000 were foreclosed upon during the year ended December 31, 2018.

	Recorded Investment	Unpaid Principal Balance	Related Allowance	Average Recorded Investment	Interest Income Recognized
	At December 31, 2017 (Dollars in thousands)			For the Year Ended December 31, 2017	
With no related allowance recorded:					
Residential, one- to four-family	$ 184	$ 184	$ -	$ 197	$ 15
Home equity	21	21	-	21	-
Commercial real estate	1,498	1,498	-	1,674	222
Commercial loans	54	54	-	54	-
Total impaired loans with no related allowance	1,757	1,757	-	1,946	237
With an allowance recorded:					
Commercial real estate(1)	-	-	-	230	-
Commercial loans(2)	-	-	-	50	6
Total impaired loans with an allowance	-	-	-	280	6
Total of impaired loans:					