Board of Governors of the Federal Reserve System

Annual Report of Holding Companies—FR Y-6

Report at the close of business as of the end of fiscal year

This Report is required by law: Section 5(c)(1)(A) of the Bank Holding Company Act (12 U.S.C. § 1844(c)(1)(A)); sections 8(a) and 13(a) of the International Banking Act (12 U.S.C. §§ 3106(a) and 3108(a)); sections 11(a)(1), 25, and 25A of the Federal Reserve Act (12 U.S.C. §§ 248(a)(1), 602, and 611a); and sections 113, 165, 312, 618, and 809 of the Dodd-Frank Act (12 U.S.C. §§ 5361, 5365, 5412, 1850a(c)(1), and 5468(b)(1)). Return to the appropriate Federal Reserve Bank the original and the number of copies specified.

This report form is to be filed by all top-tier bank holding companies, top-tier savings and loan holding companies, and U.S. intermediate holding companies organized under U.S. law, and by any foreign banking organization that does not meet the requirements of and is not treated as a qualifying foreign banking organization under Section 211.23 of Regulation K (12 C.F.R. § 211.23). (See page one of the general instructions for more detail of who must file.) The Federal Reserve may not conduct or sponsor, and an organization (or a person) is not required to respond to, an information collection unless it displays a currently valid OMB control number.

NOTE: The *Annual Report of Holding Companies* must be signed by one director of the top-tier holding company. This individual should also be a senior official of the top-tier holding company. In the event that the top-tier holding company does not have an individual who is a senior official and is also a director, the chairman of the board must sign the report. If the holding company is an ESOP/ESOT formed as a corporation or is an LLC, see the General Instructions for the authorized individual who must sign the report.

I, Michael G. McAuliffe
Name of the Holding Company Director and Official

Chairman and CEO
Title of the Holding Company Director and Official

attest that the *Annual Report of Holding Companies* (including the supporting attachments) for this report date has been prepared in conformance with the instructions issued by the Federal Reserve System and are true and correct to the best of my knowledge and belief.

With respect to information regarding individuals contained in this report, the Reporter certifies that it has the authority to provide this information to the Federal Reserve. The Reporter also certifies that it has the authority, on behalf of each individual, to consent or object to public release of information regarding that individual. The Federal Reserve may assume, in the absence of a request for confidential treatment submitted in accordance with the Board's "Rules Regarding Availability of Information," 12 C.F.R. Part 261, that the Reporter and individual consent to public release of all details in the report concerning that individual.

Michael G. McAuliffe
Signature of Holding Company Director and Official

03/25/2020
Date of Signature

For holding companies not registered with the SEC–
Indicate status of Annual Report to Shareholders:

- ☐ is included with the FR Y-6 report
- ☐ will be sent under separate cover
- ☐ is not prepared

For Federal Reserve Bank Use Only

RSSD ID ______
C.I. ______

Date of Report (top-tier holding company's fiscal year-end):
December 31, 2019
Month / Day / Year

N/A
Reporter's Legal Entity Identifier (LEI) (20-Character LEI Code)

Reporter's Name, Street, and Mailing Address

Middlesex Bancorp, MHC
Legal Title of Holding Company

6 Main Street
(Mailing Address of the Holding Company) Street / P.O. Box

Natick	MA	01760
City	State	Zip Code

Physical Location (if different from mailing address)

Person to whom questions about this report should be directed:

Gina Mazzaro	Vice President
Name	Title

508-315-5313
Area Code / Phone Number / Extension

508-651-3359
Area Code / FAX Number

gina.mazzaro@middlesexbank.com
E-mail Address

www.middlesexbank.com
Address (URL) for the Holding Company's web page

Is confidential treatment requested for any portion of this report submission? .... 0=No 1=Yes: 0

In accordance with the General Instructions for this report (check only one),

1. a letter justifying this request is being provided along with the report .... ☐
2. a letter justifying this request has been provided separately ... ☐

NOTE: Information for which confidential treatment is being requested must be provided separately and labeled as "confidential."

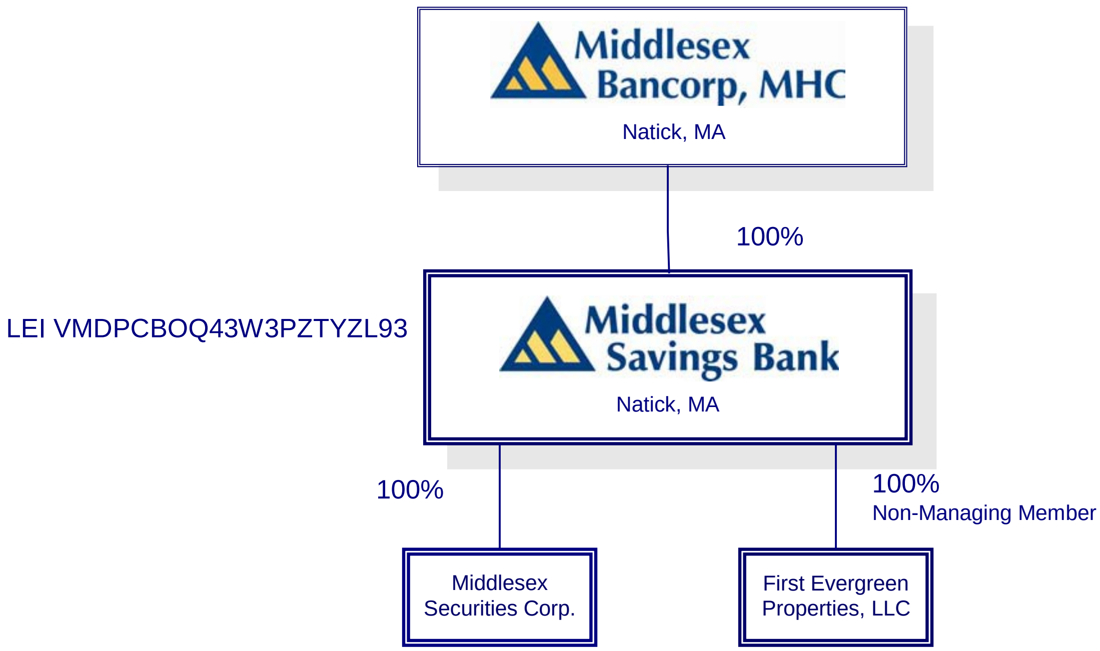
Form FR Y-6

Middlesex Bancorp, MHC
Natick, Massachusetts
Fiscal Year Ending December 31, 2019

Report Item

1. The Bank Holding Company annual Report
2.a. Organization Chart is included.
2.b. Domestic Branch Listing is included.
3. Securities Holders - N/A
4. Insider report is included.

Form FR Y-6
Middlesex Bancorp, MHC
Natick, Massachusetts
Fiscal Year Ending December 31, 2019



State of Incorporation is the State of Massachusetts unless otherwise noted. LEI is for Middlesex Savings Bank, LEI is not applicable for other entities.

Results: A list of branches for your depository institution: MIDDLESEX SAVINGS BANK (ID_RSSD: 888002).
This depository institution is held by MIDDLESEX BANCORP MHC (3932072) of NATICK, MA.
The data are as of 12/31/2019. Data reflects information that was received and processed through 01/07/2020.

Data Action	Effective Date	Branch Service Type	Branch ID_RSSD*	Popular Name	Street Address	City	State	Zip Code	County	Country	Head Office	Head Office ID_RSSD*	Comments
OK		Full Service (Head Office)	888002	MIDDLESEX SAVINGS BANK	6 MAIN ST	NATICK	MA	01760	MIDDLESEX	UNITED STATES	MIDDLESEX SAVINGS BANK	888002	
OK		Full Service	680701	ACTON BRANCH	577 MASSACHUSETTS AVE	ACTON	MA	01720	MIDDLESEX	UNITED STATES	MIDDLESEX SAVINGS BANK	888002	
OK		Full Service	180304	SHOPPING CENTER BRANCH	291 MAIN STREET	ACTON	MA	01720	MIDDLESEX	UNITED STATES	MIDDLESEX SAVINGS BANK	888002	
OK		Full Service	701606	ASHLAND BRANCH	2 W UNION ST	ASHLAND	MA	01721	MIDDLESEX	UNITED STATES	MIDDLESEX SAVINGS BANK	888002	
OK		Full Service	3483761	GREAT ROAD BRANCH	186 GREAT ROAD	BEDFORD	MA	01730	MIDDLESEX	UNITED STATES	MIDDLESEX SAVINGS BANK	888002	
OK		Full Service	2822943	BELLINGHAM BRANCH	267 HARTFORD AVENUE	BELLINGHAM	MA	02019	NORFOLK	UNITED STATES	MIDDLESEX SAVINGS BANK	888002	
OK		Full Service	3431025	BOXBOROUGH BRANCH	629 MASSACHUSETTS AVENUE	BOXBOROUGH	MA	01719	MIDDLESEX	UNITED STATES	MIDDLESEX SAVINGS BANK	888002	
OK		Full Service	749000	CONCORD BRANCH	64 MAIN ST	CONCORD	MA	01742	MIDDLESEX	UNITED STATES	MIDDLESEX SAVINGS BANK	888002	
OK		Full Service	856805	W CONCORD BRANCH	1208 MAIN ST	CONCORD	MA	01742	MIDDLESEX	UNITED STATES	MIDDLESEX SAVINGS BANK	888002	
OK		Full Service	1891670	FRAMINGHAM BRANCH	899 EDGELL	FRAMINGHAM	MA	01701	MIDDLESEX	UNITED STATES	MIDDLESEX SAVINGS BANK	888002	
OK		Full Service	4124968	ROUTE 9 BRANCH	598 WORCESTER ROAD	FRAMINGHAM	MA	01702	MIDDLESEX	UNITED STATES	MIDDLESEX SAVINGS BANK	888002	
OK		Full Service	1923580	FRANKLIN VILLAGE SHOPPING CENTER	1000 FRANKLIN VILLAGE DRIVE	FRANKLIN	MA	02038	NORFOLK	UNITED STATES	MIDDLESEX SAVINGS BANK	888002	
OK		Full Service	2869715	GROTON BRANCH	112 BOSTON ROAD	GROTON	MA	01450	MIDDLESEX	UNITED STATES	MIDDLESEX SAVINGS BANK	888002	
OK		Full Service	617604	HOLLISTON OFFICE	830 WASHINGTON STR	HOLLISTON	MA	01746	MIDDLESEX	UNITED STATES	MIDDLESEX SAVINGS BANK	888002	
OK		Full Service	651402	HOPKINTON BRANCH	10 MAIN STR	HOPKINTON	MA	01748	MIDDLESEX	UNITED STATES	MIDDLESEX SAVINGS BANK	888002	
OK		Full Service	2947529	LITTLETON BRANCH	308 GREAT ROAD	LITTLETON	MA	01460	MIDDLESEX	UNITED STATES	MIDDLESEX SAVINGS BANK	888002	
OK		Full Service	681203	MAYNARD BRANCH	17 NASON ST	MAYNARD	MA	01754	MIDDLESEX	UNITED STATES	MIDDLESEX SAVINGS BANK	888002	
OK		Full Service	1003400	POWDER MILL BRANCH	72 POWDER MILL ROAD	MAYNARD	MA	01754	MIDDLESEX	UNITED STATES	MIDDLESEX SAVINGS BANK	888002	
OK		Full Service	3431034	MEDFIELD BRANCH	495 MAIN STREET	MEDFIELD	MA	02052	NORFOLK	UNITED STATES	MIDDLESEX SAVINGS BANK	888002	
OK		Full Service	760108	MEDWAY MAIN STREET BRANCH	81 MAIN ST	MEDWAY	MA	02053	NORFOLK	UNITED STATES	MIDDLESEX SAVINGS BANK	888002	
OK		Full Service	1223909	MILLISTON ROAD BRANCH	36A MILLISTON ROAD	MILLIS	MA	02054	NORFOLK	UNITED STATES	MIDDLESEX SAVINGS BANK	888002	
OK		Full Service	3160259	CHESTNUT STREET BRANCH	50 CHESTNUT STREET	NEEDHAM	MA	02492	NORFOLK	UNITED STATES	MIDDLESEX SAVINGS BANK	888002	
OK		Full Service	4901404	SHERBORN BRANCH	31 N. MAIN STREET	SHERBORN	MA	01770	MIDDLESEX	UNITED STATES	MIDDLESEX SAVINGS BANK	888002	
OK		Full Service	2701150	SOUTHBOROUGH BRANCH	162 CORDAVILLE ROAD	SOUTHBOROUGH	MA	01772	WORCESTER	UNITED STATES	MIDDLESEX SAVINGS BANK	888002	
OK		Full Service	3820450	SUDBURY BRANCH	454 BOSTON POST ROAD	SUDBURY	MA	01776	MIDDLESEX	UNITED STATES	MIDDLESEX SAVINGS BANK	888002	
OK		Full Service	5046870	WALPOLE BRANCH	657 MAIN STREET	WALPOLE	MA	02081	NORFOLK	UNITED STATES	MIDDLESEX SAVINGS BANK	888002	
OK		Full Service	952707	WAYLAND BRANCH	150 COMMONWEALTH ROAD	WAYLAND	MA	01778	MIDDLESEX	UNITED STATES	MIDDLESEX SAVINGS BANK	888002	
OK		Full Service	4516929	WAYLAND CENTER BRANCH	1 ANDREW AVENUE	WAYLAND	MA	01778	MIDDLESEX	UNITED STATES	MIDDLESEX SAVINGS BANK	888002	
OK		Full Service	2531487	WELLESLEY BRANCH	278 WASHINGTON STREET	WELLESLEY	MA	02481	NORFOLK	UNITED STATES	MIDDLESEX SAVINGS BANK	888002	
OK		Full Service	764704	WESTFORD BRANCH	160 LITTLETON RD	WESTFORD	MA	01886	MIDDLESEX	UNITED STATES	MIDDLESEX SAVINGS BANK	888002	

https://structurelists.federalreserve.gov/Default.aspx

Form FR Y-6
Middlesex Bancorp, MHC
Fiscal Year Ending December 31, 2019

Report Item 4: Insiders
(1), (2), (3)(a,b,c), and (4)(a,b,c)

(1) Name, City, State, Country	(2) Principal Occupation if other than with Bank Holding Company	(3)(a) Title & Position with Bank Holding Company	(3)(b) Title & Position with Subsidiaries (include names of subsidiaries)	(3)(c) Title & Position with Other Businesses (include names of other businesses)	(4)(a) Percentage of Voting Shares in Bank Holding Company	(4)(b) Percentage of Voting Shares in Subsidiaries (include names of subsidiaries)	(4)(c) List names of other companies (include partnerships) if 25% or more of voting securities are held. (list names of companies and percentage of voting securities held)
Peter M. Burke Natick, Ma	Developer Real Estate Broker	Trustee	Director Middlesex Savings Bank	McB LLC Partner	N/A	N/A	McB LLC 33% Navy Yard Realty Trust 50% Thula Thula Realty Trust 25%
Robert E. Carr Concord, MA	Retired	Trustee	Director Middlesex Savings Bank	N/A	N/A	N/A	274 Real Estate LLC 25% Walden Crossing LLC 25% A&D Real Estate LLC 51%
Arthur J. Chaves Natick, MA	Accountant	Trustee	Director Middlesex Savings Bank	Treasurer/COO Coan, Inc.	N/A	N/A	N/A
Joan M. Craig West Chatham, MA	Retired	Trustee	Director Middlesex Savings Bank	N/A	N/A	N/A	N/A
Arthur B. Fair III Natick, MA	Insurance Agent	Trustee	Director Middlesex Savings Bank	President Fair & Yeager Insurance Agency, Inc.	N/A	N/A	Fair & Yeager Insurance Agency 100%
Carolyn Hatch Flood Concord, MA	Manager	Trustee	Director Middlesex Savings Bank	Mass Audubon Drumlin Farm Wildlife Sanctuary	N/A	N/A	N/A
Donna M. Gallo Natick, MA	Professor	Trustee	Director Middlesex Savings Bank	Clark University	N/A	N/A	N/A
Paul J. Gerry, Jr. Natick, MA	CPA	Trustee	Director Middlesex Savings Bank	Partner Gray, Gray, Gray CPAs	N/A	N/A	N/A
Kenneth C. A. Isaacs Lincoln, MA	Investment Advisor	Trustee	Director Middlesex Savings Bank	Investment Advisor Massachusetts Finance Group	N/A	N/A	Massachusetts Finance Group 100%
Kelly A. Kober Medway, MA	Food Broker	Trustee	Director Middlesex Savings Bank	Director of Customer Svc & Administration Old Colony Foods, Inc.	N/A	N/A	N/A
Brian D. Lanigan Concord, MA	Retired	Trustee	Director Middlesex Savings Bank	N/A	N/A	N/A	N/A
Michael G. McAuliffe Framingham, MA	N/A	Chairman, President & CEO	Chairman, President & CEO Middlesex Savings Bank	N/A	N/A	N/A	
Richard J. Napoli Acton, MA	Specialty Foods & Farmers Market	Trustee	N/A	Idylwilde Farm, Inc CFO	N/A	N/A	N/A
Richard M. Presti Sudbury, MA	Real Estate Advisor	Trustee	Director Middlesex Savings Bank	President Chapel Partners, Inc	N/A	N/A	Domus, LLC 100% 160 Lincoln Road LLC 100% 66 Commonwealth Ave LLC 100% 168 Ayer Road LLC 100% Stonehouse Nominee Trust 100% 7 Mill Street LLC 100%

(1) Name, City, State, Country	(2) Principal Occupation if other than with Bank Holding Company	(3)(a) Title & Position with Bank Holding Company	(3)(b) Title & Position with Subsidiaries (include names of subsidiaries)	(3)(c) Title & Position with Other Businesses (include names of other businesses)	(4)(a) Percentage of Voting Shares in Bank Holding Company	(4)(b) Percentage of Voting Shares in Subsidiaries (include names of subsidiaries)	(4)(c) List names of other companies (include partnerships) if 25% or more of voting securities are held. (list names of companies and percentage of voting securities held)
Lauren Stiller Rikleen Wayland, MA	Attorney	Trustee	N/A	Executive Director - Rikleen Institute for Strategic Leadership	N/A	N/A	Rikleen Institute 100%
Ian E. Rubin Wayland, MA	Consultant	Trustee	Director Middlesex Savings Bank	Forrester - Solutions Partner	N/A	N/A	N/A
Sean F. Burke Townsend, MA	N/A	Executive Vice President Chief Technology Officer	Executive Vice President Chief Technology Officer Middlesex Savings Bank	N/A	N/A	N/A	N/A
Cheryl Corman Millis, MA	N/A	Executive Vice President & Chief Human Resources Officer	Executive Vice President & Chief Human Resources Officer Middlesex Savings Bank	N/A	N/A	N/A	N/A
Dana Neshe Framingham, MA	N/A	Executive Vice President Chief Risk Officer	Executive Vice President Chief Operating Officer Middlesex Savings Bank	N/A	N/A	N/A	N/A
Brian D. Stewart Walpole, MA	N/A	Executive Vice President Chief Financial Officer	Executive Vice President Chief Financial Officer Middlesex Savings Bank	N/A	N/A	N/A	N/A
Thomas F. Farley, Jr Acton, MA	N/A	Executive Vice President Chief Commercial Banking Officer	Executive Vice President Chief Commercial Banking Officer Middlesex Savings Bank	N/A	N/A	N/A	N/A
Jon Auger Grafton, MA	N/A	Executive Vice President Chief Retail Lending Officer	Executive Vice President Chief Retail Lending Officer Middlesex Savings Bank	N/A	N/A	N/A	N/A
Ian D. Hecker Wayland, MA	N/A	Executive Vice President & Bank Counsel	Executive Vice President & Bank Counsel Middlesex Savings Bank	N/A	N/A	N/A	N/A
Michael J. O'Riordan Franklin, MA	N/A	Senior Vice President Senior Credit Officer	Senior Vice President Senior Credit Officer Middlesex Savings Bank	N/A	N/A	N/A	N/A
Michael Sullivan North Attleboro, MA	N/A	Senior Vice President Director of Internal Audit	Senior Vice President Director of Internal Audit Middlesex Savings Bank	N/A	N/A	N/A	N/A

Middlesex Bancorp, MHC and Subsidiaries

Consolidated Financial Statements

Years Ended December 31, 2019 and 2018

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Independent Auditors' Report

To the Board of Trustees of Middlesex Bancorp, MHC:

Report on the Consolidated Financial Statements

We have audited the accompanying consolidated financial statements of Middlesex Bancorp, MHC and subsidiaries (the "Company") which comprise the consolidated balance sheets as of December 31, 2019 and 2018, and the related consolidated statements of net income, comprehensive income, changes in retained earnings and cash flows for the years then ended, and the related notes to the consolidated financial statements.

Management's Responsibility for the Consolidated Financial Statements

Management is responsible for the preparation and fair presentation of these consolidated financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of consolidated financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on these consolidated financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the consolidated financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the consolidated financial statements, whether due to fraud or error. In making those risk assessments, the auditors consider internal control relevant to the entity's preparation and fair presentation of the consolidated financial statements in order to design audit procedures that are appropriate in the circumstances. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of Middlesex Bancorp, MHC and subsidiaries as of December 31, 2019 and 2018, and the results of their operations and their cash flows for the years then ended in accordance with accounting principles generally accepted in the United States of America.

Internal Control Over Financial Reporting

We also have audited, in accordance with auditing standards generally accepted in the United States of America, Middlesex Bancorp, MHC's internal control over financial reporting as of December 31, 2019, based on criteria established in *Internal Control – Integrated Framework (2013)* published by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) and our report, dated March 13, 2020 expressed an unmodified opinion.

Wolf & Company, P.C.

Boston, Massachusetts
March 13, 2020

Middlesex Bancorp, MHC and Subsidiaries

Consolidated Balance Sheets

December 31, 2019 and 2018

(Dollars in Thousands)

Assets

	2019	2018
Cash and due from banks	$ 37,701	$ 53,371
Interest-bearing deposits	160,222	120,849
Total cash and cash equivalents	197,923	174,220
Investment securities available for sale, at fair value	1,312,272	1,369,780
Marketable equity securities, at fair value	73,381	-
Loans	3,169,966	3,118,344
Less allowance for loan losses	(27,343)	(28,158)
Loans, net	3,142,623	3,090,186
Stock in Federal Home Loan Bank of Boston, at cost	4,631	7,959
Banking premises and equipment, net	60,743	42,593
Accrued interest receivable	12,917	14,224
Cash surrender value of bank-owned life insurance	78,453	75,690
Deferred income tax asset, net	10,572	18,460
Goodwill	14,062	14,062
Core deposit intangible, net	-	146
Other assets	45,478	28,622
	$ 4,953,055	$ 4,835,942

Liabilities and Retained Earnings

	2019	2018
Liabilities:		
Deposits	$ 4,207,442	$ 4,135,498
Advances from Federal Home Loan Bank of Boston	188	198
Repurchase agreements	35,633	39,700
Official checks outstanding	12,568	15,619
Accrued benefits payable	9,764	14,935
Escrow deposits of borrowers	7,481	7,303
Other liabilities	23,177	13,980
Total liabilities	4,296,253	4,227,233
Commitments and contingencies (Notes 6 and 12)		
Retained earnings:		
Undistributed earnings	683,384	643,001
Accumulated other comprehensive loss	(26,582)	(34,292)
Total retained earnings	656,802	608,709
	$ 4,953,055	$ 4,835,942

See accompanying notes to consolidated financial statements.

Middlesex Bancorp, MHC and Subsidiaries

Consolidated Statements of Net Income

Years Ended December 31, 2019 and 2018

(Dollars in Thousands)

	2019	2018
Interest and dividend income:		
Mortgage loans	$ 108,929	$ 103,482
Commercial loans	21,583	21,138
Consumer loans	7,664	7,365
Debt securities	34,345	28,255
Marketable equity securities	3,517	3,285
Other	2,970	2,177
Total interest and dividend income	179,008	165,702
Interest expense:		
Deposits	40,918	29,888
Advances from Federal Home Loan Bank of Boston	83	641
Repurchase agreements	205	161
Total interest expense	41,206	30,690
Net interest and dividend income	137,802	135,012
Non-interest income:		
Deposit account fees	2,601	2,802
Gains on securities available for sale	64	2,181
Gain on marketable equity securities, net	5,356	-
Bank-owned life insurance	2,763	1,170
ATM/debit card income	6,833	6,288
Investment services	1,156	1,239
Interest rate swap fees	1,160	1,320
Other	3,102	3,388
Total non-interest income	23,035	18,388
Non-interest expense:		
Salaries and employee benefits	67,172	64,597
Office occupancy and equipment	11,898	10,037
Advertising	3,022	3,190
Information technology	9,408	7,661
Postage and office supplies	930	815
FDIC/DIF insurance	556	1,609
Loan workout and other real estate owned	304	129
ATM/debit card expense	3,208	2,561
Contributions	2,229	2,736
Other operating expenses	9,049	7,517
Total non-interest expense	107,776	100,852
Income before income taxes	53,061	52,548
Income tax expense	11,253	11,846
Net income	$ 41,808	$ 40,702

See accompanying notes to consolidated financial statements.

Middlesex Bancorp, MHC and Subsidiaries

Consolidated Statements of Comprehensive Income

Years Ended December 31, 2019 and 2018

(Dollars in Thousands)

	2019	2018
Net income	$ 41,808	$ 40,702
Other comprehensive income (loss):		
Investment securities available for sale:		
Unrealized holding gains (losses)	19,174	(13,532)
Reclassification adjustment for gains realized in income	(64)	(2,181)
Net unrealized gains (losses)	19,110	(15,713)
Tax effect	(4,651)	3,719
Net-of-tax amount	14,459	(11,994)
Defined benefit pension plan:		
Reclassification adjustment for net actuarial losses recognized in net periodic benefit cost	3,408	2,523
Actuarial losses arising during period	(14,778)	(11,476)
Net change	(11,370)	(8,953)
Tax effect	3,196	2,406
Net-of-tax amount	(8,174)	(6,547)
Total other comprehensive income (loss)	6,285	(18,541)
Comprehensive income	$ 48,093	$ 22,161

Realized gains on securities available for sale are included in gains on securities available for sale in the consolidated statements of net income, and the related income tax expense for the years ended December 31, 2019 and 2018 was $18 and $611, respectively. Amortization of net actuarial losses is included in other operating expenses, and the related income tax benefit for the years ended December 31, 2019 and 2018 was $954 and $706, respectively.

See accompanying notes to consolidated financial statements.

Middlesex Bancorp, MHC and Subsidiaries

Consolidated Statements of Changes in Retained Earnings

Years Ended December 31, 2019 and 2018

(Dollars in Thousands)

	Undistributed Earnings	Accumulated Other Comprehensive Loss	Total Retained Earnings
Balance at December 31, 2017	$ 602,299	$ (15,751)	$ 586,548
Comprehensive income (loss)	40,702	(18,541)	22,161
Balance at December 31, 2018	643,001	(34,292)	608,709
Cumulative effect of adopting Accounting Standards Update 2016-01 (see Note 2)	(1,425)	1,425	-
Comprehensive income	41,808	6,285	48,093
Balance at December 31, 2019	$ 683,384	$ (26,582)	$ 656,802

See accompanying notes to consolidated financial statements.

Middlesex Bancorp, MHC and Subsidiaries

Consolidated Statements of Cash Flows

Years Ended December 31, 2019 and 2018

(Dollars in Thousands)

	2019	2018
Cash flows from operating activities:		
Net income	$ 41,808	$ 40,702
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation and amortization	6,549	4,843
Deferred income tax expense (benefit)	6,433	(1,540)
Gains on securities available for sale	(64)	(2,181)
Gain on marketable equity securities	(5,356)	-
Gain on sale of other assets	-	(315)
Amortization of investment securities, net	383	665
Loans originated for sale	(16,107)	(7,753)
Principal balance of mortgage loans sold	15,833	9,195
Decrease (increase) in accrued interest receivable	1,307	(2,378)
Increase in cash surrender value of bank-owned life insurance	(2,763)	(1,170)
Net change in:		
Other assets	(16,710)	(726)
Official checks outstanding	(3,051)	4,139
Accrued benefits payable	(16,541)	2,406
Escrow deposits of borrowers	178	211
Other liabilities	9,197	1,741
Net cash provided by operating activities	21,096	47,839
Cash flows from investing activities:		
Proceeds from sales of investment securities available for sale	-	6,321
Proceeds from calls and maturities of investment securities available for sale	475,064	202,061
Principal paydowns of investment securities available for sale	111,399	64,519
Purchase of investment securities available for sale	(568,233)	(316,254)
Purchase of marketable equity securities	(9,956)	-
Purchase of bank-owned life insurance	-	(5,000)
Net loan originations	(52,163)	(24,744)
Purchase of Federal Home Loan Bank of Boston stock	(1,658)	(5,865)
Redemption of Federal Home Loan Bank of Boston stock	4,986	5,945
Capital expenditures	(24,699)	(9,533)
Net cash used by investing activities	(65,260)	(82,550)

(continued)

See accompanying notes to consolidated financial statements.

Middlesex Bancorp, MHC and Subsidiaries

Consolidated Statements of Cash Flows (Concluded)

Years Ended December 31, 2019 and 2018

(Dollars in Thousands)

	2019	2018
Cash flows from financing activities:		
Net increase in time deposit accounts	123,323	71,501
Net (decrease) increase in other deposit accounts	(51,379)	40,777
Repayment of Federal Home Loan Bank of Boston advances	(10)	(9)
Net (decrease) increase in repurchase agreements	(4,067)	7,664
Net cash provided by financing activities	67,867	119,933
Net change in cash and cash equivalents	23,703	85,222
Cash and cash equivalents, beginning of year	174,220	88,998
Cash and cash equivalents, end of year	$ 197,923	$ 174,220
Supplemental cash flow information:		
Cash paid during the period for:		
Interest	$ 41,249	$ 30,633
Income taxes	11,910	12,995
Transfer from investment securities available for sale to marketable equity securities	58,061	-

See accompanying notes to consolidated financial statements.

1. ORGANIZATION AND SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

Organization

Middlesex Bancorp, MHC (the "Company") is a state-chartered mutual holding company. The Company and its subsidiaries provide a variety of loan, deposit, and other financial services to customers and are subject to competition from other financial service companies, including commercial banks, savings banks, credit unions, mortgage banking companies, insurance agencies, and investment companies. The Company is also subject to the regulations of, and periodic examination by, the Federal Reserve Bank, the Federal Deposit Insurance Corporation ("FDIC") and the Massachusetts Division of Banks. The Company's deposits are insured in full by a combination of FDIC and Depositors Insurance Fund ("DIF") deposit insurance. Interest-bearing, non-transaction account deposits up to $250 per owner or beneficiary, including retirement accounts, are insured by the Bank Insurance Fund of the FDIC. Amounts above those insured by the FDIC are insured by the DIF.

Basis of Presentation

The consolidated financial statements include the accounts of the Company and its wholly-owned subsidiaries, Middlesex Savings Bank (the "Bank"), Middlesex Securities Corp. and First Evergreen Properties, LLC. All intercompany accounts and transactions have been eliminated in consolidation.

The accounting and reporting policies of the Company conform to U.S. generally accepted accounting principles and prevailing practices within the banking industry. In preparing the consolidated financial statements, management is required to make estimates and assumptions that affect the reported amounts of assets and liabilities at the consolidated balance sheet date and income and expenses for the year. 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 and the determination of post-retirement benefit liabilities.

(Dollars in Thousands)

Intangible Assets

Goodwill of $14,062 is not amortized but is evaluated for impairment. Management assesses the recoverability of goodwill on at least an annual basis and whenever events or changes in circumstances indicate that the carrying value may not be recoverable. The impairment test for goodwill uses a combined qualitative and quantitative approach. The initial qualitative approach assesses whether the existence of events or circumstances led to a determination that it is more likely than not that the fair value of a reporting unit is less than its carrying amount. If, after this assessment, the Company determines that it is more likely than not that the fair value is less than the carrying value, a quantitative impairment test is performed. The quantitative impairment test compares book value to the fair value of the reporting unit. If the carrying amount exceeds fair value, an impairment charge is recorded through earnings. No impairment adjustments have been recorded to date. Identified intangible assets include core deposit premiums. Core deposit premiums are subject to amortization over their estimated useful lives of 10 years using a straight-line method.

Following is a summary of the core deposit intangible assets at December 31, 2019 and 2018:

	2019	2018
Gross carrying amount	$ 2,929	$ 2,929
Accumulated amortization	(2,929)	(2,783)
Net carrying balance	$ -	$ 146

Fair Value Hierarchy

The Company groups its assets and liabilities measured at fair value in three levels, based on the markets in which they are traded and the reliability of the assumptions used to determine fair value. Fair value is defined as the price which a seller would receive in an orderly transaction between market participants (an exit price).

Level 1 – Valuation is based on quoted prices in active markets for identical assets and liabilities and are obtained from readily available pricing sources.

Fair Value Hierarchy (concluded)

Level 2 – Valuation is based on observable inputs other than Level 1 prices, such as quoted prices for similar assets and liabilities; quoted prices in markets that are not active; or other inputs that are observable or can be corroborated by observable market data for substantially the full term of the assets and liabilities.

Level 3 – Valuation is based on unobservable inputs that are supported by little or no market activity and that are significant to the fair value of the assets and liabilities. Level 3 assets and liabilities include those whose value is determined using unobservable inputs to pricing models, discounted cash flow methodologies, or similar techniques, as well as those for which the determination of fair value requires significant management judgment or estimation.

Reclassification

Certain amounts in the 2018 consolidated financial statements have been reclassified to conform to the 2019 presentation.

Securities

Debt securities are classified as available for sale and reported at fair value, with unrealized gains and losses (net of related income taxes) excluded from earnings and reported as other comprehensive income/loss. Marketable equity securities are carried at fair value, with changes in fair value reported in net income. Prior to January 1, 2019, marketable equity securities were classified as available for sale (See Note 2).

Premiums and discounts on debt securities are amortized and accreted using a method that approximates the interest method. The Company records security transactions on a trade-date basis. Gains and losses on sales of securities available for sale are recognized at the time of sale using the specific-identification method.

The Company continually reviews securities available for sale for the existence of other-than-temporary impairment ("OTTI"), taking into consideration current market conditions, the extent and nature of changes in fair value, issuer rating changes and trends, the credit worthiness of the obligor of the security, volatility of earnings, current analysts' evaluations, the Company's intent to sell the security or whether it is more likely than not that the Company will be required to sell the security before its anticipated recovery, as well as other qualitative factors.

Securities (concluded)

The term "other-than-temporary" is not intended to indicate that the decline is permanent, but indicates that the prospects for a near-term recovery of value are not necessarily favorable, or that there is a lack of evidence to support a realizable value equal to or greater than the carrying value of the security.

Management prepares an estimate of the expected cash flows for debt securities that potentially may be deemed to have OTTI. This estimate begins with the contractual cash flows of the security. This amount is then reduced by an estimate of probable credit losses associated with the security. When estimating the extent of probable losses on the securities, management considers the strength of the underlying issuers. Indicators of diminished credit quality of the issuers include defaults, interest deferrals, or "payments in kind." The resulting estimate of cash flows after considering credit is then subject to a present value computation using a discount rate equal to the current yield used to accrete the beneficial interest or the effective interest rate implicit in the security at the date of acquisition. If the present value of the estimated cash flows is less than the current amortized cost basis, OTTI is considered to have occurred. As part of the analysis, management considers whether it intends to sell the security or whether it is more than likely that it would be required to sell the security before the recovery of its amortized cost basis. A charge to income is recognized on investment securities when a decline in value is considered other than temporary. For all impaired debt securities that the Company intends to sell, or more likely than not will be required to sell, the full amount of the depreciation is recognized as OTTI through earnings. For all other impaired debt securities, only the portion related to credit loss is recognized through earnings. Noncredit-related OTTI for such debt securities is recognized in other comprehensive income, net of applicable taxes. Prior to January 1, 2019, OTTI for marketable equity securities was recognized entirely through earnings (See Note 2).

Derivatives

The Company is a party to interest rate swap agreements to manage interest rate risk for certain commercial loans and not for speculative purposes. These derivatives are not designated as hedging instruments and are accounted for at fair value with changes in fair value recognized through earnings.

Federal Home Loan Bank Stock

The Company, as a member of the Federal Home Loan Bank ("FHLB") system, is required to maintain an investment in capital stock of the FHLB of Boston. Based on redemption provisions of the FHLB of Boston, the stock has no quoted market value and is carried at cost. The Company reviews for impairment based on the ultimate recoverability of the cost basis in the stock. As of December 31, 2019, no impairment has been recognized.

Loans

The Company’s loan portfolio includes residential mortgage; equity and second mortgage; commercial mortgage; commercial; construction and development; and consumer segments. Consumer loans include classes for collateral and personal loans.

Loans are reported at the principal balance outstanding, net of deferred loan origination costs and fees. Loan origination costs, net of certain origination fees, are considered adjustments of interest rate yield and amortized into interest income over the loan term.

Loans held for sale are carried at the lower of aggregate cost or fair value. Calculations are done on an individual loan basis. Net unrealized losses are recognized through a valuation allowance by charges to earnings. Gains on the sale of loans are recognized on the date the transaction is settled and are included in other non-interest income.

Non-accrual loans are those on which the accrual of interest is discontinued when collectibility of principal or interest is uncertain or payments of principal or interest have become contractually past due 90 days. Upon such discontinuance, all unpaid accrued interest is reversed. A loan may remain on accrual status if both the value of any collateral securing the loan is sufficient to cover principal and accrued interest and the loan is in the process of collection. Interest received on impaired loans is recognized in income on a cash basis when the remaining recorded investment is deemed to be fully collectible.

Non-accrual loans are returned to accrual status when the loan is brought current, there no longer exists concern over collectibility, and the borrower has demonstrated, over time, both the intent and ability to repay the loan.

The Company periodically may agree to modify the contractual terms of loans. When a loan is modified and a concession is made to a borrower experiencing financial difficulty, the modification is considered a troubled debt restructuring (“TDR”). All TDRs are initially classified as impaired.

Commercial, construction and development, commercial mortgage, and non-performing residential mortgage loans exceeding certain dollar amounts are individually evaluated for impairment, and deemed impaired when it is probable that the Company will not be able to collect all amounts due according to the contractual terms of the loan agreement. Factors generally considered by management in determining impairment classification include payment status and terms and, to a lesser extent, collateral value. The amount of impairment for these types of impaired loans is determined by the difference between the present value of the expected cash flows to be derived from the loan, using the original contractual interest rate, and its recorded value, or, as a practical expedient in the case of collateral dependent loans, the difference between the fair value of the collateral and the recorded amount of the loan.

Loans (continued)

When foreclosure is probable, impairment is measured based on the fair value of the collateral. Large groups of smaller balance homogeneous loans are collectively evaluated for impairment. Loans that experience insignificant payment delays and insignificant shortfalls in payment amounts generally are not classified as impaired. Management determines the significance of payment delays and payment shortfalls on a case-by-case basis, taking into consideration all of the circumstances surrounding the loan and the borrower, including the length of the delay, the reasons for the delay, the borrower's prior payment record, and the amount of the shortfall in relation to the principal and interest owed.

Loans over 90 days delinquent and/or with a risk rating of doubtful or loss are reviewed on a quarterly basis and amounts deemed uncollectible are charged off as appropriate after an evaluation of estimated cash flows, or collateral values less estimated costs to sell.

Allowance for Loan Losses

The allowance for loan losses is maintained at a level believed by management to be adequate to meet reasonably foreseeable loan losses on the basis of many factors, including the risk characteristics of the portfolio, underlying collateral, economic conditions that may affect the borrower's ability to pay, and trends in loan delinquencies and charge-offs. The allowance is increased (decreased) by provisions (credits) reflected in earnings, and reduced by loan charge-offs, net of recoveries.

The allowance for loan losses is determined using a systematic analysis based on historical experience, product types, and industry data. The allowance is segregated into three components: “general,” “specific,” and “unallocated.” The general component is determined by applying coverage percentages to groups of loans based on risk. Coverage percentages applied are determined based on evaluation of historical loss rates adjusted for other qualitative and environmental factors consistent with industry practice. The specific component is established by allocating a portion of the allowance for loan losses to individual impaired loans on the basis of specific circumstances and assessments. A system of periodic loan reviews is performed to assess the inherent risk and assign risk ratings to each loan individually. The unallocated component supplements the first two components based on management's judgement of the effect of current economic conditions and trends on the borrower's abilities to repay, and other factors, and helps to minimize the risk related to the margin of imprecision associated with estimating general and specific losses in the portfolio.

Loans (continued)

Allowance for Loan Losses (continued)

While this evaluation process utilizes historical and other objective information, the classification of loans and the establishment of the allowance for loan losses rely to a great extent on the judgment and experience of management. While management uses available information to recognize losses on loans, future additions to the allowance may be necessary based on changes in economic conditions. In addition, various regulatory agencies, as an integral part of their examination process, periodically review the Company's allowance for loan losses. Such agencies may require the Company to recognize additions to the allowance based on judgments different from those of management.

The qualitative factors are determined based on the various risk characteristics of each loan segment. Risk characteristics relevant to each portfolio segment are as follows:

Residential mortgage – Loans in this segment are secured by first liens on owner-occupied residential real estate. The Company generally does not originate loans with a loan-to-value ratio greater than 80 percent and does not grant loans that would be classified as subprime upon origination. Repayment is dependent on the credit quality of the individual borrower. The overall health of the economy, including unemployment rates and housing prices, will have an effect on the credit quality of this segment.

Equity and second mortgage – Loans in this segment are secured by owner-occupied residential real estate. The Company has first or second liens on equity lines of credit. Second mortgages are term loans. Repayment is dependent on the credit quality of the individual borrower.

Commercial real estate – Loans in this segment are primarily income-producing properties throughout Massachusetts, New Hampshire and Rhode Island. The underlying cash flows generated by the properties can be adversely impacted by a downturn in the economy due to increased vacancy rates, which in turn, would have an effect on the credit quality in this segment. Management obtains rent rolls and financial information annually and continually monitors the cash flow of these loans. There is a small subset of exception monitoring loans (total risk exposure $350 or less) where annual reporting is not required.

Loans (concluded)

Allowance for Loan Losses (concluded)

Commercial – Loans in this segment are made to businesses and are generally secured by assets of the business. Repayment is expected from the cash flows of the business. A weakened economy and resulting decreased consumer spending will have an effect on the credit quality in this segment.

Construction and development – Loans in this segment primarily include speculative real estate development loans for which payment is derived from the sale of the property. Credit risk is affected by cost overruns, time to sell at an adequate price and market conditions.

Consumer – Loans in this segment include unsecured and secured personal loans and repayment is dependent on the credit quality of the individual borrower.

Allowance for Off-Balance-Sheet Credit Risk

The Company maintains an allowance for reasonably foreseeable credit losses related to off-balance-sheet credit risk, amounting to $1,025 and $832 at December 31, 2019 and 2018, respectively, in other liabilities. The measurement of loss is consistent with the general component of the allowance for loan losses and is based on credit risk.

Bank-owned Life Insurance

Bank-owned life insurance policies are reflected on the consolidated balance sheets at cash surrender value. Changes in the net cash surrender value of the policies, as well as insurance proceeds received in excess of cash surrender values, are reflected in non-interest income on the consolidated statements of net income and are not subject to income taxes.

Transfers of Financial Assets

Transfers of an entire financial asset, a group of entire financial assets, or a participating interest in an entire financial asset 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 to pledge or exchange the transferred assets, and (3) the Company does not maintain effective control over the transferred assets.

Transfers of Financial Assets (concluded)

During the normal course of business, the Company may transfer a portion of a financial asset, for example, a participation loan or the government guaranteed portion of a loan. In order to be eligible for sales treatment, the transfer of the portion of the loan must meet the criteria of a participating interest. If it does not meet the criteria of a participating interest, the transfer must be accounted for as a secured borrowing. In order to meet the criteria for a participating interest, all cash flows from the loan must be divided proportionately, the rights of each loan holder must have the same priority, the loan holders must have no recourse to the transferor other than standard representations and warranties and no loan holder has the right to pledge or exchange the entire loan.

Banking Premises and Equipment

Banking premises and equipment are stated at cost, net of accumulated depreciation and amortization. Depreciation and amortization are computed to approximate the straight-line method over the estimated useful lives of the assets or expected terms of related leases, if shorter. Expected terms include lease option periods to the extent that the exercise of such options is reasonably assured.

Cash and Cash Equivalents

Cash and cash equivalents are defined to include cash and due from banks and interest-bearing deposits. The Company is required to maintain average balances on hand or with the Federal Reserve Bank. At December 31, 2019 and 2018, these reserve balances amounted to $5,535 and $5,848, respectively. See also Note 14.

Income Taxes

The Company recognizes income taxes under the asset and liability method. Under this method, deferred tax assets and liabilities are established for the temporary differences between the accounting basis and the tax basis of the Company’s assets and liabilities at enacted tax rates expected to be in effect when the amounts related to such temporary differences are realized or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date. To the extent that current available evidence about the future raises doubt about the realization of a deferred tax asset, a valuation allowance must be established.

The Company does not have any uncertain tax positions at December 31, 2019 or 2018 which require accrual or disclosure. The Company records interest and penalties as part of income tax expense. No interest or penalties were recorded for the years ended December 31, 2019 and 2018.

(Dollars in Thousands)

Pension Benefits

The Company provides pension benefits to its employees under a noncontributory, defined benefit plan, which is funded on a current basis in compliance with the requirements of the Employee Retirement Income Security Act of 1974.

The Company accounts for its defined benefit pension plan using an actuarial model that allocates pension costs over the service period of employees in the plan. The Company accounts for the over-funded or under-funded status of its defined benefit plan as an asset or liability in its consolidated balance sheet and recognizes changes in the funded status in the year in which the changes occur through other comprehensive income or loss.

Comprehensive Income (Loss)

Accounting principles generally require that recognized revenue, expenses, gains and losses be included in net income. Certain changes in assets and liabilities are reported as a separate component of the retained earnings section of the balance sheet and such items, along with net income, are components of comprehensive income (loss).

The components of accumulated other comprehensive loss included in retained earnings at December 31, 2019 and 2018 are as follows:

	2019	2018
Investment securities available for sale:		
Net unrealized gain (loss)	$ 8,167	$ (12,856)
Tax effect	(1,857)	3,282
Net-of-tax amount	6,310	(9,574)
Defined benefit pension plan:		
Unrecognized net actuarial loss	(45,753)	(34,383)
Tax effect	12,861	9,665
Net-of-tax amount	(32,892)	(24,718)
	$ (26,582)	$ (34,292)

The estimated amount of actuarial loss that will be amortized from accumulated other comprehensive loss into other operating expenses in 2020 is $4,615.

Recent Accounting Pronouncements

Effective January 1, 2019, the Company adopted Accounting Standard Update ("ASU") No. 2014-09, *Revenue from Contracts with Customers (Topic 606)*. The amendments in this Update create Topic 606, *Revenue from Contracts with Customers*, and supersede the existing revenue recognition requirements. The guidance in this ASU affects any entity that either enters into contracts with customers to transfer goods or services or entered into contracts for the transfer of nonfinancial assets unless those contracts are within the scope of other standards. Accordingly, the guidance does not apply to, among other things, the following: loans, debt and equity investments, financial instruments, and transfers and servicing. As predominately all of the Company's revenues are excluded from the scope of the guidance, adoption did not have a material impact on the Company's consolidated financial statements.

Effective January 1, 2019, the Company adopted ASU 2016-01, *Financial Instruments – Overall, (Subtopic 825-10)*. This Update includes the requirement for 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. See Note 2 for disclosures related to marketable equity securities.

On December 31, 2019, the Company adopted ASU 2017-07, *Compensation — Retirement Benefits (Topic 715): Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost*. The amendments in this Update require that an employer report the service cost component in the same line item or items as other compensation costs arising from services rendered by the pertinent employees during the period. The other components of net benefit cost are required to be presented in the income statement separately from the service cost component and outside a subtotal of income from operations, if one is presented. See Note 11 for presentation disclosure.

In February 2016, the Financial Accounting Standards Board ("FASB") issued ASU 2016-02, *Leases (Topic 842)*, which supersedes the lease requirements in Topic 840, *Leases*. The objective of Topic 842 is to establish the principles that lessees and lessors shall apply to report useful information to users of financial statements about the amount, timing, and uncertainty of cash flows arising from a lease. The core principle of Topic 842 is that a lessee should recognize the assets and liabilities that arise from leases. The amendments in this Update are effective for fiscal years beginning after December 15, 2020, and interim periods within fiscal years beginning after December 15, 2021. Early application of the amendments in this Update is permitted for all entities. Management is currently evaluating the impact to the consolidated financial statements of adopting this Update. It is expected that assets and liabilities will increase based on the estimated present value of remaining lease payments in place at the adoption date.

Recent Accounting Pronouncements (concluded)

In June 2016, the FASB issued ASU 2016-13, *Financial Instruments - Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments.* Among other things, these amendments require the measurement of all expected credit losses for certain financial assets, such as loans, held at the reporting date based on historical experience, current conditions, and reasonable and supportable forecasts. For non-public business entities, the ASU is effective for fiscal years beginning after December 15, 2022, including interim periods within those fiscal years. Early application is permitted. The Company is currently evaluating the impact this ASU will have on its consolidated financial statements.

In August 2018, the FASB issued ASU 2018-14, *Compensation – Retirement Benefits – Defined Benefit Plans - General (Topic 715-20): Disclosure Framework – Changes to the Disclosure Requirements for Defined Benefit Plans.* This Update removes the disclosure requirements that are no longer considered cost beneficial, clarify the specific requirements of disclosures, and add disclosure requirements identified as relevant. For non-public business entities, the amendments are effective for fiscal years ending after December 15, 2021. The Company does not expect this Update will have a material impact on the consolidated financial statements.

(Dollars in Thousands)

2. SECURITIES

Investment Securities Available for Sale

The cost and fair value of investment securities available for sale at December 31, 2019 and 2018 are as follows:

	Amortized Cost	Unrealized Gains	Unrealized Losses	Fair Value
2019				
Residential mortgage-backed securities	$ 650,655	$ 7,000	$ (876)	$ 656,779
U.S. government-sponsored agency obligations	219,744	35	(268)	219,511
Corporate bonds	399,273	5,511	(146)	404,638
Hybrid capital securities	34,433	61	(3,150)	31,344
Total investment securities available for sale	$ 1,304,105	$ 12,607	$ (4,440)	$ 1,312,272
2018				
Residential mortgage-backed securities	$ 430,953	$ 4,060	$ (626)	$ 434,387
U.S. government-sponsored agency obligations	454,696	175	(4,428)	450,443
Corporate bonds	402,614	522	(5,965)	397,171
Hybrid capital securities	34,399	27	(4,708)	29,718
Mutual funds	10,000	-	(905)	9,095
Preferred stock	49,974	335	(1,343)	48,966
Total investment securities available for sale	$ 1,382,636	$ 5,119	$ (17,975)	$ 1,369,780

At December 31, 2019 and 2018, the Company has financial sector corporate bonds and hybrid capital securities, with a fair value of $250,565 and $237,284, respectively.

At December 31, 2019 and 2018, residential mortgage-backed securities consist of securities issued by government-sponsored enterprises and federal agencies.

(Dollars in Thousands)

The cost and fair value of debt and hybrid capital securities at December 31, 2019, by final contractual maturity, are shown below. Actual maturities may differ from contractual maturities due to prepayments.

	Cost	Fair Value
Within one year	$ 125,107	$ 125,209
1 - 2 years	112,309	112,763
2 - 5 years	285,154	288,936
5 - 10 years	120,319	121,624
Over 10 years	661,216	663,740
	$ 1,304,105	$ 1,312,272

At December 31, 2019 and 2018, included in investment securities available for sale are investments with a cost basis of $525,722 and $654,255, respectively, that could be called prior to the contractual maturity date.

There were no sales of investment securities available for sale in fiscal year 2019. Proceeds from sales of investment securities available for sale amounted to $6,321 in fiscal year 2018. Such sales resulted in gross realized gains of $244 and no gross realized losses in fiscal 2018. During the year ended December 31, 2019 and 2018, the Company recorded gains in the amount of $64 and $1,937, respectively, on called securities with make-whole provisions whereby the proceeds are greater than par amounts if called.

At December 31, 2019, the Company pledged debt securities with a fair value of $19,976 as collateral for the discount window at the Federal Reserve Bank (See Note 5) and debt securities with a fair value of $51,515 as collateral for repurchase agreements (See Note 8). All securities pledged as collateral are U.S. government-sponsored agency obligations and residential mortgage-backed securities.

(Dollars in Thousands)

Gross unrealized losses on investment securities available for sale and the fair value of the related securities, aggregated by investment category and length of time that individual securities have been in a continuous unrealized loss position, at December 31, 2019 and 2018 are as follows:

	Less Than Twelve Months		Over Twelve Months		Total	
	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses
2019						
Residential mortgage-backed securities	$ 289,580	$ (639)	$ 39,060	$ (237)	$ 328,640	$ (876)
U.S. government-sponsored agency obligations	44,915	(85)	54,815	(183)	99,730	(268)
Corporate bonds	25,236	(141)	5,027	(5)	30,263	(146)
Hybrid capital securities	-	-	28,783	(3,150)	28,783	(3,150)
Total	$ 359,731	$ (865)	$ 127,685	$ (3,575)	$ 487,416	$ (4,440)
2018						
Residential mortgage-backed securities	$ 78,600	$ (300)	$ 46,146	$ (326)	$ 124,746	$ (626)
U.S. government-sponsored agency obligations	-	-	290,309	(4,428)	290,309	(4,428)
Corporate bonds	108,849	(967)	216,046	(4,998)	324,895	(5,965)
Hybrid capital securities	-	-	27,191	(4,708)	27,191	(4,708)
Mutual funds	-	-	9,095	(905)	9,095	(905)
Preferred stock	33,603	(1,343)	-	-	33,603	(1,343)
Total	$ 221,052	$ (2,610)	$ 588,787	$ (15,365)	$ 809,839	$ (17,975)

At December 31, 2019, the gross unrealized losses on investment securities available for sale, excluding those related to hybrid capital securities, are individually insignificant. All of the debt obligations in an unrealized loss position at December 31, 2019 are rated investment grade or higher and are performing according to the contractual terms of the securities. The Company does not consider such losses to be other than temporary at December 31, 2019. In addition, the Company does not intend to, and it is more likely than not that it will not be required to, sell the related investment securities prior to a market price recovery or maturity.

At December 31, 2019, five hybrid capital securities have aggregate unrealized losses equal to 10% of the Company's amortized cost basis. The unrealized losses on the hybrid capital securities were caused by general market concerns related to interest rate risk, market volatility, market illiquidity and not a fundamental deterioration in the issuer. The Company continually reviews these securities for the existence of OTTI, taking into consideration current market conditions, the extent and nature of changes in fair value, issuer rating changes and trends, the credit worthiness of the obligor of the security, and volatility of earnings. At December 31, 2019, the unrealized losses on these securities were considered to be temporary based on analysis of the financial soundness of the issuers. In addition, the Company does not intend to, and it is more likely than not that it will not be required to, sell the related investment securities prior to a market price recovery or maturity.

Marketable Equity Securities

Marketable equity securities consist of preferred stock and mutual funds. The Company held marketable equity securities with an aggregate fair value of $73,381 and $58,061 at December 31, 2019 and 2018, respectively. Prior to January 1, 2019, marketable equity securities were stated at fair value with unrealized gains and losses reported as a component of accumulated other comprehensive income/loss ("AOCI"), net of tax. At December 31, 2018, net unrealized losses, net of deferred taxes of $1,425, had been recorded in AOCI, and on January 1, 2019 were reclassified out of AOCI and into undistributed earnings. Subsequent changes in the fair value of marketable equity securities are recognized in non-interest income. Net unrealized gains recognized during 2019 on marketable equity securities still held at December 31, 2019 amounted to $5,356.

(Dollars in Thousands)

3. LOANS

Major classifications of loans are as follows:

	2019	2018
Mortgage loans:		
Residential	$ 1,148,364	$ 1,111,126
Equity and second mortgage	128,962	137,905
Commercial	1,092,907	1,134,518
Total mortgage loans	2,370,233	2,383,549
Commercial loans	391,005	414,454
Construction and development loans	398,246	309,435
Consumer loans:		
Collateral	5,020	4,882
Personal	4,949	5,332
Total consumer loans	9,969	10,214
Total loans	3,169,453	3,117,652
Deferred loan costs, net	513	692
Allowance for loan losses	(27,343)	(28,158)
Net loans	$ 3,142,623	$ 3,090,186

At December 31, 2019 and 2018, included in residential mortgage loans were loans held for sale amounting to $626 and $352, respectively. Proceeds from loan sales during 2019 amounted to $16,024, with gains recorded of $251. Proceeds from loan sales during 2018 amounted to $9,340, with gains recorded of $145.

Loans and available credit made to trustees and senior management of the Company in the ordinary course of business amounted to $17,063 and $19,129 at December 31, 2019 and 2018, respectively. Principal paydowns amounted to $2,450 and additions amounted to $384 during 2019. All loans and commitments included in such amounts were made on substantially the same terms, including interest rates and collateral, as those prevailing at the time for comparable transactions with other persons and do not involve more than the normal risk of collectibility or present other unfavorable features.

(Dollars in Thousands)

The Company has transferred a portion of its originated commercial real estate loans to participating lenders. The amounts transferred have been accounted for as sales and are therefore not included in the Company's accompanying consolidated balance sheets. The Company and participating lenders share ratably in any gains or losses that may result from a borrower's lack of compliance with contractual terms of the loan. The Company continues to service the loans on behalf of the participating lenders and, as such, collects cash payments from the borrowers, remits payments on a pro-rata basis (net of servicing fees) to participating lenders, and disburses required escrow funds to relevant parties. At December 31, 2019 and 2018, the Company was servicing loans for participants aggregating $48,071 and $44,202, respectively.

4. ALLOWANCE FOR LOAN LOSSES

Analysis of the allowance for loan losses for the years ended December 31, 2019 and 2018 and allocation of the allowance to loan segments as of December 31, 2019 and 2018 follows:

	Residential Mortgage	Equity and Second Mortgage	Commercial Mortgage	Commercial	Construction and Development	Consumer	Unallocated	Total
2019								
Allowance for loan losses:								
Balance, beginning of year	$ 1,786	$ 717	$ 13,305	$ 7,416	$ 1,578	$ 51	$ 3,305	$ 28,158
Provision (credit) for loan losses	(455)	(68)	376	(234)	187	29	165	-
Loans charged-off	(57)	-	-	(1,203)	-	(51)	-	(1,311)
Recoveries of loans previously charged-off	2	15	-	458	-	21	-	496
Balance, end of year	$ 1,276	$ 664	$ 13,681	$ 6,437	$ 1,765	$ 50	$ 3,470	$ 27,343
December 31, 2019								
Amount of allowance for impaired loans	$ -	$ -	$ -	$ 232	$ -	$ -	$ -	$ 232
Amount of allowance for non-impaired loans	1,276	664	13,681	6,205	1,765	50	3,470	27,111
Total allowance for loan losses	$ 1,276	$ 664	$ 13,681	$ 6,437	$ 1,765	$ 50	$ 3,470	$ 27,343
Impaired loans	$ 1,175	$ 58	$ 1,216	$ 1,035	$ 96	$ -	$ -	$ 3,580
Non-impaired loans	1,147,189	128,904	1,091,691	389,970	398,150	9,969		3,165,873
Total loans	$ 1,148,364	$ 128,962	$ 1,092,907	$ 391,005	$ 398,246	$ 9,969	$ -	$ 3,169,453

(Dollars in Thousands)

	Residential Mortgage	Equity and Second Mortgage	Commercial Mortgage	Commercial	Construction and Development	Consumer	Unallocated	Total
2018								
Allowance for loan losses:								
Balance, beginning of year	$ 1,941	$ 1,106	$ 13,797	$ 7,542	$ 1,320	$ 72	$ 2,847	$ 28,625
Provision (credit) for loan losses	(125)	(451)	(492)	325	258	27	458	-
Loans charged-off	(65)	(51)	-	(555)	-	(62)	-	(733)
Recoveries of loans previously charged-off	35	113	-	104	-	14	-	266
Balance, end of year	$ 1,786	$ 717	$ 13,305	$ 7,416	$ 1,578	$ 51	$ 3,305	$ 28,158
December 31, 2018								
Amount of allowance for impaired loans	$ -	$ -	$ 53	$ 1,213	$ -	$ -	$ -	$ 1,266
Amount of allowance for non-impaired loans	1,786	717	13,252	6,203	1,578	51	3,305	26,892
Total allowance for loan losses	$ 1,786	$ 717	$ 13,305	$ 7,416	$ 1,578	$ 51	$ 3,305	$ 28,158
Impaired loans	$ 1,869	$ 73	$ 1,175	$ 3,044	$ 1,936	$ -	$ -	$ 8,097
Non-impaired loans	1,109,257	137,832	1,133,343	411,410	307,499	10,214		3,109,555
Total loans	$ 1,111,126	$ 137,905	$ 1,134,518	$ 414,454	$ 309,435	$ 10,214	$ -	$ 3,117,652

The following is a summary of past due and non-accrual loans at December 31, 2019 and 2018:

	30-59 Days Past Due	60-89 Days Past Due	Greater than 90 Days	Total Past Due	Past Due > 90 Days and Still Accruing	Loans on Non-accrual
2019						
Residential mortgage	$ 4,955	$ 1,432	$ 2,378	$ 8,765	$ -	$ 5,111
Equity and second mortgage	187	5	72	264	-	279
Commercial mortgage	1,834	-	259	2,093	-	595
Commercial	5	1	397	403	-	1,038
Construction and development	-	-	96	96		96
Consumer:						
Personal	18	10	18	46	-	29
Total	$ 6,999	$ 1,448	$ 3,220	$ 11,667	$ -	$ 7,148

(Dollars in Thousands)

2018	30-59 Days Past Due	60-89 Days Past Due	Greater than 90 Days	Total Past Due	Past Due > 90 Days and Still Accruing	Loans on Non-accrual
Residential mortgage	$ 3,249	$ 997	$ 1,890	$ 6,136	$ -	$ 5,659
Equity and second mortgage	352	4	61	417	-	296
Commercial mortgage	-	-	203	203	-	662
Commercial	38	6	746	790	-	3,043
Construction and development	-	-	1,936	1,936		1,936
Consumer:						
Personal	8	2	11	21	-	18
Total	$ 3,647	$ 1,009	$ 4,847	$ 9,503	$ -	$ 11,614

The following is information pertaining to impaired loans:

December 31, 2019	Recorded Investment	Unpaid Principal Balance	Related Allowance
Impaired loans without a valuation allowance:			
Mortgage loans:			
Residential	$ 1,175	$ 1,652	$ -
Equity and second mortgage	58	114	
Commercial	1,216	1,433	-
Commercial loans	739	3,033	-
Construction and development loans	96	98	-
Total	3,284	6,330	-
Impaired loans with a valuation allowance:			
Commercial loans	296	306	232
Total impaired loans	$ 3,580	$ 6,636	$ 232

(Dollars in Thousands)

	Average Recorded Investment	Interest Income Recognized	Income Recognized on Cash Basis
2019			
Residential mortgage	$ 1,280	$ 30	$ 30
Equity and second mortgage	60	-	-
Commercial mortgage	1,087	34	34
Commercial	1,918	32	32
Construction and development	653	3	3
Total	$ 4,998	$ 99	$ 99

	Recorded Investment	Unpaid Principal Balance	Related Allowance
December 31, 2018			
Impaired loans without a valuation allowance:			
Mortgage loans:			
Residential	$ 1,869	$ 2,468	$ -
Equity and second mortgage	73	128	
Commercial	972	1,299	-
Commercial loans	1,199	3,170	-
Construction and development loans	1,936	2,018	-
Total	6,049	9,083	-
Impaired loans with a valuation allowance:			
Mortgage loans:			
Commercial	203	206	53
Commercial loans	1,845	1,883	1,213
Total	2,048	2,089	1,266
Total impaired loans	$ 8,097	$ 11,172	$ 1,266

(Dollars in Thousands)

	Average Recorded Investment	Interest Income Recognized	Income Recognized on Cash Basis
2018			
Residential mortgage	$ 1,983	$ 36	$ 36
Equity and second mortgage	32	-	-
Commercial mortgage	1,531	35	35
Commercial	2,306	86	86
Construction and development	1,214	101	101
Total	$ 7,066	$ 258	$ 258

Funds committed to be advanced in connection with impaired loans at December 31, 2019 and 2018 amounted to $251 and $1,592, respectively.

During fiscal 2019 and 2018, there were no material troubled debt restructurings or material trouble debt restructurings that defaulted within one year of modification.

Credit quality information

The Company utilizes a nine-grade internal loan rating system for commercial mortgage, construction and development, commercial, and certain non-performing residential mortgage loans as follows:

Loans rated 1 – 6 are considered “pass” rated loans with low to average risk.

Loans rated 7 are considered “special mention.” These loans are starting to show signs of potential weakness and are being closely monitored by management.

Loans rated 8 are considered “substandard.” Generally, a loan is considered substandard if it is inadequately protected by the current net worth and paying capacity of the obligors and/or the collateral pledged. There is a distinct possibility that the Company will sustain some loss if the weakness is not corrected.

Loans rated 9 are considered “doubtful.” Loans classified as doubtful have all the weaknesses inherent in those classified substandard with the added characteristic that the weaknesses make collection or liquidation in full, on the basis of currently existing facts, highly questionable and improbable.

On an annual basis, or more often if needed, the Company formally reviews the ratings on substantially all commercial mortgage loans, construction and development loans and commercial loans. Annually, the Company engages an independent third party to review a significant portion of loans within these segments. Management uses the results of these reviews as part of its annual review process.

The Company does not assign risk ratings to residential mortgage, equity and second mortgage, consumer, and small-balance commercial loans, unless they have a well-defined weakness that may jeopardize collection. The construction and development loans include non-speculative residential mortgage construction loans which are not rated. Non-rated loans are monitored on an exception basis with emphasis placed on debt repayment performance.

(Dollars in Thousands)

The following table presents the Company's loans by risk rating at December 31, 2019 and 2018:

	Residential Mortgage	Equity and Second Mortgage	Commercial Mortgage	Commercial	Construction and Development	Consumer
2019						
Loans rated 1 - 6	$ -	$ -	$ 1,065,893	$ 361,164	$ 388,410	$ -
Loans rated 7	-	-	19,281	20,107	-	-
Loans rated 8	5,111	282	7,733	7,592	96	26
Loans rated 9	-	-	-	625	-	-
Loans not rated	1,143,253	128,680	-	1,517	9,740	9,943
Total	$ 1,148,364	$ 128,962	$ 1,092,907	$ 391,005	$ 398,246	$ 9,969

	Residential Mortgage	Equity and Second Mortgage	Commercial Mortgage	Commercial	Construction and Development	Consumer
2018						
Loans rated 1 - 6	$ -	$ -	$ 1,103,028	$ 379,635	$ 300,791	$ -
Loans rated 7	-	-	29,629	29,615	98	-
Loans rated 8	6,154	393	1,861	3,191	1,936	18
Loans rated 9	-	-	-	304	-	-
Loans not rated	1,104,972	137,512	-	1,709	6,610	10,196
Total	$ 1,111,126	$ 137,905	$ 1,134,518	$ 414,454	$ 309,435	$ 10,214

5. STOCK IN AND ADVANCES FROM FEDERAL HOME LOAN BANK OF BOSTON AND OTHER BORROWINGS

Stock in Federal Home Loan Bank Boston

As a voluntary member of the Federal Home Loan Bank of Boston ("FHLB Boston"), the Company is required to purchase stock of FHLB Boston to meet (1) a basic membership requirement generally based on the amount of mortgage-related collateral eligible to secure advances, or total assets owned by the member and (2) an activity requirement based on the member's outstanding advances, typically in the range of 4% to 5% of the member's outstanding advance amount and any other business activity as determined by the FHLB Boston in their capital plans.

At December 31, 2019 and 2018, the Company's investment in FHLB Boston stock exceeded its minimum investment by $421 and $724, respectively. No market exists for shares of this stock. The Company's cost for FHLB Boston stock is equal to its par value. Upon redemption of the stock, which is at the discretion of the FHLB Boston, the Company would receive an amount equal to the par value of the stock.

At the discretion of its Board of Directors, the FHLB Boston may declare and pay dividends in either cash or capital stock.

Long-term Debt

At December 31, 2019 and 2018, FHLB Boston advances consist of one amortizing advance in the amount of $188 and $198, respectively, with a rate of 2.50% and which matures in 2026.

All borrowings from the FHLB Boston are secured by a blanket lien on qualified collateral based on a percentage of the carrying value of first mortgage loans on owner-occupied residential property.

Other Borrowing Arrangements

The Company has $39,660 in available lines-of-credit with the FHLB Boston and another correspondent financial institution at interest rates that adjust daily. There were no advances outstanding under these lines-of-credit at December 31, 2019 and 2018.

(Dollars in Thousands)

The Company has an agreement with the Federal Reserve Bank of Boston for borrowings at the discount window. The terms of this agreement call for the pledging of assets as security for any and all obligations of the Company under this agreement (See Note 2). At December 31, 2019 and 2018, there were no borrowings outstanding under this agreement.

6. BANKING PREMISES AND EQUIPMENT

The following table shows banking premises and equipment at December 31, 2019 and 2018:

	2019	2018
Land	$ 11,904	$ 9,609
Buildings and leasehold improvements	54,349	44,120
Furniture, fixtures and equipment	45,586	39,847
Fixed assets in process	7,497	3,035
	119,336	96,611
Accumulated depreciation and amortization	(58,593)	(54,018)
	$ 60,743	$ 42,593

Depreciation and amortization expense related to premises and equipment was $6,549 and $4,843 for the year ended December 31, 2019 and 2018, respectively. The estimated useful lives for leasehold improvements and buildings are 5 to 20 years and 40 years, respectively. The estimated useful life for furniture, fixtures and equipment is 2 to 10 years, with the exception of computer software and equipment, which is 2 to 5 years.

The Company occupied leased quarters at 17 branch locations, 3 remote ATM locations, 1 future branch location and 1 temporary operations center as of December 31, 2019. The leases expire at various dates, with options for renewal, and contain several provisions and clauses providing for increased rentals based on, among other things, increases in common area maintenance. Rental expense for the years ended December 31, 2019 and 2018 was $1,704 and $1,730, respectively.

The Company has outstanding construction commitments as of December 31, 2019 totaling $2,941 for the renovation of corporate headquarters.

(Dollars in Thousands)

A summary of minimum rental payments, net of rental income, for future periods under noncancelable long-term operating leases is as follows:

Years Ending December 31,	Amount
2020	2,323
2021	1,877
2022	1,882
2023	1,907
2024	1,921
Thereafter	3,889
	$ 13,799

7. DEPOSITS

The following table shows deposits by type at December 31, 2019 and 2018:

	2019	2018
Demand deposit accounts	$ 1,020,168	$ 1,044,344
Interest-bearing transaction deposits:		
NOW	167,704	183,321
Regular savings	112,383	120,812
Money fund	1,492,707	1,495,864
Total interest-bearing transaction deposits	1,772,794	1,799,997
Time deposits:		
IRA/Keogh	297,523	299,559
Certificates of deposit	1,116,957	991,598
Total time deposits	1,414,480	1,291,157
Total deposits	$ 4,207,442	$ 4,135,498

Time deposits in denominations of $250 or more amounted to $334,975 and $282,305 at December 31, 2019 and 2018, respectively.

(Dollars in Thousands)

Scheduled maturities of time deposits at December 31, 2019 and 2018 are as follows:

	2019	2018
Within one year	$ 969,967	$ 865,095
Over 1 - 2 years	212,635	205,675
Over 2 - 3 years	44,958	56,283
Over 3 - 5 years	183,616	157,810
Over 5 years	3,304	6,294
	$ 1,414,480	$ 1,291,157

Interest expense for each category of deposits for the years ended December 2019 and 2018 is as follows:

	2019	2018
NOW accounts	$ 188	$ 166
Regular savings	247	158
Money fund	11,253	9,937
Time deposits	29,230	19,627
	$ 40,918	$ 29,888

(Dollars in Thousands)

8. REPURCHASE AGREEMENTS

The following table discloses certain information regarding repurchase agreements as of and for the years ended December 31, 2019 and 2018:

	2019	2018
Balance outstanding at end of year	$ 35,633	$ 39,700
Maximum outstanding during year	51,822	54,964
Average amount outstanding during year	36,305	32,939
Amortized cost of collateral pledged as security for agreements	51,486	62,176
Fair value of collateral pledged as security for agreements	51,515	62,292
Weighted average interest rate at end of year	0.56%	0.49%

Repurchase agreements are collateralized by certain debt securities, which have been specifically identified within the portfolio (See Note 2). The obligations to repurchase the securities sold are reflected as a liability in the consolidated balance sheets. The dollar amounts of the securities underlying the agreements remain in the asset accounts. As these borrowings mature daily and are secured by the U.S. government-sponsored agency obligations and residential mortgage-backed securities, there is minimal risk of a significant decline in collateral.

9. INCOME TAXES

The components of income tax expense for the years ended December 31, 2019 and 2018 are as follows:

	2019	2018
Current income tax expense:		
Federal	$ 3,902	$ 9,686
State	918	3,700
Total current expense	4,820	13,386
Deferred income tax expense (benefit):		
Federal	4,833	(970)
State	1,600	(570)
Total deferred expense (benefit)	6,433	(1,540)
Total income tax expense	$ 11,253	$ 11,846

(Dollars in Thousands)

The Company had gross deferred income tax assets and liabilities at December 31, 2019 and 2018 as follows:

	2019	2018
Deferred income tax assets pertaining to:		
Allowance for loan losses	$ 7,974	$ 8,149
Investments in partnerships	-	7
Pension liability	12,861	9,665
Depreciation and amortization	317	402
Interest on non-accrual loans	1,841	1,849
Unrealized loss on investment securities available for sale	-	3,282
Accrued expenses	1,311	1,488
Other	183	90
Gross deferred income tax assets	24,487	24,932
Deferred income tax liabilities pertaining to:		
Employee benefit plans	10,116	5,467
Deferred loan costs	1,030	1,005
Investments in partnerships	191	-
Unrealized gain on investment securities available for sale	1,857	-
Unrealized gain on marketable equity securities	721	-
	13,915	6,472
Net deferred tax asset	$ 10,572	$ 18,460

Based on the Company’s historical and current pre-tax earnings, management believes it is more likely than not that the Company will realize the net deferred income tax asset existing at December 31, 2019. Management believes the existing net deductible temporary differences, which give rise to the net deferred tax asset at December 31, 2019, will reverse during periods in which the Company generates net taxable income. In addition, gross deductible temporary differences are expected to reverse in periods during which offsetting gross taxable temporary differences are expected to reverse. Factors beyond management’s control, such as the general state of the economy and real estate values, can affect future levels of taxable income, and no assurance can be given that sufficient taxable income will be generated to fully absorb gross deductible temporary differences.

(Dollars in Thousands)

The federal income tax reserve for loan losses at the Bank's base year is $13,731. If any portion of the reserve is used for purposes other than to absorb loan losses, approximately 150% of the amount actually used (limited to the amount of the reserve) would be subject to taxation in the fiscal year in which used. As the Bank intends to use the reserve only to absorb loan losses, a deferred income tax liability of $3,860 has not been provided.

The Company's tax years ended December 31, 2016 through December 31, 2019 remain subject to examination by federal and state taxing authorities.

Income tax expense for the following periods differed from the expected expense, computed by applying the statutory federal income tax rate to income before income taxes, due to the following principal reasons:

	Amount		Effective Tax Rate	
	2019	2018	2019	2018
Expected tax expense at statutory rate	$ 11,143	$ 11,035	21.0%	21.0%
Differences resulting from:				
State income tax, net	1,989	2,473	3.7	4.7
Bank-owned life insurance	(580)	(246)	(1.1)	(0.5)
Tax-exempt interest	(674)	(792)	(1.3)	(1.5)
Dividends received deduction	(344)	(321)	(0.6)	(0.6)
Other	(281)	(303)	(0.5)	(0.6)
Income tax expense	$ 11,253	$ 11,846	21.2%	22.5%

10. CAPITAL REQUIREMENTS

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

The regulations require minimum ratios of total capital, common equity Tier 1 capital and Tier 1 capital to risk-weighted assets and a minimum leverage ratio for all banking organizations as set forth in the following table. Additionally, community banking institutions must maintain a capital conservation buffer of common equity Tier 1 capital in an amount greater than 2.5% of total risk-weighted assets to avoid being subject to limitations on capital distributions and discretionary bonuses.

(Dollars in Thousands)

As of December 31, 2019, the most recent notification from the FDIC categorized the Bank as well capitalized under the regulatory framework for prompt corrective action. To be categorized as well capitalized, the Bank must maintain minimum total risk-based, common equity Tier 1 risk-based, Tier 1 risk-based, and Tier 1 leverage ratios as set forth in the following table. There are no conditions or events since that notification that management believes would cause a change in the Bank's categorization. Prompt corrective action provisions are not applicable to holding companies. The principal source of revenue for the Holding Company is dividends received from the Bank. The Bank cannot pay any dividends that would cause it to have insufficient capital under regulatory guidelines.

The regulatory capital ratios for the Bank are not materially different from the Company's ratios.

The Company's actual capital amounts and ratios, with respective minimum requirements, are presented in the following table:

	Actual		Minimum for Capital Adequacy		Minimum to be Well Capitalized	
	Amount	Ratio	Amount	Ratio	Amount	Ratio
December 31, 2019:						
Total Capital to Risk-Weighted Assets	$ 675,344	17.58%	$ 307,382	8.00%	$ 384,228	10.00%
Common Equity Tier 1 Capital to Risk-Weighted Assets	647,344	16.85	172,902	4.50	249,748	6.50
Tier 1 Capital to Risk-Weighted Assets	647,344	16.85	230,537	6.00	307,382	8.00
Tier 1 Capital to Average Assets	647,344	13.14	197,025	4.00	246,281	5.00
December 31, 2018:						
Total Capital to Risk-Weighted Assets	$ 640,561	17.15%	$ 298,721	8.00%	$ 373,401	10.00%
Common Equity Tier 1 Capital to Risk-Weighted Assets	611,571	16.38	168,030	4.50	242,711	6.50
Tier 1 Capital to Risk-Weighted Assets	611,571	16.38	224,041	6.00	298,721	8.00
Tier 1 Capital to Average Assets	611,571	12.75	191,863	4.00	239,829	5.00

11. EMPLOYEE BENEFITS

Pension Plan

The Company is a member of the Savings Banks Employees Retirement Association ("SBERA") within which it maintains a defined benefit pension plan. SBERA offers a common and collective trust as the underlying investment structure for its retirement plans. The target allocation mix for the common and collective trust portfolio calls for an equity-based investment deployment range from 43% to 57% of total portfolio assets. The remainder of the portfolio is allocated to fixed income from 15% to 25% and other investments, including global asset allocation and hedge funds, from 15% to 31%. The trustees of SBERA, through the SBERA investment committee, select investment managers for the common and collective trust portfolio. A professional investment advisory firm is retained by the Investment Committee to provide allocation analysis, performance measurement and to assist with manager searches. The overall investment objective is to diversify investments across a spectrum of investment types (e.g., small cap, large cap, international, etc.) and styles (e.g., growth, value, etc.) to limit risks from large market swings.

Assumptions for the expected return on plan assets and discount rates applicable to the Company's pension plan and other post-retirement agreements are periodically reviewed. As part of the review, management, in consultation with independent consulting actuaries, performs an analysis of expected returns based on the pension plan's asset allocation. This forecast reflects the Company's and SBERA's expected return on plan assets for each significant asset class or economic indicator. The range of returns developed relies on forecasts and on broad market historical benchmarks for expected return, correlation, and volatility for each asset class.

(Dollars in Thousands)

The following table presents the funded status of the Company's pension plan, and activity therein, as of and for the following periods, and amounts recognized in the Company's consolidated financial statements:

	2019	2018
Change in benefit obligation:		
Benefit obligation at beginning of year	$ 101,411	$ 98,066
Service cost	4,766	4,930
Interest cost	4,145	3,553
Actuarial (gain) loss	25,620	(2,777)
Benefits paid	(2,276)	(2,361)
Benefit obligation at end of year	133,666	101,411
Change in plan assets:		
Fair value of plan assets at beginning of year	96,152	104,656
Actual return (loss) on plan assets	18,226	(6,143)
Employer contributions	22,000	-
Benefits paid	(2,276)	(2,361)
Fair value of plan assets at end of year	134,102	96,152
Funded status and (accrued) prepaid pension at end of year	$ 436	$ (5,259)
Accumulated benefit obligation at end of year	$ 107,405	$ 80,087

The components of net periodic pension cost for the years ended December 31, 2019 and 2018 are as follows:

	2019	2018
Service cost	$ 4,766	$ 4,930
Interest cost	4,145	3,553
Expected return on assets	(7,385)	(8,110)
Recognized net actuarial loss	3,408	2,523
	$ 4,934	$ 2,896

The service cost component of net periodic pension cost is included in salaries and employee benefits and the remaining components are included in other operating expenses on the consolidated statements of net income.

(Dollars in Thousands)

Assumptions applicable to recognition of benefit obligations and related net periodic benefit costs are as follows:

	2019	2018
Weighted average assumptions used to determine the benefit obligation as of December 31:		
Discount rate	3.00%	4.25%
Salary increase rate	4.00%	4.00%
Weighted average assumptions used to determine net periodic benefit cost for the year ended December 31:		
Discount rate	4.25%	3.75%
Expected return on plan assets	8.00%	8.00%
Rate of compensation increase	4.00%	4.00%

Benefit payments for the pension plan, which reflect anticipated future service, as appropriate, are expected to be paid as follow:

Year	Amount
2020	10,232
2021	10,262
2022	9,923
2023	9,927
2024	10,801
2025-2029	51,227

The Company expects to contribute $4,250 to the pension plan during the year ending December 31, 2020.

(Dollars in Thousands)

The fair values of the Company's pension plan assets follow:

	December 31, 2019			
	Level 1	Level 2	Level 3	Total
Collective funds	$ 11,132	$ -	$ -	$ 11,132
Equity securities	13,020	-	-	13,020
Mutual funds	41,745	-	-	41,745
	$ 65,897	$ -	$ -	65,897
Investments measured at net asset value*				68,205
				$ 134,102

	December 31, 2018			
	Level 1	Level 2	Level 3	Total
Collective funds	$ 5,417	$ -	$ -	$ 5,417
Equity securities	10,522	-	-	10,522
Short-term investments	132	-	-	132
Mutual funds	29,453	-	-	29,453
	$ 45,524	$ -	$ -	45,524
Investments measured at net asset value*				50,628
				$ 96,152

*Investments measured at net asset value per share or its equivalent are not classified in the fair value hierarchy.

(Dollars in Thousands)

Investments measured using the net asset value per share as a practical expedient, are summarized below:

	December 31,	
	2019	2018
Collective funds	$ 59,744	$ 40,898
Limited partnerships	5,915	4,575
Hedge funds	2,546	5,155
	$ 68,205	$ 50,628

There are no participant redemption restrictions for these investments.

Other Post-retirement Plans

The Company has supplemental employee retirement plan ("SERP") agreements for certain senior officers. The SERP agreements provide additional compensation upon the participant's retirement and are either defined benefit or defined contribution plans. The SERP benefits are payable in accordance with the participant's election. For defined benefit SERPs, the discount rate assumption is the same rate used for the Company's pension plan and the present value of estimated future payments is provided over the remaining terms of the officers' employment. At December 31, 2019 and 2018, the liability recognized for SERPs amounted to $8,232 and $8,340, respectively. Expense related to these agreements for the years ended December 31, 2019 and 2018 amounted to $1,263 and $917, respectively.

Defined Contribution Plan

The Company maintains an employee savings plan under Section 401(k) of the Internal Revenue Code. Under the savings plan, the Company on an annual basis matches up to 50% of the first 6% of eligible compensation contributed by employees, with a limit of a 3% total match on an annual basis. Total expense recorded for the 401(k) plan amounted to $1,047 in fiscal 2019 and $1,022 in fiscal 2018.

(Dollars in Thousands)

12. OFF-BALANCE-SHEET RISK AND CONTINGENCIES

Financial Instruments

The Company is party to financial instruments with off-balance-sheet risk in the normal course of business to meet the financing needs of its customers. These financial instruments include commitments to originate loans, unused lines of credit, standby letters of credit, and unadvanced portions of construction loans. The instruments involve, to varying degrees, elements of credit and interest rate risk in excess of the amounts recognized in the consolidated balance sheets.

The Company's exposure to credit loss in the event of nonperformance by the other party to the financial instruments is represented by the contractual amount of these instruments. The Company uses the same credit policies in making commitments and conditional obligations as it does for on-balance-sheet instruments.

Contractual amounts of financial instruments with off-balance-sheet risk at December 31, 2019 and 2018 are as follows:

	2019	2018
Commitments to originate loans	$ 41,221	$ 38,503
Unused lines of credit	462,860	376,874
Unused equity lines of credit	183,191	178,535
Standby letters of credit	9,259	4,362
Unadvanced portions of construction loans	189,621	186,314

Commitments to originate loans (including loans held for sale), unused lines of credit, and unadvanced portions of construction loans are agreements to lend to a customer provided there is no violation of any condition established in the contract. Commitments generally have fixed expiration dates or other termination clauses and may require payment of a fee. Since a portion of the commitments is expected to expire without being drawn upon, the total commitment amounts do not necessarily represent future cash requirements. The Company evaluates each customer's creditworthiness on a case-by-case basis.

Standby letters of credit are conditional commitments issued by the Company to guarantee the performance by a customer to a third party. The credit risk involved in issuing letters of credit is essentially the same as that involved in extending loan facilities to customers. The Company generally holds collateral supporting these commitments.

(Dollars in Thousands)

Legal Contingencies

Various legal claims arise from time to time in the normal course of business which, in the opinion of management, will have no material effect on the Company's consolidated financial statements.

13. FAIR VALUES OF ASSETS AND LIABILITIES

The Company uses fair value measurements to record fair value adjustments to certain assets and liabilities. Fair value is the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. Fair value is best determined based upon quoted market prices. However, in many instances, there are no quoted market prices for the Company's various assets and liabilities. In cases where quoted market prices are not available, fair values are based on estimates using present value or other valuation techniques. Those techniques are significantly affected by the assumptions used, including the discount rate and estimates of future cash flows. Accordingly, the fair value estimates may not be realized in an immediate settlement of the asset or liability.

The following summarizes assets and liabilities measured at fair value at December 31, 2019 and 2018:

		Fair Value Measurements Using:		
	Total	Level 1	Level 2	Level 3
2019				
Assets measured on a recurring basis:				
Investment securites available-for-sale	$ 1,312,272	$ -	$ 1,312,272	$ -
Marketable equity securities	73,381	73,381	-	-
Derivative assets	14,098	-	14,098	-
Liabilities measured on a recurring basis:				
Derivative liabilities	14,103	-	14,103	-
Assets measured on a non-recurring basis:				
Impaired loans	1,813	-	-	1,813
Other real estate owned	110	-	-	110
2018				
Assets measured on a recurring basis:				
Marketable equity securities	$ 58,061	$ 58,061	$ -	$ -
Other available-for-sale securities	1,311,719	-	1,311,719	-
Derivative assets	4,931	-	4,931	-
Liabilities measured on a recurring basis:				
Derivative liabilities	4,931	-	4,931	-
Assets measured on a non-recurring basis:				
Impaired loans	2,141	-	-	2,141
Other real estate owned	116	-	-	116

Securities

Fair value measurements are obtained from a third-party pricing service and are not adjusted by management. The securities measured at fair value in Level 1 are based on quoted market prices or per share net asset values in an active exchange market. Securities measured at fair value in Level 2 are based on pricing models that consider standard input factors such as observable market data, benchmark yields, interest rate volatilities, broker/dealer quotes, credit spreads and new issue data.

Derivative Assets and Liabilities

Interest rate swaps are stated at estimated fair value based on their notional amount, amortization, tenor, payment frequency, day count fraction, fixed and floating rates, and other factors. The present value of expected cash flow differences is calculated based on prevailing market and contractual swap rates. The valuations of interest rate swaps are reviewed on a frequent basis. These valuations are performed by an independent appraiser consistent with market practice of the valuation derivatives.

The fair value of the risk participation agreement is based on the fair value of the interest rate swap and the probability of default. Significant increases (decreases) in probability of default would result in a significantly higher (lower) fair value measurement.

Impaired Loans and Other Real Estate Owned

Certain impaired loans are adjusted to the fair value, less costs to sell, of the underlying collateral securing these loans resulting in losses. The loss is not recorded directly as an adjustment to current earnings, but rather as a component in determining the allowance for loan losses. Fair value for such impaired loans and other real estate owned is measured using appraised values of collateral and adjusted as necessary by management based on unobservable inputs for specific properties. Losses on impaired loans for the years ended December 31, 2019 and 2018 were $930 and $1,181, respectively.

Certain properties in other real estate owned are adjusted to the fair value using appraised values of collateral and adjusted as necessary by management based on unobservable inputs for specific properties. The loss on other real estate owned represents adjustments in valuation recorded during the time period indicated and not for losses incurred on sales. During the years ended December 31, 2019 and 2018, fair value write-downs for properties taken into other real estate owned and still held at year end were $6 and 12, respectively.

14. DERIVATIVE INSTRUMENTS

Interest Rate Swaps

The Company is a party to interest rate derivatives that are not designated as hedging instruments. These derivatives relate to interest rate swaps that the Company enters into with borrowers to allow borrowers to convert variable rate loans to a fixed rate. The Company pays interest to the borrower at a floating rate on the notional amount and receives interest from the borrower at a fixed rate for the same notional amount. At the same time the interest rate swap is entered into with the borrower, an offsetting interest rate swap is entered into with another financial institution. The Company pays the other financial institution interest at the same fixed rate on the same notional amount as the swap entered into with the borrower, and receives interest from the financial institution for the same floating rate on the same notional amount. The changes in the fair value of the swaps offset each other, except for the credit risk of the counterparties, which is determined by taking into consideration the risk rating, probability of default and loss given default for all counterparties. Transaction fees received are recognized in earnings at the time of the transaction.

As of December 31, 2019 and 2018, respectively, the Company had 31 and 24 outstanding interest rate swaps with customers and a correspondent bank associated with its lending activities that are not designated as hedges.

At December 31, 2019 and 2018, respectively, the Company had interest-bearing deposits amounting to $14,500 and $1,250 pledged for collateral on its interest rate swaps.

(Dollars in Thousands)

At December 31, 2019 and 2018, the following floating interest rate swaps were outstanding with customers:

	2019	2018
Notional amount	$ 250,924	$ 204,854
Receive fixed rate (weighted average)	4.53%	4.53%
Pay variable rate (weighted average)	4.33%	4.02%
Weighted average remaining term	6.8 years	7.6 years
Unrealized fair value gain	$ 14,003	$ 3,352
Unrealized fair value loss	(95)	(1,579)

At December 31, 2019 and 2018 the following offsetting fixed interest rate swaps were outstanding with a correspondent bank:

	2019	2018
Notional amount	$ 250,924	$ 204,854
Pay fixed rate (weighted average)	4.53%	4.53%
Receive variable rate (weighted average)	4.33%	4.02%
Weighted average remaining term	6.8 years	7.6 years
Unrealized fair value loss	$ (14,003)	$ (3,352)
Unrealized fair value gain	95	1,579

Risk Participation Agreements

The Company has risk participation agreements that obligate the Company to make payments under these agreements if the customers default on their obligation to perform under derivative swap contracts with a third party. The following is a summary of risk participation agreements sold at December 31, 2019 and 2018:

	2019	2018
Notional amount	$ 49,843	$ 50,391
Unrealized fair value loss	(5)	-
Weighted average remaining term	5.2 years	5.7 years

Based on the internal risk rating process of underlying third parties to swap contracts, the risk participation agreements were all pass rated at December 31, 2019 and 2018, which indicates the expected risk of default is currently low. Assuming all of the underlying swap counterparties defaulted at December 31, 2019, the exposure from risk participation agreements would be $545 based on the Company's obligation for the fair value of the underlying swaps.

15. SUBSEQUENT EVENTS

Management has reviewed events occurring through March 13, 2020, the date the consolidated financial statements were available to be issued, and no subsequent events occurred requiring accrual or disclosure.