# Century Bancorp <br> 2018 Annual Report 



Century Bank at half a century.

Dear Fellow Shareholders \& Customers:


As I prepare to celebrate my 93rd birthday, I fondly recall how my father taught me business fundamentals which positioned me well to succeed in the banking industry. I learned how to judge the character of my customers and coworkers, how much service to others goes into an honest day's work, and how much a sound business deal can improve the lives of everyone involved.

I got my start in banking because my father acquired a closed bank building in Magoun Square. We stored furniture on the second floor, but never touched a thing in the first floor bank branch. He envisioned a bank in that space again as a tenant but, unfortunately, he died at a young age and wouldn't see it occupied by a bank. I never forgot his dream.

I was 28 years old when I phoned the Banking Commissioner to inquire about starting a bank. It was my first foray into banking, but wouldn't be my last. My father's dream of a bank in that old space was achieved and I'm sure he would be surprised to know that I was the banker.

Banking to me has always been about growth and innovation. Century was an early adopter of technology. You could say "Century innovated its way up" and that would not be far from the truth. Today, banking continues to evolve and is now conducted whenever and wherever you want: right from your phone and soon by the power of your voice. We will continue to embrace technology to meet our customers' expectations and enhance productivity in our back-office. Technology is not, and has never been, a replacement for personal interaction. It's the merging of old and new practices to achieve efficiency and speed of delivery. At the end of the day, it's about protecting our customers' money, privacy and trust.

I started Century in a rented trailer on May 1, 1969. As we prepare to celebrate our 50th Anniversary, I'm excited to tell you we've surpassed the milestone of $\$ 5$ billion in assets, have 27 branch locations and had another year of record earnings. Im grateful for our accomplishments over the last 50 years but also for the loyalty of the people who have been part of the Century Bank team that built the bank. I'm thankful for our customers and shareholders. It's because of them we continue profitable growth and achieve significant milestones almost every year.

At Century, our business is not about checks, statements, rates and loans. It's about getting to know each customer, providing every individual and business we serve with all the resources to achieve their goals - their way. It's about working hard for, and with, our customers for the betterment of our surrounding communities. It's a mission I set for the Bank when I founded it 50 years ago and it's one we continue to this day.

I am still honored to say, "I'm your Banker."


Marshall M. Sloane
Founder and Chairman

Dear Fellow Shareholders:

2018 was a year of excellent financial results, setting records for the 9th consecutive year. As we approach the 50th Anniversary of our founding on May 1, 1969, we are proud that the last decade has been among the best financial performance in our history. So many factors have contributed to our success, but most importantly the unwavering strategic discipline devised and implemented by our Founder and Chairman, Marshall M. Sloane.

Net earnings and core earnings were $\$ 36.2$ million, an increase of $17.8 \%$ over 2017 core earnings, and our capital grew to $\$ 300$ million. We ended 2018 at a milestone: $\$ 5.2$ billion in assets due to growth of $7.9 \%$, a size that vaults us firmly into the realm of regional banks. Century earned $\$ 6.50$ per share in 2018 , as compared to $\$ 4.01$ in 2017. Our stock closed the year at $\$ 67.73$, a decline of $13 \%$ over the year, a reduction along with most of our peers. CNBKA has a three-year cumulative total return of $60 \%$ and a five-year cumulative total return of $114 \%$.

All three principal business units again performed extremely well in 2018.

Through up and down business and interest rate cycles of varying duration and severity, we have produced consistent and superior results. We continued that trend in 2018:
$\$ 5.2$
Billion in Assets

## Celebrating Our Family's Bank. And Yours.

Our slogan translates into our devotion to treat our clients, as we, as a family and a business, would wish to be treated. It means fair products, rates, and fees, quick credit decisions and closings, transparency of process, and respect for the continuity and loyalty of our clients. Yet we also appreciate the frailty of life and business conditions, and try to support our clients through those inevitable undulations.

We particularly tried to assist those families who suffered due to the partial federal government shutdown in January. Several programmatic supports were created for federal employees, and we are utilizing a resourceful attitude toward those business customers who were unable to proceed due to the SBA closure. Let's hope that such an impasse does not recur.

The following examines the multiple elements of Century's results that have contributed to our success in 2018:


Pictured from left: Executive Vice President Linda Sloane Kay; Founder \& Chairman Marshall M. Sloane; and President \& CEO Barry R. Sloane


## Celebrating Centralized Hands On Management

Banking is a business of temperament and daily routine. We are steadfast in our centralized control and transparency of management. Our Loan Committee is a weekly institution that approves in open forum every loan over \$500,000. So-called Deal of the Day meets almost every afternoon to approve all other loans and lines of credit. I participate in virtually every one. It is a level of centralized credit approval that ensures we know the risks we take, makes sure we reward customer loyalty, and connects us to our clients and communities.

Our Management Committee is composed of the 10 most senior sector executives at Century. This bi-weekly, half-day meeting follows an agenda that covers officer hirings, contracts, leases, audits, marketing campaigns, significant complaints, policy changes, donations, and pipelines of all new business. MANCOM, as we call it, sets our cultural tone of centralized, yet participatory, management engagement. Opinions and dialogue are encouraged; the wisdom of our collective executive team is shared. All have a stake in decisions made. It works.

## Celebrating Core Earnings Growth and Return on Equity

Core earnings increased by $17.8 \%$ to $\$ 36.2$ million, for the year ended December 31, 2018, as compared to core earnings of $\$ 30.7$ million for 2017. Century's return on average equity (ROE) was 13.05\% for 2018, as compared to 2017's 8.75\%. The ROE is the primary building block of our financial goal setting. It reflects our priority to grow shareholder value as the key driver of our strategic plan, our annual budget, and our tactical decisions. We can't control the equity markets, but we can have a high level of confidence that if we continue to produce a double digit ROE, the share price will follow over time. It is why we believe Standard and Poor's/CFRA continues for the fourth year to rate Century's shares an " $A$ ".

In addition, our efficiency ratio of overhead to revenue, the key comparative metric of non-interest expense increased slightly from 58\% in 2017 to 59\% in 2018. This increase is due to the effect of the lower income tax rate on our calculation of interest income on a fully taxable equivalent basis. We watch our expenses carefully, and are very proud of the efficiency ratio remaining below $60 \%$, an industry threshold target for the last three years.

Total Assets (in thousands)

'16

Earnings per Class A share, diluted


Net Income (in thousands)



Century Bank is proud to support the Archdiocese of Boston
Pictured from left: Linda Sloane Kay; Cardinal Sean P. O'Malley, Marshall M. Sloane; and Barry R. Sloane

## Celebrating Significant Asset Growth

Total assets grew 8\% to a record of $\$ 5.2$ billion on December 31, 2018, up from $\$ 4.8$ billion on December 31, 2017, an increase of $\$ 378$ million. We experienced significant growth in 2018 for all three of our business lines: consumer, business, and institutional services. We are proud to have dozens of depositors who each routinely keep tens of millions at Century with confidence in our high performing earnings and asset growth. Being one of the 22 S\&P/CFRA "A" quality rated banks in America, and one of only four in Massachusetts, is a strong external contributing confidence factor.

## Celebrating Record Capital

Total equity was $\$ 300.4$ million on December 31, 2018, an increase of $\$ 40$ million or $15.4 \%$ from $\$ 260.3$ million on December 31, 2017. Book value per share increased to $\$ 53.96$ at December 31, 2018, up by $\$ 7.21$ from $\$ 46.75$ at December 31, 2017. Century is "well capitalized" by all regulatory standards, and we have passed all "Basel III" requirements through organic capital generation from earnings.

A
S\&P/CFRA Quality Ranking


Pictured from left: Executive Vice President Paul A. Evangelista; Chief Financial Officer \& Treasurer William P. Hornby; Executive Vice President David B. Woonton; and Executive Vice President Brian J. Feeney


Century Bank is proud to support the Visiting Nurse Association
Pictured from left: Barry R. Sloane; Linda Sloane Kay; Marshall M. Sloane; Shipley C. Mason, SVP, Century Bank; and Linda S. Cornell, President \& CEO, Visiting Nurse Association

## Celebrating Record Loan Portfolio Size

Our unique loan portfolio strategy continues to work exceptionally well. Total loans grew by $\$ 110$ million or $5 \%$ to a record $\$ 2.3$ billion on December 31, 2018; our largest loan portfolio ever, and a loan to deposit ratio of 51.9\%. Non-performing assets continued to be a minimal number for a portfolio of our size, increasing from $\$ 1.7$ million at December 31, 2017 to $\$ 3.5$ million at December 31, 2018. The education and healthcare sectors continue to anchor our loan portfolio. We are, by any standard, one of the leading experts in tax-exempt financing in New England. We believe the magnetism and quality of Massachusetts' colleges and universities validate our decade-long strategic conclusion that education and healthcare were, and are, the future of our region.

Much has been written about the failure of four Massachusetts area colleges in recent months. We will evaluate industry developments to look for warning signs for our portfolio and be vigilant in our loan approval and monitoring discipline.

Our calling officers are seeking new middle market business prospects every day. We combine expert market knowledge with extraordinary product expertise, leading to some of the longest duration satisfied relationships in commercial banking. The process goes on, every day, pushing up our market share, but it's not easy as many of our peers have lower underwriting and pricing standards than we do. The middle business market is an exceptionally competitive environment.

Loan quality is religion to us; our portfolio continues to be well diversified with emphasis on quality underwriting and effective ongoing monitoring of the loan portfolio. 2018 was a productive year in which we closed $\$ 82$ million in residential first mortgages, and $\$ 183$ million in home equity loans. We extended 241 energy conservation loans through the Mass Save loan program, which helped us do our part for conservation while originating many new long term relationships.

## Celebrating Results in our Branch System

We are proud that five of our twenty-seven branches hold over $\$ 100$ million in deposits, and total branch deposits exceed $\$ 2.3$ billion. We are very discerning in the search for our next branch, \#28. We are on the lookout for further high visibility market-extending locations; small size and manageable cost is paramount. In addition, we now operate 51 ATMs, processing over 500,000 annual transactions.

We are in the early stages of implementing a CRM (customer relationship management) system across all of our client facing businesses. When fully operational it will assist our communication and responsiveness to our thousands of clients.

## Celebrating Record Growth in Institutional Services

The Institutional Services Group, which includes our government, cash management, and not-for-profit banking teams, had another record year of client growth. Our share of government banking deposits is now the highest among Massachusetts chartered banks, and we have expanded our client set significantly in Rhode Island and New Hampshire.

We processed over 36 million check and payment items in 2018, with exceptional quality control and customer service. The lockbox function remains a time tested magnet for corporate and institutional clients. We are proud of the most stable operational management team in the industry, combining an advanced technology platform with live and experienced customer senvice personnel.

For the sixth consecutive year, the audit of our automated lockbox services and its operative effectiveness of controls was without any finding of deficiency.

In 2018 we implemented the largest and most complex corporate lockbox relationship in our history. Proving that our service, execution, and reputation is without peer in New England. We will do our utmost to ensure it is always true.


Chairman's Spirit Award Recipients
The Century Bank Lockbox Team received the Spirit Award based on their dedication, team work and Century spirit

## Celebrating Record Size in Wealth Management

2018 was the fourth full year of our wealth management function. Our assets under management grew $4.1 \%$ to over $\$ 130.7$ million in 2018. Our wealth management business is a great opportunity to serve the generational transition challenges of our private clients while providing our not-for-profit clients an institutional quality offering that embraces industry best practices. We specialize in growth and income "defensive" portfolios that we believe are particularly relevant when equity markets continue to behave with meaningful volatility.

## Celebrating our Brand

It's easy to be different in this realm as there is no other family managed and controlled bank of our size in New England. Our advertising, in print, radio, and now regional television, promotes our consistent message of local family control, permanence, approachability, and personal service. Dad, Linda, and I keep taking the time to personally sign each welcome note thanking all new clients of Century. This level of personal touch is unique from all others in the industry.

## Celebrating Results in Information Systems

We pride ourselves on a technology platform of redundancy and expertise that our clients can rely on for financial inquiry, transactions, and high quality service. We are proud to say that Information Systems met all of its operational and service goals in 2018. We are constantly monitoring our systems reliability, and when customers encounter problems at night or on weekends, we're always reachable.

## Celebrating the Digital Services Platform Transformation

A metamorphosis is underway in banking from face to face to digital customer service. A most effective partnership of our Marketing and Information Systems departments began two years ago to create a strategic plan and analytic agenda of the full realm of digital banking services. Our goal is to offer the menu of digital services offered by our most advanced giant competitors, yet ALWAYS provide for the intervention of live bankers to assist and educate customers in their relationship needs. We are well down this new road, with the offering of 10 digital services, on a par with our largest peers. The challenge is to seamlessly integrate these new services into our highly reliable legacy platform systems. It's what we call a "digitally enhanced relationship." We believe it's our version of the future of banking. More to come.

## Celebrating Our Commitment to the Community

We are focused on our social responsibility to our home communities. Led by our imperative for locally controlled enterprise, community development, and relationship based philanthropy, we live our social mission every day. We support the Community Reinvestment Act function with staff, resources, and management commitment. We are proud that our most recent completed Massachusetts CRA audit was ranked a "High Satisfactory." We diligently try to better serve our minority and lower income communities with home ownership opportunities and access to traditional banking services. We are very proud that


Senior Vice Presidents
Standing, pictured from left: Kenneth A. Samuelian; Anthony C. LaRosa; James M. Flynn, Jr.; Timothy L. Glynn;
William J. Gambon, Jr.; Richard L. Billig; Jason J. Melius; Peter R. Castiglia; and Thomas E. Piemontese
Sitting, pictured from left: Deborah R. Rush; Shipley C. Mason; Yasmin D. Whipple; Gerald S. Algere; and Bradford J. Buckley
we are the lead lender to a new affordable housing project in Jamaica Plain of four two-family homes to be occupied in 2019. We are also proud to be one of the leaders raising the endowment to construct the new Medford Public Library.

## Celebrating our People and our Values

We can't say enough about the commitment and capability of our over 450 Century Associates. When bad weather, family calamity, or industry changes bring challenges, our colleagues faultlessly respond with time, ability and ingenuity. So many of our colleagues have worked together for decades, a rare condition in our industry that makes our teamwork superb. Most of the achievements described above are the result of the talent and resourcefulness of the Century team.

Finally, we see so clearly our family and corporate values of industry, fairness, and community. Thank you to our shareholders, our clients, our Associates, and our communities, for their confidence and relationships. We will endeavor to make 2019 another year of superior results through our diligence and resourcefulness.

## Over 450 <br> Century Bank Associates

Gratefully,

2020 Women on Boards
ACT Lawrence
Adopt-A-Student Foundation AFSCME Council 93
Alzheimer's Association
Alzheimer's Foundation of America American Foundation for Suicide Prevention Andover Business Community Association Andover Rotary Club Andover Youth Foundation Animal Rescue League of Boston Apple Orchard School

Cambridge Montessori School
Cambridge YMCA
Cambridge YWCA
Camp Harbor View Foundation, Inc.
Cardinal Cushing Centers, Inc.
Cardinal Spellman High School
Caritas Communities
Catholic Charities of Boston
Catholic Schools Foundation, Inc./Inner-City Scholarship Fund
Challenge Me, Inc.
Challenge Unlimited


Century Bank hosted The Evolution of Women's Entrepreneurship with a panel of Senior Executives and Business Owners
Pictured from left: Tami Bonnell; Jacquelyn Redmond; Desiree Patno; Linda Sloane Kay; and Betsy Magnuson

Archdiocese of Boston
Asian Community Development Corporation Associazione Gizio
Back Bay Association
Bais Yaakov of Boston High School for Girls Bay State Chapter Freedoms Foundation
Beacon Academy
Best Buddies
Beth Israel Deaconess Medical Center-Milton Beth Menachem Chabad of Newton
Bike MS
Bishop Fenwick High School
Boston Architectural College
Boston Ballet
Boston Children's Hospital
Boston Chinatown Neighborhood Center, Inc.
Boston College
Boston College High School
Boston Harbor Association
Boston Jewish Film Festival
Boston Landmarks Orchestra
Boston POPS
Boston University
Braintree Catholic Womens Club
Bread of Life
Brookline Chamber of Commerce
Brookline High School Innovation Fund
Burbage Theatre Company
Burlington Community Scholarship Foundation/Dollars for Scholars
Burlington Recreation Department
Cambridge Camping


Team Century participates at the New England Museum Association Expo

Chelsea Housing Authority
Children's Trust
Christians and Jews United for Israel
City of Beverly
City of Chicopee
City of Everett

Epstein Hillel School
ESSCO-MGH Breast Cancer Research Fund
Essex Chamber Music Players
Everett Chamber of Commerce
Everett Rotary Club
Facing Cancer Together
FAR OUT Rocketry
Federazione Associzzione
Fisher Center for Alzheimer's Research Fund
Foundation for MetroWest
Foundation for Racial, Ethnic \& Religious Harmony Franciscan Children's
Friends of Christopher Columbus Park Friends of the Middlesex Fells Reservation Friends of the North End Branch Library Gann Academy
German International School Boston
Granara-Skerry Trust
Greater Beverly Chamber of Commerce
Greater Lawrence Family Health Center
Greater Lynn Senior Services
Greater Medford Visiting Nurse Association
Greater Newburyport Chamber of Commerce
\& Industry
Habitat for Humanity Greater Boston
Hebrew College
Hebrew SeniorLife
Hospitality Homes, Inc.
I.B.E.W. Local 103

Initiative for a Competitive Inner City Irish International Immigrant Center James L. McKeown Boys \& Girls Club of Woburn Jewish Big Brothers Big Sisters
Jewish Cemetery Association of Massachusetts
Jewish Community Centers of Greater Boston Jewish Family Service
John M. Barry Boys \& Girls Club of Newton
John T. Forcellese Memorial Fund
Joseph N. Hermann Youth Center
Joslin Diabetes Center
Jubilee Christian Church
Juvenile Diabetes Research Foundation


Century Bank Newton Centre Associates educated students from The Carroll Center For The Blind on money management

City of Medford
City of Peabody
City of Quincy
City of Somerville
Colleen E. Ritzer Memorial Scholarship Fund Combined Jewish Philanthropies
Community Dispute Settlement Center Coolidge Corner Community Chorus Coolidge Corner Merchants' Association Courageous Sailing
Covenant Christian Academy
Cristo Rey Boston High School
Cyrus E. Dallin Art Museum, Inc.
Cystic Fibrosis Foundation
Dana-Farber Cancer Institute
Dante Alighieri Society of Massachusetts
Deutsches Altenheim, Inc.
Dimock Community Health Centers
DONNE 2000
Dr. Enzinger Esophageal/Stomach Research Fund Dr. Thomas Abrams Research Fund for Gl Cancer East Middlesex Association for Children
Eliot School
Emerson College

Koleinu Boston's Jewish Community Chorus Kollel of Greater Boston
Kosher Dental Study
Krystle Campbell Memorial Fund
Ladies Ancient Order of Hibernians
Lawrence CommunityWorks
Lazarus House Ministries
Leonard P. Zakim Center for Integrative Therapies
Little Sisters of the Poor
UNGevity Foundation
ynnn Chamber of Commerce
Lynn Housing Authority \& Neighborhood Development
Lynn Museum \& Historical Society
Malden Babe Ruth League
Malden Chamber of Commerce
Marine Corps League
Mary Ann Brett Food Pantry - Dorchester Catholic
Massachusetts Adoption Resource Exchange
Massachusetts Association for Mental Health
Massachusetts Eye and Ear Infirmary
Massachusetts General Hospital
Massachusetts Law Reform Institute
Massachusetts Mortgage Bankers Foundation, Inc
Massachusetts Network of Foster Care Alumni
Matignon High School
May Institute
Medford Chamber of Commerce

Medford Citizen of the Year Alumni Benevolent Fund
Medford Girl Scouts
Medford High School
Medford Jingle Bell Festival
Medford Little League
Medford Public Library
Medford Rotary Club
Medford Youth Center
Melanoma Education Foundation
Mental Health Programs, Inc. (MHPI)
Merrimack Valley Chamber of Commerce
Merrimack Valley YMCA
Morgan Memorial Goodwill Industries
My Life My Choice
Mystic Valley Branch of the NAACP
Mystic Valley Elder Senvices
Mystic Valley Public Health Coalition
Mystic Wellington Yacht Club
NAIOP Massachusetts
Nashua Senior Activity Center
National Brain Tumor Society
National Kidney Foundation
National Tay-Sachs \& Allied Diseases Association
Nativity Preparatory School
Nazzarro Recreation Center
Needham History Center \& Museum
Neighborhood House Charter School
New Art Center
New England Center for Children
New England Conservatory
New England Disabled Sports
Newbury Street League
Newton North High School
Newton-Needham Chamber of Commerce
Newton-Wellesley Hospital Charitable Foundation
Norman B. Leventhal Map Center
North Andover Housing Authority
North Andover Scholarship Foundation
North End Against Drugs, Inc.
North End Christmas Fund
North End Music and Performing Arts Center
North End Waterfront Health
North Reading Little League
North Reading Youth Football

Roman W. DeSanctis MD Legacy Endowed Fund Run for the Troops
Sacred Heart School
Sail Cape Cod
Saint Anthony's Society
Saint Gennaro Foundation of Boston
Saint John School
Saint Leonard Parish
Saint Peter School
Salem Chamber of Commerce
Salem Rotary Club
Salve Regina University
Sancta Maria Hospital, Inc.
Save the Children

Temple Sinai Sharon
The A.C.D.K. Hope Foundation
The American Legion - Medford Post 45
The Andover Village Improvement Society
The Angel Fund
The Arc of the South Shore
The Brookline Center for Community Mental Health
The Carroll Center For The Blind
The E Club
The Genesis Fund
The Gifford School
The Gloucester Fund, Inc.
The Greater Boston Food Bank
The Jimmy Fund


Team Century joins the Medford Day celebration

Sergeant Michael Chesna Family Fund Shakespeare \& Company
Sisterhood Temple Emanuel of Newton Sisters of St. Joseph of Boston Society of Jesus of New England Solomon Schechter Day School Somerville Chamber of Commerce Somerville Council on Aging


Brandeis University business students read and discuss the book "Character Counts" by Marshall M. Sloane

North Shore Chamber of Commerce
North Shore Community Action Programs, Inc.
North Shore Latino Business Association, Inc.
Northeast Arc
Northern Light Productions
On the Rise
Our Lady of Cedars of Lebanon Church
P.A.W.S. Preschool of Wellesley Schools Pan-Mass Challenge
Partners HealthCare at Home
Peabody Chamber of Commerce
Peabody Institute Library Foundation
Peabody Main Streets
Prospect Hill Academy Charter School
Public Broadcasting Service
Quincy Asian Resources, Inc.
Quincy Chamber of Commerce
Quincy College
Quincy School Community Partnership
Raymond J. Reilly, MD Innovation Fund
Red Sox Foundation/Run to Home Base
Redemptoris Mater Seminary
Regis College
Right at Home
Rodman Ride for Kids
ROFEH International

[^0]The Joey Fund
The Kennek Foundation
The Shadow Fund NE
The Skating Club of Boston
The Soldiers Fund
The Somerville Mathematics Fund
The Thursday Fortnightly Club
The United States Conference of Mayors
The Welcome Project
The Wildcat Fund
Torah Academy
Town of Acton
Town of Burlington
Town of Swampscott
UNICO Merrimack Valley
University of Massachusetts Boston
Veterans of Foreign Wars
Vilna Shul
Visiting Nurse Association of Eastern Massachusetts
VNA Hospice Care
Ward 7 Improvement Association
Wellesley Chamber of Commerce
Wellesley Rotary Club
Whittier Street Health Center
Winchester Historical Society
Winchester Hospital
Winchester Pop Warner
Winchester Rotary Club
Woburn Middlesex Lions Club
Woburn Public Library
Woburn Rotary Club
Women's Bar Association of Massachusetts Yeshiva Ohr Yisrael


Team Century participating in Step Up for Colleen 5K

## Century Bancorp, Inc.

 DirectorsGeorge R. Baldwin4.6.
President \& CEO
Baldwin \& Company
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Clark, Hunt, Ahearn \& Embry
Louis J. Grossman ${ }^{4,7}$
Chairman
The Grossman Companies, Inc.
Russell B. Higley, Esq. ${ }^{6,7}$
Attorney
Jackie Jenkins-Scott $4.5{ }^{5}$
President Emeritus Wheelock College
Linda Sloane Kay 4,5,6,7
Executive Vice President Century Bank and Trust Company
Fraser Lemley ${ }^{2 \times 3,4,5}$
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Independant Consultant
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Joseph J. Senna, Esq.144
Attorney
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CEO
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Barry R. Sloane ${ }^{4,5,6,7}$
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Century Bank and Trust Company
Marshall M. Sloane 4.5
Chairman of the Board
Century Bank and Trust Company
George F. Swansburg 4 4,5,6
Jon Westling ${ }^{12,3}$
President Emeritus
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## Officers

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Founder and Chairman
Barry R. Sloane
President \& CEO
Linda Sloane Kay
Executive Vice President
William P. Hornby, CPA
Chief Financial Officer \& Treasurer
Rosalie A. Cunio
Clerk
Judith Sinclair
Assistant Clerk

## Century Bank and Trust Company Officers

## Management Committee

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Chairman of the Board
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President \& CEO
William P. Hornby, CPA
Chief Financial Officer \& Treasurer
Paul A. Evangelista
Executive Vice President
Brian J. Feeney
Executive Vice President
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Timothy L. Glynn
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Shipley C. Mason
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Deborah R. Rush
Kenneth A. Samuelian
Yasmin D. Whipple

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Joshua L. Jick
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Amanda A. Leitrz
David M. Leung
Paula A. Malley
Kimberly J. Matsumoto
Sambo Mean
Cheryl L. Miller
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Christopher M. Ross
Jessica E. Rozzo
Cynthia E. Sarnie
Biljana Savic
Michael E. Serieka
Maria R. Serrentino
Robert J. Silva
Judith Sinclair
Lyndsey H. Starks
Ellzabeth A. Theriault

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Century Bancorp, Inc. AR '18

| (dollars in thousands, except share data) |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| FOR THE YEAR |  |  |  |  |  |  |  |  |  |  |
| Interest income | \$ | 137,056 | \$ | 113,436 | \$ | 96,699 | \$ | 90,093 | \$ | 85,371 |
| Interest expense |  | 44,480 |  | 27,820 |  | 22,617 |  | 20,134 |  | 19,136 |
| Net interest income |  | 92,576 |  | 85,616 |  | 74,082 |  | 69,959 |  | 66,235 |
| Provision for loan losses |  | 1,350 |  | 1,790 |  | 1,375 |  | 200 |  | 2,050 |
| Net interest income after provision for loan losses |  | 91,226 |  | 83,826 |  | 72,707 |  | 69,759 |  | 64,185 |
| Other operating income |  | 16,248 |  | 16,552 |  | 16,222 |  | 15,993 |  | 15,271 |
| Operating expenses |  | 69,693 |  | 67,119 |  | 64,757 |  | 62,198 |  | 56,730 |
| Income before income taxes |  | 37,781 |  | 33,259 |  | 24,172 |  | 23,554 |  | 22,726 |
| Provision for income taxes |  | 1,568 |  | 10,958 |  | (362) |  | 533 |  | 866 |
| Net income | \$ | 36,213 | \$ | 22,301 | \$ | 24,534 | \$ | 23,021 | \$ | 21,860 |
| Core earnings - Non-GAAP ${ }^{(1)}$ | \$ | 36,213 | \$ | 30,749 | \$ | 24,534 | \$ | 23,021 | \$ | 21,860 |
| Average shares outstanding Class A, basic |  | 3,608,179 |  | 3,604,029 |  | 3,600,729 |  | 3,600,729 |  | 3,591,732 |
| Average shares outstanding Class B, basic |  | 1,959,730 |  | 1,963,880 |  | 1,967,180 |  | 1,967,180 |  | 1,969,030 |
| Average shares outstanding Class A, diluted |  | 5,567,909 |  | 5,567,909 |  | 5,567,909 |  | 5,567,909 |  | 5,562,209 |
| Average shares outstanding Class B, diluted |  | 1,959,730 |  | 1,963,880 |  | 1,967,180 |  | 1,967,180 |  | 1,969,030 |
| Total shares outstanding at year-end |  | 5,567,909 |  | 5,567,909 |  | 5,567,909 |  | 5,567,909 |  | 5,567,909 |
| Earnings per share: |  |  |  |  |  |  |  |  |  |  |
| Basic, Class A | \$ | 7.89 | \$ | 4.86 | \$ | 5.35 | \$ | 5.02 | \$ | 4.78 |
| Basic, Class B | \$ | 3.95 | \$ | 2.43 | \$ | 2.68 | \$ | 2.51 | \$ | 2.39 |
| Diluted, Class A | \$ | 6.50 | \$ | 4.01 | \$ | 4.41 | \$ | 4.13 | \$ | 3.93 |
| Diluted, Class B | \$ | 3.95 | \$ | 2.43 | \$ | 2.68 | \$ | 2.51 | \$ | 2.39 |
| Dividend payout ratio - Non-GAAP ${ }^{(1)}$ |  | 6.1 \% |  | 9.9 \% |  | 9.0 \% |  | 9.6 \% |  | 10.0 \% |
| AT YEAR-END |  |  |  |  |  |  |  |  |  |  |
| Assets | \$ | 5,163,935 | \$ | 4,785,572 | \$ | 4,462,608 | \$ | 3,947,441 | \$ | 3,624,036 |
| Loans |  | 2,285,578 |  | 2,175,944 |  | 1,923,933 |  | 1,731,536 |  | 1,331,366 |
| Deposits |  | 4,406,964 |  | 3,916,967 |  | 3,653,218 |  | 3,075,060 |  | 2,737,591 |
| Stockholders' equity |  | 300,439 |  | 260,297 |  | 240,041 |  | 214,544 |  | 192,500 |
| Book value per share | \$ | 53.96 | \$ | 46.75 | \$ | 43.11 | \$ | 38.53 | \$ | 34.57 |
| SELECTED FINANCIAL PERCENTAGES |  |  |  |  |  |  |  |  |  |  |
| Return on average assets |  | 0.74 \% |  | 0.48 \% |  | 0.57 \% |  | 0.59 \% |  | 0.61 \% |
| Return on average stockholders' equity |  | 13.05 \% |  | 8.75 \% |  | 10.80 \% |  | 11.26 \% |  | 11.57 \% |
| Net interest margin, taxable equivalent |  | 2.18 \% |  | 2.25 \% |  | 2.12 \% |  | 2.18 \% |  | 2.22 \% |
| Net (recoveries) charge-offs as a percent of average loans |  | (0.04) \% |  | 0.00 \% |  | 0.00 \% |  | (0.04) \% |  | 0.05 \% |
| Average stockholders' equity to average assets |  | 5.71 \% |  | 5.50 \% |  | 5.29 \% |  | 5.25 \% |  | 5.27 \% |
| Efficiency ratio - Non-GAAP ${ }^{(1)}$ |  | 59.2 \% |  | 57.8 \% |  | 62.7 \% |  | 64.1 \% |  | 62.0 \% |

${ }^{(1)}$ Non-GAAP Financial Measures are reconciled in the following tables:

|  | 2018 |  | 2017 |  | 2016 |  | 2015 |  | 2014 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Calculation of Efficiency Ratio: |  |  |  |  |  |  |  |  |  |  |
| Total Operating Expenses (numerator) | \$ | 69,693 | \$ | 67,119 | \$ | 64,757 | \$ | 62,198 | \$ | 56,730 |
| Net Interest Income |  | 92,576 |  | 85,616 |  | 74,082 |  | 69,959 |  | 66,235 |
| Total Other Operating Income |  | 16,248 |  | 16,552 |  | 16,222 |  | 15,993 |  | 15,271 |
| Tax Equivalent Adjustment |  | 8,854 |  | 13,979 |  | 12,917 |  | 11,140 |  | 10,033 |
| Total Income (denominator) | \$ | 117,678 | \$ | 116,147 | \$ | 103,221 | \$ | 97,092 | \$ | 91,539 |
| Efficiency Ratio, Year - Non-GAAP |  | 59.2 \% |  | 57.8 \% |  | 62.7 \% |  | 64.1 \% |  | 62.0 \% |
|  |  | 2018 |  | 2017 |  | 2016 |  | 2015 |  | 2014 |
| Calculation of Dividend Payout Ratio: |  |  |  |  |  |  |  |  |  |  |
| Dividends Paid (numerator) | \$ | 2,203 | \$ | 2,200 | \$ | 2,201 | \$ | 2,200 | \$ | 2,196 |
| Net Income (denominator) | \$ | 36,213 | \$ | 22,301 | \$ | 24,534 | \$ | 23,021 | \$ | 21,860 |
| Dividend Payout Ratio - Non-GAAP |  | 6.1 \% |  | 9.9 \% |  | 9.0 \% |  | 9.6 \% |  | 10.0 \% |
|  |  | 2018 |  | 2017 |  | 2016 |  | 2015 |  | 2014 |
| Calculation of core earnings: |  |  |  |  |  |  |  |  |  |  |
| Net Income | \$ | 36,213 | \$ | 22,301 | \$ | 24,534 | \$ | 23,021 | \$ | 21,860 |
| Add: Deferred Tax Remeasurement Charge |  | - |  | 8,448 |  | - |  | - |  | - |
| Core earnings - Non-GAAP | \$ | 36,213 | \$ | 30,749 | \$ | 24,534 | \$ | 23,021 | \$ | 21,860 |

The stock performance graph below compares the cumulative total shareholder return of the Company's Class A Common Stock from December 31,2013 to December 31, 2018 with the cumulative total return of the NASDAQ Market Index (U.S. Companies) and the NASDAQ Bank Stock Index. The lines in the graph represent monthly index levels derived from compounded daily returns that include all dividends. If the monthly interval, based on the fiscal year-end, was not a trading day, the preceding trading day was used.

Comparison of Five-Year
Cumulative Total Return*


[^2]December 31, 2013 and that all dividends were reinvested.

## FORWARD-LOOKING STATEMENTS

Certain statements contained herein are not based on historical facts and are "forward-looking statements" within the meaning of Section 21A of the Securities Exchange Act of 1934. Forward-looking statements, which are based on various assumptions (some of which are beyond the Company's control), may be identified by reference to a future period or periods, or by the use of forward-looking terminology, such as "may," "will," "believe," "expect," "estimate," "anticipate," "continue" or similar terms or variations on those terms, or the negative of these terms. Actual results could differ materially from those set forth in forward-looking statements due to a variety of factors, including, but not limited to, those related to the economic environment, particularly in the market areas in which the Company operates, competitive products and pricing, fiscal and monetary policies of the U.S. Government, changes in government regulations affecting financial institutions, including regulatory fees and capital requirements, changes in prevailing interest rates, acquisitions and the integration of acquired businesses, credit risk management, asset/liability management, the financial and securities markets, and the availability of and costs associated with sources of liquidity.

The Company does not undertake, and specifically disclaims any obligation, to publicly release the result of any revisions which may be made to any forwardlooking statements to reflect the occurrence of anticipated or unanticipated events or circumstances after the date of such statements.

## RECENT MARKET DEVELOPMENTS

On July 21, 2010, the Dodd-Frank Wall Street Reform and Consumer Protection Act (the "D-F Act") became law. The D-F Act was intended to address many issues arising in the recent financial crisis and is exceedingly broad in scope, affecting many aspects of bank and financial market regulation. The D-F Act requires, or permits by implementing regulation, enhanced prudential standards for banks and bank holding companies inclusive of capital, leverage, liquidity, concentration and exposure measures. In addition, traditional bank regulatory principles such as restrictions on transactions with affiliates and insiders were enhanced. The D-F Act also contains reforms of consumer mortgage lending practices and creates a Bureau of Consumer Financial Protection, which is granted broad authority over consumer financial practices of banks and others. It is expected as the specific new or incremental requirements applicable to the Company become effective that the costs and difficulties of remaining compliant with all such requirements will increase. The D-F Act broadened the base for FDIC assessments to average consolidated assets less tangible equity of financial institutions and also permanently raises the current standard maximum FDIC deposit insurance amount to $\$ 250,000$. The Act extended unlimited deposit insurance on non-interest bearing transaction accounts through December 31, 2012.

In addition, the D-F Act added a new Section 13 to the Bank Holding Company Act, the so-called "Volcker Rule," (the "Rule") which generally restricts certain banking entities such as the Company and its subsidiaries or affiliates, from engaging in proprietary trading activities and owning equity in or sponsoring any private equity or hedge fund. The Rule became effective July 21, 2012. The final implementing regulations for the Rule were issued by various regulatory agencies in December, 2013 and under an extended conformance regulation compliance was required to be achieved by July 21,2015 . The conformance period for investments in and relationships with certain "legacy covered funds" was extended to July 21, 2017. Under the Rule, the Company may be restricted from engaging in proprietary trading, investing in third party hedge or private equity funds or sponsoring new funds unless it qualifies for an exemption from the rule. The Company has little involvement in prohibited proprietary trading or investment activities in covered funds and the Company does not expect
that complying with the requirements of the Rule will have any material effect on the Company's financial condition or results of operation. The federal banking agencies have issued notices of proposed rulemaking to make certain amendments to the Rule to simplify and tailor compliance requirements and to conform the Rule to the EGRRCPA (discussed below).
Federal banking regulators have issued risk-based capital guidelines, which assign risk factors to asset categories and off-balance-sheet items. Also, the Basel Committee has issued capital standards entitled "Basel III: A global regulatory framework for more resilient banks and banking systems" ("Basel III"). The Federal Reserve Board has finalized its rule implementing the Basel III regulatory capital framework. The rule that came into effect in January 2015 sets the Basel III minimum regulatory capital requirements for all organizations. It included a new common equity Tier I ratio of 4.5 percent of risk-weighted assets, raised the minimum Tier I capital ratio from 4 percent to 6 percent of risk-weighted assets and would set a new conservation buffer of 2.5 percent of risk-weighted assets. The implementation of the framework did not have a material impact on the Company's financial condition or results of operations.
On December 22, 2017, the Tax Cuts and Jobs Act (the "Tax Act") was enacted, which represents the most comprehensive reform to the U.S. tax code in over thirty years. The majority of the provisions of the Tax Act took effect on January 1, 2018. The Tax Act lowered the Company's federal tax rate from 34\% to $21 \%$. Also, for tax years beginning after December 31, 2017, the corporate Alternative Minimum Tax ("AMT") has been repealed. For 2018 through 2021, the AMT credit carryforward can offset regular tax liability and is refundable in an amount equal to $50 \% ~(100 \%$ for 2021) of the excess of the minimum tax credit for the tax year over the amount of the credit allowable for the year against regular tax liability. Accordingly, it is anticipated that the full amount of the alternative minimum tax credit carryforward will be recovered in tax years beginning before 2022. The Tax Act also contains other provisions that may affect the Company currently or in future years. Among these are changes to the deductibility of meals and entertainment, the deductibility of executive compensation, the dividend received deduction and net operating loss carryforwards. Tax Act changes for individuals include lower tax rates, mortgage interest and state and local tax limitations as well as an increase in the standard deduction, among others.
On May 24, 2018, the Economic Growth, Regulatory Relief, and Consumer Protection Act, or the EGRRCPA, became law. This is arguably the most significant financial institution legislation since the D-F Act. The EGRRCPA changes certain of the regulatory requirements of the D-F Act and includes provisions intended to relieve the regulatory burden on "community banks." Among other things, for qualifying community banks with less than $\$ 10$ billion in total consolidated assets, the EGRRCPA contains a safe harbor from the D-F Act "ability to repay" mortgage requirements, an exemption from the Volcker Rule, may permit filing of simplified Call Reports, and potentially will result in some alleviation of the D-F Act and U.S. Basel III capital mandates. The EGRRCPA requires the federal banking agencies to develop a community bank leverage ratio (defined as the ratio of tangible equity capital to average total consolidated assets) for banks and holding companies with total consolidated assets of less than $\$ 10$ billion and an appropriate risk profile. The required regulations must specify a minimum community bank leverage ratio of not less than $8 \%$ and not more than $10 \%$. The federal banking agencies jointly issued a notice of proposed rulemaking which would set the minimum ratio at $9 \%$. Qualifying banks that exceed the minimum community bank leverage ratio will be deemed to be in compliance with all other capital and leverage requirements including the capital ratio requirements that are required to be considered well capitalized under Section 38 of Federal Deposit Insurance Act.

## OVERVIEW

Century Bancorp, Inc. (together with its bank subsidiary, unless the context otherwise requires, the "Company") is a Massachusetts state-chartered bank holding company headquartered in Medford, Massachusetts. The Company is a Massachusetts corporation formed in 1972 and has one banking subsidiary (the "Bank"): Century Bank and Trust Company formed in 1969. At December 31, 2018, the Company had total assets of $\$ 5.2$ billion. Currently, the Company operates 27 banking offices in 20 cities and towns in Massachusetts, ranging from Braintree in the south to Andover in the north. The Bank's customers consist primarily of small and medium-sized businesses and retail customers in these communities and surrounding areas, as well as local governments and large healthcare and higher education institutions throughout Massachusetts, New Hampshire, Rhode Island, Connecticut and New York.

The Company's results of operations are largely dependent on net interest income, which is the difference between the interest earned on loans and securities and interest paid on deposits and borrowings. The results of operations are also affected by the level of income and fees from loans, deposits, as well as operating expenses, the provision for loan losses, the impact of federal and state income taxes and the relative levels of interest rates and economic activity.

The Company offers a wide range of services to commercial enterprises, state and local governments and agencies, non-profit organizations and individuals. It emphasizes service to small and medium sized businesses and retail customers in its market area. In recent years, the Company has increased business to larger institutions, specifically, healthcare and higher education. The Company makes commercial loans, real estate and construction loans and consumer loans, and accepts savings, time, and demand deposits. In addition, the Company offers its corporate and institutional customers automated lock box collection services, cash management services and account reconciliation services, and actively promotes the marketing of these services to the municipal market. Also, the Company provides full service securities brokerage services through a program called Investment Services at Century Bank, which is supported by LPL Financial, a third party full-service securities brokerage business.

The Company has municipal cash management client engagements in Massachusetts, New Hampshire and Rhode Island comprised of approximately 250 government entities.
The Company had net income of $\$ 36,213,000$ for the year ended December 31, 2018, compared with net income of $\$ 22,301,000$ for the year ended December 31, 2017, and net income of $\$ 24,534,000$ for the year ended December 31, 2016. Class A diluted earnings per share were $\$ 6.50$ in 2018 compared to $\$ 4.01$ in 2017 and compared to $\$ 4.41$ in 2016.

During 2017, the Company's earnings were negatively impacted by a reduction in the value of its net deferred tax asset resulting in a charge of $\$ 8.4$ million to income tax expense. This was the result of the enactment of the Tax Act on December 22, 2017, which lowered the Company's federal tax rate from $34 \%$ to $21 \%$. During 2018 and 2017, the Company's earnings were positively impacted primarily by an increase in net interest income. This increase was primarily due to an increase in earning assets. During 2016, the U.S. economy experienced a low short-term rate environment. The lower short-term rates negatively impacted the net interest margin as the rate at which short-term deposits could be invested declined more than the rates offered on those deposits.

Earnings per share (EPS) for each class of stock and for each year ended December 31, is as follows:

|  | 2018 | 2017 | 2016 |
| :--- | ---: | ---: | ---: |
| Basic EPS - Class A common | $\$ 7.89$ | $\$ 4.86$ | $\$ 5.35$ |
| Basic EPS - Class B common | $\$ 3.95$ | $\$ 2.43$ | $\$ 2.68$ |
| Diluted EPS - Class A common | $\$ 6.50$ | $\$ 4.01$ | $\$ 4.41$ |
| Diluted EPS - Class B common | $\$ 3.95$ | $\$ 2.43$ | $\$ 2.68$ |

The trends in the net interest margin are illustrated in the graph below:

## Net Interest Margin



The net interest margin decreased during the second, third, and fourth quarters of 2016 primarily as a result of a decrease in rates on earning assets. The margin increased during 2017 primarily as a result of an increase in rates on earning assets. This increase was primarily the result of the yield on floating rate assets increasing as a result of recent increases in short term interest rates as well as an increase in prepayment penalties collected during the second quarter of 2017. Prepayment penalties collected amounted to $\$ 825,000$ and contributed approximately seven basis points to the net interest margin for the second quarter of 2017. During 2017, the Company did not see a corresponding increase in short term rates on interest bearing liabilities. The margin decreased for 2018 mainly as a result of a decrease in the corporate tax rate from $34 \%$ to $21 \%$. This decrease results in a lower tax equivalent yield on tax-exempt assets. During the fourth quarter of 2018, the Company increased its interest-bearing deposits. These deposits increased net interest income, but decreased the net interest margin. While management will continue its efforts to improve the net interest margin, there can be no assurance that certain factors beyond its control, such as the prepayment of loans and changes in market interest rates, will continue to positively impact the net interest margin.

Historical U.S. Treasury Yield Curve
$3.50 \%$
$3.00 \%$
$2.50 \%$

A yield curve typically plots the interest rates of U.S. Treasury Debt, which have different maturity dates but the same credit quality, at a specific point in time. The three main types of yield curve shapes are normal, inverted and flat. Over the past three years, the U.S. economy has experienced low short-term rates. During 2017 and 2018, short-term rates increased more than longer-term rates resulting in a flattening of the yield curve. This flattening of the yield curve became more pronounced during 2017 and 2018.

Total assets were $\$ 5,163,935,000$ at December 31, 2018, an increase of $7.9 \%$ from total assets of $\$ 4,785,572,000$ at December 31, 2017.

On December 31, 2018, stockholders' equity totaled \$300,439,000, compared with $\$ 260,297,000$ on December 31, 2017. Book value per share increased to $\$ 53.96$ at December 31, 2018, from \$46.75 on December 31, 2017.

During June 2016, the Company entered into a lease agreement to open a new branch located in Wellesley, Massachusetts. The Company closed its existing Wellesley branch and transferred the accounts to the new Wellesley branch which opened on December 19, 2016. On September 25, 2017 the Company purchased the new Wellesley location.

## CRITICAL ACCOUNTING POLICIES

Accounting policies involving significant judgments and assumptions by management, which have, or could have, a material impact on the carrying value of certain assets and impact income, are considered critical accounting policies.

The Company considers allowance for loan losses and income taxes to be its critical accounting policies.

Allowance for Loan Losses
Arriving at an appropriate level of allowance for loan losses necessarily involves a high degree of judgment. Management maintains an allowance for loan losses to absorb losses inherent in the loan portfolio. The allowance is based on assessments of the probable estimated losses inherent in the loan portfolio. Management's methodology for assessing the appropriateness of the allowance consists of several key elements, which include the specific allowances, if appropriate, for identified problem loans, formula allowance, and possibly an unallocated allowance. Arriving at an appropriate level of allowance for loan losses necessarily involves a high degree of judgment.

Specific allowances for loan losses entail the assignment of allowance amounts to individual loans on the basis of loan impairment. Under this method, loans are selected for evaluation based upon a change in internal risk rating, occurrence of delinquency, loan classification or nonaccrual status. The formula allowances are based on evaluations of homogenous loans to determine the allocation appropriate within each portfolio segment. Formula allowances are based on internal risk ratings or credit ratings from external sources. After considering the above components, an unallocated component may be generated to cover uncertainties that could affect management's estimate of probable losses. Further information regarding the Company's methodology for assessing the appropriateness of the allowance is contained within Note 1 of the "Notes to Consolidated Financial Statements".

During 2017 and 2018, the Company further enhanced its methodology to the allowance for loan losses by including additional metrics for qualitative factors on certain loan portfolios. Further enhancements and refinements include adding qualitative factors to certain loan portfolios to enhance granularity. The Company also updated and added data sources to measure present and forecasted economic conditions. Management believes that the allowance for loan losses is adequate. In addition, various regulatory agencies, as part of the examination process, periodically review the Company's allowance for loan losses. Such agencies may require the Company to recognize additions to the allowance based on their judgments about information available to them at the time of their examination.

## FINANCIAL CONDITION

Investment Securities
The Company's securities portfolio consists of securities available-for-sale ("AFS"), securities held-to-maturity ("HTM"), and equity securities.

Securities available-for-sale consist of certain U.S. Treasury, U.S. Government Sponsored Enterprises, SBA Backed Securities, and U.S. Government Sponsored Enterprise mortgage-backed securities; state, county and municipal securities; privately issued mortgage-backed securities; and other debt securities.

These securities are carried at fair value, and unrealized gains and losses, net of applicable income taxes, are recognized as a separate component of stockholders' equity. The fair value of securities available-for-sale at December 31, 2018 totaled $\$ 336,759,000$ and included gross unrealized gains of $\$ 635,000$ and gross unrealized losses of $\$ 627,000$. A year earlier, the fair value of securities available-for-sale was $\$ 395,830,000$ including gross unrealized gains of $\$ 673,000$ and gross unrealized losses of $\$ 790,000$. In 2018, the Company recognized gains of $\$ 302,000$ on the sale of available-for-sale securities. In 2017 and 2016, the Company recognized gains of $\$ 47,000$ and $\$ 52,000$, respectively.

Securities classified as held-to-maturity consist of U.S. Government Sponsored Enterprises, SBA Backed Securities, and U.S. Government Sponsored Enterprise mortgage-backed securities. Securities held-to-maturity as of December 31, 2018 are carried at their amortized cost of $\$ 2,046,647,000$. A year earlier, securities held-to-maturity totaled $\$ 1,701,233,000$. In 2018, 2017, and 2016, the company recognized gains of $\$ 0$ and $\$ 0$, and $\$ 12,000$ respectively, on the sale of held-to-maturity securities. The sales from securities held-to-maturity relate to certain mortgage-backed securities for which the Company had previously collected a substantial portion of its principal investment.

Equity securities are reported at fair value with unrealized gains and losses included in earnings. The fair value of equity securities at December 31, 2018 and December 31, 2017, amounted to \$1,596,000 and $\$ 1,663,000$, respectively.

The following table sets forth the fair value and percentage distribution of securities available-for-sale at the dates indicated.
Fair Value of Securities Available-for-Sale

| At December 31, | 2018 |  |  | 2017 |  |  | 2016 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Amount | Percent |  | mount | Percent |  | Amount | Percent |
| (dollars in thousands) |  |  |  |  |  |  |  |  |  |
| U.S. Treasury | \$ | 1,992 | 0.6 \% | \$ | 1,984 | 0.5 \% | \$ | 2,000 | 0.4 \% |
| U.S. Government Sponsored Enterprises |  | 3,915 | 1.2 \% |  | - | 0.0 \% |  | 24,952 | 5.0 \% |
| SBA Backed Securities |  | 70,194 | 20.9 \% |  | 80,950 | 20.5 \% |  | 57,767 | 11.6 \% |
| U.S. Government Agency and Sponsored Enterprises Mortgage-Backed Securities |  | 162,890 | 48.4 \% |  | 225,775 | 57.0 \% |  | 243,325 | 48.9 \% |
| Privately Issued Residential Mortgage-Backed Securities |  | 672 | 0.2 \% |  | 892 | 0.2 \% |  | 1,109 | 0.2 \% |
| Obligations Issued by States and Political Subdivisions |  | 93,503 | 27.7 \% |  | 82,600 | 20.9 \% |  | 164,876 | 33.2 \% |
| Other Debt Securities |  | 3,593 | 1.0 \% |  | 3,629 | 0.9 \% |  | 3,569 | 0.7 \% |
| Total | \$ | 336,759 | 100.0 \% | \$ | 395,830 | 100.0 \% | \$ | 497,598 | 100.0 \% |

The majority of the Company's securities AFS are classified as Level 2, as defined in Note 1 of the "Notes to Consolidated Financial Statements." The fair values of these securities are obtained from a pricing service, which provides the Company with a description of the inputs generally utilized for each type of security. These inputs include benchmark yields, reported trades, broker/dealer quotes, issuer spreads, two-sided markets, benchmark securities, bids, offers and reference data. Management's understanding of a pricing service's pricing methodologies includes obtaining an understanding of the valuation risks, assessing its qualification, verification of sources of information and processes used to develop prices and identifying, documenting, and testing controls. Management's validation of a vendor's pricing methodology includes establishing internal controls to determine that the pricing information received by a pricing service and used by management in the valuation process is relevant and reliable. Market indicators and industry and economic events are also monitored. The decline in fair value from amortized cost for individual available-forsale securities that are temporarily impaired is not attributable to changes in credit quality. Because the Company does not intend to sell any of its debt securities and it is not more likely than not that it will be required to sell the debt securities before the anticipated recovery of their remaining amortized cost, the Company does not consider these investments to be other-than-temporarily impaired at December 31, 2018.
The increase in SBA Backed Securities in 2017 was primarily the result of an increased investment return combined with a lower risk rating in these types of securities. The decrease in Obligations Issued by States and Political Subdivisions was primarily the result of increased competition in the bidding process for these types of securities.

Securities available-for-sale totaling $\$ 88,728,000$, or $1.7 \%$ of assets, are classified as Level 3 , as defined in Note 1 of the "Notes to Consolidated Financial Statements." These securities are generally municipal securities with no readily determinable fair value. The Company also utilizes internal pricing analysis on various municipal securities using market rates on comparable securities. The securities are carried at fair value with periodic review of underlying financial statements and credit ratings to assess the appropriateness of these valuations.

Debt securities of Government Sponsored Enterprises refer primarily to debt securities of Fannie Mae and Freddie Mac.
The following table sets forth the amortized cost and percentage distribution of securities held-to-maturity at the dates indicated.
Amortized Cost of Securities Held-to-Maturity
At December 31,
(dollars in thousands)
U.S. Treasury
U.S. Government Sponsored Enterprises
Amount

Century Bancorp, Inc. AR '18

The following two tables set forth contractual maturities of the Bank's securities portfolio at December 31, 2018. Actual maturities may differ from contractual maturities because borrowers may have the right to call or prepay obligations with or without call or prepayment penalties.

Fair Value of Securities Available-for-Sale
Amounts Maturing

|  | Within One Year | \% of <br> Total | Weighted <br> Average <br> Yield | One Year to Five Years | \% of <br> Total | Weighted <br> Average <br> Yield | Five Years <br> to Ten <br> Years | \% of <br> Total | Weighted <br> Average <br> Yield | Over <br> Ten <br> Years | \% of <br> Total | Weighted <br> Average <br> Yield | Total | \% of <br> Total | Weighted <br> Average <br> Yield |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (dollars in thousands) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| U.S. Treasury | \$ 1,992 | 0.6 \% | 1.28 \% \$ | \$ - | 0.0 \% | 0.00 \% | \$ | 0.0 \% | 0.00 \% | \$ | 0.0 \% | 0.00 \% \$ | 1,992 | 0.6 \% | 1.28 \% |
| U.S. Government Sponsored Enterprises | - | 0.0 \% | 0.00 \% | 3,915 | 1.2 \% | 2.27 \% | - | 0.0 \% | 0.00 \% | - | 0.0 \% | 0.00 \% | 3,915 | 1.2 \% | 2.27 \% |
| SBA Backed Securities | 132 | 0.1 \% | 2.12 \% | 42,310 | 12.6 \% | 2.73 \% | 13,574 | 4.0 \% | 2.92 \% | 14,178 | 4.2 \% | 2.89 \% | 70,194 | 20.9 \% | 2.80 \% |
| U.S. Government Agency <br> and Sponsored <br> Enterprise Mortgage- <br> Backed Securities | 1,227 | 0.4 \% | 2.81 \% | 35,648 | 10.6 \% | 2.97 \% | 121,507 | 36.0 \% | 2.99 \% | 4,508 | 1.4 \% | 3.13 \% | 162,890 | 48.4 \% | 2.98 \% |
| Privately Issued Residential Mortgage-Backed |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Securities | 672 | 0.2 \% | 2.30 \% | - | 0.0 \% | 0.00 \% | - | 0.0 \% | 0.00 \% | - | 0.0 \% | 0.00 \% | 672 | 0.2 \% | 2.30 \% |
| Obligations of States and Political Subdivisions | 88,095 | 26.1 \% | 2.62 \% | 483 | 0.1 \% | 3.75 \% | 150 | 0.1 \% | 4.04 \% | 4,775 | 1.4 \% | 3.68 \% | 93,503 | 27.7 \% | 2.68 \% |
| Other Debt Securities | 800 | 0.2 \% | 2.79 \% | 756 | 0.2 \% | 2.32 \% | 1,013 | 0.3 \% | 6.00 \% | 1,024 | 0.3 \% | 6.00 \% | 3,593 | 1.0 \% | 4.47 \% |
| Total | \$ 92,918 | 27.6 \% | 2.59 \% \$ | \$ 83,112 | 24.7 \% | 2.81 \% | \$136,244 | 40.4 \% | 3.00 \% | \$ 24,485 | 7.3 \% | 3.22 \% \$ | 336,759 | 100.0 \% | 2.86 \% |

Amortized Cost of Securities Held-to-Maturity
Amounts Maturing

|  | Within <br> One <br> Year | $\begin{aligned} & \% \text { of } \\ & \text { Total } \end{aligned}$ | Weighted <br> Average <br> Yield | One Year to Five Years | $\begin{aligned} & \text { \% of } \\ & \text { Total } \end{aligned}$ | Weighted <br> Average <br> Yield | Five Years to Ten Years | \% of <br> Total | Weighted <br> Average <br> Yield |  | Over Ten Years | $\%$ of <br> Total | Weighted <br> Average <br> Yield | Total | \% of <br> Total | Weighted <br> Average <br> Yield |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (dollars in thousands) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| U.S. Treasury | \$ 9,960 | 0.5 \% | 2.28 \% | \$ | 0.0 \% | 0.00 \% | \$ | 0.0 \% | 0.00 \% | \$ | - | 0.0 \% | 0.00 \% | \$ 9,960 | 0.5 \% | 2.28 \% |
| U.S. Government |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Sponsored Enterprises | 24,915 | 1.2 \% | 2.11 \% | 209,313 | 10.2 \% | 2.71 \% | - | 0.0 \% | 0.00 \% |  |  | 0.0 \% | 0.00 \% | 234,228 | 11.4 \% | 2.64 \% |
| SBA Backed Securities | - | 0.0 \% | 0.00 \% | 52,051 | 2.5 \% | 2.28 \% | - | 0.0 \% | 0.00 \% |  |  | 0.0 \% | 0.00 \% | 52,051 | 2.5 \% | 2.28 \% |
| U.S. Government Sponsored |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Enterprise Mortgage- |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Backed Securities | 6,279 | 0.3 \% | 2.21 \% | 1,229,590 | 60.1\% | 2.63 \% | 506,654 | 24.8 \% | 2.54 \% |  | 7,885 | 0.4 \% | 2.92 \% | 1,750,408 | 85.6 \% | 2.60 \% |
| Total | \$ 41,154 | 2.0 \% | 2.17 \% | \$ 1,490,954 | 72.8 \% | 2.63 \% | \$ 506,654 | 24.8 \% | 2.54 \% | \$ | 7,885 | 0.4 \% | 2.92 \% | \$2,046,647 | 100.0 \% | 2.60 \% |

At December 31, 2018 and 2017, the Bank had no investments in obligations of individual states, counties, municipalities or nongovernment corporate entities which exceeded $10 \%$ of stockholders' equity. In 2018, sales of securities totaling $\$ 27,517,000$ in gross proceeds resulted in a net realized gain of $\$ 302,000$. In 2017 , sales of securities totaling $\$ 18,180,000$ in gross proceeds resulted in a net realized gain of $\$ 47,000$. There were no sales of state, county or municipal securities during 2018 and 2017.

Management reviews the investment portfolio for other-than-temporary impairment of individual securities on a regular basis. The results of such analysis are dependent upon general market conditions and specific conditions related to the issuers of our securities.

Loans
The Company's lending activities are conducted principally in Massachusetts, New Hampshire, Rhode Island, Connecticut and New York. The Company grants singlefamily and multi-family residential loans, commercial and commercial real estate loans, municipal loans, and a variety of consumer loans. To a lesser extent, the Company grants loans for the construction of residential homes, multi-family properties, commercial real estate properties and land development. Most loans granted by the Company are secured by real estate collateral. The ability and willingness of commercial real estate, commercial, construction, residential and consumer loan borrowers to honor their repayment commitments are generally dependent on the health of the real estate market in the borrowers' geographic areas and of the general economy.

The following summary shows the composition of the loan portfolio at the dates indicated.

| December 31, | 2018 |  |  | 2017 |  |  | 2016 |  |  | 2015 |  |  | 2014 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Amount | Percent of Total |  | Amount | Percent of Total |  | Amount | Percent of Total |  | Amount | Percent of Total |  | Amount | Percent of Total |
| (dollars in thousands) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Construction and land development | \$ | 13,628 | 0.6 \% | \$ | 18,931 | 0.9 \% | \$ | 14,928 | 0.8 \% | \$ | 27,421 | 1.6 \% | \$ | 22,744 | 1.7 \% |
| Commercial and industrial |  | 761,625 | 33.3 \% |  | 763,807 | 35.1 \% |  | 612,503 | 31.8 \% |  | 452,235 | 26.1 \% |  | 149,732 | 11.2 \% |
| Municipal |  | 97,290 | 4.3 \% |  | 106,599 | 4.9 \% |  | 135,418 | 7.0 \% |  | 85,685 | 4.9 \% |  | 41,850 | 3.1 \% |
| Commercial real estate |  | 750,362 | 32.8 \% |  | 732,491 | 33.7 \% |  | 696,173 | 36.2 \% |  | 721,506 | 41.7 \% |  | 696,272 | 52.3 \% |
| Residential real estate |  | 348,250 | 15.2 \% |  | 287,731 | 13.2 \% |  | 241,357 | 12.5 \% |  | 255,346 | 14.7 \% |  | 257,305 | 19.3 \% |
| Consumer |  | 21,359 | 0.9 \% |  | 18,458 | 0.8 \% |  | 11,013 | 0.6 \% |  | 10,744 | 0.6 \% |  | 10,925 | 0.8 \% |
| Home equity |  | 292,340 | 12.9 \% |  | 247,345 | 11.4 \% |  | 211,857 | 11.0 \% |  | 178,020 | 10.3 \% |  | 151,275 | 11.4 \% |
| Overdrafts |  | 724 | 0.0 \% |  | 582 | 0.0 \% |  | 684 | 0.1 \% |  | 579 | 0.1 \% |  | 1,263 | 0.2 \% |
| Total |  | ,285,578 | 100.0 \% |  | 2,175,944 | 100.0 \% | \$ | 1,923,933 | 100.0 \% | \$ | 1,731,536 | 100.0 \% |  | 1,331,366 | 100.0 \% |

At December 31, 2018, 2017, 2016, 2015 and 2014, loans were carried net of (premiums) discounts of $\$(364,000), \$ 46,000, \$ 313,000, \$ 360,000$ and $\$ 407,000$, respectively. Net deferred loan fees of $\$ 496,000, \$ 588,000, \$ 641,000, \$ 988,000$ and $\$ 908,000$ were carried in 2018, 2017, 2016, 2015 and 2014, respectively.

The following table summarizes the remaining maturity distribution of certain components of the Company's loan portfolio on December 31, 2018. The table excludes loans secured by 1-4 family residential real estate, loans for household and family personal expenditures, and municipal loans. Maturities are presented as if scheduled principal amortization payments are due on the last contractual payment date.

|  | Remaining Maturities of Selected Loans at December 31, 2018 |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | One Year or Less | One to Five Years | Over Five Years | Total |
| (dollars in thousands) |  |  |  |  |
| Construction and land development | \$ | \$ | \$ 13,628 | \$ 13,628 |
| Commercial and industrial | 36,546 | 44,682 | 680,397 | 761,625 |
| Commercial real estate | 21,342 | 102,411 | 626,609 | 750,362 |
| Total | \$ 57,888 | \$ 147,093 | \$ 1,320,634 | \$ 1,525,615 |

The following table indicates the rate variability of the above loans due after one year.

| December 31, 2018 | One to Five Years | Over Five Years | Total |
| :---: | :---: | :---: | :---: |
| (dollars in thousands) |  |  |  |
| Predetermined interest rates | \$ 94,201 | \$ 334,753 | \$ 428,954 |
| Floating or adjustable interest rates | 52,892 | 985,881 | 1,038,773 |
| Total | \$ 147,093 | \$ 1,320,634 | \$ 1,467,727 |

The Company's commercial and industrial ("C\&l") loan customers include large healthcare and higher education institutions. During 2017, the Company increased its lending activities to these types of organizations. This increase may expose the Company to concentration risks inherent in financings based upon analysis of credit risk, the value of underlying collateral, and other more intangible factors, which are considered in originating commercial loans. The percentage of these types of organizations to total C\&l loans has decreased to $86 \%$ at December 31, 2018, compared to $87 \%$ at December 31, 2017.

C\&I loan customers also include various small and middle-market established businesses involved in manufacturing, distribution, retailing and services. Most clients are privately owned with markets that range from local to national in scope. Many of the loans to this segment are secured by liens on corporate assets and the personal guarantees of the principals. The regional economic strength or weakness impacts the relative risks in this loan category. There is little concentration in any one business sector, and loan risks are generally diversified among many borrowers.
Commercial real estate loans are extended to educational institutions, hospitals and other non-profit organizations. Loans are normally extended in amounts up to a maximum of $80 \%$ of appraised value and normally for terms between three and thirty years. Also included in commercial real estate loans are loans extended to finance various manufacturing, warehouse, light industrial, office, retail and residential properties in the Bank's market area, which generally includes Massachusetts, New Hampshire, and Rhode Island.

Amortization schedules are long term and thus a balloon payment is generally due at maturity. Under most circumstances, the Bank will offer to rewrite or otherwise extend the loan at prevailing interest rates. During recent years, the Bank has emphasized nonresidential-type owner-occupied properties. This complements our C\&I emphasis placed on the operating business entities and will continue. The regional economic environment affects the risk of both nonresidential and residential mortgages.

Municipal loans customers include loans to municipalities or related interests, primarily for infrastructure projects. The Company had increased its lending activities to municipalities through 2016. Municipal loans decreased during 2017 and 2018 as a result of loan payoffs.

Residential real estate (1-4 family) includes two categories of loans. Included in residential real estate are approximately $\$ 41,726,000$ of C\&I type loans secured by 1-4 family real estate. Primarily, these are small businesses with modest capital or shorter operating histories where the collateral mitigates some risk. This category of loans shares similar risk characteristics with the C\&l loans, notwithstanding the collateral position.

The other category of residential real estate loans is mostly 1-4 family residential properties located in the Bank's market area. General underwriting criteria are largely the same as those used by Fannie Mae. The Bank utilizes mortgage insurance to provide lower down payment products and has provided a "First Time Homebuyer" product to encourage new home ownership. Residential real estate loan volume has increased and remains a core consumer product. The economic environment impacts the risks associated with this category.
Home equity loans are extended as both first and second mortgages on owner-occupied residential properties in the Bank's market area. Loans are underwritten to a maximum loan to property value of $75 \%$.

Bank officers evaluate the feasibility of construction projects based on independent appraisals of the project, architects' or engineers' evaluations of the cost of construction and other relevant data. As of December 31, 2018, the Company was obligated to advance a total of $\$ 28,746,000$ to complete projects under construction.

The composition of nonperforming assets is as follows:


At December 31, 2018, 2017, 2016, 2015 and 2014 impaired loans had specific reserves of $\$ 145,000, \$ 164,000, \$ 173,000, \$ 250,000$ and $\$ 904,000$, respectively.
The Company was servicing mortgage loans sold to others without recourse of approximately $\$ 209,160,000, \$ 229,533,000, \$ 229,730,000, \$ 185,299,000$ and $\$ 143,696,000$ at December 31, 2018, 2017, 2016, 2015 and 2014, respectively. The Company had no loans held for sale at December 31, 2018, 2017, 2016, 2015 and 2014.

Servicing assets are recorded at fair value and recognized as separate assets when rights are acquired through sale of loans with servicing rights retained. Mortgage servicing assets ("MSA") are amortized into non-interest income in proportion to, and over the period of, the estimated net servicing income. Upon sale, the mortgage servicing asset is established, which represents the then-current estimated fair value based on market prices for comparable mortgage servicing contracts, when available, or alternatively, is based on a valuation model that calculates the present value of estimated future net servicing income. The valuation model incorporates assumptions that market participants would use in estimating future net servicing income, such as the cost to service, the discount rate, an inflation rate, ancillary income, prepayment speeds and default rates and losses. Servicing rights are assessed for impairment based on fair value at each reporting date. MSAs are reported in other assets in the consolidated balance sheets. MSAs totaled \$1,226,000 at December 31, 2018, \$1,525,000 at December 31, 2017, \$1,629,000 at December 31, 2016, \$1,305,000 at December 31, 2015 and $\$ 941,000$ at December 31, 2014.

Directors and officers of the Company and their associates are customers of, and have other transactions with, the Company in the normal course of business. All loans and commitments included in such transactions 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 normal risk of collection or present other unfavorable features.

Loans are placed on nonaccrual status when any payment of principal and/or interest is 90 days or more past due, unless the collateral is sufficient to cover both principal and interest and the loan is in the process of collection. The Company monitors closely the performance of its loan portfolio. In addition to internal loan review, the Company has contracted with an independent organization to review the Company's commercial and commercial real estate loan portfolios. This independent review was performed in each of the past five years. The status of delinquent loans, as well as situations identified as potential problems, is reviewed on a regular basis by senior management and monthly by the Board of Directors of the Bank.
Nonaccrual loans remained relatively stable from 2016 through 2018. Nonaccrual loans decreased during 2016, primarily as a result of a decrease in home equity and residential real estate nonperforming loans. Nonaccrual loans decreased during 2015 primarily due to the sale and partial charge-off of the property securing a large commercial real estate loan subsequent to foreclosure.

The Company continues to monitor closely $\$ 31,728,000$ and $\$ 37,184,000$ at December 31, 2018 and 2017, respectively, of loans for which management has concerns regarding the ability of the borrowers to perform. The majority of the loans are secured by real estate and are considered to have adequate collateral value to cover the loan balances at December 31, 2018, although such values may fluctuate with changes in the economy and the real estate market. The decrease is primarily attributable to two loan relationships secured by real estate.

## Allowance for Loan Losses

The Company maintains an allowance for loan losses in an amount determined by management on the basis of the character of the loans, loan performance, financial condition of borrowers, the value of collateral securing loans and other relevant factors. The following table summarizes the changes in the Company's allowance for loan losses for the years indicated.

Year Ended December 31, 201820172016

## (dollars in thousands)

Year-end loans outstanding
(net of unearned discount and deferred loan fees)
Average loans outstanding
(net of unearned discount and deferred loan fees)
Balance of allowance for
loan losses at the beginning of year
Loans charged-off:
Commercial and industrial
Construction
Commercial real estate
Residential real estate
Consumer
Total loans charged-off
Recovery of loans previously charged-off:
Commercial and industrial

| 2018 | 2017 |  | 2016 |  | 2015 |  | 2014 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| \$2,285,578 | \$ 2,175,944 |  | \$ 1,923,933 |  | \$ 1,731,536 |  | \$ 1,331,366 |  |
| \$ 2,222,946 | \$ 2,059,797 |  | \$ 1,838,136 |  | \$ 1,507,546 |  | \$ 1,307,888 |  |
| \$ 26,255 | \$ | 24,406 | \$ | 23,075 | \$ | 22,318 | \$ | 20,941 |
| 67 |  | 49 |  | - |  | - |  | 333 |
| - |  | - |  | - |  | 172 |  | 500 |
| - |  | - |  | - |  | 298 |  | - |
| 450 |  | - |  | 27 |  | - |  | 24 |
| 316 |  | 341 |  | 362 |  | 311 |  | 525 |
| 833 |  | 390 |  | 389 |  | 781 |  | 1,382 |
| 57 |  | 110 |  | 132 |  | 212 |  | 201 |
| 1,436 |  | - |  | - |  | 780 |  | - |
| 75 |  | 84 |  | 6 |  | 91 |  | 117 |
| 203 |  | 255 |  | 296 |  | 255 |  | 391 |
| 1,771 |  | 449 |  | 434 |  | 1,338 |  | 709 |
| (938) |  | (59) |  | (45) |  | (557) |  | 673 |
| 1,350 |  | 1,790 |  | 1,375 |  | 200 |  | 2,050 |
| - |  | - |  | (89) |  | - |  | - |
| \$ 28,543 | \$ | 26,255 | \$ | 24,406 | \$ | 23,075 | \$ | 22,318 |
| (0.04) \% |  | 0.00 \% |  | 0.00 \% |  | (0.04) \% |  | 0.05 \% |
| 1.25 \% |  | 1.21 \% |  | 1.27 \% |  | 1.33 \% |  | 1.68 \% |

Construction
Real estate
Consumer
Total recoveries of loans previously charged-off:
Net loan (recoveries) charge-offs
Provision charged to operating expense
Reclassification to other liabilities
Balance at end of year
Ratio of net (recoveries) charge-offs during the year to average loans outstanding

Ratio of allowance for loan losses to loans outstanding

The amount of the allowance for loan losses results from management's evaluation of the quality of the loan portfolio considering such factors as loan status, specific reserves on impaired loans, collateral values, financial condition of the borrower, the state of the economy and other relevant information. The level of the charge-offs depends on many factors, including the national and regional economy. Cyclical lagging factors may result in charge-offs being higher than historical levels. Chargeoffs declined in 2015 and 2016 as a result of the overall decrease in the level of nonaccrual loans. Charge-offs increased in 2018 primarily as a result of one residential real estate loan. The dollar amount of the allowance for loan losses increased primarily as a result of an increase in loan balances offset, somewhat, by lower historical loss factors.

During 2015, the Company enhanced its approach to the development of the historical loss factors and qualitative factors used on certain loan portfolios. The methodology enhancement was in response to the changes in the risk characteristics of the Company's new loan originations, as the Company has continued to increase its exposure to larger loan originations to large institutions with strong credit quality. The Company has limited internal loss history experience with these types of loans,

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and has determined a more appropriate representation of loss expectation is to utilize external historical loss factors based on public credit ratings, as there is a great deal of default and loss data available on these types of loans from the credit rating agencies. As of June 30, 2015, the Company incorporated this information into the development of the historical loss rates for these loan types. The combination of the enhancements made to the allowance methodology to address the changing risk profile of the Company's new loan originations and the increase in these loan types as a percentage of the overall portfolio, has resulted in a decrease in the ratio of allowance for loan losses to total loans for 2015. For 2016 and 2017, the change in the ratio of the allowance for loan losses to loans outstanding, was primarily due to changes in portfolio composition, lower historical loss rates, and qualitative factor adjustments. For 2018, the ratio increased, primarily as a result of changes in qualitative factors related to general economic factors pertaining to certain industries.

In addition, the Company monitors the outlook for the industries in which these institutions operate. Healthcare and higher education are the primary industries. The Company also monitors the volatility of the losses within the historical data.

By combining the credit rating, the industry outlook and the loss volatility, the Company arrives at the quantitative loss factor for each credit grade.
Credit ratings issued by national organizations were utilized as credit quality indicators as presented in the following table at December 31, 2018.

|  | Commercial and Industrial |  | Municipal |  | Commercial Real Estate |  | Total |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (in thousands) |  |  |  |  |  |  |  |  |
| Credit Rating: |  |  |  |  |  |  |  |  |
| Aaa-Aa3 | \$ | 491,247 | \$ | 54,105 | \$ | 42,790 | \$ | 588,142 |
| A1-A3 |  | 172,472 |  | 7,605 |  | 151,381 |  | 331,458 |
| Baa1-Baa3 |  | - |  | 26,970 |  | 118,197 |  | 145,167 |
| Ba2 |  | - |  | 6,810 |  | - |  | 6,810 |
| Total | \$ | 663,719 | \$ | 95,490 | \$ | 312,368 | \$ | 1,071,577 |

Credit ratings issued by national organizations were utilized as credit quality indicators as presented in the following table at December 31, 2017.

|  | Commercial <br> and Industrial | Municipal | Commercial <br> Real Estate | Total |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: | ---: | ---: |

The allowance for loan losses is an estimate of the amount needed for an adequate reserve to absorb losses in the existing loan portfolio. This amount is determined by an evaluation of the loan portfolio, including input from an independent organization engaged to review selected larger loans, a review of loan experience and current economic conditions. Although the allowance is allocated between categories, the entire allowance is available to absorb losses attributable to all loan categories. At December 31 of each year listed below, the allowance is comprised of the following:

|  | 2018 |  | 2017 |  | 2016 |  | 2015 |  | 2014 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Amount | Percent of Loans in Each Category to Total Loans | Amount | Percent of Loans in Each Category to Total Loans | Amount | Percent of Loans in Each Category to Total Loans | Amount | Percent of Loans in Each Category to Total Loans | Amount | Percent of Loans in Each Category to Total Loans |
| (dollars in thousands) |  |  |  |  |  |  |  |  |  |  |
| Construction and land development | \$ 1,092 | 0.6 \% | \$ 1,645 | 0.9 \% | \$ 1,012 | 0.8 \% | \$ 2,041 | 1.6 \% | \$ 1,592 | 1.7 \% |
| Commercial and industrial | 10,998 | 33.3 \% | 9,651 | 35.1 \% | 6,972 | 31.8 \% | 5,899 | 26.1 \% | 4,757 | 11.2 \% |
| Municipal | 1,838 | 4.3 \% | 1,720 | 4.9 \% | 1,612 | 7.1 \% | 994 | 4.9 \% | 1,488 | 3.1 \% |
| Commercial real estate | 10,663 | 32.8 \% | 9,728 | 33.7 \% | 11,135 | 36.2 \% | 10,589 | 41.7 \% | 11,199 | 52.3 \% |
| Residential real estate | 2,190 | 15.2 \% | 1,873 | 13.2 \% | 1,698 | 12.5 \% | 1,320 | 14.7 \% | 776 | 19.3 \% |
| Consumer and other | 365 | 0.9 \% | 373 | 0.8 \% | 582 | 0.6 \% | 644 | 0.7 \% | 810 | 1.0 \% |
| Home equity | 1,111 | 12.9 \% | 989 | 11.4 \% | 1,102 | 11.0 \% | 1,077 | 10.3 \% | 599 | 11.4 \% |
| Unallocated | 286 |  | 276 |  | 293 |  | 511 |  | 1,097 |  |
| Total | \$ 28,543 | 100.0 \% | \$ 26,255 | 100.0 \% | \$ 24,406 | 100.0 \% | \$ 23,075 | 100.0 \% | \$ 22,318 | 100.0 \% |

[^3]
## Deposits

The Company offers savings accounts, NOW accounts, demand deposits, time deposits and money market accounts. Additionally, the Company offers cash management accounts which provide either automatic transfer of funds above a specified level from the customer's checking account to a money market account or short-term borrowings. Also, an account reconciliation service is offered whereby the Company provides a report balancing the customer's checking account.

Interest rates on deposits are set twice per month by the Bank's rate-setting committee, based on factors including loan demand, maturities and a review of competing interest rates offered. Interest rate policies are reviewed periodically by the Executive Management Committee.

The following table sets forth the average balances of the Bank's deposits for the periods indicated.

|  | 2018 |  |  | 2017 |  |  | 2016 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Amount | Percent |  | Amount | Percent |  | Amount | Percent |
| (dollars in thousands) |  |  |  |  |  |  |  |  |  |
| Demand Deposits | \$ | 753,604 | 18.5 \% | \$ | 687,853 | 18.0 \% | \$ | 609,159 | 17.8 \% |
| Savings and Interest Checking |  | 1,514,259 | 37.1 \% |  | 1,457,872 | 38.2 \% |  | 1,322,714 | 38.6 \% |
| Money Market |  | 1,230,010 | 30.2 \% |  | 1,105,072 | 28.9 \% |  | 1,041,404 | 30.4 \% |
| Time Certificates of Deposit |  | 577,975 | 14.2 \% |  | 566,940 | 14.9 \% |  | 452,562 | 13.2 \% |
| Total | \$ | 4,075,848 | 100.0 \% | \$ | 3,817,737 | 100.0 \% | \$ | 3,425,839 | 100.0\% |

Time Deposits of $\$ 100,000$ or more as of December 31 , are as follows:

$$
2018
$$

2017

## (dollars in thousands)

Three months or less
Three months through six months
Six months through twelve months
Over twelve months
Total

| $\$ 141,500$ | $\$ 107,649$ |
| ---: | ---: |
| 110,189 | 137,260 |
| 100,446 | 123,468 |
| 107,182 | 135,426 |
| $\$ 459,317$ | $\$ 503,803$ |

## Borrowings

The Bank's borrowings consisted primarily of Federal Home Loan Bank of Boston ("FHLBB") borrowings collateralized by a blanket pledge agreement on the Bank's FHLBB stock, certain qualified investment securities, deposits at the FHLBB and residential mortgages held in the Bank's portfolios. The Bank's borrowings from the FHLBB totaled $\$ 202,378,000$, a decrease of $\$ 145,400,000$ from the prior year. The Bank's remaining term borrowing capacity at the FHLBB at December 31, 2018, was approximately $\$ 508,861,000$. In addition, the Bank has a $\$ 14,500,000$ line of credit with the FHLBB. See Note 12 , "Other Borrowed Funds and Subordinated Debentures," for a schedule, including related interest rates and other information.

## Subordinated Debentures

In December 2004, the Company consummated the sale of a Trust Preferred Securities offering, in which it issued $\$ 36,083,000$ of subordinated debt securities due 2034 to its newly formed unconsolidated subsidiary, Century Bancorp Capital Trust II.

Century Bancorp Capital Trust II then issued 35,000 shares of Cumulative Trust Preferred Securities with a liquidation value of $\$ 1,000$ per share. These securities paid dividends at an annualized rate of $6.65 \%$ for the first ten years and then converted to the three-month LIBOR rate plus $1.87 \%$ for the remaining 20 years. The coupon rate on these securities was $4.66 \%$ at December 31, 2018. The Company is using the proceeds primarily for general business purposes.

Securities Sold Under Agreements to Repurchase
The Bank's remaining borrowings consist primarily of securities sold under agreements to repurchase. Securities sold under agreements to repurchase totaled $\$ 154,240,000$, a decrease of $\$ 4,750,000$ from the prior year. See Note 11, "Securities Sold Under Agreements to Repurchase," for a schedule, including related interest rates and other information.

## RESULTS OF OPERATIONS

Net Interest Income
The Company's operating results depend primarily on net interest income and fees received for providing services. Net interest income on a fully taxable equivalent basis increased $1.8 \%$ in 2018 to $\$ 101,430,000$, compared with $\$ 99,595,000$ in 2017. The increase in net interest income for 2018 was mainly due to a $5.1 \%$ increase in the average balances of earning assets, combined with a similar increase in deposits. The increase in net interest income for 2017 was mainly due to an $8.1 \%$ increase in the average balances of earning assets, combined with a similar increase in deposits. The level of interest rates, the ability of the Company's earning assets and liabilities to adjust to changes in interest rates and the mix of the Company's earning assets and liabilities affect net interest income. The net interest margin on a fully taxable equivalent basis decreased to $2.18 \%$ in 2018 and increased to $2.25 \%$ in 2017 from $2.12 \%$ in 2016 . The decrease in the net interest margin for 2018 was primarily the result of a decrease in the federal corporate tax rate from $34 \%$ to $21 \%$ as well as lower prepayment penalties collected during 2018 . The decrease in the tax rate results in a lower tax equivalent yield on tax-exempt assets. The increase in the net interest margin for 2017 was primarily attributable to an increase in rates on earning assets and prepayment penalties collected. The Company collected approximately $\$ 39,000, \$ 907,000$ and $\$ 416,000$, respectively, of prepayment penalties, which are included in interest income on loans, for 2018, 2017 and 2016, respectively.

Additional information about the net interest margin is contained in the "Overview" section of this report. Also, there can be no assurance that certain factors beyond its control, such as the prepayment of loans and changes in market interest rates, will continue to positively impact the net interest margin. Management believes that the current yield curve environment will continue to present challenges as deposit and borrowing costs may have the potential to increase at a faster rate than corresponding asset categories.

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The following table sets forth the distribution of the Company's average assets, liabilities and stockholders' equity, and average rates earned or paid on a fully taxable equivalent basis for each of the years indicated.

| Year Ended December 31, | 2018 |  |  |  |  | 2017 |  |  |  |  | 2016 |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Average Balance |  | Interest <br> Income/ <br> Expense ${ }^{(1)}$ |  | Rate <br> Earned/ Paid ${ }^{(1)}$ | Average <br> Balance |  | Interest <br> Income/ <br> Expense ${ }^{(2)}$ |  |  | Average Balance |  | Interest <br> Income/ <br> Expense ${ }^{(2)}$ |  | Rate <br> Earned/ Paid ${ }^{(2)}$ |
| (dollars in thousands) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| ASSETS |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Interest-earning assets: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Loans ${ }^{(3)}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Taxable | \$ | 1,102,390 | \$ | 46,615 | 4.23 \% | \$ | 978,593 | \$ | 39,103 | 4.00 \% | \$ | 866,180 | \$ | 34,324 | 3.96 \% |
| Tax-exempt |  | 1,120,556 |  | 40,439 | 3.61 \% |  | 1,081,204 |  | 40,420 | 3.74 \% |  | 971,956 |  | 35,943 | 3.70 \% |
| Securities available-for-sale: ${ }^{(4)}$ |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Taxable |  | 310,071 |  | 7,864 | 2.54 \% |  | 354,918 |  | 5,859 | 1.65 \% |  | 349,023 |  | 3,969 | 1.14 \% |
| Tax-exempt |  | 90,027 |  | 1,938 | 2.15 \% |  | 106,717 |  | 1,588 | 1.49 \% |  | 149,631 |  | 1,465 | 0.98 \% |
| Securities held-to-maturity: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Taxable |  | 1,854,328 |  | 45,556 | 2.46 \% |  | 1,725,280 |  | 38,348 | 2.22 \% |  | 1,533,032 |  | 32,679 | 2.13 \% |
| Interest-bearing deposits in other banks |  | 183,903 |  | 3,498 | 1.90 \% |  | 189,193 |  | 2,097 | 1.11 \% |  | 235,339 |  | 1,236 | 0.53 \% |
| Total interest-earning assets |  | 4,661,275 |  | 145,910 | 3.13 \% |  | 4,435,905 |  | 127,415 | 2.87 \% |  | 4,105,161 |  | 109,616 | 2.67 \% |
| Noninterest-earning assets |  | 229,244 |  |  |  |  | 221,628 |  |  |  |  | 210,203 |  |  |  |
| Allowance for loan losses |  | $(27,531)$ |  |  |  |  | $(25,329)$ |  |  |  |  | $(23,872)$ |  |  |  |
| Total assets |  | 4,862,988 |  |  |  | \$ | 4,632,204 |  |  |  |  | 4,291,492 |  |  |  |

LIABILITIES AND
STOCKHOLDERS' EQUITY

| Interest-bearing deposits: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| NOW accounts | \$ | 926,143 | \$ | 6,579 | 0.71 \% | \$ | 949,924 | \$ | 3,669 | 0.39 \% | \$ | 904,892 | \$ | 2,311 | 0.26 \% |
| Savings accounts |  | 588,116 |  | 5,178 | 0.88 \% |  | 507,948 |  | 2,627 | 0.52 \% |  | 417,822 |  | 1,709 | 0.41 \% |
| Money market accounts |  | 1,230,010 |  | 13,922 | 1.13 \% |  | 1,105,071 |  | 5,626 | 0.51 \% |  | 1,041,404 |  | 3,542 | 0.34 \% |
| Time deposits |  | 577,975 |  | 10,208 | 1.77 \% |  | 566,941 |  | 7,919 | 1.40 \% |  | 452,562 |  | 5,706 | 1.26 \% |
| Total interest-bearing deposits |  | 3,322,244 |  | 35,887 | 1.08 \% |  | 3,129,884 |  | 19,841 | 0.63 \% |  | 2,816,680 |  | 13,268 | 0.47 \% |
| Securities sold under agreements to repurchase |  | 147,944 |  | 976 | 0.66 \% |  | 189,684 |  | 496 | 0.26 \% |  | 222,956 |  | 472 | 0.21 \% |
| Other borrowed funds and subordinated debentures |  | 291,674 |  | 7,617 | 2.61 \% |  | 309,102 |  | 7,483 | 2.42 \% |  | 357,974 |  | 8,877 | 2.48 \% |
| Total interest-bearing liabilities |  | 3,761,862 |  | 44,480 | 1.18 \% |  | 3,628,670 |  | 27,820 | 0.77 \% |  | 3,397,610 |  | 22,617 | 0.67 \% |
| Noninterest-bearing liabilities |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Demand deposits |  | 753,604 |  |  |  |  | 687,853 |  |  |  |  | 609,159 |  |  |  |
| Other liabilities |  | 70,020 |  |  |  |  | 60,925 |  |  |  |  | 57,602 |  |  |  |
| Total liabilities |  | 4,585,486 |  |  |  |  | 4,377,448 |  |  |  |  | 4,064,371 |  |  |  |
| Stockholders' equity |  | 277,502 |  |  |  |  | 254,756 |  |  |  |  | 227,121 |  |  |  |
| Total liabilities and stockholders' equity |  | 4,862,988 |  |  |  | \$ | 4,632,204 |  |  |  | \$ | 4,291,492 |  |  |  |

Net interest income on a fully taxable equivalent basis

Less taxable equivalent adjustment
Net interest income
Net interest spread
Net interest margin

| $\$ 101,430$ |  | $\$ 99,595$ |  | $\$ 86,999$ |  |
| ---: | ---: | ---: | ---: | ---: | ---: |
|  | $(8,854)$ |  | $(13,979)$ |  | $(12,917)$ |
| $\$$ | 92,576 |  | $\$ 85,616$ |  | \$4,082 |
|  | $1.95 \%$ |  | $2.11 \%$ | $2.00 \%$ |  |
|  | $2.18 \%$ | $2.25 \%$ | $2.12 \%$ |  |  |

[^4]The following table summarizes the year-to-year changes in the Company's net interest income resulting from fluctuations in interest rates and volume changes in earning assets and interest-bearing liabilities. Changes due to rate are computed by multiplying the change in rate by the prior year's volume. Changes due to volume are computed by multiplying the change in volume by the prior year's rate. Changes in volume and rate that cannot be separately identified have been allocated in proportion to the relationship of the absolute dollar amounts of each change.

| Year Ended December 31, | 2018 Compared with 2017 Increase/(Decrease) Due to Change in |  |  |  |  |  | 2017 Compared with 2016 Increase/(Decrease) Due to Change in |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Volume |  | Rate |  | Total |  | Volume |  | Rate |  | Total |  |
| (dollars in thousands) |  |  |  |  |  |  |  |  |  |  |  |  |
| Interest income: |  |  |  |  |  |  |  |  |  |  |  |  |
| Loans |  |  |  |  |  |  |  |  |  |  |  |  |
| Taxable | \$ | 5,144 | \$ | 2,368 | \$ | 7,512 |  | 4,490 | \$ | 289 |  | \$ 4,779 |
| Tax-exempt |  | 1,445 |  | $(1,426)$ |  | 19 |  | 4,080 |  | 397 |  | 4,477 |
| Securities available-for-sale: |  |  |  |  |  |  |  |  |  |  |  |  |
| Taxable |  | (816) |  | 2,821 |  | 2,005 |  | 68 |  | 1,822 |  | 1,890 |
| Tax-exempt |  | (277) |  | 627 |  | 350 |  | (498) |  | 621 |  | 123 |
| Securities held-to-maturity: |  |  |  |  |  |  |  |  |  |  |  |  |
| Taxable |  | 2,994 |  | 4,214 |  | 7,208 |  | 4,229 |  | 1,440 |  | 5,669 |
| Interest-bearing deposits in other banks |  | (61) |  | 1,462 |  | 1,401 |  | (283) |  | 1,144 |  | 861 |
| Total interest income |  | 8,429 |  | 10,066 |  | 18,495 |  | 12,086 |  | 5,713 |  | 17,799 |
| Interest expense: |  |  |  |  |  |  |  |  |  |  |  |  |
| Deposits: |  |  |  |  |  |  |  |  |  |  |  |  |
| NOW accounts |  | (94) |  | 3,004 |  | 2,910 |  | 120 |  | 1,238 |  | 1,358 |
| Savings accounts |  | 468 |  | 2,083 |  | 2,551 |  | 412 |  | 506 |  | 918 |
| Money market accounts |  | 702 |  | 7,594 |  | 8,296 |  | 228 |  | 1,856 |  | 2,084 |
| Time deposits |  | 157 |  | 2,132 |  | 2,289 |  | 1,551 |  | 662 |  | 2,213 |
| Total interest-bearing deposits |  | 1,233 |  | 14,813 |  | 16,046 |  | 2,311 |  | 4,262 |  | 6,573 |
| Securities sold under agreements to repurchase |  | (130) |  | 610 |  | 480 |  | (77) |  | 101 |  | 24 |
| Other borrowed funds and subordinated debentures |  | (437) |  | 571 |  | 134 |  | $(1,187)$ |  | (207) |  | $(1,394)$ |
| Total interest expense |  | 666 |  | 15,994 |  | 16,660 |  | 1,047 |  | 4,156 |  | 5,203 |
| Change in net interest income | \$ | 7,763 |  | $(5,928)$ | \$ | 1,835 |  | 11,039 | \$ | 1,557 |  | \$ 12,596 |

Average earning assets were $\$ 4,661,275,000$ in 2018 , an increase of $\$ 225,370,000$ or $5.1 \%$ from the average in 2017 , which was $8.1 \%$ higher than the average in 2016. Total average securities, including securities available-for-sale and securities held-to-maturity, were $\$ 2,254,426,000$, an increase of $3.1 \%$ from the average in 2017. The increase in securities volume was mainly attributable to an increase in taxable securities held-to-maturity. An increase in securities volume and short term rates resulted in higher securities income, which increased $20.9 \%$ to $\$ 55,358,000$ on a fully tax equivalent basis. Total average loans increased $7.9 \%$ to $\$ 2,222,946,000$ after increasing $\$ 221,661,000$ in 2017. The primary reason for the increase in loans was due in large part to an increase in taxable residential mortgage and commercial lending and tax-exempt lending. The increase in loan volume resulted in higher loan income. Loan income increased by $9.5 \%$ or $\$ 7,531,000$ to $\$ 87,054,000$ in 2018 compared to 2017. This was mainly the result of an increase in average balances. Loan income also benefited from an increase in rates. Also, there was a decrease in rates earned on tax exempt lending. This was primarily attributable to the decrease in the federal tax rate which lowers the tax equivalent yield. Total loan income was $\$ 70,267,000$ in 2016.

The Company's sources of funds include deposits and borrowed funds. On average, deposits increased $6.8 \%$, or $\$ 258,111,000$, in 2018 after increasing by $11.4 \%$, or $\$ 391,898,000$, in 2017. Deposits increased in 2018, primarily as a result of increases in time deposits, savings, demand deposits, and money market accounts. Deposits increased in 2017, primarily as a result of increases in time deposits, savings, demand deposits, money market, and NOW accounts. Borrowed funds and subordinated debentures decreased by $11.9 \%$ in 2018 , following a decrease of $14.1 \%$ in 2017. The majority of the Company's borrowed funds are borrowings from the FHLBB and retail repurchase agreements. Average borrowings from the FHLBB decreased by approximately $\$ 17,428,000$, and average retail repurchase agreements decreased by $\$ 41,740,000$ in 2018. Interest expense totaled $\$ 44,480,000$ in 2018 , an increase of $\$ 16,660,000$, or $59.9 \%$, from 2017 when interest expense increased $23.0 \%$ from 2016. The increase in interest expense, for 2018, is primarily due to increases in the rates on deposits as well as an increase in average balances of deposits. The increase in interest expense, for 2017, is primarily due to increases in the rates on deposits as well as an increase in average balances of deposits offset, somewhat, by a decrease in borrowed funds.

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Provision for Loan Losses
The provision for loan losses was $\$ 1,350,000$ in 2018, compared with $\$ 1,790,000$ in 2017 and $\$ 1,375,000$ in 2016. These provisions are the result of management's evaluation of the amounts and credit quality of the loan portfolio considering such factors as loan status, collateral values, financial condition of the borrower, the state of the economy and other relevant information. The provision for loan losses decreased during 2018, primarily as a result of net recoveries of $\$ 938,000$ offset by changes in qualitative factors. The provision for loan losses increased during 2017, primarily as a result of an increase in loan balances offset, somewhat, by changes in historical loss factors.

## Other Operating Income

During 2018, the Company continued to experience strong results in its feebased services, including fees derived from traditional banking activities such as deposit-related services, its automated lockbox collection system and fullservice securities brokerage supported by LPL Financial, a full-service securities brokerage business.
Under the lockbox program, which is not tied to extensions of credit by the Company, the Company's customers arrange for payments of their accounts receivable to be made directly to the Company. The Company records the amounts paid to its customers, deposits the funds to the customer's account and provides automated records of the transactions to customers. Typical customers for the lockbox service are municipalities that use it to automate tax collections, cable TV companies, utilities, and other commercial enterprises.

Through a program called Investment Services at Century Bank, the Bank provides full-service securities brokerage services supported by LPL Financial, a full-service securities brokerage business. Registered representatives employed by Century Bank offer limited investment advice, execute transactions and assist customers in financial and retirement planning. LPL Financial provides research to the Bank's representatives. The Bank receives a share in the commission revenues.

Total other operating income in 2018 was $\$ 16,248,000$, a decrease of $\$ 304,000$, or $1.9 \%$, compared to 2017. This decrease followed an increase of $\$ 330,000$, or $2.0 \%$, in 2017 , compared to 2016. Included in other operating income are net gains on sales of securities of \$302,000, \$47,000 and \$64,000 in 2018, 2017 and 2016, respectively. Also included in other operating income are net gains on sales of mortgage loans of \$0, \$370,000 and \$1,331,000 in 2018, 2017 and 2016, respectively. Service charge income, which continues to be a major source of other operating income, totaling \$8,560,000 in 2018, decreased $\$ 26,000$ compared to 2017. This followed an increase of $\$ 679,000$ in 2017 compared to 2016. The decrease in fees, in 2018, was mainly attributable to an increase earnings credit rates that are used to offset fees collected from processing activities, this was offset somewhat by an increase in debit card fees. The increase in fees, in 2017, was mainly attributable to an increase in fees collected from processing activities and debit card fees. Lockbox revenues totaled $\$ 3,274,000$, down $\$ 16,000$ in 2018 following an increase of $\$ 126,000$ in 2017. Other income totaled $\$ 3,764,000$, down $\$ 142,000$ in 2018 following an increase of $\$ 465,000$ in 2017. The decrease in 2018 was primarily the result of decreases in the returns on life insurance policies offset, somewhat by increase in wealth management fees, and merchant card sales royalties. The increase in 2017 was primarily the result of increases in wealth management fees and merchant card sales royalties.

Operating Expenses
Total operating expenses were $\$ 69,693,000$ in 2018, compared to $\$ 67,119,000$ in 2017 and $\$ 64,757,000$ in 2016.

Salaries and employee benefits expenses increased by $\$ 2,193,000$ or $5.4 \%$ in 2018, after increasing by $5.2 \%$ in 2017 . The increase in 2018 was mainly attributable to merit increases in salaries. The increase in 2017 was mainly attributable to merit increases in salaries and bonus, and health insurance costs.

Occupancy expense decreased by $\$ 48,000$, or $0.8 \%$, in 2018 , following a decrease of $\$ 7,000$, or $0.1 \%$, in 2017. The decrease in 2018 was primarily attributable to a decrease in depreciation expense. The decrease in 2017 was primarily attributable to a decrease in rent expense.

Equipment expense increased by $\$ 240,000$, or $8.3 \%$, in 2018 , following an increase of $\$ 47,000$, or $1.7 \%$, in 2017 . The increase in 2018 was primarily attributable to an increase in depreciation expense. The increase in 2017 was primarily attributable to an increase in service contracts.

FDIC assessments decreased by $\$ 110,000$, or $7.0 \%$, in 2018 , following a decrease of $\$ 321,000$, or $16.9 \%$, in 2017. FDIC assessments decreased in 2018 and 2017 mainly as a result of a decrease in the assessment rate.

Other operating expenses increased by $\$ 299,000$ in 2018, which followed a $\$ 642,000$ increase in 2017. The increase in 2018 was primarily attributable to an increase in consultants' expense and software maintenance expense. The increase in 2017 was primarily attributable to an increase in contributions, legal expenses, and marketing expenses.

Provision for Income Taxes
Income tax expense was $\$ 1,568,000$ in 2018, \$10,958,000 in 2017, and $\$(362,000)$ in 2016 . The effective tax rate was $4.2 \%$ in $2018,32.9 \%$ in 2017, and ( $1.5 \%$ ) in 2016. The decrease for 2018 was primarily as a result of a reduction in the value of its net deferred tax asset resulting in a charge of $\$ 8,448,000$ to 2017 income tax expense as a result of the Tax Act as previously discussed. The increase in the effective tax rate for 2017 was primarily the result of a reduction in the value of the deferred tax asset resulting in a charge of $\$ 8,448,000$ to income tax expense. On December 22, 2017, the Tax Act was enacted, which lowered the Company's federal tax rate from $34 \%$ to $21 \%$. As a result of the rate reduction, the Company recorded a reduction in the value of its net deferred tax asset. The federal tax rate was $21 \%$ in 2018, and $34 \%$ in 2017 and 2016.

Market Risk and Asset Liability Management
Market risk is the risk of loss from adverse changes in market prices and rates. The Company's market risk arises primarily from interest rate risk inherent in its lending and deposit-taking activities. To that end, management actively monitors and manages its interest rate risk exposure.
The Company's profitability is affected by fluctuations in interest rates. A sudden and substantial change in interest rates may adversely impact the Company's earnings to the extent that the interest rates borne by assets and liabilities do not change at the same speed, to the same extent or on the same basis. The Company monitors the impact of changes in interest rates on its net interest income using several tools. One measure of the Company's exposure to differential changes in interest rates between assets and liabilities is an interest rate risk management test.

This test measures the impact on net interest income of an immediate change in interest rates in 100-basis point increments as set forth in the following table:

| Change in Interest Rates <br> (in Basis Points) | Percentage Ch <br> Net Interest In |
| :---: | :---: |
| +400 | $(8.4)$ |
| +300 | $(6.5)$ |
| +200 | $(5.0)$ |
| +100 | $(2.4)$ |
| -100 | 2.1 |
| -200 | 2.0 |

(1) The percentage change in this column represents net interest income for 12 months in various rate scenarios versus the net interest income in a stable interest rate environment.

The changes in the table above are within the Company's policy parameters.
The Company's primary objective in managing interest rate risk is to minimize the adverse impact of changes in interest rates on the Company's net interest income and capital, while structuring the Company's asset-liability structure to obtain the maximum yield-cost spread on that structure. The Company relies primarily on its asset-liability structure to control interest rate risk.

Liquidity and Capital Resources
Liquidity is provided by maintaining an adequate level of liquid assets that includes cash and due from banks, federal funds sold and other temporary investments. Liquid assets totaled \$342,503,000 on December 31, 2018, compared with $\$ 356,430,000$ on December 31, 2017. In each of these two years, deposit and borrowing activity has generally been adequate to support asset activity.

The sources of funds for dividends paid by the Company are dividends received from the Bank and liquid funds held by the Company. The Company and the Bank are regulated enterprises and their abilities to pay dividends are subject to regulatory review and restriction. Certain regulatory and statutory restrictions exist regarding dividends, loans and advances from the Bank to the Company. Generally, the Bank has the ability to pay dividends to the Company subject to minimum regulatory capital requirements.

## Capital Adequacy

Total stockholders' equity was $\$ 300,439,000$ at December 31, 2018, compared with $\$ 260,297,000$ at December 31, 2017. The Company's equity increased primarily as a result of earnings and a decrease in other comprehensive loss, net of taxes, offset somewhat by dividends paid. Other comprehensive loss, net of taxes, decreased primarily as a result of a decrease in unrealized losses on securities transferred from available-for-sale to held-to-maturity, a decrease in unrealized losses on securities available-for-sale, and a decrease in the pension liability, net of taxes.

Federal banking regulators have issued risk-based capital guidelines, which assign risk factors to asset categories and off-balance-sheet items. The following table reflects capital ratios computed utilizing the recently implemented Basel III regulatory capital framework:

|  | Minimum <br> Capital Ratios | Bank | Company |
| :--- | :---: | :---: | :---: |
| Leverage ratios | $4.00 \%$ | $6.68 \%$ | $6.91 \%$ |
| $\quad$ rommon equity tier 1 |  |  |  |
| $\quad$ risk weighted capital ratios | $4.50 \%$ | $12.21 \%$ | $11.32 \%$ |
| Tier 1 risk weighted capital ratios | $6.00 \%$ | $12.21 \%$ | $12.59 \%$ |
| Total risk weighted capital ratios | $8.00 \%$ | $13.24 \%$ | $13.62 \%$ |

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Contractual Obligations, Commitments, and Contingencies
The Company has entered into contractual obligations and commitments. The following tables summarize the Company's contractual cash obligations and other commitments at December 31, 2018.

Contractual Obligations and Commitments by Maturity
(dollars in thousands)

|  | Payments Due - By Period |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| CONTRACTUAL OBLIGATIONS |  | Total |  | ess Than ne Year |  | One to Years |  | ree to e Years |  | fter Five Years |
| FHLBB advances | \$ | 202,378 | \$ | 63,000 | \$ | 53,000 | \$ | 33,500 | \$ | 52,878 |
| Subordinated debentures |  | 36,083 |  | - |  | - |  | - |  | 36,083 |
| Retirement benefit obligations |  | 50,610 |  | 3,971 |  | 8,430 |  | 9,152 |  | 29,057 |
| Lease obligations |  | 9,863 |  | 2,490 |  | 3,864 |  | 2,435 |  | 1,074 |
| Customer repurchase agreements |  | 154,240 |  | 154,240 |  | - |  | - |  | - |
| Total contractual cash obligations | \$ | 453,174 | \$ | 223,701 | \$ | 65,294 | \$ | 45,087 | \$ | 119,092 |


|  | Amount of Commitment Expiring - By Period |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| OTHER COMMITMENTS | Total |  | Less Than One Year |  | One to Three Years |  | Three to Five Years |  | After Five Years |  |
| Lines of credit | \$ | 553,045 | \$ | 84,608 | \$ | 59,064 | \$ | 91,426 | \$ | 317,947 |
| Standby and commercial letters of credit |  | 4,258 |  | 3,459 |  | 512 |  | 236 |  | 51 |
| Other commitments |  | 54,126 |  | 10,626 |  | 6,217 |  | 2,327 |  | 34,956 |
| Total commitments | \$ | 611,429 | \$ | 98,693 | \$ | 65,793 | \$ | 93,989 | \$ | 352,954 |

Financial Instruments with Off-Balance-Sheet Risk
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 primarily include commitments to originate and sell loans, standby letters of credit, unused lines 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 amount recognized in the consolidated balance sheet. The contract or notional amounts of those instruments reflect the extent of involvement the Company has in these particular classes of financial instruments.

The Company's exposure to credit loss in the event of nonperformance by the other party to the financial instrument for loan commitments, standby letters of credit and unadvanced portions of construction loans is represented by the contractual amount of those instruments. The Company uses the same credit policies in making commitments and conditional obligations as it does for on-balance-sheet instruments. Financial instruments with off-balance-sheet risk at December 31 are as follows:

| Contract or Notional Amount | 2018 | 2017 |  |
| :--- | ---: | ---: | ---: |
| (dollars in thousands) |  |  |  |
| Financial instruments whose contract amount |  |  |  |
| represents credit risk: |  |  |  |
| Commitments to originate 1-4 family mortgages | $\$ 5,075$ | $\$$ | 5,748 |
| Standby and commercial letters of credit | 4,258 | 5,520 |  |
| Unused lines of credit | 553,045 | 434,618 |  |
| Unadvanced portions of construction loans | 28,746 | 15,152 |  |
| Unadvanced portions of other loans | $\mathbf{2 0 , 3 0 5}$ | 35,602 |  |

Commitments to originate loans, unadvanced portions of construction loans and unused letters of credit are generally 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 many of the commitments are expected to expire without being drawn upon, the total commitment amounts do not necessarily represent future cash requirements. The Company evaluates each customer's creditworthiness on a case-by-case basis. The amount of collateral obtained, if deemed necessary by the Company upon extension of credit, is based on management's credit evaluation of the borrower.

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 fair value of standby letters of credit was $\$ 51,000$ and $\$ 66,000$ for 2018 and 2017, respectively.

Recent Accounting Developments
See Note 1 to the Notes to Consolidated Financial Statements for details of recent accounting developments and their expected impact on the Company's financial statements.

| December 31, | 2018 |  | 2017 |  |
| :---: | :---: | :---: | :---: | :---: |
| (dollars in thousands except share data) |  |  |  |  |
| ASSETS |  |  |  |  |
| Cash and due from banks (Note 2) | \$ | 89,540 | \$ | 77,199 |
| Federal funds sold and interest-bearing deposits in other banks |  | 252,963 |  | 279,231 |
| Total cash and cash equivalents |  | 342,503 |  | 356,430 |
| Securities available-for-sale, amortized cost \$336,751 in 2018 and \$395,947 in 2017 (Notes 3, 9 and 11) |  | 336,759 |  | 395,830 |
| Securities held-to-maturity, fair value \$1,991,421 in 2018 and \$1,668,827 in 2017 |  |  |  |  |
| Federal Home Loan Bank of Boston, stock at cost |  | 17,974 |  | 21,779 |
| Equity securities, amortized cost \$1,635 in 2018 and \$1,616 in 2017, respectively |  | 1,596 |  | 1,663 |
| Loans, net (Note 5) |  | 2,285,578 |  | 2,175,944 |
| Less: allowance for loan losses (Note 6) |  | 28,543 |  | 26,255 |
| Net loans |  | 2,257,035 |  | 2,149,689 |
| Bank premises and equipment (Note 7) |  | 23,921 |  | 23,527 |
| Accrued interest receivable |  | 14,406 |  | 11,179 |
| Other assets (Notes 5, 6, 8 and 16) |  | 123,094 |  | 124,242 |
| Total assets | \$ | 5,163,935 | \$ | 4,785,572 |
| LIABILITIES AND STOCKHOLDERS' EQUITY |  |  |  |  |
| Demand deposits | \$ | 813,478 | \$ | 736,020 |
| Savings and NOW deposits |  | 1,707,019 |  | 1,367,358 |
| Money market accounts |  | 1,325,888 |  | 1,188,228 |
| Time deposits (Note 10) |  | 560,579 |  | 625,361 |
| Total deposits |  | 4,406,964 |  | 3,916,967 |
| Securities sold under agreements to repurchase (Note 11) |  | 154,240 |  | 158,990 |
| Other borrowed funds (Note 12) |  | 202,378 |  | 347,778 |
| Subordinated debentures (Note 12) |  | 36,083 |  | 36,083 |
| Other liabilities |  | 63,831 |  | 65,457 |
| Total liabilities |  | 4,863,496 |  | 4,525,275 |
| Commitments and contingencies (Notes 7, 18 and 19) |  |  |  |  |
| Stockholders' equity (Note 15): |  |  |  |  |
| Preferred Stock - \$1.00 par value; 100,000 shares authorized; no shares issued and outstanding |  |  |  |  |
| Common stock, Class A, $\$ 1.00$ par value per share; authorized 10,000,000 shares; issued 3,608,329 shares in 2018 and 3,605,829 shares in 2017 |  | 3,608 |  | 3,606 |
| Common stock, Class B, <br> $\$ 1.00$ par value per share; authorized $5,000,000$ shares; issued 1,959,580 in 2018 and 1,962,080 shares in 2017 |  | 1,960 |  | 1,962 |
| Additional paid-in capital |  | 12,292 |  | 12,292 |
| Retained earnings |  | 301,488 |  | 263,666 |
|  |  | 319,348 |  | 281,526 |
| Unrealized gain (losses) on securities available-for-sale, net of taxes |  | 6 |  | (62) |
| Unrealized losses on securities transferred to held-to-maturity, net of taxes |  | $(2,565)$ |  | $(3,050)$ |
| Pension liability, net of taxes |  | $(16,350)$ |  | $(18,117)$ |
| Total accumulated other comprehensive loss, net of taxes (Notes 3, 13 and 15) |  | $(18,909)$ |  | $(21,229)$ |
| Total stockholders' equity |  | 300,439 |  | 260,297 |
| Total liabilities and stockholders' equity | \$ | 5,163,935 | \$ | 4,785,572 |

[^5]
## Consolidated Statements of Income

Century Bancorp, Inc. AR '18

| Year Ended December 31, | 2018 |  | 2017 |  | 2016 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (dollars in thousands except share data) |  |  |  |  |  |  |
| INTEREST INCOME |  |  |  |  |  |  |
| Loans, taxable | \$ | 46,615 | \$ | 39,103 | \$ | 34,324 |
| Loans, non-taxable |  | 31,936 |  | 26,910 |  | 23,440 |
| Securities available-for-sale, taxable |  | 6,748 |  | 4,987 |  | 3,003 |
| Securities available-for-sale, non-taxable |  | 1,587 |  | 1,119 |  | 1,051 |
| Federal Home Loan Bank of Boston dividends |  | 1,116 |  | 872 |  | 966 |
| Securities held-to-maturity |  | 45,556 |  | 38,348 |  | 32,679 |
| Federal funds sold, interest-bearing deposits in other banks and short-term investments |  | 3,498 |  | 2,097 |  | 1,236 |
| Total interest income |  | 137,056 |  | 113,436 |  | 96,699 |
| INTEREST EXPENSE |  |  |  |  |  |  |
| Savings and NOW deposits |  | 11,757 |  | 6,296 |  | 4,020 |
| Money market accounts |  | 13,922 |  | 5,626 |  | 3,542 |
| Time deposits |  | 10,208 |  | 7,919 |  | 5,706 |
| Securities sold under agreements to repurchase |  | 976 |  | 496 |  | 472 |
| Other borrowed funds and subordinated debentures |  | 7,617 |  | 7,483 |  | 8,877 |
| Total interest expense |  | 44,480 |  | 27,820 |  | 22,617 |
| Net interest income |  | 92,576 |  | 85,616 |  | 74,082 |
| Provision for loan losses (Note 6) |  | 1,350 |  | 1,790 |  | 1,375 |
| Net interest income after provision for loan losses |  | 91,226 |  | 83,826 |  | 72,707 |
| OTHER OPERATING INCOME |  |  |  |  |  |  |
| Service charges on deposit accounts |  | 8,560 |  | 8,586 |  | 7,907 |
| Lockbox fees |  | 3,274 |  | 3,290 |  | 3,164 |
| Brokerage commissions |  | 348 |  | 353 |  | 315 |
| Net gains on sales of securities |  | 302 |  | 47 |  | 64 |
| Gains on sales of mortgage loans |  | - |  | 370 |  | 1,331 |
| Other income |  | 3,764 |  | 3,906 |  | 3,441 |
| Total other operating income |  | 16,248 |  | 16,552 |  | 16,222 |
| OPERATING EXPENSES |  |  |  |  |  |  |
| Salaries and employee benefits (Note 17) |  | 42,710 |  | 40,517 |  | 38,516 |
| Occupancy |  | 6,092 |  | 6,140 |  | 6,147 |
| Equipment |  | 3,132 |  | 2,892 |  | 2,845 |
| FDIC assessments |  | 1,471 |  | 1,581 |  | 1,902 |
| Other (Note 20) |  | 16,288 |  | 15,989 |  | 15,347 |
| Total operating expenses |  | 69,693 |  | 67,119 |  | 64,757 |
| Income before income taxes |  | 37,781 |  | 33,259 |  | 24,172 |
| Provision for income taxes (Note 16) |  | 1,568 |  | 10,958 |  | (362) |
| Net income | \$ | 36,213 | \$ | 22,301 | \$ | 24,534 |

SHARE DATA (Note 14)

| Weighted average number of shares outstanding, basic |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Class A |  | 3,608,179 |  | 3,604,029 |  | 3,600,729 |
| Class B |  | 1,959,730 |  | 1,963,880 |  | 1,967,180 |
| Weighted average number of shares outstanding, diluted |  |  |  |  |  |  |
| Class A |  | 5,567,909 |  | 5,567,909 |  | 5,567,909 |
| Class B |  | 1,959,730 |  | 1,963,880 |  | 1,967,180 |
| Basic earnings per share |  |  |  |  |  |  |
| Class A | \$ | 7.89 | \$ | 4.86 | \$ | 5.35 |
| Class B | \$ | 3.95 | \$ | 2.43 | \$ | 2.68 |
| Diluted earnings per share |  |  |  |  |  |  |
| Class A | \$ | 6.50 | \$ | 4.01 | \$ | 4.41 |
| Class B | \$ | 3.95 | \$ | 2.43 | \$ | 2.68 |

See accompanying "Notes to Consolidated Financial Statements."

Century Bancorp, Inc. AR '18

| Year Ended December 31, | 2018 |  | 2017 |  | 2016 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (dollars in thousands) |  |  |  |  |  |  |
| NET INCOME | \$ | 36,213 | \$ | 22,301 | \$ | 24,534 |
| Other comprehensive income (loss), net of tax: |  |  |  |  |  |  |
| Unrealized gains (losses) on securities: |  |  |  |  |  |  |
| Unrealized holding gains (losses) arising during period |  | 326 |  | 533 |  | (289) |
| Less: reclassification adjustment for gains included in net income |  | (217) |  | (28) |  | (32) |
| Total unrealized gains (losses) on securities |  | 109 |  | 505 |  | (321) |
| Accretion of net unrealized losses transferred during period |  | 1,086 |  | 1,034 |  | 2,812 |
| Defined benefit pension plans: |  |  |  |  |  |  |
| Pension liability adjustment: |  |  |  |  |  |  |
| Net (loss) gain |  | 3,770 |  | $(2,315)$ |  | (297) |
| Amortization of prior service cost and loss included in net periodic benefit cost |  | 1,167 |  | 931 |  | 970 |
| Total pension liability adjustment |  | 4,937 |  | $(1,384)$ |  | 673 |
| Other comprehensive income |  | 6,132 |  | 155 |  | 3,164 |
| Comprehensive income (loss) | \$ | 42,345 | \$ | 22,456 | \$ | 27,698 |

See accompanying "Notes to Consolidated Financial Statements."

Century Bancorp, Inc. AR '18

|  |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- |

See accompanying "Notes to Consolidated Financial Statements."


SUPPLEMENTAL DISCLOSURES OF CASH FLOW INFORMATION:

| Cash paid during the year for: |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Interest | \$ | 44,289 | \$ | 27,731 | \$ | 22,668 |
| Income taxes | \$ | 590 | \$ | 5,330 | \$ | 3,730 |
| Change in unrealized gains on securities available-for-sale, net of taxes | \$ | 109 | \$ | 505 | \$ | (321) |
| Change in unrealized losses on securities transferred to held-to-maturity, net of taxes | \$ | 1,086 | \$ | 1,034 | \$ | 2,812 |
| Pension liability adjustment, net of taxes | \$ | 4,937 | \$ | $(1,384)$ | \$ | 673 |
| Transfer of loans to other real estate owned | \$ | 2,225 | \$ | - | \$ | - |

See accompanying "Notes to Consolidated Financial Statements."

## 1. Summary of Significant Accounting Policies

## BASIS OF FINANCIAL STATEMENT PRESENTATION

The consolidated financial statements include the accounts of Century Bancorp, Inc. (the "Company") and its wholly owned subsidiary, Century Bank and Trust Company (the "Bank"). The consolidated financial statements also include the accounts of the Bank's wholly owned subsidiaries, Century Subsidiary Investments, Inc. ("CSII"), Century Subsidiary Investments, Inc. II ("CSII II"), Century Subsidiary Investments, Inc. III ("CSII III") and Century Financial Services Inc. ("CFSI"). CSII, CSII II, and CSII III are engaged in buying, selling and holding investment securities. CFSI has the power to engage in financial agency, securities brokerage, and investment and financial advisory services and related securities credit. The Company also owns $100 \%$ of Century Bancorp Capital Trust II ("CBCT II"). The entity is an unconsolidated subsidiary of the Company.

All significant intercompany accounts and transactions have been eliminated in consolidation. The Company provides a full range of banking services to individual, business and municipal customers in Massachusetts, New Hampshire, Rhode Island, Connecticut and New York. As a bank holding company, the Company is subject to the regulation and supervision of the Federal Reserve Board. The Bank, a state chartered financial institution, is subject to supervision and regulation by applicable state and federal banking agencies, including the Federal Reserve Board, the Federal Deposit Insurance Corporation (the "FDIC") and the Commonwealth of Massachusetts Commissioner of Banks. The Bank is also subject to various requirements and restrictions under federal and state law, including requirements to maintain reserves against deposits, restrictions on the types and amounts of loans that may be granted and the interest that may be charged thereon, and limitations on the types of investments that may be made and the types of services that may be offered. Various consumer laws and regulations also affect the operations of the Bank. In addition to the impact of regulation, commercial banks are affected significantly by the actions of the Federal Reserve Board as it attempts to control the money supply and credit availability in order to influence the economy. All aspects of the Company's business are highly competitive. The Company faces aggressive competition from other lending institutions and from numerous other providers of financial services. The Company has one reportable operating segment.

The financial statements have been prepared in conformity with accounting principles generally accepted in the United States of America and general practices within the banking industry. In preparing the financial statements, management is required to make estimates and assumptions that affect the reported amounts of assets and liabilities as of the date of the balance sheet and revenues and expenses for the period. Actual results could differ from those estimates

Material estimates that are susceptible to change in the near term relate to the allowance for loan losses. Management believes that the allowance for loan losses is adequate based on a review of factors, including historical charge-off rates with additional allocations based on qualitative risk factors for each category and general economic factors. While management uses available information to recognize loan losses, future additions to the allowance for loan losses may be necessary based on changes in economic conditions. In addition, regulatory agencies periodically review the Company's allowance for loan losses. Such agencies may require the Company to recognize additions to the allowance for loan losses based on their judgments about information available to them at the time of their examination. Certain reclassifications are made to prior-year amounts whenever necessary to conform with the current-year presentation.

## FAIR VALUE MEASUREMENTS

The Company follows FASB ASC 820-10, Fair Value Measurements and Disclosures, which among other things, requires enhanced disclosures about assets and liabilities carried at fair value. ASC 820-10 establishes a hierarchal disclosure framework associated with the level of pricing observability utilized
in measuring financial instruments at fair value. The three broad levels of the hierarchy are as follows:

Level I — Quoted prices are available in active markets for identical assets or liabilities as of the reported date. The type of financial instruments included in Level I are highly liquid cash instruments with quoted prices, such as G-7 government, agency securities, listed equities and money market securities, as well as listed derivative instruments.

Level II - Pricing inputs are other than quoted prices in active markets, which are either directly or indirectly observable as of the reported date. The nature of these financial instruments includes cash instruments for which quoted prices are available but traded less frequently, derivative instruments whose fair value has been derived using a model where inputs to the model are directly observable in the market or can be derived principally from or corroborated by observable market data, and instruments that are fair valued using other financial instruments, the parameters of which can be directly observed. Instruments that are generally included in this category are corporate bonds and loans, mortgage whole loans, municipal bonds and over the counter ("OTC") derivatives.

Level III - These instruments have little to no pricing observability as of the reported date. These financial instruments do not have two-way markets and are measured using management's best estimate of fair value, where the inputs into the determination of fair value require significant management judgment or estimation. Instruments that are included in this category generally include certain commercial mortgage loans, certain private equity investments, distressed debt, and noninvestment grade residual interests in securitizations as well as certain highly structured OTC derivative contracts.

## CASH AND CASH EQUIVALENTS

For purposes of reporting cash flows, cash equivalents include highly liquid assets with an original maturity of three months or less. Highly liquid assets include cash and due from banks, federal funds sold and certificates of deposit.

## SHORT-TERM INVESTMENTS

As of December 31, 2018 and 2017, short-term investments include highly liquid certificates of deposit with original maturities of more than 90 days but less than one year.

## INVESTMENT SECURITIES

Debt securities that the Company has the positive intent and ability to hold to maturity are classified as held-to-maturity and reported at amortized cost; debt securities that are bought and held principally for the purpose of selling are classified as trading and reported at fair value, with unrealized gains and losses included in earnings; and debt securities not classified as either held-to-maturity or trading are classified as available-for-sale and reported at fair value, with unrealized gains and losses excluded from earnings and reported as a separate component of stockholders' equity, net of estimated related income taxes. Equity securities are reported at fair value with unrealized gains and losses included in earnings. The Company has no securities held for trading.

Premiums and discounts on investment securities are amortized or accreted into income by use of the level-yield method. Gains and losses on the sale of investment securities are recognized on the trade date on a specific identification basis.

Management also considers the Company's capital adequacy, interest-rate risk, liquidity and business plans in assessing whether it is more likely than not that the Company will sell or be required to sell the investment securities before recovery. Other-than-temporary-impairment (OTTI) arises when a security's fair value is less than its amortized cost and, based on specific factors, the loss is considered OTTI. If the Company determines that a decline in fair value is OTTI
and that it is more likely than not that the Company will not sell or be required to sell the investment security before recovery of its amortized cost, the credit portion of the impairment loss is recognized in the Company's consolidated statement of income and the noncredit portion is recognized in accumulated other comprehensive income. The credit portion of the OTTI impairment represents the difference between the amortized cost and the present value of the expected future cash flows of the investment security. If the Company determines that a decline in fair value is OTTI and it is more likely than not that it will sell or be required to sell the investment security before recovery of its amortized cost, the entire difference between the amortized cost and the fair value of the security will be recognized in the Company's consolidated statement of income.

The transfer of a security between categories of investments shall be accounted for at fair value. For a debt security transferred into the held-to-maturity category from the available-for-sale category, the unrealized holding gain or loss at the date of the transfer shall continue to be reported in a separate component of shareholders' equity but shall be amortized over the remaining life of the security as an adjustment of yield in a manner consistent with the amortization of any premium or discount. The amortization of an unrealized holding gain or loss reported in equity will offset or mitigate the effect on interest income of the amortization of the premium or discount for that held-to-maturity security.

The sale of a security held-to-maturity may occur after a substantial portion (at least $85 \%$ ) of the principal outstanding at acquisition due either to prepayments on the debt security or to scheduled payments on a debt security payable in equal installments over its term. For variable rate securities, the scheduled payments need not be equal.

## FEDERAL HOME LOAN BANK STOCK

The Bank, as a member of the Federal Home Loan Bank of Boston ("FHLBB"), is required to maintain an investment in capital stock of the FHLBB. Based on redemption provisions, the stock has no quoted market value and is carried at cost. At its discretion, the FHLBB may declare dividends on the stock. The Company reviews for impairment based on the ultimate recoverability of the cost basis of the stock. As of December 31, 2018, no impairment has been recognized.

## LOANS HELD FOR SALE

Loans originated and intended for sale in the secondary market are carried at the lower of cost or estimated fair value in the aggregate. Net unrealized losses, if any, are recognized through a valuation allowance by charges to income.

## LOANS

Interest on loans is recognized based on the daily principal amount outstanding. Accrual of interest is discontinued when loans become ninety days delinquent unless the collateral is sufficient to cover both principal and interest and the loan is in the process of collection. Past-due status is based on contractual terms of the loan. Loans, including impaired loans, on which the accrual of interest has been discontinued, are designated nonaccrual loans. When a loan is placed on nonaccrual, all income that has been accrued but remains unpaid is reversed against current period income, and all amortization of deferred loan costs and fees is discontinued. Nonaccrual loans may be returned to an accrual status when principal and interest payments are not delinquent or the risk characteristics of the loan have improved to the extent that there no longer exists a concern as to the collectibility of principal and interest. Income received on nonaccrual loans is either recorded in income or applied to the principal balance of the loan, depending on management's evaluation as to the collectibility of principal.

Loan origination fees and related direct loan origination costs are offset, and the resulting net amount is deferred and amortized over the life of the related loans using the level-yield method. Prepayments are not initially considered when amortizing premiums and discounts.

The Bank measures impairment for impaired loans at either the fair value of the loan, the present value of the expected future cash flows discounted at the loan's effective interest rate or the fair value of the collateral if the loan is collateral dependent. This method applies to all loans, uncollateralized as well as collateralized, except large groups of smaller-balance homogeneous loans such as residential real estate and consumer loans that are collectively evaluated for impairment and loans that are measured at fair value. For collateral dependent loans, the amount of the recorded investment in a loan that exceeds the fair value of the collateral is charged-off against the allowance for loan losses in lieu of an allocation of a specific allowance when such an amount has been identified definitively as uncollectible. Management considers the payment status, net worth and earnings potential of the borrower, and the value and cash flow of the collateral as factors to determine if a loan will be paid in accordance with its contractual terms. Management does not set any minimum delay of payments as a factor in reviewing for impaired classification. Loans are charged-off when management believes that the collectibility of the loan's principal is not probable. The specific factors that management considers in making the determination that the collectibility of the loan's principal is not probable include the delinquency status of the loan, the fair value of the collateral, if secured, and, the financial strength of the borrower and/or guarantors. In addition, criteria for classification of a loan as in-substance foreclosure has been modified so that such classification need be made only when a lender is in possession of the collateral. The Bank measures the impairment of troubled debt restructurings using the premodification effective rate of interest.

## TRANSFERS OF FINANCIAL ASSETS

Transfers of financial assets, typically residential mortgages and loan participations for the Company, are accounted for as sales when control over the assets has been surrendered. Control over transferred assets is deemed to be surrendered when (1) the assets have been isolated from the Company, (2) the transferee obtains the right (free of conditions that constrain it from taking advantage of that right) to pledge or exchange the transferred assets, and (3) the Company does not maintain effective control over the transferred assets.

## ACQUIRED LOANS

In accordance with FASB ASC 310-30, Loans and Debt Securities Acquired with Deteriorated Credit Quality (formerly Statement of Position ("SOP") No. 03-3, "Accounting for Certain Loans or Debt Securities Acquired in a Transfer") the Company reviews acquired loans for differences between contractual cash flows and cash flows expected to be collected from the Company's initial investment in the acquired loans to determine if those differences are attributable, at least in part, to credit quality. If those differences are attributable to credit quality, the loan's contractually required payments received in excess of the amount of its cash flows expected at acquisition, or nonaccretable discount, is not accreted into income. FASB ASC 310-30 requires that the Company recognize the excess of all cash flows expected at acquisition over the Company's initial investment in the loan as interest income using the interest method over the term of the loan. This excess is referred to as accretable discount and is recorded as a reduction of the loan balance.

Loans which, at acquisition, do not have evidence of deterioration of credit quality since origination are outside the scope of FASB ASC 310-30. For such loans, the discount, if any, representing the excess of the amount of reasonably estimable and probable discounted future cash collections over the purchase price, is accreted into interest income using the interest method over the term of the loan. Prepayments are not considered in the calculation of accretion income. Additionally, the discount is not accreted on nonperforming loans.

When a loan is paid off, the excess of any cash received over the net investment is recorded as interest income. In addition to the amount of purchase discount that is recognized at that time, income may include interest owed by the
borrower prior to the Company's acquisition of the loan, interest collected if on nonperforming status, prepayment fees and other loan fees.

## NONPERFORMING ASSETS

In addition to nonperforming loans, nonperforming assets include other real estate owned. Other real estate owned is comprised of properties acquired through foreclosure or acceptance of a deed in lieu of foreclosure. Other real estate owned is recorded initially at the lower of cost or the estimated fair value less costs to sell. When such assets are acquired, the excess of the loan balance over the estimated fair value of the asset is charged to the allowance for loan losses. An allowance for losses on other real estate owned is established by a charge to earnings when, upon periodic evaluation by management, further declines in the estimated fair value of properties have occurred.

Such evaluations are based on an analysis of individual properties as well as a general assessment of current real estate market conditions. Holding costs and rental income on properties are included in current operations, while certain costs to improve such properties are capitalized. Gains and losses from the sale of other real estate owned are reflected in earnings when realized.

## ALLOWANCE FOR LOAN LOSSES

The allowance for loan losses is based on management's evaluation of the quality of the loan portfolio and is used to provide for losses resulting from loans that ultimately prove uncollectible. The components of the allowance for loan losses represent estimates based upon Accounting Standards Codification ("ASC") Topic 450, contingencies, and ASC Topic 310 Receivables. ASC Topic 450 applies to homogenous loan pools such as consumer installment, residential mortgages, consumer lines of credit and commercial loans that are not individually evaluated for impairment under ASC Topic 310. In determining the level of the allowance, periodic evaluations are made of the loan portfolio, which takes into account factors such as the characteristics of the loans, loan status, financial strength of the borrowers, value of collateral securing the loans and other relevant information sufficient to reach an informed judgment. The allowance is increased by provisions charged to income and reduced by loan charge-offs, net of recoveries. Management maintains an allowance for loan losses to absorb losses inherent in the loan portfolio. The allowance is based on assessments of the probable estimated losses inherent in the loan portfolio. Management's methodology for assessing the appropriateness of the allowance consists of several key elements, which include the specific allowances, if appropriate, for identified problem loans, formula allowance, and possibly an unallocated allowance. Arriving at an appropriate level of allowance for loan losses necessarily involves a high degree of judgment.

While management uses available information in establishing the allowance for loan losses, future adjustments to the allowance may be necessary if economic conditions differ substantially from the assumptions used in making the evaluations. Loans are charged-off in whole or in part when, in management's opinion, collectibility is not probable. The specific factors that management considers in making the determination that the collectibility of the loan's principal is not probable include the delinquency status of the loan, the fair value of the collateral and the financial strength of the borrower and/or guarantors.

Under ASC Topic 310, a loan is impaired, based upon current information and in management's opinion, when it is probable that the loan will not be repaid according to its original contractual terms, including both principal and interest, or if a loan is designated as a Troubled Debt Restructuring ("TDR"). Specific allowances for loan losses entail the assignment of allowance amounts to individual loans on the basis of loan impairment. Under this method, loans are selected for evaluation based upon a change in internal risk rating, occurrence of delinquency, loan classification or nonaccrual status. A specific allowance amount is allocated to an individual loan when such loan has been deemed impaired
and when the amount of a probable loss is able to be estimated on the basis of: (a) present value of anticipated future cash flows, (b) the loan's observable fair market price or (c) fair value of collateral if the loan is collateral dependent. For collateral dependent loans, the amount of the recorded investment in a loan that exceeds the fair value of the collateral is charged-off against the allowance for loan losses in lieu of an allocation of a specific allowance when such an amount has been identified definitively as uncollectible.

In estimating probable loan loss under ASC Topic 450 management considers numerous factors, including historical charge-offs and subsequent recoveries. The formula allowances are based on evaluations of homogenous loans to determine the allocation appropriate within each portfolio segment. Formula allowances are based on internal risk ratings or credit ratings from external sources. Individual loans within the commercial and industrial, commercial real estate and real estate construction loan portfolio segments are assigned internal risk ratings to group them with other loans possessing similar risk characteristics. Changes in risk grades affect the amount of the formula allowance. Risk grades are determined by reviewing current collateral value, financial information, cash flow, payment history and other relevant facts surrounding the particular credit. On these loans, the formula allowances are based on the risk ratings, the historical loss experience, and the loss emergence period. Historical loss data and loss emergence periods are developed based on the Company's historical experience. For larger loans with available external credit ratings, these ratings are utilized rather than the Company's risk ratings. The historical loss factor and loss emergence periods for these loans are based on data published by the rating agencies for similar credits as the Company has limited internal historical data. For the residential real estate and consumer loan portfolios, the formula allowances are calculated by applying historical loss experience and the loss emergence period to the outstanding balance in each loan category. Loss factors and loss emergence periods are based on the Company's historical net loss experience.

Additional allowances are added to portfolio segments based on qualitative factors. Management considers potential factors identified in regulatory guidance. Management has identified certain qualitative factors, which could impact the degree of loss sustained within the portfolio. These include market risk factors and unique portfolio risk factors that are inherent characteristics of the Company's loan portfolio. Market risk factors may consist of changes to general economic and business conditions, such as unemployment and GDP that may impact the Company's loan portfolio customer base in terms of ability to repay and that may result in changes in value of underlying collateral. Unique portfolio risk factors may include the outlooks for business segments in which the Company's borrowers operate and loan size. The potential ranges for qualitative factors are based on historical volatility in losses. The actual amount utilized is based on management's assessment of current conditions.

After considering the above components, an unallocated component may be generated to cover uncertainties that could affect management's estimate of probable losses. These uncertainties include the effects of loans in new geographical areas and new industries. The unallocated component of the allowance reflects the margin of imprecision inherent in the underlying assumptions used in the methodologies for estimating allocated and general reserves in the portfolio.

## BANK PREMISES AND EQUIPMENT

Bank premises and equipment are stated at cost less accumulated depreciation and amortization. Land is stated at cost. Depreciation is computed using the straight-line method over the estimated useful lives of the assets or the terms of leases, if shorter. It is general practice to charge the cost of maintenance and repairs to operations when incurred; major expenditures for improvements are capitalized and depreciated.

## GOODWILL AND IDENTIFIABLE INTANGIBLE ASSETS

Goodwill represents the excess of the cost of an acquisition over the fair value of the net assets acquired. Goodwill is not subject to amortization. Identifiable intangible assets consist of core deposit intangibles and are assets resulting from acquisitions that are being amortized over their estimated useful lives. Goodwill and identifiable intangible assets are included in other assets on the consolidated balance sheets. The Company tests goodwill for impairment on an annual basis, or more often if events or circumstances indicate there may be impairment. Goodwill impairment testing is performed at the segment (or "reporting unit") level. Currently, the Company's goodwill is evaluated at the entity level as there is only one reporting unit. Goodwill is assigned to reporting units at the date the goodwill is initially recorded. Once goodwill has been assigned to reporting units, it no longer retains its association with a particular acquisition, and all of the activities within a reporting unit, whether acquired or organically grown, are available to support the value of the goodwill.

Goodwill impairment is evaluated by first assessing qualitative factors (events and circumstances) to determine whether it is more likely than not (meaning a likelihood of more than 50 percent) that the fair value of a reporting unit is less than its carrying amount. If, after considering all relevant events and circumstances, an entity determines it is not more likely than not that the fair value of a reporting unit is less than its carrying amount, then performing the two-step impairment test will be unnecessary.

The first step, in the two-step impairment test, used to identify potential impairment, involves comparing each reporting unit's fair value to its carrying value including goodwill. If the fair value of a reporting unit exceeds its carrying value, applicable goodwill is considered not to be impaired. If the carrying value exceeds fair value, there is an indication of impairment and the second step is performed to measure the amount of impairment.

## SERVICING

The Company services mortgage loans for others. Mortgage servicing assets are recognized as separate assets when rights are acquired through purchase or through sale of financial assets. Fair value is determined using prices for similar assets with similar characteristics, when available, or based upon discounted cash flows using market-based assumptions. The valuation model incorporates assumptions that market participants would use in estimating future net servicing income, such as the cost to service, the discount rate, an inflation rate, ancillary income, prepayment speeds and default rates and losses. Capitalized servicing rights are reported in other assets and are amortized into loan servicing fee income in proportion to, and over the period of, the estimated future net servicing income of the underlying financial assets. Servicing assets are evaluated for impairment based upon the fair value of the rights as compared to amortized cost. Impairment is determined by stratifying rights by predominant risk characteristics, such as interest rates and terms. Impairment is recognized through a valuation allowance for an individual stratum, to the extent that fair value is less than the capitalized amount for the stratum. Changes in the valuation allowance are reported in loan servicing fee income.

## STOCK OPTION ACCOUNTING

The Company follows the fair value recognition provisions of FASB ASC 718, Compensation - Stock Compensation for all share-based payments. The Company's method of valuation for share-based awards granted utilizes the Black-Scholes option-pricing model. The Company will recognize compensation expense for its awards on a straight-line basis over the requisite service period for the entire award (straight-line attribution method), ensuring that the amount of compensation cost recognized at any date at least equals the portion of the grant-date fair value of the award that is vested at that time.

During 2000 and 2004, common stockholders of the Company approved stock option plans (the "Option Plans") that provide for granting of options
to purchase up to 150,000 shares of Class A common stock per plan. Under the Option Plans, all officers and key employees of the Company are eligible to receive nonqualified or incentive stock options to purchase shares of Class A common stock. The Option Plans are administered by the Compensation Committee of the Board of Directors, whose members are ineligible to participate in the Option Plans. Based on management's recommendations, the Committee submits its recommendations to the Board of Directors as to persons to whom options are to be granted, the number of shares granted to each, the option price (which may not be less than $85 \%$ of the fair market value for nonqualified stock options, or the fair market value for incentive stock options, of the shares on the date of grant) and the time period over which the options are exercisable (not more than ten years from the date of grant). There were no options to purchase shares of Class A common stock outstanding at December 31, 2018.

The Company uses the fair value method to account for stock options. There were no options granted during 2018 and 2017.

## INCOME TAXES

The Company uses the asset and liability method in accounting for income taxes. Under the asset and liability method, deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which temporary differences are expected to be recovered or settled. Under this method, 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.
The Company accounts for uncertain tax positions in accordance with FASB ASC 740.
The Company classifies interest resulting from underpayment of income taxes as income tax expense in the first period the interest would begin accruing according to the provisions of the relevant tax law.

The Company classifies penalties resulting from underpayment of income taxes as income tax expense in the period for which the Company claims or expects to claim an uncertain tax position or in the period in which the Company's judgment changes regarding an uncertain tax position.
For tax years beginning after December 31, 2018, the corporate alternative minimum tax ("AMT") has been repealed. For 2018 through 2021, the AMT credit carryforward can offset regular tax liability and is refundable in an amount equal to $50 \% ~(100 \%$ for 2021$)$ of the excess of the minimum tax credit for the tax year over the amount of the credit allowable for the year against regular tax liability. Accordingly, the full amount of the AMT credit carryforward will be recovered in tax years beginning before 2022. As a result of the change, the Company has classified its AMT credit carryforward as currently receivable.

## EARNINGS PER SHARE ("EPS")

Class A and Class B shares participate equally in undistributed earnings. Under the Company's Articles of Organization, the holders of Class A Common Stock are entitled to receive dividends per share equal to at least $200 \%$ of dividends paid, if any, from time to time, on each share of Class B Common Stock.

Diluted EPS includes the dilutive effect of common stock equivalents; basic EPS excludes all common stock equivalents. The only common stock equivalents for the Company are stock options.

The company utilizes the two class method for reporting EPS. The two-class method is an earnings allocation formula that treats Class A and Class B shares as having rights to earnings that otherwise would have been available only to Class A shareholders and Class B shareholders as if converted to Class A shares.

## TREASURY STOCK

Effective July 1, 2004, companies incorporated in Massachusetts became subject to Chapter 156D of the Massachusetts Business Corporation Act, provisions of which eliminate the concept of treasury stock and provide that shares reacquired by a company are to be treated as authorized but unissued shares.

## PENSION

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 ("ERISA") and recognizes costs over the estimated employee service period.

The Company also has a Supplemental Executive Insurance/Retirement Plan ("the Supplemental Plan"), which is limited to certain officers and employees of the Company. The Supplemental Plan is accrued on a current basis and recognizes costs over the estimated employee service period.

Executive officers of the Company or its subsidiaries who have at least one year of service may participate in the Supplemental Plan. The Supplemental Plan is voluntary. Individual life insurance policies, which are owned by the Company, are purchased covering the life of each participant.

The Company utilizes a full yield curve approach in the estimation of the service and interest components by applying the specific spot rates along the yield curve used in the determination of the benefit obligation to the underlying projected cash flows.

At December 31, 2018, the discount rate was determined by preparing an analysis of the respective plan's expected future cash flows and high-quality fixedincome investments currently available and expected to be available during the period to maturity of the benefits.

## RECENT ACCOUNTING DEVELOPMENTS

## Recently Adopted Accounting Standards Updates

Effective January 1, 2018, the following new accounting guidance was adopted by the Company:

In March 2018 Financial Accounting Standards Board ("FASB") issued Accounting Standards Update ("ASU") 2018-05: Income Taxes (Topic 740) Amendments to SEC Paragraphs Pursuant to SEC Staff Accounting Bulletin No. 118—Income Tax Accounting Implications of the Tax Cuts and Jobs Act. This ASU is effective for fiscal years beginning after December 22, 2017. The effect of this update did not have a material impact on the Company's consolidated financial position.

In February 2018, the FASB issued ASU 2018-03, Technical Corrections and Improvements to Financial Instruments—Overall (Subtopic 825-10) Recognition and Measurement of Financial Assets and Financial Liabilities. The amendments in this Update include items brought to the Board's attention by stakeholders. The amendments clarify certain aspects of the guidance issued in Update 2016-1. For public entities, this ASU was effective for the fiscal years beginning after December 15, 2017, including interim periods within those fiscal years. The effect of this update did not have a material impact on the Company's consolidated financial position.

In February 2018, the FASB issued ASU 2018-02, Income Statement Reporting Comprehensive Income (Topic 220) Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income. The amendments in this ASU allow a reclassification from accumulated other comprehensive income to retained earnings for stranded tax effects resulting from the Tax Cuts and Jobs Act. Consequently, the amendments eliminate the stranded tax effects resulting from the Tax Cuts and Jobs Act and will improve the usefulness of information reported to financial statement users. However, because the amendments only
relate to the reclassification of the income tax effects of the Tax Cuts and Jobs Act, the underlying guidance that requires that the effect of a change in tax laws or rates be included in income from continuing operations is not affected. The amendments in this ASU are effective for all entities for fiscal years beginning after December 15, 2018, and interim periods within those fiscal years. Early adoption of the amendments in this ASU is permitted, including adoption in any interim period, (1) for public business entities for reporting periods for which financial statements have not yet been issued and (2) for all other entities for reporting periods for which financial statements have not yet been made available for issuance. The amendments in this ASU should be applied either in the period of adoption or retrospectively to each period (or periods) in which the effect of the change in the U.S. federal corporate income tax rate in the Tax Cuts and Jobs Act is recognized. The Company adopted this update in the first quarter of 2018 and applied the effects of the changes in the period of adoption. The effect of the changes is approximately $\$ 3.8$ million that increased retained earnings and a corresponding decrease to AOCl .

In May 2017, the FASB issued ASU 2017-09, Compensation-Stock Compensation (Topic 718): Scope of Modification Accounting. FASB issued this Update to address the diversity in practice as well as the cost and complexity when applying the guidance in Topic 718, Compensation - Stock Compensation, to a change to the terms or conditions of a share-based payment award. For public entities, this ASU was effective for annual reporting periods beginning after December 15, 2017. The effect of this update did not have a material impact on the Company's consolidated financial position.

In March 2017, the FASB issued 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 ASU require that an employer disaggregate the service cost component from the other components of net benefit cost. The amendments also provide explicit guidance on how to present the service cost component and the other components of net benefit cost in the income statement and allow only the service cost component of net benefit cost to be eligible for capitalization. The amendments in this ASU were effective for fiscal years beginning after December 15, 2017. Early adoption is permitted. This ASU is for presentation purposes only, accordingly, there was no impact on the Company's consolidated financial position. See Note 17, Employee Benefits, for a further explanation of this ASU.

In February 2017, the FASB issued ASU 2017-05, Other Income Gains and Losses from the Derecognition of Nonfinancial Assets (Subtopic 610-20). This ASU was issued to clarify the scope of Subtopic 610-20, and to add guidance for partial sales of nonfinancial assets. For public entities, this ASU was effective for annual reporting periods beginning after December 15, 2017. The effect of this update did not have a material impact on the Company's consolidated financial position.

Effective January 1, 2018, the Company adopted ASU 2014-09 "Revenue Recognition (Topic 606): Revenue from Contracts with Customers." ASU 2014-09 supersedes Topic 605 "Revenue Recognition" and requires an entity to recognize the amount of revenue to which it expects to be entitled for the transfer of promised goods or services to customers at an amount that reflects the consideration to which the entity expects to be entitled to in exchange for those goods or services.

The vast majority of the Company's revenue is interest income on loans, investment securities and deposits at other financial institutions which are specifically outside the scope of ASU 2014-09. ASU 2014-09 applies primarily to certain non-interest income items in the Company's financial statements. We adopted Topic 606 as of January 1, 2018 using the cumulative effect transition method. The impact of adopting the new standard was not material. See Note 22, Revenue from Contracts with Customers, for further details.

In November 2016, the FASB issued ASU 2016-18, Statement of Cash Flows (Topic 230) Restricted Cash. The amendments of this ASU were issued to require that a statement of cash flows explain the change during the period in the total of cash, cash equivalents, and amounts generally described as restricted cash or restricted cash equivalents. Therefore, amounts generally described as restricted cash and restricted cash equivalents should be included with cash and cash equivalents when reconciling the beginning-of-period and end-of-period total amounts shown on the statement of cash flows. For public entities, this ASU was effective for the fiscal years beginning after December 15, 2017, including interim periods within those fiscal years. The effect of this update did not have a material impact on the Company's consolidated financial position.

In August 2016, the FASB issued ASU 2016-15, Statement of Cash Flows (Topic 326) Classification of Certain Cash Receipts and Cash Payments. Stakeholders indicated that there is diversity in practice in how certain cash receipts and cash payments are presented and classified in the statement of cash flows under Topic 230, Statement of Cash Flows, and other Topics. This ASU addresses eight specific cash flow issues with the objective of reducing the existing diversity in practice. The amendments in this update were effective for public business entities for fiscal years beginning after December 15, 2017, and interim periods within those fiscal years. The effect of this update required a reclassification of \$375,000 and \$115,000 for 2018 and 2017, respectively, of proceeds from life insurance policies to investing activities from operating activities.
In January 2016, FASB issued ASU 2016-1, "Financial Instruments-Overall" (Subtopic 825-10) Recognition and Measurement of Financial Assets and Financial Liabilities. This ASU significantly revises an entity's accounting related to (1) the classification and measurement of investments in equity securities and (2) the presentation of certain fair value changes for financial liabilities measured at fair value. It also amends certain disclosure requirements associated with the fair value of financial instruments. The Company used exit price notion when measuring the fair value of financial instruments for disclosure purposes (see Note 9 Fair Value of Financial Instruments). This ASU was effective for fiscal years beginning after December 15, 2017, including interim periods therein. The Company adopted this update in the first quarter of 2018 and applied the effects of the changes retrospectively. The effect of the changes is approximately $\$ 29,000$, which was reclassified from accumulated other comprehensive income to retained earnings.

## Accounting Standards Issued but not yet Adopted

The following list identifies ASUs applicable to the Company that have been issued by the FASB but are not yet effective:

In August 2018, FASB issued ASU 2018-15, Intangibles-Goodwill and OtherInternal Use Software (Subtopic 350-40): Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract (a consensus of the FASB Emerging Issues Task Force) The amendments in this ASU align the requirements for capitalizing implementation costs incurred in a hosting arrangement that is a service contract with the requirements for capitalizing implementation costs incurred to develop or obtain internal-use software (and hosting arrangements that include an internal use software license).This ASU is effective for annual reporting periods beginning after December 15, 2019. The Company has not determined the impact, if any, as of December 31, 2018.
In August 2018, FASB issued ASU 2018-14, Compensation-Retirement BenefitsDefined Benefit Plans-General (Subtopic 715-20): Disclosure FrameworkChanges to the Disclosure Requirements for Defined Benefit plans. The amendments in this ASU remove disclosures that no longer are considered cost
beneficial, clarify the specific requirements of disclosures, and add disclosure requirements identified as relevant. This ASU is effective for annual reporting periods beginning after December 15, 2020. The Company has not determined the impact, if any, as of December 31, 2018.

In August 2018, FASB issued ASU 2018-13, Fair Value Measurement (Topic 820), Disclosure Framework-Changes to the Disclosure Requirements for Fair Value. The amendments in this ASU modify the disclosure requirements on fair value measurements in Topic 820, Fair Value Measurement, based on the concepts in the Concepts Statement, including the consideration of costs and benefits. This ASU is effective for annual reporting periods beginning after December 15, 2019. The Company has not determined the impact, if any, as of December 31, 2018.

In July 2017, FASB issued ASU 2017-11, Earnings Per Share (Topic 260), Distinguishing Liabilities from Equity (Topic 480), Derivatives and Hedging (Topic 815): I. Accounting for Certain Financial Instruments with Down Round Features II. Replacement of the Indefinite Deferral for Mandatorily Redeemable Financial Instruments of Certain Nonpublic Entities and Certain Mandatorily Redeemable Noncontrolling Interest with a Scope Exception. For public entities, this ASU is effective for annual reporting periods beginning after December 15, 2018. The effect of this update is not expected to have a material impact on the Company's consolidated financial position.
In March 2017, the FASB issued ASU 2017-08, Receivables - Nonrefundable Fees and Other Costs (Subtopic 310-20) Premium Amortization of Purchased Callable Debt. The FASB is issuing this ASU to amend the amortization period for certain purchased callable debt securities held at a premium. The FASB is shortening the amortization period for the premium to the earliest call date. Under current generally accepted accounting principles (GAAP), entities generally amortize the premium as an adjustment of yield over the contractual life of the instrument. For public business entities, the amendments in this ASU are effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2018. The effect of this update is not expected to have a material impact on the Company's consolidated financial position.

In January 2017, the FASB issued ASU 2017-04, Intangibles - Goodwill and Other (Topic 350). This ASU was issued to simplify the subsequent measurement of goodwill by eliminating Step 2 from the goodwill impairment test. For public entities, this ASU is effective for the fiscal years beginning after December 15,2019 , including interim periods within those fiscal years. Early adoption is permitted and application should be on a prospective basis. The effect of this update is not expected to have a material impact on the Company's consolidated financial position.

In June 2016, the FASB issued ASU 2016-13, Financial Instruments-Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments. This ASU was issued to provide financial statement users with more decisionuseful information about the expected credit losses on financial instruments and other commitments to extend credit held by a reporting entity at each reporting date. To achieve this objective, the amendments in this ASU replace the incurred loss impairment methodology in current GAAP with a methodology that reflects expected credit losses and requires consideration of a broader range of reasonable and supportable information to inform credit loss estimates. The amendments in this ASU are effective for fiscal years beginning after December 15, 2019, including interim periods within those fiscal years. The Company is in the process of analyzing this ASU and has purchased a software solution and began to capture information needed to implement this update. The Company has started to input information and is in the beginning stages of running the software program. The Company has not determined the impact, if any, as of December 31, 2018.

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In November 2018, the FASB issued ASU 2018-19, Codification Improvements to Topic 326, Financial Instruments-Credit Losses. The amendments in this ASU align the implementation date for nonpublic entities' annual financial statements with the implementation date for their interim financial statements and clarify the scope of the guidance in the amendments in ASU 2016-13. The Company has not determined the impact, if any, as of December 31, 2018.

In February 2016, the FASB issued ASU 2016-02, Leases. This ASU requires lessees to put most leases on their balance sheet but recognize expenses on their income statements in a manner similar to today's accounting. This ASU also eliminates today's real estate-specific provisions for all companies. For lessors, this ASU modifies the classification criteria and the accounting for sales-type and direct financing leases. This ASU is effective for fiscal years beginning after December 15, 2018, including interim periods therein. Early adoption is permitted. The Company began analyzing this ASU and assessed the implementation steps. At December 31, 2018, the Company analyzed the financial impact of real estate leases. The Company also reviewed contracts to determine if they contain embedded leases. The Company has determined the total balance sheet impact will be approximately $\$ 14-\$ 16$ million as of December 31,2018 . This amount will be booked as a right of use asset with a corresponding lease liability.

In July 2018, ASU 2018-10, "Codification Improvements to Topic 842, Leases" ("ASU 2018-10") was issued to provide more detailed guidance and additional clarification for implementing ASU 2016-02. Also in July 2018, ASU 2018-11, "Targeted Improvements" ("ASU 2018-11") was issued and allows for an optional transition method in which the provisions of Topic 842 would be applied upon the adoption date and would not have to be retroactively applied to the earliest reporting period presented in the consolidated financial statements." The Company intends to use this optional transition method for the adoption of Topic 842.

## Securities and Exchange Commission (SEC) ruling:

In August 2018, the SEC issued a final rule that amends certain of the Commission's disclosure requirements "that have become redundant, duplicative, overlapping, outdated, or superseded, in light of other Commission disclosure requirements, U.S. GAAP, or changes in the information environment." The financial reporting implications of the final rule's amendments may vary by company, but the changes are generally expected to reduce or eliminate some of an SEC registrant's disclosure requirements. In limited circumstances, however, the amendments may expand those requirements, including those related to interim disclosures about changes in stockholders' equity. Under the requirements, registrants must now analyze changes in stockholders' equity, in the form of a reconciliation, for "the current and comparative year-to-date periods, with subtotals for each interim period." The Company will therefore include a reconciliation for the current quarter and year-to-date interim periods as well as the comparative periods of the prior years (i.e., a reconciliation covering each period for which an income statement is presented). The final rule is effective for all filings submitted on or after November 5, 2018.
2. Cash and Due from Banks

The Company is required to maintain a portion of its cash and due from banks as a reserve balance under the Federal Reserve Act. Such reserve is calculated based upon deposit levels and amounted to \$0 at December 31, 2018, and \$0 at December 31, 2017.
3. Securities Available-for-Sale

|  | December 31, 2018 |  |  |  |  |  |  | December 31, 2017 |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Amortized Cost | Gross Unrealized Gains |  | Gross Unrealized Losses |  | Estimated Fair Value |  | Amortized Cost |  | Gross Unrealized Gains |  | Gross <br> Unrealized Losses |  | Estimated Fair Value |
| (dollars in thousands) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| U.S. Treasury | \$ 2,000 | \$ | - | \$ | 8 | \$ | 1,992 | \$ | 1,999 | \$ | - | \$ | 15 | \$ 1,984 |
| U. S. Government Sponsored Enterprises | 3,946 |  | - |  | 31 |  | 3,915 |  | - |  | - |  | - | - |
| SBA Backed Securities | 70,477 |  | 1 |  | 284 |  | 70,194 |  | 81,065 |  | 46 |  | 161 | 80,950 |
| U.S. Government Agency and Sponsored Enterprises Mortgage-Backed Securities | 162,604 |  | 536 |  | 250 |  | 162,890 |  | 225,537 |  | 555 |  | 317 | 225,775 |
| Privately Issued Residential Mortgage-Backed Securities | 679 |  | 3 |  | 10 |  | 672 |  | 897 |  | 4 |  | 9 | 892 |
| Obligations Issued by States and Political Subdivisions | 93,445 |  | 58 |  | - |  | 93,503 |  | 82,849 |  | - |  | 249 | 82,600 |
| Other Debt Securities | 3,600 |  | 37 |  | 44 |  | 3,593 |  | 3,600 |  | 68 |  | 39 | 3,629 |
| Total | \$ 336,751 | \$ | 635 | \$ | 627 |  | 336,759 |  | 395,947 | \$ | 673 | \$ | 790 | \$ 395,830 |

Included in SBA Backed Securities and U.S. Government Agency and Sponsored Enterprises Mortgage-Backed Securities are securities at fair value pledged to secure public deposits and repurchase agreements amounting to $\$ 197,304,000$ and $\$ 216,353,000$ at December 31, 2018 and 2017, respectively. Also included in securities available-for-sale at fair value are securities pledged for borrowing at the Federal Home Loan Bank amounting to $\$ 34,787,000$ and $\$ 67,780,000$ at December 31, 2018 and 2017, respectively. The Company realized gains on sales of securities of $\$ 302,000, \$ 47,000$ and $\$ 52,000$ from the proceeds of sales of available-for-sale securities of $\$ 27,517,000, \$ 18,180,000$ and $\$ 2,376,000$ for the years ended December 31, 2018, 2017, and 2016, respectively.

Debt securities of U.S. Government Agency and Sponsored Enterprises Mortgage-Backed Securities primarily refer to debt securities of Fannie Mae and Freddie Mac.

The following table shows the estimated maturity distribution of the Company's securities available-for-sale at December 31, 2018.

|  | Amortized <br> Cost | Fair <br> Value |  |  |
| :--- | ---: | ---: | ---: | ---: |
| (dollars in thousands) |  |  |  |  |
| Within one year | $\$$ | 92,935 | $\$$ | 92,918 |
| After one but within five years |  | 83,286 |  | 83,112 |
| After five but within ten years |  | 136,075 |  | 136,244 |
| More than ten years | 24,455 |  | 24,485 |  |
| Total | $\$$ | 336,751 | $\$$ | 336,759 |

The weighted average remaining life of investment securities available-for-sale at December 31, 2018, was 4.7 years. Included in the weighted average remaining life calculation at December 31, 2018 were $\$ 3,946,000$ of U.S. Government Sponsored Enterprises obligations that are callable at the discretion of the issuer. The contractual maturities, which were used in the table above, of mortgage-backed securities, will differ from the actual maturities due to the ability of the issuers to prepay underlying obligations. Also, $\$ 231,981,000$ of the securities are floating rate or adjustable rate and reprice prior to maturity.

As of December 31, 2018 and December 31, 2017, management concluded that the unrealized losses of its investment securities are temporary in nature since they are not related to the underlying credit quality of the issuers, and the Company does not intend to sell these debt securities and it is not more likely than not that it will be required to sell these debt securities before the anticipated recovery of its remaining amortized cost. In making its other-than-temporary impairment evaluation, the Company considered the fact that the principal and interest on these securities are from issuers that are investment grade. The change in the unrealized losses on the Obligations Issued by States and Political Subdivisions, Privately Issued Residential Mortgage-Backed Securities and Other Debt Securities was primarily caused by changes in credit spreads and liquidity issues in the marketplace.

The unrealized loss on SBA Backed Securities and U.S. Government Agency and Sponsored Enterprises Mortgage-Backed Securities related primarily to interest rates and not credit quality and because the Company has the ability and intent to hold these investments until recovery of fair value, which may be maturity. The Company does not consider these investments to be other-than-temporarily impaired at December 31, 2018 and December 31, 2017.

In evaluating the underlying credit quality of a security, management considers several factors such as the credit rating of the obligor and the issuer, if applicable. Internal reviews of issuer financial statements are performed as deemed necessary. In the case of privately issued mortgage-backed securities, the performance of the underlying loans is analyzed as deemed necessary to determine the estimated future cash flows of the securities. Factors considered include the level of subordination, current and estimated future default rates, current and estimated prepayment rates, estimated loss severity rates, geographic concentrations and origination dates of underlying loans.

The following table shows the temporarily impaired securities of the Company's available-for-sale portfolio at December 31, 2018. This table shows the unrealized market loss of securities that have been in a continuous unrealized loss position for 12 months or less and a continuous loss position for 12 months and longer. There are 10 and 30 securities that are temporarily impaired for less than 12 months and for 12 months or longer, respectively, out of a total of 190 holdings at December 31, 2018.

| Temporarily Impaired Investments | December 31, 2018 |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Less Tha <br> Value | Unrealized Losses |  |  | 12 Mon | Unrealized Losses |  | Fair Value |  | Unrealized Losses |  |
| (dollars in thousands) |  |  |  |  |  |  |  |  |  |  |  |  |
| U.S. Treasury | \$ | - | \$ | - | \$ | 1,992 | \$ | 8 | \$ | 1,992 | \$ | 8 |
| U.S. Government Sponsored Enterprises |  | 3,914 |  | 31 |  | - |  | - |  | 3,914 |  | 31 |
| SBA Backed Securities |  | 17,950 |  | 28 |  | 44,323 |  | 256 |  | 62,273 |  | 284 |
| U.S. Government Agency and Sponsored Enterprise Mortgage-Backed Securities |  | 19,244 |  | 21 |  | 45,782 |  | 229 |  | 65,026 |  | 250 |
| Privately Issued Residential Mortgage-Backed Securities |  | - |  | - |  | 495 |  | 10 |  | 495 |  | 10 |
| Obligations Issued by States and Political Subdivisions |  | - |  | - |  | - |  | - |  | - |  | - |
| Other Debt Securities |  | - |  | - |  | 455 |  | 44 |  | 455 |  | 44 |
| Total temporarily impaired securities | \$ | 41,108 | \$ | 80 | \$ | 93,047 | \$ | 547 | \$ | 134,155 | \$ | 627 |

The following table shows the temporarily impaired securities of the Company's available-for-sale portfolio at December 31, 2017. This table shows the unrealized market loss of securities that have been in a continuous unrealized loss position for 12 months or less and a continuous loss position for 12 months and longer. There are 16 and 26 securities that are temporarily impaired for less than 12 months and for 12 months or longer, respectively, out of a total of 249 holdings at December 31 , 2017.

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| Temporarily Impaired Investments | December 31, 2017 |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Less Tha air Value | M | ized <br> es |  | 12 Mont | or | $\begin{aligned} & \text { r } \\ & \text { lized } \\ & \text { es } \end{aligned}$ | Fair Value |  | Unrealized Losses |  |
| (dollars in thousands) |  |  |  |  |  |  |  |  |  |  |  |  |
| U.S. Treasury | \$ | 1,984 | \$ | 15 | \$ | - | \$ | - | \$ | 1,984 | \$ | 15 |
| U.S. Government Sponsored Enterprises |  | - |  | - |  | - |  | - |  | - |  | - |
| SBA Backed Securities |  | 18,378 |  | 54 |  | 40,911 |  | 107 |  | 59,289 |  | 161 |
| U.S. Government Agency and Sponsored Enterprise <br> Mortgage-Backed Securities |  | 40,394 |  | 123 |  | 59,336 |  | 194 |  | 99,730 |  | 317 |
| Privately Issued Residential Mortgage-Backed Securities |  | - |  | - |  | 633 |  | 9 |  | 633 |  | 9 |
| Obligations Issued by States and Political Subdivisions |  | - |  | - |  | 4,458 |  | 249 |  | 4,458 |  | 249 |
| Other Debt Securities |  | 400 |  | 1 |  | 461 |  | 38 |  | 861 |  | 39 |
| Total temporarily impaired securities | \$ | 61,156 | \$ | 193 | \$ | 105,799 | \$ | 597 | \$ | 166,955 | \$ | 790 |

4. Investment Securities Held-to-Maturity

|  | December 31, 2018 |  |  |  | December 31, 2017 |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Amortized Cost | Gross Unrealized Gains | Gross Unrealized Losses | Estimated Fair Value | Amortized Cost | Gross Unrealized Gains | Gross Unrealized Losses | Estimated Fair Value |
| (dollars in thousands) |  |  |  |  |  |  |  |  |
| U.S. Treasury | \$ 9,960 | \$ | \$ 2 | \$ 9,958 | \$ | \$ | \$ | \$ |
| U.S. Government Sponsored Enterprises | 234,228 | 336 | 803 | 233,761 | 104,653 | 341 | 472 | 104,522 |
| SBA Backed Securities | 52,051 | - | 2,065 | 49,986 | 57,235 | 20 | 1,271 | 55,984 |
| U.S. Government Sponsored Enterprises |  |  |  |  |  |  |  |  |
| Mortgage-Backed Securities | 1,750,408 | 2,324 | 55,016 | 1,697,716 | 1,539,345 | 2,261 | 33,285 | 1,508,321 |
| Total | \$ 2,046,647 | \$ 2,660 | \$ 57,886 | \$ 1,991,421 | \$ 1,701,233 | \$ 2,622 | \$ 35,028 | \$ 1,668,827 |

Included in U.S. Government Sponsored Enterprises and U.S. Government Sponsored Enterprise Mortgage-Backed Securities are securities pledged to secure public deposits and repurchase agreements at fair value amounting to $\$ 1,441,059,000$ and $\$ 1,262,708,000$ at December 31, 2018, and 2017, respectively. Also included are securities pledged for borrowing at the Federal Home Loan Bank at fair value amounting to \$291,190,000 and \$382,120,000 at December 31, 2018, and 2017, respectively. The Company did not realize any gains of sales of securities for the year ending December 31, 2018, and 2017. The sales from securities held-to-maturity relate to certain mortgage-backed securities for which the Company had previously collected a substantial portion of its principal investment. The Company realized gains on sales of securities of $\$ 12,000$ from the proceeds of sales of held-to-maturity securities of $\$ 192,000$ for the year ending December 31, 2016.

At December 31, 2018 and 2017, all mortgage-backed securities are obligations of U.S. Government Sponsored Enterprises. Government Sponsored Enterprises primarily refer to debt securities of Fannie Mae and Freddie Mac.

The following table shows the maturity distribution of the Company's securities held-to-maturity at December 31, 2018.

|  | Amortized <br> Cost | Fair <br> Value |
| :--- | ---: | ---: | ---: |
| (dollars in thousands) |  |  |
| Within one year | $\$ 41,154$ | $\$ 41,013$ |
| After one but within five years | $1,490,954$ | $1,454,543$ |
| After five but within ten years | 506,654 | 488,129 |
| More than ten years | 7,885 | 7,736 |
|  | $\$ 2,046,647$ | $\$ 1,991,421$ |

The weighted average remaining life of investment securities held-to-maturity at December 31, 2018, was 4.3 years. Included in the weighted average remaining life calculation at December 31, 2018, were $\$ 149,156,000$ of U.S. Government Sponsored Enterprises obligations that are callable at the discretion of the issuer. The contractual maturities, which were used in the table above, of mortgage-backed securities, will differ from the actual maturities due to the ability of the issuers to prepay underlying obligations. Also, $\$ 124,000$ of the securities are floating rate or adjustable rate and reprice prior to maturity.

As of December 31, 2018 and December 31, 2017, management concluded that the unrealized losses of its investment securities are temporary in nature since they are not related to the underlying credit quality of the issuers, and the Company does not intend to sell these debt securities and it is not more likely than not that it will be required to sell these debt securities before the anticipated recovery of their remaining amortized costs. In making its other-than-temporary impairment evaluation, the Company considered the fact that the principal and interest on these securities are from issuers that are investment grade.

The unrealized loss on U.S. Government Sponsored Enterprises, SBA Backed Securities and U.S. Government Sponsored Enterprises Mortgage-Backed Securities related primarily to interest rates and not credit quality, and because the Company does not intend to sell any of these securities and it is not more likely than not that it will be required to sell these securities before the anticipated recovery of the remaining amortized cost, the Company does not consider these investments to be other-thantemporarily impaired at December 31, 2018 and December 31, 2017.

In evaluating the underlying credit quality of a security, management considers several factors such as the credit rating of the obligor and the issuer, if applicable. Internal reviews of issuer financial statements are performed as deemed necessary.

The following table shows the temporarily impaired securities of the Company's held-to-maturity portfolio at December 31, 2018. This table shows the unrealized market loss of securities that have been in a continuous unrealized loss position for 12 months or less and a continuous loss position for 12 months and longer. There are 56 and 315 securities that are temporarily impaired for less than 12 months and for 12 months or longer, respectively, out of a total of 475 holdings at December 31 , 2018.

| Temporarily Impaired Investments |  |  |
| :--- | ---: | :--- | :--- | :--- |

The following table shows the temporarily impaired securities of the Company's held-to-maturity portfolio at December 31, 2017. This table shows the unrealized market loss of securities that have been in a continuous unrealized loss position for 12 months or less and a continuous loss position for 12 months and longer. There are 117 and 168 securities that are temporarily impaired for less than 12 months and for 12 months or longer, respectively, out of a total of 404 holdings at December 31 , 2017.

| Temporarily Impaired Investments | December 31, 2017 |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Less Tha <br> Fair Value | U | nths ealized sses |  | 12 Mon <br> Fair Value | L | nger <br> nrealized Losses | Fair Value | UnrealizedLosses |  |
| (dollars in thousands) |  |  |  |  |  |  |  |  |  |  |
| U.S. Government Sponsored Enterprises | \$ 15,257 | \$ | 239 | \$ | 14,768 | \$ | 233 | \$ 30,025 |  | 472 |
| SBA Backed Securities | 19,457 |  | 142 |  | 33,750 |  | 1,129 | 53,207 |  | 1,271 |
| U.S. Government Agency and Sponsored Enterprise |  |  |  |  |  |  |  |  |  |  |
| Mortgage-Backed Securities | 519,481 |  | 5,920 |  | 814,712 |  | 27,365 | 1,334,193 |  | 33,285 |
| Total temporarily impaired securities | \$ 554,195 | \$ | 6,301 | \$ | 863,230 | \$ | 28,727 | \$ 1,417,425 | \$ | 35,028 |

5. Loans

The majority of the Bank's lending activities are conducted in Massachusetts with other lending activity principally in New Hampshire, Rhode Island, Connecticut and New York. The Bank originates construction, commercial and residential real estate loans, commercial and industrial loans, municipal loans, consumer, home equity and other loans for its portfolio.

The following summary shows the composition of the loan portfolio at the dates indicated.

| December 31, | 2018 | 2017 |  |
| :--- | ---: | ---: | ---: |
| (dollars in thousands) |  |  |  |
| Construction and land development | $\$$ | 13,628 | $\$$ |
| Commercial and industrial | 761,625 | 18,931 |  |
| Municipal | 97,290 | 763,807 |  |
| Commercial real estate | 750,362 | 106,599 |  |
| Residential real estate | 348,250 | 732,491 |  |
| Consumer | 21,359 | 287,731 |  |
| Home equity | 292,340 | 18,458 |  |
| Overdrafts | 724 | 247,345 |  |
| Total | $\$ 2,285,578$ | 582 |  |

At December 31, 2018, and December 31, 2017, loans were carried net of (premiums) discounts of $\$(364,000)$ and $\$ 46,000$, respectively. Net deferred fees included in loans at December 31, 2018, and December 31, 2017, were $\$ 496,000$ and $\$ 588,000$, respectively.
The Company was servicing mortgage loans sold to others without recourse of approximately $\$ 209,160,000$ and $\$ 229,533,000$ at December 31, 2018, and December 31, 2017, respectively. The Company had no residential real estate loans held for sale at December 31, 2018 and December 31, 2017. The Company's mortgage servicing rights totaled $\$ 1,226,000$ and $\$ 1,525,000$ at December 31, 2018 and December 31, 2017, respectively.
As of December 31, 2018 and 2017, the Company's recorded investment in impaired loans was $\$ 3,051,000$ and $\$ 7,114,000$, respectively. If an impaired loan is placed on nonaccrual, the loan may be returned to an accrual status when principal and interest payments are not delinquent and the risk characteristics have improved to the extent that there no longer exists a concern as to the collectibility of principal and interest. At December 31, 2018, there were $\$ 2,774,000$ impaired loans with specific reserves of $\$ 145,000$. At December 31, 2017, there were $\$ 6,581,000$ impaired loans with specific reserves of $\$ 164,000$.

Loans are designated as troubled debt restructures when a concession is made on a credit as a result of financial difficulties of the borrower. Typically, such concessions consist of a reduction in interest rate to a below-market rate, taking into account the credit quality of the note, or a deferment of payments, principal or interest, which materially alters the Bank's position or significantly extends the note's maturity date, such that the present value of cash flows to be received is materially less than those contractually established at the loan's origination. Restructured loans are included in the impaired loan category.

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The composition of nonaccrual loans and impaired loans is as follows:

| December 31, | 2018 | 2017 | 2016 |
| :---: | :---: | :---: | :---: |
| (dollars in thousands) |  |  |  |
| Loans on nonaccrual | \$ 1,313 | \$ 1,684 | \$ 1,084 |
| Loans 90 days past due and still accruing | - | - | - |
| Impaired loans on nonaccrual included above | 296 | 254 | 304 |
| Total recorded investment in impaired loans | 3,051 | 7,114 | 3,830 |
| Average recorded investment of impaired loans | 5,491 | 5,608 | 3,661 |
| Accruing troubled debt restructures | 2,559 | 2,749 | 3,526 |
| Interest income not recorded on nonaccrual loans according to their original terms | 64 | 51 | 37 |
| Interest income on nonaccrual loans actually recorded | - | - | - |
| Interest income recognized on impaired loans | 196 | 182 | 140 |

Directors and officers of the Company and their associates are customers of, and have other transactions with, the Company in the normal course of business. All loans and commitments included in such transactions 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 normal risk of collection or present other unfavorable features.

The following table shows the aggregate amount of loans to directors and officers of the Company and their associates during 2018.

| Balance at <br> December 31, 2017 | Additions | Repayments <br> and Deletions | Balance at <br> December 31, 2018 |
| :---: | :---: | :---: | :---: |
| (dollars in thousands) <br> $\$ 5,825$ | $\$ 7,800$ | $\$ 1,078$ | $\$ 12,547$ |

6. Allowance for Loan Losses

The Company maintains an allowance for loan losses in an amount determined by management on the basis of the character of the loans, loan performance, financial condition of borrowers, the value of collateral securing loans and other relevant factors. The following table summarizes the changes in the Company's allowance for loan losses for the years indicated.

An analysis of the allowance for loan losses for each of the three years ending December 31, 2018, 2017 and 2016 is as follows:

|  | 2018 | 2017 | 2016 |
| :---: | :---: | :---: | :---: |
| (dollars in thousands) |  |  |  |
| Allowance for loan losses, beginning of year | \$ 26,255 | \$ 24,406 | \$ 23,075 |
| Loans charged-off | (833) | (390) | (389) |
| Recoveries on loans previously charged-off | 1,771 | 449 | 434 |
| Net recoveries (charge-offs) | 938 | 59 | 45 |
| Provision charged to expense | 1,350 | 1,790 | 1,375 |
| Reclassification to other liabilities* | - | - | (89) |
| Allowance for loan losses, end of year | \$ 28,543 | \$ 26,255 | \$ 24,406 |

* The reclassification relates to allowance for loan losses allocations on unused commitments that have been reclassified to other liabilities.

Further information pertaining to the allowance for loan losses at December 31, 2018 follows:

|  |  | struction nd Land elopment |  | mmercial and ndustrial | Municipal |  | Commercial Real Estate |  | Residential Real Estate |  | Consumer |  | Home Equity |  | Unallocated |  | Total |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (dollars in thousands) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Allowance for Loan Losses: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Balance at December 31, 2017 | \$ | 1,645 | \$ | 9,651 | \$ | 1,720 | \$ | 9,728 | \$ | 1,873 | \$ | 373 | \$ | 989 |  | 276 | \$ | 26,255 |
| Charge-offs |  | - |  | (67) |  | - |  | - |  | (450) |  | (316) |  | - |  | - |  | (833) |
| Recoveries |  | 1,436 |  | 57 |  | - |  | - |  | 75 |  | 203 |  | - |  | - |  | 1,771 |
| Provision |  | $(1,989)$ |  | 1,357 |  | 118 |  | 935 |  | 692 |  | 105 |  | 122 |  | 10 |  | 1,350 |
| Ending balance at December 31, 2018 | \$ | 1,092 | \$ | 10,998 | \$ | 1,838 | \$ | 10,663 | \$ | 2,190 | \$ | 365 | \$ | 1,111 |  | 286 | \$ | 28,543 |
| Amount of allowance for loan losses for loans deemed to be impaired | \$ | - | \$ | 54 | \$ | - | \$ | 91 | \$ | - | \$ | - | \$ | - | \$ |  | \$ | 145 |
| Amount of allowance for loan losses for loans not deemed to be impaired | \$ | 1,092 | \$ | 10,944 | \$ | 1,838 | \$ | 10,572 | \$ | 2,190 | \$ | 365 | \$ | 1,111 |  | 286 | \$ | 28,398 |
| Loans: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Ending balance | \$ | 13,628 |  | 761,625 | \$ | 97,290 | \$ | 750,362 |  | 348,250 | \$ | 22,083 |  | 92,340 | \$ | - |  | 285,578 |
| Loans deemed to be impaired | \$ | - | \$ | 401 | \$ | - | \$ | 2,650 | \$ | - | \$ | - | \$ | - | \$ | - | \$ | 3,051 |
| Loans not deemed to be impaired |  | 13,628 |  | 761,224 | \$ | 97,290 | \$ | 747,712 |  | 348,250 |  | 22,083 |  | 92,340 | \$ |  |  | 282,527 |

Further information pertaining to the allowance for loan losses at December 31, 2017 follows:

|  |  | nstruction nd Land velopment |  | mmercial <br> and ndustrial |  | unicipal |  | mmercial eal Estate | Residential Real Estate |  | Consumer |  | Home Equity |  | Unallocated |  | Total |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (dollars in thousands) |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Allowance for Loan Losses: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Balance at December 31, 2016 | \$ | 1,012 | \$ | 6,972 | \$ | 1,612 | \$ | 11,135 | \$ | 1,698 | \$ | 582 | \$ | 1,102 |  | 293 | \$ | 24,406 |
| Charge-offs |  | - |  | (49) |  | - |  | - |  | - |  | (341) |  | - |  | - |  | (390) |
| Recoveries |  | - |  | 110 |  | - |  | - |  | 2 |  | 255 |  | 82 |  | - |  | 449 |
| Provision |  | 633 |  | 2,618 |  | 108 |  | $(1,407)$ |  | 173 |  | (123) |  | (195) |  | (17) |  | 1,790 |
| Ending balance at December 31, 2017 | \$ | 1,645 | \$ | 9,651 | \$ | 1,720 | \$ | 9,728 | \$ | 1,873 | \$ | 373 | \$ | 989 |  | 276 | \$ | 26,255 |
| Amount of allowance for loan losses for loans deemed to be impaired | \$ | - | \$ | 7 | \$ | - | \$ | 99 | \$ | 58 | \$ | - | \$ | - | \$ |  | \$ | 164 |
| Amount of allowance for loan losses for loans not deemed to be impaired | \$ | 1,645 | \$ | 9,644 | \$ | 1,720 | \$ | 9,629 | \$ | 1,815 | \$ | 373 | \$ | 989 |  | 276 | \$ | 26,091 |
| Loans: |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Ending balance | \$ | 18,931 | \$ | 763,807 |  | 06,599 | \$ | 732,491 | \$ | 287,731 | \$ | 19,040 |  | 47,345 | \$ |  |  | 175,944 |
| Loans deemed to be impaired | \$ | - | \$ | 348 | \$ | - | \$ | 2,554 | \$ | 4,212 | \$ | - | \$ | - | \$ | - | \$ | 7,114 |
| Loans not deemed to be impaired |  | 18,931 |  | 763,459 |  | 06,599 |  | 729,937 |  | 283,519 |  | 19,040 |  | 47,345 | \$ |  |  | 168,830 |

## CREDIT QUALITY INFORMATION

The Company utilizes a six-grade internal loan rating system for commercial real estate, construction and commercial loans as follows:
Loans rated 1-3 (Pass) - Loans in this category are considered "pass" rated loans with low to average risk.
Loans rated 4 (Monitor) - These loans represent classified loans that management is closely monitoring for credit quality. These loans have had or may have minor credit quality deterioration as of December 31, 2018.

Loans rated 5 (Substandard) - Substandard loans represent classified loans that management is closely monitoring for credit quality. These loans have had more significant credit quality deterioration as of December 31, 2018.

Loans rated 6 (Doubtful) - Doubtful loans represent classified loans that management is closely monitoring for credit quality. These loans had more significant credit quality deterioration as of December 31, 2018, and are doubtful for full collection.

Impaired - Impaired loans represent classified loans that management is closely monitoring for credit quality. A loan is classified as impaired when it is probable that the Company will be unable to collect all amounts due.

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

|  | Construction and Land Development |  | Commercial and Industrial | Municipal |  | Commercial Real Estate |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (dollars in thousands) |  |  |  |  |  |  |
| Grade: |  |  |  |  |  |  |
| 1-3 (Pass) | \$ | 13,628 | \$ 757,089 | \$ | 97,290 | \$ 723,170 |
| 4 (Monitor) |  | - | 4,135 |  | - | 24,542 |
| 5 (Substandard) |  | - | - |  | - | - |
| 6 (Doubtful) |  | - | - |  | - | - |
| Impaired |  | - | 401 |  | - | 2,650 |
| Total | \$ | 13,628 | \$ 761,625 | \$ | 97,290 | \$ 750,362 |

The Company has increased its exposure to larger loans to large institutions with publicly available credit ratings. These ratings are tracked as a credit quality indicator for these loans.

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The following table presents the Company's loans by credit rating at December 31, 2018.

|  | Commercial <br> and <br> Industrial |  |  | Commercial <br> Municipal | Total |  |
| :--- | ---: | ---: | ---: | ---: | ---: | ---: |
| (dollars in thousands) |  |  |  |  |  |  |
| Credit Rating: | $\$ 491,247$ | $\$ 54,105$ | $\$ 42,790$ | $\$$ | 588,142 |  |
| Aaa-Aa3 | 172,472 | 7,605 | 151,381 | 331,458 |  |  |
| A1-A3 | - | 26,970 | 118,197 | 145,167 |  |  |
| Baa1-Baa3 | - | 6,810 | - | 6,810 |  |  |
| Ba2 | $\underline{\$ 663,719}$ | $\$ 95,490$ | $\$ 312,368$ | $\$ 1,071,577$ |  |  |
| Total |  |  |  |  |  |  |

The following table presents the Company's loans by risk rating at December 31, 2017.

|  | Construction <br> and Land <br> Development | Commercial <br> and <br> Industrial | Municipal |  |  |
| :--- | ---: | ---: | ---: | ---: | ---: |
| Commercial |  |  |  |  |  |
| Real Estate |  |  |  |  |  |

The following table presents the Company's loans by credit rating at December 31, 2017.
$\left.\begin{array}{lrrrrrr} & \begin{array}{c}\text { Commercial } \\ \text { and } \\ \text { Industrial }\end{array} & & & \begin{array}{c}\text { Commercial } \\ \text { Real Estate }\end{array} & \text { Total } \\ \text { Municipal }\end{array}\right]$

The Company utilized payment performance as credit quality indicators for residential real estate, consumer and overdrafts, and the home equity portfolio. The indicators are depicted in the table "aging of past-due loans," below.

## AGING OF PAST-DUE LOANS

At December 31, 2018 the aging of past due loans are as follows:

|  | $\begin{aligned} & \text { Accruing } \\ & \text { 30-89 Days } \\ & \text { Past Due } \end{aligned}$ |  | Non Accrual |  | uing <br> ater <br> an <br> Days |  | Total Past Due |  | Current Loans |  | Total |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (dollars in thousands) |  |  |  |  |  |  |  |  |  |  |  |
| Construction and land development | \$ | \$ | \$ - | \$ | - | \$ | \$ - | \$ | 13,628 | \$ | 13,628 |
| Commercial and industrial | 187 |  | 115 |  | - |  | 302 |  | 761,323 |  | 761,625 |
| Municipal | - |  | - |  | - |  | - |  | 97,290 |  | 97,290 |
| Commercial real estate | 774 |  | 190 |  | - |  | 964 |  | 749,398 |  | 750,362 |
| Residential real estate | 2,554 |  | 569 |  | - |  | 3,123 |  | 345,127 |  | 348,250 |
| Consumer and overdrafts | 24 |  | 14 |  | - |  | 38 |  | 22,045 |  | 22,083 |
| Home equity | 1,108 |  | 425 |  | - |  | 1,533 |  | 290,807 |  | 292,340 |
| Total | \$ 4,647 |  | 1,313 | \$ | - |  | 5,960 |  | 2,279,618 |  | ,285,578 |

At December 31, 2017 the aging of past due loans are as follows:

|  | $\begin{aligned} & \text { Accruing } \\ & \text { 30-89 Days } \\ & \text { Past Due } \end{aligned}$ | Non Accrual |  | Accruing Greater Than 90 Days |  |  | Total t Due | Current Loans |  | Total |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (dollars in thousands) |  |  |  |  |  |  |  |  |  |  |  |
| Construction and land development | \$ - | \$ | - | \$ | - | \$ | - | \$ | 18,931 | \$ | 18,931 |
| Commercial and industrial | 65 |  | 44 |  | - |  | 109 |  | 763,698 |  | 763,807 |
| Municipal | - |  | - |  | - |  | - |  | 106,599 |  | 106,599 |
| Commercial real estate | 672 |  | 215 |  | - |  | 887 |  | 731,604 |  | 732,491 |
| Residential real estate | 4,282 |  | 724 |  | - |  | 5,006 |  | 282,725 |  | 287,731 |
| Consumer and overdrafts | 5 |  | 6 |  | - |  | 11 |  | 19,029 |  | 19,040 |
| Home equity | 618 |  | 695 |  | - |  | 1,313 |  | 246,032 |  | 247,345 |
| Total | \$ 5,642 |  | 1,684 | \$ | - |  | 7,326 |  | ,168,618 |  | 175,944 |

## IMPAIRED LOANS

A loan is impaired when, based on current information and events, it is probable that a creditor will be unable to collect all amounts due according to the contractual terms of the loan agreement. When a loan is impaired, the Company measures impairment based on the present value of expected future cash flows discounted at the loan's effective interest rate, except that as a practical expedient, the Company measures impairment based on a loan's observable market price or the fair value of the collateral if the loan is collateral dependent. Loans are charged-off when management believes that the collectibility of the loan's principal is not probable. The specific factors that management considers in making the determination that the collectibility of the loan's principal is not probable include; the delinquency status of the loan, the fair value of the collateral, if secured, and the financial strength of the borrower and/or guarantors. For collateral dependent loans, the amount of the recorded investment in a loan that exceeds the fair value of the collateral is charged-off against the allowance for loan losses in lieu of an allocation of a specific allowance amount when such an amount has been identified definitively as uncollectible. The Company's policy for recognizing interest income on impaired loans is contained within Note 1 of the "Notes to Consolidated Financial Statements."

The following is information pertaining to impaired loans at December 31, 2018:

|  | Carrying Value |  | Unpaid Balance Principal |  | Required Reserve |  | Average Carrying Value Recognized |  | Interest Income |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (dollars in thousands) |  |  |  |  |  |  |  |  |  |  |
| With no required reserve recorded: |  |  |  |  |  |  |  |  |  |  |
| Construction and land development |  | - | \$ | - | \$ | - | \$ | - | \$ | - |
| Commercial and industrial |  | 87 |  | 291 |  | - |  | 46 |  | 5 |
| Municipal |  | - |  | - |  | - |  | - |  | - |
| Commercial real estate |  | 189 |  | 212 |  | - |  | 249 |  | - |
| Residential real estate |  | - |  | - |  | - |  | - |  | - |
| Consumer |  | - |  | - |  | - |  | - |  | - |
| Home equity |  | - |  | - |  | - |  | - |  | - |
| Total |  | 276 | \$ | 503 | \$ | - | \$ | 295 | \$ | 5 |
| With required reserve recorded: |  |  |  |  |  |  |  |  |  |  |
| Construction and land development |  | - | \$ | - | \$ | - | \$ | - | \$ | - |
| Commercial and industrial |  | 314 |  | 315 |  | 54 |  | 462 |  | 13 |
| Municipal |  | - |  | - |  | - |  | - |  | - |
| Commercial real estate |  | 2,461 |  | 2,575 |  | 91 |  | 2,322 |  | 97 |
| Residential real estate |  | - |  | - |  | - |  | 2,412 |  | 81 |
| Consumer |  | - |  | - |  | - |  | - |  | - |
| Home equity |  | - |  | - |  | - |  | - |  | - |
| Total |  | 2,775 |  | 2,890 | \$ | 145 | \$ | 5,196 | \$ | 191 |
| Total |  |  |  |  |  |  |  |  |  |  |
| Construction and land development |  | - | \$ | - | \$ | - | \$ | - | \$ | - |
| Commercial and industrial |  | 401 |  | 606 |  | 54 |  | 508 |  | 18 |
| Municipal |  | - |  | - |  | - |  | - |  | - |
| Commercial real estate |  | 2,650 |  | 2,787 |  | 91 |  | 2,571 |  | 97 |
| Residential real estate |  | - |  | - |  | - |  | 2,412 |  | 81 |
| Consumer |  | - |  | - |  | - |  | - |  | - |
| Home equity |  | - |  | - |  | - |  | - |  | - |
| Total |  | 3,051 |  | 3,393 | \$ | 145 | \$ | 5,491 | \$ | 196 |

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The following is information pertaining to impaired loans at December 31, 2017:

|  | Carrying Value |  | Unpaid Balance Principal |  | Required Reserve |  | Average Carrying Value Recognized |  | Interest Income |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (dollars in thousands) |  |  |  |  |  |  |  |  |  |  |
| With no required reserve recorded: |  |  |  |  |  |  |  |  |  |  |
| Construction and land development | \$ | \$ - | \$ | - | \$ | - | \$ | - | \$ | - |
| Commercial and industrial |  | 113 |  | 325 |  | - |  | 54 |  | 4 |
| Municipal |  | - |  | - |  | - |  | - |  | - |
| Commercial real estate |  | 420 |  | 548 |  | - |  | 286 |  | 21 |
| Residential real estate |  | - |  | - |  | - |  | 73 |  | - |
| Consumer |  | - |  | - |  | - |  | - |  | - |
| Home equity |  | - |  | - |  | - |  | - |  | - |
| Total |  | 533 | \$ | 873 | \$ | - | \$ | 413 | \$ | 25 |
| With required reserve recorded: |  |  |  |  |  |  |  |  |  |  |
| Construction and land development | \$ | \$ - | \$ | - | \$ | - | \$ | 43 | \$ | - |
| Commercial and industrial |  | 235 |  | 235 |  | 7 |  | 318 |  | 12 |
| Municipal |  | - |  | - |  | - |  | - |  | - |
| Commercial real estate |  | 2,134 |  | 2,135 |  | 99 |  | 2,501 |  | 72 |
| Residential real estate |  | 4,212 |  | 4,212 |  | 58 |  | 2,333 |  | 73 |
| Consumer |  | - |  | - |  | - |  | - |  | - |
| Home equity |  | - |  | - |  | - |  | - |  | - |
| Total |  | 6,581 | \$ | 6,582 | \$ | 164 | \$ | 5,195 | \$ | 157 |
| Total |  |  |  |  |  |  |  |  |  |  |
| Construction and land development | \$ | \$ - | \$ | - | \$ | - | \$ | 43 | \$ | - |
| Commercial and industrial |  | 348 |  | 560 |  | 7 |  | 372 |  | 16 |
| Municipal |  | - |  | - |  | - |  | - |  | - |
| Commercial real estate |  | 2,554 |  | 2,683 |  | 99 |  | 2,787 |  | 93 |
| Residential real estate |  | 4,212 |  | 4,212 |  | 58 |  | 2,406 |  | 73 |
| Consumer |  | - |  | - |  | - |  | - |  | - |
| Home equity |  | - |  | - |  | - |  | - |  | - |
| Total |  | 7,114 | \$ | 7,455 | \$ | 164 | \$ | 5,608 | \$ | 182 |

Troubled Debt Restructurings are identified as a modification in which a concession was granted to a customer who was having financial difficulties. This concession may be below market rate, longer amortization/term, or a lower payment amount. The present value calculation of the modification did not result in an increase in the allowance for these loans beyond any previously established allocations.

There was one residential real estate loan and one consumer loan that were modified during the first quarter of 2018. The loans were modified by reducing the interest rates as well as extending the terms on both loans. The pre-modification and post-modification outstanding recorded investment was $\$ 2,675,000$ for the residential real estate loan that was not accruing interest. The pre-modification and post-modification outstanding recorded investment was $\$ 17,000$ for the consumer loan that was accruing interest. The financial impact for the modifications was not material. Both troubled debt restructurings subsequently defaulted during 2018. The residential real estate loan was partially charged off for $\$ 450,000$ and was recorded as other real estate owned for $\$ 2,225,000$ during the fourth quarter of 2018 . Other real estate owned is included in other assets on the balance sheet. The consumer loan was fully charged off during the fourth quarter of 2018.

There were no troubled debt restructurings occurring during the year ended December 31, 2017. There were no troubled debt restructurings that subsequently defaulted during 2017.
7. Bank Premises and Equipment
December 31,
(dollars in thousands)
Land
Bank premises
Furniture and equipment
Leasehold improvements

Accumulated depreciation and amortization
Total

The Company is obligated under a number of non-cancelable operating leases for premises and equipment expiring in various years through 2028. Total lease expense approximated $\$ 2,601,000, \$ 2,608,000$ and $\$ 2,834,000$ for the years ended December 31, 2018, 2017 and 2016, respectively. Included in lease expense are amounts paid to a company affiliated with Marshall M. Sloane, Chairman of the Board, amounting to $\$ 444,000, \$ 439,000$ and $\$ 424,000$, respectively. Rental income approximated $\$ 373,000, \$ 321,000$ and $\$ 318,000$ in 2018, 2017 and 2016, respectively. Depreciation and amortization amounted to $\$ 3,206,000, \$ 3,135,000$ and $\$ 2,952,000$ at December 31, 2018, 2017 and 2016 respectively.

Future minimum rental commitments for non-cancelable operating leases with initial or remaining terms of one year or more at December 31, 2018, were as follows:

| (dollars in thousands) | Year | Amount |
| :--- | ---: | ---: | ---: |
| 2019 | $\$ \quad 2,490$ |  |
| 2020 | 2,170 |  |
| 2021 | 1,694 |  |
| 2022 | 1,331 |  |
| 2023 | 1,104 |  |
| Thereafter | 1,074 |  |

8. Goodwill and Identifiable Intangible Assets

At December 31, 2018 and 2017, the Company concluded that it is not more likely than not that fair value of the reporting unit is less than its carrying value, and goodwill is not considered to be impaired.
The changes in goodwill and identifiable intangible assets for the years ended December 31, 2018 and 2017 are shown in the table below.
Mortgage

| Carrying Amount of Goodwill and Intangibles | Goodwill |  | Servicing Rights |  | Total |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (dollars in thousands) |  |  |  |  |  |  |
| Balance at December 31, 2016 | \$ | 2,714 | \$ | 1,629 | \$ | 4,343 |
| Additions |  | - |  | 276 |  | 276 |
| Amortization Expense |  | - |  | (380) |  | (380) |
| Balance at December 31, 2017 |  | 2,714 |  | 1,525 | \$ | 4,239 |
| Additions |  | - |  | - |  | - |
| Amortization Expense |  | - |  | (299) |  | (299) |
| Balance at December 31, 2018 |  | 2,714 |  | 1,226 | \$ | 3,940 |

9. Fair Value Measurements

The Company follows FASB ASC 820-10, Fair Value Measurements and Disclosures, which among other things, requires enhanced disclosures about assets and liabilities carried at fair value. ASC 820-10 establishes a hierarchal disclosure framework associated with the level of pricing observability utilized in measuring financial instruments at fair value. The three broad levels of the hierarchy are as follows:
Level I — Quoted prices are available in active markets for identical assets or liabilities as of the reported date. The type of financial instruments included in Level I are highly liquid cash instruments with quoted prices such as G-7 government, agency securities, listed equities and money market securities, as well as listed derivative instruments.

Level II - Pricing inputs are other than quoted prices in active markets, which are either directly or indirectly observable as of the reported date. The nature of these financial instruments include cash instruments for which quoted prices are available but traded less frequently, derivative instruments whose fair value have been derived using a model where inputs to the model are directly observable in the market, or can be derived principally from or corroborated by observable market data, and instruments that are fair valued using other financial instruments, the parameters of which can be directly observed. Instruments which are generally included in this category are corporate bonds and loans, mortgage whole loans, municipal bonds and OTC derivatives.

Level III - These instruments have little to no pricing observability as of the reported date. These financial instruments do not have two-way markets and are measured using management's best estimate of fair value, where the inputs into the determination of fair value require significant management judgment or estimation. Instruments that are included in this category generally include certain commercial mortgage loans, certain private equity investments, distressed debt, non-investment grade residual interests in securitizations, as well as certain highly structured OTC derivative contracts.

The results of the fair value hierarchy as of December 31, 2018, are as follows:

|  | Carrying Value |  | Fair Value Measurements Using |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Quoted Prices in Active Markets for Identical Assets (Level 1) |  | Significant Observable Inputs (Level 2) |  | Significant Other Unobservable Inputs (Level 3) |  |
| (dollars in thousands) |  |  |  |  |  |  |  |  |
| Financial Instruments Measured at Fair Value on a Recurring Basis - Securities AFS |  |  |  |  |  |  |  |  |
| U.S. Treasury | \$ | 1,992 | \$ | - | \$ | 1,992 | \$ | - |
| U.S. Government Agency Sponsored Enterprises |  | 3,915 |  | - |  | 3,915 |  | - |
| SBA Backed Securities |  | 70,194 |  | - |  | 70,194 |  | - |
| U.S. Government Agency and Sponsored Enterprises Mortgage-Backed Securities |  | 162,890 |  | - |  | 162,890 |  | - |
| Privately Issued Residential Mortgage-Backed Securities |  | 672 |  | - |  | 672 |  | - |
| Obligations Issued by States and Political Subdivisions |  | 93,503 |  | - |  | 4,775 |  | 88,728 |
| Other Debt Securities |  | 3,593 |  | - |  | 3,593 |  | - |
| Total | \$ | 336,759 | \$ | - | \$ | 248,031 |  | 88,728 |
| Other Real Estate Owned | \$ | 2,225 | \$ | - | \$ | - | \$ | 2,225 |
| Financial Instruments Measured at Fair Value on a Recurring Basis |  |  |  |  |  |  |  |  |
| Equity Securities | \$ | 1,596 | \$ | 293 | \$ | 1,303 | \$ | - |
| Financial Instruments Measured at Fair Value on a Non-recurring Basis |  |  |  |  |  |  |  |  |
| Impaired Loans | \$ | 251 | \$ | - | \$ | - | \$ | 251 |

Impaired loan balances in the table above represent those collateral dependent loans where management has estimated the credit loss by comparing the loan's carrying value against the expected realizable fair value of the collateral. Fair value is generally determined through a review process that includes independent appraisals, discounted cash flows, or other external assessments of the underlying collateral, which generally include various Level 3 inputs which are not identifiable. The Company discounts the fair values, as appropriate, based on management's observations of the local real estate market for loans in this category.

Appraisals, discounted cash flows and real estate tax assessments are reviewed quarterly. There is no specific policy regarding how frequently appraisals will be updated. Adjustments are made to appraisals and real estate tax assessments based on management's estimate of changes in real estate values. Within the past twelve months there have been no updated appraisals, however, all impaired loans have been reviewed during the past quarter using either a discounted cash flow analysis or other type of real estate tax assessment. The types of adjustments that are made to specific provisions relate to impaired loans recognized for 2018 for the estimated credit loss amounted to \$540,000.

There was a transfer of an auction rate security during 2018 from level 3 to level 2. Quoted prices on the auction rate security became available but traded infrequently. There were no other transfers between level 1,2 and 3 for the year ended December 31, 2018. There were no liabilities measured at fair value on a recurring or nonrecurring basis during the year ended December 31, 2018.

The following table presents additional information about assets measured at fair value on a recurring and nonrecurring basis for which the Company has utilized Level 3 inputs to determine fair value (dollars in thousands) at December 31, 2018. Management continues to monitor the assumptions used to value the assets listed below.
Fair Value
Asset
Securities AFS
Other Real Estate Owned
(1)
Impaired Loans

The changes in Level 3 securities for the year ended December 31, 2018 are as shown in the table below:

|  | Auction Rate Securities | Obligations Issued by States and Political Subdivisions | Equity Securities | Total |
| :---: | :---: | :---: | :---: | :---: |
| (dollars in thousands) |  |  |  |  |
| Balance at December 31, 2017 | \$ 4,459 | \$ 78,141 | \$ - | \$ 82,600 |
| Purchases | - | 132,470 | - | 132,470 |
| Maturities/redemptions | - | $(121,753)$ | - | $(121,753)$ |
| Transfer to Level 2 | $(4,459)$ | - | - | $(4,459)$ |
| Amortization | - | (130) | - | (130) |
| Change in fair value | - | - | - | - |
| Balance at December 31, 2018 | \$ | \$ 88,728 | \$ - | \$ 88,728 |

The amortized cost of Level 3 securities was $\$ 88,728,000$ with an unrealized loss of $\$ 0$ at December 31, 2018. The securities in this category are generally municipal securities with no readily determinable fair value or failed auction rate securities. Management evaluated the fair value of these securities based on an evaluation of the underlying issuer, prevailing rates and market liquidity.

The results of the fair value hierarchy as of December 31, 2017, are as follows:

|  | Carrying Value |  | Fair Value Measurements Using |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Quoted Prices in Active Markets for Identical Assets (Level 1) |  | Significant Observable Inputs (Level 2) |  | Significant <br> Other Unobservable Inputs (Level 3) |  |
| (dollars in thousands) |  |  |  |  |  |  |  |  |
| Financial Instruments Measured at Fair Value on a Recurring Basis - Securities AFS |  |  |  |  |  |  |  |  |
| U.S. Treasury |  | \$ 1,984 | \$ | - | \$ | 1,984 | \$ | - |
| U.S. Government Agency Sponsored Enterprises |  | - |  | - |  | - |  | - |
| SBA Backed Securities |  | 80,950 |  | - |  | 80,950 |  | - |
| U.S. Government Agency and Sponsored Enterprises Mortgage-Backed Securities |  | 225,775 |  | - |  | 25,775 |  | - |
| Privately Issued Residential Mortgage-Backed Securities |  | 892 |  | - |  | 892 |  | - |
| Obligations Issued by States and Political Subdivisions |  | 82,600 |  | - |  | - |  | 600 |
| Other Debt Securities |  | 3,629 |  | - |  | 3,629 |  | - |
| Total |  | \$ 395,830 | \$ | - |  | 13,230 |  | 600 |
| Financial Instruments Measured at Fair Value on a Recurring Basis |  |  |  |  |  |  |  |  |
| Equity Securities |  | \$ 1,663 | \$ | 321 | \$ | 1,342 | \$ | - |
| Financial Instruments Measured at Fair Value on a Non-recurring Basis |  |  |  |  |  |  |  |  |
| Impaired Loans |  | \$ 246 | \$ | - | \$ | - | \$ | 246 |

Impaired loan balances in the table above represent those collateral dependent loans where management has estimated the credit loss by comparing the loan's carrying value against the expected realizable fair value of the collateral. Fair value is generally determined through a review process that includes independent appraisals, discounted cash flows, or other external assessments of the underlying collateral, which generally include various Level 3 inputs which are not identifiable. The Company discounts the fair values, as appropriate, based on management's observations of the local real estate market for loans in this category.

Appraisals, discounted cash flows and real estate tax assessments are reviewed quarterly. There is no specific policy regarding how frequently appraisals will be updated. Adjustments are made to appraisals and real estate tax assessments based on management's estimate of changes in real estate values. Within the past twelve months there have been no updated appraisals, however, all impaired loans have been reviewed during the past quarter using either a discounted cash flow analysis or other type of real estate tax assessment. The types of adjustments that are made to specific provisions relate to impaired loans recognized for 2017 for the estimated credit loss amounted to \$3,000.

There were no transfers between level 1, 2 and 3 for the year ended December 31, 2017. There were no liabilities measured at fair value on a recurring or nonrecurring basis during the year ended December 31, 2017.

## Notes to Consolidated Financial Statements

Century Bancorp, Inc. AR '18

The following table presents additional information about assets measured at fair value on a recurring and nonrecurring basis for which the Company has utilized Level 3 inputs to determine fair value (dollars in thousands) at December 31, 2017. Management continues to monitor the assumptions used to value the assets listed below.

|  |  |  | Unobservable Input |  |
| :--- | ---: | :--- | :--- | :--- |
| Asset | Fair Value | Valuation Technique | Unobservable Input | Value or Range |
| Securities AFS |  |  |  |  |

${ }^{(1)}$ Municipal securities generally have maturities of one year or less and, therefore, the amortized cost equates to the fair value.
${ }^{(2)}$ Weighted averages.
${ }^{(3)}$ Fair value is generally determined through independent appraisals of the underlying collateral, which generally include various Level 3 inputs which are not identifiable.
${ }^{(4)}$ Appraisals may be adjusted by management for qualitative factors such as economic conditions and estimated expenses.
The changes in Level 3 securities for the year ended December 31, 2017 are as shown in the table below:

|  | Auction Rate Securities | Obligations Issued by States and Political Subdivisions | Equity Securities | Total |
| :---: | :---: | :---: | :---: | :---: |
| (dollars in thousands) |  |  |  |  |
| Balance at December 31, 2016 | \$ 4,298 | \$ 160,578 | \$ - | \$ 164,876 |
| Purchases | - | 99,136 | - | 99,136 |
| Maturities/redemptions | - | $(181,394)$ | - | $(181,394)$ |
| Amortization | - | (179) | - | (179) |
| Change in fair value | 161 | - | - | 161 |
| Balance at December 31, 2017 | \$ 4,459 | \$ 78,141 | \$ - | \$ 82,600 |

The amortized cost of Level 3 securities was $\$ 82,849,000$ with an unrealized loss of $\$ 249,000$ at December 31, 2017. The securities in this category are generally municipal securities with no readily determinable fair value or failed auction rate securities. Management evaluated the fair value of these securities based on an evaluation of the underlying issuer, prevailing rates and market liquidity.
10. Deposits

The following is a summary of remaining maturities or re-pricing of time deposits as of December 31,

|  |  | 2018 | Percent |  | 2017 | Percent |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (dollars in thousands) |  |  |  |  |  |  |
| Within one year |  | 413,297 | 74 \% |  | 436,911 | 70 \% |
| Over one year to two years |  | 88,815 | 16 \% |  | 121,802 | 19 \% |
| Over two years to three years |  | 39,924 | 7 \% |  | 30,098 | 5 \% |
| Over three years to five years |  | 18,543 | 3 \% |  | 36,550 | 6 \% |
| Total |  | 560,579 | 100 \% |  | 625,361 | 100 \% |

Time deposits of more than $\$ 250,000$ totaled $\$ 293,046,000$ and $\$ 345,183,000$ in 2018 and 2017 , respectively. The decrease was mainly attributable to competitive market rates for these types of deposits.

Deposits totaling $\$ 36,794,000$ and $\$ 35,667,000$ were attributable to related parties at December 31, 2018 and December 31, 2017, respectively.
11. Securities Sold Under Agreements to Repurchase

The following is a summary of securities sold under agreements to repurchase as of December 31,

|  | 2018 | 2017 | 2016 |
| :--- | :---: | :---: | :---: |
| (dollars in thousands) |  |  |  |
| Amount outstanding at December 31 | $\$ 154,240$ | $\$ 158,990$ | $0.32 \%$ |
| Weighted average rate at December 31 | $0.82 \%$ | $\$ 228,848$ | $0.21 \%$ |
| Maximum amount outstanding at any month end | $\$ 174,150$ | $\$ 189,684$ | $\$ 241,110$ |
| Daily average balance outstanding during the year | $\$ 147,944$ | $0.26 \%$ | $\$ 222,956$ |
| Weighted average rate during the year | $0.66 \%$ | $0.21 \%$ |  |

Amounts outstanding at December 31, 2018, 2017 and 2016 carried maturity dates of the next business day. U.S. Government Sponsored Enterprise securities with a total amortized cost of $\$ 160,576,000, \$ 162,927,000$, and $\$ 183,829,000$ were pledged as collateral and held by custodians to secure the agreements at December 31 , 2018, 2017 and 2016, respectively. The approximate fair value of the collateral at those dates was $\$ 156,369,000, \$ 159,051,000$, and $\$ 182,074,000$, respectively.
12. Other Borrowed Funds and Subordinated Debentures

The following is a summary of other borrowed funds and subordinated debentures as of December 31,

|  | 2018 | 2017 | 2016 |
| :--- | :---: | :---: | :---: |
| (dollars in thousands) |  |  |  |
| Amount outstanding at December 31 | $\$ 238,461$ | $\$ 383,861$ | $\$ 329,083$ |
| Weighted average rate at December 31 | $2.76 \%$ | $2.26 \%$ | $2.39 \%$ |
| Maximum amount outstanding at any month end | $\$ 542,913$ | $\$ 491,583$ | $\$ 467,083$ |
| Daily average balance outstanding during the year | $\$ 291,674$ | $\$ 309,102$ | $\$ 357,974$ |
| Weighted average rate during the year | $2.61 \%$ | $2.42 \%$ | $2.48 \%$ |

## FEDERAL HOME LOAN BANK BORROWINGS

Federal Home Loan Bank of Boston ("FHLBB") borrowings are collateralized by a blanket pledge agreement on the Bank's FHLBB stock, certain qualified investment securities, deposits at the FHLBB and residential mortgages held in the Bank's portfolios. The Bank's remaining term borrowing capacity at the FHLBB at December 31, 2018, was approximately $\$ 508,861,000$. In addition, the Bank has a $\$ 14,500,000$ line of credit with the FHLBB. A schedule of the maturity distribution of FHLBB advances with the weighted average interest rates is as follows:

| December 31, | 2018 |  |  | 2017 |  |  | 2016 |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Amount |  | Weighted Average Rate | Amount |  | Weighted Average Rate | Amount |  | Weighted Average Rate |
| (dollars in thousands) |  |  |  |  |  |  |  |  |  |
| Within one year | \$ | 63,000 | 2.17 \% | \$ | 164,500 | 1.82 \% | \$ | 77,500 | 2.21 \% |
| Over one year to two years | \$ | 28,000 | 2.29 \% | \$ | 63,000 | 2.17 \% | \$ | 54,500 | 2.25 \% |
| Over two years to three years | \$ | 25,000 | 3.34 \% | \$ | 28,000 | 2.29 \% | \$ | 58,000 | 1.87 \% |
| Over three years to five years | \$ | 33,500 | 2.23 \% | \$ | 28,500 | 3.19 \% | \$ | 58,000 | 2.68 \% |
| Over five years | \$ | 52,878 | 2.47 \% | \$ | 63,778 | 2.38 \% | \$ | 45,000 | 2.85 \% |
| Total |  | 202,378 | 2.42 \% | \$ | 347,778 | 2.13 \% | \$ | 293,000 | 2.34 \% |

Included in the table above are $\$ 40,000,000, \$ 20,000,000$, and $\$ 45,000,000$, respectively, of FHLBB advances at December 31, 2018, 2017 and 2016, that are puttable at the discretion of FHLBB. These put dates were not utilized in the table above.

## SUBORDINATED DEBENTURES

Subordinated debentures totaled \$36,083,000 at December 31, 2018 and 2017.
In December 2004, the Company consummated the sale of a trust preferred securities offering, in which it issued $\$ 36,083,000$ of subordinated debt securities due 2034 to its newly formed unconsolidated subsidiary Century Bancorp Capital Trust II.

Century Bancorp Capital Trust II then issued 35,000 shares of Cumulative Trust Preferred Securities with a liquidation value of \$1,000 per share. These securities paid dividends at an annualized rate of $6.65 \%$ for the first ten years and then converted to the three-month LIBOR rate plus $1.87 \%$ for the remaining 20 years. The coupon rate on these securities was $4.66 \%$ at December 31, 2018 and $3.46 \%$ at December 31, 2017.

## OTHER BORROWED FUNDS

There were no overnight federal funds purchased at December 31, 2018 and 2017.
13. Reclassifications Out of Accumulated Other Comprehensive Income ${ }^{(2)}$

| Details About Accumulated Other Comprehensive Income Components | Amount Reclassified from Accumulated Other Comprehensive Income |  | Affected Line Item in the Statement Where Net Income is Presented |
| :---: | :---: | :---: | :---: |
|  | Year Ended December 31, $2018^{(\text {a) }}$ | Year Ended December 31, $2017^{(a)}$ |  |
| Unrealized gains and losses on available-for-sale securities | \$ 302 | \$ 47 | Net gains on sales of investments |
|  | (85) | (19) | Provision for income taxes |
|  | \$ 217 | \$ 28 | Net income |
| Accretion of unrealized losses transferred | \$ $(1,477)$ | \$ $(2,292)$ | Securities held-to-maturity |
|  | 391 | 1,258 | Provision for income taxes |
|  | \$ $(1,086)$ | \$ $(1,034)$ | Net income |
| Amortization of defined benefit pension items |  |  |  |
| Prior-service costs | \$ (14) | \$ (10) | Salaries and employee benefits ${ }^{(b)}$ |
| Actuarial gains (losses) | $(1,610)$ | $(1,540)$ | Salaries and employee benefits ${ }^{(b)}$ |
| Total before tax | $(1,624)$ | $(1,550)$ | Income before taxes |
| Tax (expense) or benefit | 457 | 619 | Provision for income taxes |
| Net of tax | \$ $(1,167)$ | \$ (931) | Net income |

${ }^{(a)}$ Amounts in parentheses indicate decreases to profit/loss.
${ }^{(b)}$ These accumulated other comprehensive income components are included in the computation of net periodic pension cost (see employee benefits footnote (Note 17) for additional details).

## 14. Earnings per share ("EPS")

Class A and Class B shares participate equally in undistributed earnings. Under the Company's Articles of Organization, the holders of Class A Common Stock are entitled to receive dividends per share equal to at least $200 \%$ of dividends paid, if any, from time to time, on each share of Class B Common Stock.

Diluted EPS includes the dilutive effect of common stock equivalents; basic EPS excludes all common stock equivalents. There were no common stock equivalents for 2018, 2017 and 2016, respectively.

The following table is a reconciliation of basic EPS and diluted EPS:

| Year Ended December 31, | 2018 |  | 2017 |  | 2016 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (in thousands except share and per share data) |  |  |  |  |  |  |
| BASIC EPS COMPUTATION |  |  |  |  |  |  |
| Numerator: |  |  |  |  |  |  |
| Net income, Class A | \$ | 28,479 | \$ | 17,526 | \$ | 19,270 |
| Net income, Class B |  | 7,734 |  | 4,775 |  | 5,264 |
| Denominator: |  |  |  |  |  |  |
| Weighted average shares outstanding, Class A |  | 608,179 |  | 04,029 |  | 00,729 |
| Weighted average shares outstanding, Class B |  | 959,730 |  | 63,880 |  | 67,180 |
| Basic EPS, Class A | \$ | 7.89 | \$ | 4.86 | \$ | 5.35 |
| Basic EPS, Class B | \$ | 3.95 | \$ | 2.43 | \$ | 2.68 |

DILUTED EPS COMPUTATION
Numerator:
Net income, Class A
Net income, Class B
Total net income, for diluted EPS, Class A computation
Denominator:
Weighted average shares outstanding, basic, Class A
Weighted average shares outstanding, Class B
Weighted average shares outstanding diluted, Class A
Weighted average shares outstanding, Class B
Diluted EPS, Class A
Diluted EPS, Class B

| \$ | 28,479 | \$ | 17,526 | \$ | 19,270 |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | 7,734 |  | 4,775 |  | 5,264 |
|  | 36,213 |  | 22,301 |  | 24,534 |
|  | 3,608,179 |  | 3,604,029 |  | 3,600,729 |
|  | 1,959,730 |  | 1,963,880 |  | 1,967,180 |
|  | 5,567,909 |  | 5,567,909 |  | 5,567,909 |
|  | 1,959,730 |  | 1,963,880 |  | 1,967,180 |
| \$ | 6.50 | \$ | 4.01 | \$ | 4.41 |
| \$ | 3.95 | \$ | 2.43 | \$ | 2.68 |

## 15. Stockholders' Equity

## DIVIDENDS

Holders of the Class A common stock may not vote in the election of directors but may vote as a class to approve certain extraordinary corporate transactions. Holders of Class B common stock may vote in the election of directors. Class A common stockholders are entitled to receive dividends per share equal to at least $200 \%$ per share of that paid, if any, on each share of Class B common stock. Class A common stock is publicly traded. Class B common stock is not publicly traded; however, it can be converted on a per share basis to Class A common stock at any time at the option of the holder. Dividend payments by the Company are dependent in part on the dividends it receives from the Bank, which are subject to certain regulatory restrictions.

## STOCK OPTION PLAN

During 2000 and 2004, common stockholders of the Company approved stock option plans (the "Option Plans") that provide for granting of options for not more than 150,000 shares of Class A common stock per plan. Under the Option Plans, all officers and key employees of the Company are eligible to receive nonqualified and incentive stock options to purchase shares of Class A common stock. The Option Plans are administered by the Compensation Committee of the Board of Directors, whose members are ineligible to participate in the Option Plans. Based on management's recommendations, the Committee submits its recommendations to the Board of Directors as to persons to whom options are to be granted, the number of shares granted to each, the option price (which may not be less than $85 \%$ of the fair market value for nonqualified stock options, or the fair market value for incentive stock options, of the shares on the date of grant) and the time period over which the options are exercisable (not more than ten years from the date of grant). There were no options outstanding at December 31, 2018 and December 31, 2017.

## CAPITAL RATIOS

The Bank and the Company are subject to various regulatory 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 Bank and Company's financial statements. Under capital adequacy guidelines and regulatory framework for prompt corrective action, the Bank and Company must meet specific capital guidelines that involve quantitative measures of the Bank and Company's assets and liabilities, and certain off-balance-sheet items as calculated under regulatory accounting practices. The Bank and Company's capital amounts and classification are also subject to qualitative judgments by the regulators about components, risk weightings and other factors.

Quantitative measures established by regulation to ensure capital adequacy require the Bank and the Company to maintain minimum amounts and ratios (set forth in the table below) of total and Tier 1 capital (as defined in the regulation) to risk-weighted assets (as defined) and Tier 1 capital (as defined) to average assets (as defined). Management believes, as of December 31, 2018, that the Bank and the Company meet all capital adequacy requirements to which they are subject.
The Basel Committee has issued capital standards entitled "Basel III: A global framework for more resilient banks and banking systems" (Basel III). The Federal Reserve has finalized its rule implementing the Basel III regulatory capital framework. The rule was effective in January 2015 and sets the Basel III minimum Regulatory capital requirements. To be categorized as well capitalized, the Bank must maintain minimum total risk-based, Common Equity tier 1, tier 1 risk-based, and Tier 1 leverage ratios as set forth in the table. There are no conditions or events since that notification that management believes would cause a change in the Bank's categorization.

The Bank's actual capital amounts and ratios are presented in the following table:

|  | Actual |  |  | For Capital Adequacy Purposes |  |  | To Be Well Capitalized Under Prompt Corrective Action Provisions |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Amount | Ratio |  | Amount | Ratio |  | Amount | Ratio |
| As of December 31, 2018 (Basel III) |  |  |  |  |  |  |  |  |  |
| Total Capital (to Risk-Weighted Assets) | \$ | 364,744 | 13.24 \% | \$ | 220,335 | 8.00 \% | \$ | 275,419 | 10.00 \% |
| Tier 1 Capital (to Risk-Weighted Assets) |  | 336,201 | 12.21 \% |  | 165,251 | 6.00 \% |  | 220,335 | 8.00 \% |
| Common Equity Tier 1 Capital (to Risk-Weighted Assets) |  | 336,201 | 12.21 \% |  | 123,938 | 4.50 \% |  | 179,022 | 6.50 \% |
| Tier 1 Capital (to 4th Qtr. Average Assets) |  | 336,201 | 6.68 \% |  | 201,228 | 4.00 \% |  | 251,535 | 5.00 \% |
| As of December 31, 2017 (Basel III) |  |  |  |  |  |  |  |  |  |
| Total Capital (to Risk-Weighted Assets) | \$ | 329,666 | 12.70 \% | \$ | 207,707 | 8.00 \% | \$ | 259,633 | 10.00 \% |
| Tier 1 Capital (to Risk-Weighted Assets) |  | 303,411 | 11.69 \% |  | 155,780 | 6.00 \% |  | 207,707 | 8.00 \% |
| Common Equity Tier 1 Capital (to Risk-Weighted Assets) |  | 303,411 | 11.69 \% |  | 116,835 | 4.50 \% |  | 168,762 | 6.50 \% |
| Tier 1 Capital (to 4th Qtr. Average Assets) |  | 303,411 | 6.55 \% |  | 185,199 | 4.00 \% |  | 231,499 | 5.00 \% |

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The Company's actual capital amounts and ratios are presented in the following table:

|  | Actual |  |  | For Capital Adequacy Purposes |  |  | To Be Well Capitalized Under Prompt Corrective Action Provisions |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | Amount | Ratio |  | Amount | Ratio |  | Amount | Ratio |
| As of December 31, 2018 (Basel III) |  |  |  |  |  |  |  |  |  |
| Total Capital (to Risk-Weighted Assets) | \$ | 377,359 | 13.62 \% | \$ | 221,690 | 8.00 \% | \$ | 277,113 | 10.00 \% |
| Tier 1 Capital (to Risk-Weighted Assets) |  | 348,816 | 12.59 \% |  | 166,268 | 6.00 \% |  | 221,690 | 8.00 \% |
| Common Equity Tier 1 Capital (to Risk-Weighted Assets) |  | 313,816 | 11.32 \% |  | 124,701 | 4.50 \% |  | 180,123 | 6.50 \% |
| Tier 1 Capital (to 4th Qtr. Average Assets) |  | 348,816 | 6.91 \% |  | 201,913 | 4.00 \% |  | 252,391 | 5.00 \% |
| As of December 31, 2017 (Basel III) |  |  |  |  |  |  |  |  |  |
| Total Capital (to Risk-Weighted Assets) | \$ | 341,033 | 13.05 \% | \$ | 209,049 | 8.00 \% | \$ | 261,312 | 10.00 \% |
| Tier 1 Capital (to Risk-Weighted Assets) |  | 314,778 | 12.05 \% |  | 156,787 | 6.00 \% |  | 209,049 | 8.00 \% |
| Common Equity Tier 1 Capital (to Risk-Weighted Assets) |  | 279,778 | 10.71 \% |  | 117,590 | 4.50 \% |  | 169,853 | 6.50 \% |
| Tier 1 Capital (to 4th Qtr. Average Assets) |  | 314,778 | 6.78 \% |  | 185,657 | 4.00 \% |  | 232,072 | 5.00 \% |

16. Income Taxes

The current and deferred components of income tax (benefit) expense for the years ended December 31, are as follows:

|  | 2018 |  | 2017 |  | 2016 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (dollars in thousands) |  |  |  |  |  |  |
| Current expense: |  |  |  |  |  |  |
| Federal | \$ | 2,637 | \$ | 3,628 | \$ | 3,875 |
| State |  | 697 |  | 412 |  | 439 |
| Total current expense |  | 3,334 |  | 4,040 |  | 4,314 |
| Deferred (benefit) expense: |  |  |  |  |  |  |
| Federal |  | $(1,238)$ |  | 6,496 |  | $(4,450)$ |
| State |  | (528) |  | 422 |  | (334) |
| Valuation Allowance |  | - |  | - |  | 108 |
| Total deferred (benefit) expense |  | $(1,766)$ |  | 6,918 |  | $(4,676)$ |
| Provision for income taxes | \$ | 1,568 | \$ | 10,958 | \$ | (362) |

Income tax accounts included in other assets at December 31, are as follows:

|  | 2018 | 2017 |
| :--- | ---: | ---: | ---: |
| (dollars in thousands) |  |  |
| Currently receivable | $\$ 13,194$ | $\$ 15,940$ |
| Deferred income tax asset, net | 20,321 | 20,892 |
| Total | $\$ 33,515$ | $\$ 36,832$ |

Differences between income tax (benefit) expense at the statutory federal income tax rate and total income tax expense are summarized as follows:

|  | 2018 |  | 2017 |  | 2016 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (dollars in thousands) |  |  |  |  |  |  |
| Federal income tax expense at statutory rates | \$ | 7,934 | \$ | 11,308 | \$ | 8,218 |
| State income tax, net of federal income tax benefit |  | 134 |  | 550 |  | 69 |
| Insurance income |  | (176) |  | (371) |  | (406) |
| Effect of tax-exempt interest |  | $(6,510)$ |  | $(8,683)$ |  | $(8,259)$ |
| Net tax credit |  | (349) |  | (341) |  | (395) |
| Valuation Allowance |  | - |  | - |  | 108 |
| Deferred tax remeasurement |  | - |  | 8,448 |  | - |
| Other |  | 535 |  | 47 |  | 303 |
| Total | \$ | 1,568 | \$ | 10,958 | \$ | (362) |
| Effective tax rate |  | 4.15 \% |  | 32.95 \% |  | (1.50) \% |

The following table sets forth the Company's gross deferred income tax assets and gross deferred income tax liabilities at December 31:

|  | 2018 |  | 2017 |  |
| :---: | :---: | :---: | :---: | :---: |
| (dollars in thousands) |  |  |  |  |
| Deferred income tax assets: |  |  |  |  |
| Allowance for loan losses | \$ | 8,058 | \$ | 7,855 |
| Deferred compensation |  | 8,184 |  | 7,555 |
| Pension and SERP liability |  | 6,506 |  | 8,436 |
| Unrealized losses on securities transferred to held-to-maturity |  | 912 |  | 1,303 |
| Depreciation |  | 908 |  | 631 |
| Accrued bonus |  | 717 |  | - |
| Charitable contributions carryforward |  | 389 |  | 442 |
| Acquisition premium |  | - |  | 17 |
| Nonaccrual interest |  | 109 |  | 97 |
| Limited partnerships |  | 19 |  | 21 |
| Investments write down |  | 17 |  | 17 |
| Other |  | 145 |  | 173 |
| Gross deferred income tax asset |  | 25,964 |  | 26,547 |
| Valuation allowance |  | (108) |  | (108) |
| Gross deferred income tax asset, net of valuation allowance |  | 25,856 |  | 26,439 |
| Deferred income tax liabilities: |  |  |  |  |
| Pension liability |  | $(4,436)$ |  | $(4,403)$ |
| Deferred origination costs |  | (524) |  | (481) |
| Prepaid expenses |  | (228) |  | (248) |
| Mortgage servicing rights |  | (345) |  | (429) |
| Unrealized (gains) losses on securities available-for-sale |  | (2) |  | 14 |
| Gross deferred income tax liability |  | $(5,535)$ |  | $(5,547)$ |
| Deferred income tax asset net | \$ | 20,321 | \$ | 20,892 |

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 deferred income tax asset existing at December 31, 2018, with the exception of a $\$ 108,000$ valuation allowance on a charitable contribution carryforward that has a remaining carryforward period of 3-4 years. Management believes that existing net deductible temporary differences which give rise to the deferred tax asset 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.

On December 22, 2017, the Tax Cuts and Jobs Act (the "Tax Act") was enacted. The majority of the provisions of the Tax Act took effect on January 1, 2018. The Tax Act lowers the Company's federal tax rate from $34 \%$ to $21 \%$. The Company remeasured its deferred taxes at $21 \%$ as of the enactment date and recorded additional tax expense of $\$ 8,448,000$. Also, for tax years beginning after December 31, 2017, the corporate Alternative Minimum Tax ("AMT") has been repealed. For 2018 through 2021, the AMT credit carryforward can offset regular tax liability and is refundable in an amount equal to $50 \%$ ( $100 \%$ for 2021 ) of the excess of the minimum tax credit for the tax year over the amount of the credit allowable for the year against regular tax liability. Accordingly, the full amount of the alternative minimum tax credit carryforward will be recovered in tax years beginning before 2022. The Tax Act also contains other provisions that may affect the Company currently or in future years. Among these are changes to the deductibility of meals and entertainment, the deductibility of executive compensation, the dividend received deduction and net operating loss carryforwards.

The Company is in an Alternative Minimum Tax ("AMT") credit position. As the AMT has been repealed and the existing credit is refundable, the AMT credit, totaling $\$ 13,415,000$, has been reclassified to currently receivable. Of this amount, the Company expects to recover $\$ 7,853,000$ with the filing of its 2018 federal tax return. The Company and its subsidiaries file a consolidated federal tax return. The Company is subject to federal and state examinations for tax years after December 31 , 2014.

## 17. Employee Benefits

The Company has a Qualified Defined Benefit Pension Plan (the "Plan"), which had been offered to all employees reaching minimum age and service requirements. In 2006, the Bank became a member of the Savings Bank Employees Retirement Association ("SBERA") within which it then began maintaining the Qualified 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 of $40 \%$ to $64 \%$ of total portfolio assets. The remainder of the portfolio is allocated to fixed income securities with target range of $15 \%$ to $25 \%$ and other investments including global asset allocation and hedge funds from $25 \%$ to $41 \%$.

The Trustees of SBERA, through its 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 to limit risks from large market swings. The Company closed the plan to employees hired after March 31, 2006.

The measurement date for the Plan is December 31 for each year. The benefits expected to be paid in each year from 2019 to 2023 are $\$ 1,548,000, \$ 1,697,000$, $\$ 1,886,000, \$ 1,985,000$, and $\$ 2,081,000$, respectively. The aggregate benefits expected to be paid in the five years from 2024 to 2028 are $\$ 12,525,000$.

The framework for measuring fair value provides a fair value hierarchy that prioritizes the inputs to valuation techniques used to measure fair value. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (level 1 ) and the lowest priority to unobservable inputs (level 3 ). Valuation techniques maximize the use of relevant observable inputs and minimize the use of unobservable inputs. The three levels of the fair value hierarchy under Topic 820 are described as follows:

LEVEL 1
Inputs to the valuation methodology are quoted market prices (unadjusted) for identical assets or liabilities in active markets that the Company has the ability to access at the measurement date.

## LEVEL 2

Inputs other than quoted prices included within level 1 that are observable for the asset or liability, either directly or indirectly, such as: quoted prices for similar assets or liabilities in active markets; quoted prices for identical or similar assets or liabilities in inactive markets; inputs other that quoted prices that are observable for the asset or liability; or inputs that are derived principally from or corroborated by observable market data by correlation or other means. If the asset or liability has specified (contractual) term, the level 2 input must be observable for substantially the full term of the asset or liability.

## LEVEL 3

Inputs that are unobservable inputs for the asset or liability.
Below is a description of the valuation methodologies used for assets measured at fair value.

## Collective Funds

Valued at either the closing price reported on the active market on which the individual securities are traded or valued at the net asset value (NAV) of units of a collective trust. The NAV, as provided by the trustee, is used as a practical expedient to estimate fair value. The NAV is based on the fair value of the underlying investments held by the fund less its liabilities. This practical expedient is not used when it is determined to be probable that the fund will sell the investment for an amount different than the reported NAV. Participant transactions (purchases and sales) may occur daily. Were SBERA to initiate a full redemption of the collective trust, the investment advisor reserves the right to temporarily delay withdrawal from the trust in order to ensure that securities liquidations will be carried out in an orderly business manner.

## Equity Securities

Valued at the closing price reported on the active market on which the individual securities are traded.
Mutual Funds
Valued at the daily closing price as reported by the fund. Mutual funds held open-end mutual funds that are registered with the U.S. Securities and Exchange Commission. The funds are required to publish their daily NAV and to transact at that price.

The mutual funds held are deemed to be actively traded.

Limited Partnerships and Hedge Funds
The funds are valued at NAV, without further adjustment, as calculated by the fund's manager based upon the terms and conditions of the organization documents of the underlying investments, with further consideration to portfolio risks.

The following table sets forth by level, within the fair value hierarchy, the plan's assets at fair value. Classification within the fair value hierarchy table is based upon the lowest level of any input that is significant to the fair value measurement:

The fair value of plan assets and major categories as of December 31, 2018, is as follows:

| Description | Percent |  | NAV |  | Level 1 | Level 2 |  | Level 3 |  | Total |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (dollars in thousands) |  |  |  |  |  |  |  |  |  |  |  |
| Collective Funds | 5.6 \% | \$ | 2,504 |  | 2,504 | \$ | - | \$ | - |  | 2,504 |
| Equity Securities | 10.9 \% |  | 4,863 |  | 4,863 |  | - |  | - |  | 4,863 |
| Diversified Mutual Funds | 30.7 \% |  | 13,612 |  | 13,612 |  | - |  | - |  | 13,612 |
| Short-term investments | 0.1 \% |  | 60 |  | 60 |  | - |  | - |  | 60 |
| Total investments measured in the fair value hierarchy | 47.3 \% |  | 21,039 |  | 21,039 |  | - |  | - |  | 21,039 |
| Investments measured at net asset value ${ }^{(1)}$ | 52.7 \% |  | 23,398 |  | - |  | - |  | - |  | 23,398 |
|  | 100.0 \% |  | 44,437 |  | 21,039 | \$ | - | \$ | - |  | 44,437 |

[^6]The fair value of plan assets and major categories as of December 31, 2017, is as follows::

| Description | Percent |  | NAV |  | Level 1 | Level 2 |  | Level 3 |  | Total |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (dollars in thousands) |  |  |  |  |  |  |  |  |  |  |  |
| Collective Funds | 3.6 \% | \$ | 1,741 | \$ | 1,741 | \$ | - | \$ | - | \$ | 1,741 |
| Equity Securities | 10.7 \% |  | 5,195 |  | 5,195 |  | - |  | - |  | 5,195 |
| Diversified Mutual Funds | 17.8 \% |  | 8,615 |  | 8,615 |  | - |  | - |  | 8,615 |
| Short-term investments | 7.9 \% |  | 3,836 |  | 3,836 |  | - |  | - |  | 3,836 |
| Total investments measured in the fair value hierarchy | 40.0 \% |  | 19,387 |  | 19,387 |  | - |  | - |  | 19,387 |
| Investments measured at net asset value ${ }^{(1)}$ | 60.0 \% |  | 29,035 |  | - |  | - |  | - |  | 29,035 |
|  | 100.0\% |  | 48,422 |  | 19,387 | \$ | - | \$ | - |  | 48,422 |

${ }^{(1)}$ In accordance with Subtopic 820-10, certain investments that were measured at net asset value per share (or its equivalent) have not been classified in the fair value hierarchy.

## INVESTMENTS MEASURED USING THE NET ASSET VALUE PER SHARE PRACTICAL EXPEDIENT

The following table summarizes investments for which fair value is measured using the net asset value per share practical expedient.
There are no participant redemption restrictions for these investments.
The investments measured using the net asset value per share practical expedient as of December 31, 2018, is as follows:

|  | Percent | Fair Value |  |
| :---: | :---: | :---: | :---: |
| (dollars in thousands) |  |  |  |
| Collective Funds by Category: |  |  |  |
| Equity | 20.8 \% | \$ | 9,204 |
| Diversified | 0.0 \% |  | - |
| US debt securities | 12.1 \% |  | 5,386 |
| International equities | 9.7 \% |  | 4,311 |
| Limited Partnerships by Category: |  |  |  |
| Emerging markets | 2.9 \% |  | 1,289 |
| Multi-strategy | 1.9 \% |  | 826 |
| Hedge Funds by Category: |  |  |  |
| Multi-strategy ${ }^{(1)}$ | 3.6 \% |  | 1,593 |
| Global opportunities ${ }^{(2)}$ | 0.3 \% |  | 150 |
| Private investment entities and/or separately managed accounts ${ }^{(3)}$ | 1.4 \% |  | 639 |
|  | 52.7 \% |  | 23,398 |

The investments measured using the net asset value per share practical expedient as of December 31, 2017, is as follows:

|  | Percent | Fair Value |
| :---: | :---: | :---: |
| (dollars in thousands) |  |  |
| Collective Funds by Category: |  |  |
| Equity | 31.6 \% | \$ 15,304 |
| Diversified | 0.7 \% | 344 |
| US debt securities | 9.4 \% | 4,569 |
| International equities | 9.1 \% | 4,419 |
| Limited Partnerships by Category: |  |  |
| Emerging markets | 2.8 \% | 1,353 |
| Multi-strategy | 1.5 \% | 705 |
| Hedge Funds by Category: |  |  |
| Multi-strategy ${ }^{(1)}$ | 3.5 \% | 1,674 |
| Global opportunities ${ }^{(2)}$ | 0.7 \% | 345 |
| Private investment entities and/or separately managed accounts ${ }^{(3)}$ | 0.7 \% | 322 |
|  | 60.0 \% | \$ 29,035 |

${ }^{(1)}$ This category includes investments in hedge funds that pursue multiple strategies to diversify risks and reduce volatility. Fund objectives are to seek above-average rates of return and long-term capital growth through investments, which are fund of funds with a diversified portfolio of private investment entities and/or separately managed accounts managed by investment managers or achieve superior risk-adjusted capital appreciation over the long-term, generally through an investment, which invests in private investment funds and discretional managed accounts, structured notes, swaps or other similar products. The fair values of the investments in this category have been determined using the net asset value per share of the fund(s).
${ }^{(2)}$ This category has an investment strategy to pursue a hybrid absolute return via portfolio managers, secondaries, and co-investments with a flexible and opportunistic mandate tactically allocating capital to look to capitalize on market dislocations and inefficiencies. The opportunities are expected to fall within the following strategies: Niche Alternatives and Private Credit and Hedge Fund secondaries. The fair value of the investments in this category have been determined using the last sales price, for listed securities, and in accordance with the agreement terms for portfolio-managed investments, notes, swaps, and other similar products.
${ }^{(3)}$ The Fund's investment objective is to invest in highly attractive, select investment opportunities by maintaining investments through private investment entities and/or separately managed accounts (each, an Investment or a Portfolio and collectively, the Investments or the Portfolios) with investment management professionals (each a Manager and collectively, the Managers) specializing in various alternative investment strategies. The Managers have broad investment experience and the ability to leverage their existing relationships with corporate management teams, investment banks and other institutions to gain access to certain investment opportunities. As such, the Manager is presented with "best idea" investment opportunities, typically in asset classes where market dislocations or other events have created attractive investment opportunities. The Managers are not restricted in the investment strategies that they may employ across different asset classes and regions. The Manager anticipates that any number of strategies will be eligible for consideration for investment by the Fund and the Fund reserves the right to invest in any particular strategy or asset class it deems appropriate.

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## ASSET ALLOCATION

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 of $40 \%$ to $64 \%$ of total portfolio assets. The remainder of the portfolio is allocated to fixed income securities with a target range of $15 \%$ to $25 \%$ and other investments including global asset allocation and hedge funds from $25 \%$ to $41 \%$.

The Trustees of SBERA, through the Association's 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 to limit risks from large market swings.

The Company has a Supplemental Executive Insurance/Retirement Plan (the Supplemental Plan), which is limited to certain officers and employees of the Company. The Supplemental Plan is voluntary. Under the Supplemental Plan, each participant will receive a retirement benefit based on compensation and length of service. Life insurance policies, which are owned by the Company, are purchased covering the lives of each participant.

The benefits expected to be paid in each year from 2019 to 2023 are $\$ 2,423,000, \$ 2,470,000, \$ 2,377,000, \$ 2,425,000$ and $\$ 2,661,000$, respectively. The aggregate benefits expected to be paid in the five years from 2024 to 2028 are $\$ 16,532,000$.

Defined Benefit Pension Plan $\begin{gathered}\text { Supplemental Insurance/ } \\ \text { Retirement Plan }\end{gathered}$

|  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 2018 |  | 2017 |  | 2018 |  | 2017 |  |
| (dollars in thousands) |  |  |  |  |  |  |  |  |
| Change projected in benefit obligation |  |  |  |  |  |  |  |  |
| Benefit obligation at beginning of year | \$ | 47,065 | \$ | 42,255 | \$ | 42,579 | \$ | 38,610 |
| Service cost |  | 1,411 |  | 1,241 |  | 1,107 |  | 1,582 |
| Interest cost |  | 1,481 |  | 1,450 |  | 1,386 |  | 1,382 |
| Actuarial (gain)/loss |  | $(8,263)$ |  | 3,456 |  | $(3,591)$ |  | 2,087 |
| Benefits paid |  | $(1,185)$ |  | $(1,337)$ |  | $(1,076)$ |  | $(1,082)$ |
| Projected benefit obligation at end of year | \$ | 40,509 | \$ | 47,065 | \$ | 40,405 | \$ | 42,579 |
| Change in plan assets |  |  |  |  |  |  |  |  |
| Fair value of plan assets at beginning of year | \$ | 48,422 | \$ | 37,447 |  |  |  |  |
| Actual return on plan assets |  | $(2,800)$ |  | 5,312 |  |  |  |  |
| Employer contributions |  | - |  | 7,000 |  |  |  |  |
| Benefits paid |  | $(1,185)$ |  | $(1,337)$ |  |  |  |  |
| Fair value of plan assets at end of year | \$ | 44,437 | \$ | 48,422 |  |  |  |  |
| (Unfunded) Funded status | \$ | 3,928 | \$ | 1,357 | \$ | $(40,405)$ | \$ | $(42,579)$ |
| Accumulated benefit obligation | \$ | 40,509 | \$ | 47,065 | \$ | 36,984 | \$ | 40,375 |
| Weighted-average assumptions as of December 31 |  |  |  |  |  |  |  |  |
| Discount rate - Liability |  | 4.76 \% |  | 3.49 \% |  | 4.79 \% |  | 3.42 \% |
| Discount rate - Expense |  | 3.49 \% |  | 3.99 \% |  | 3.42 \% |  | 3.85 \% |
| Expected return on plan assets |  | 8.00 \% |  | 8.00 \% |  | NA |  | NA |
| Rate of compensation increase |  | 4.00 \% |  | 4.00 \% |  | 4.00 \% |  | 4.00 \% |
| Components of net periodic benefit cost |  |  |  |  |  |  |  |  |
| Service cost | \$ | 1,411 | \$ | 1,241 | \$ | 1,107 | \$ | 1,582 |
| Interest cost |  | 1,481 |  | 1,450 |  | 1,386 |  | 1,382 |
| Expected return on plan assets |  | $(3,813)$ |  | $(2,985)$ |  | - |  | - |
| Recognized prior service cost |  | (100) |  | (104) |  | 114 |  | 114 |
| Recognized net losses |  | 904 |  | 903 |  | 706 |  | 636 |
| Net periodic cost (benefit) | \$ | (117) | \$ | 505 | \$ | 3,313 | \$ | 3,714 |
| Other changes in plan assets and benefit obligations recognized in other comprehensive income |  |  |  |  |  |  |  |  |
| Amortization of prior service cost | \$ | 100 | \$ | 104 | \$ | (114) | \$ | (114) |
| Net (gain) loss |  | $(2,554)$ |  | 409 |  | $(4,298)$ |  | 1,752 |
| Total recognized in other comprehensive income |  | $(2,454)$ |  | 513 |  | $(4,412)$ |  | 1,638 |
| Total recognized in net periodic benefit cost and other comprehensive income | \$ | $(2,571)$ | \$ | 1,018 | \$ | $(1,099)$ | \$ | 5,352 |



The following table summarizes the amounts included in Accumulated Other Comprehensive Loss at December 31, 2018, expected to be recognized as components of net periodic benefit cost in the next year:

|  | Supplemental <br> Plan |  |
| :--- | :---: | :---: | :---: |
| Amortization of prior service cost to be |  | Plan |
| recognized in 2019 | - | 114 |
| Amortization of loss to be recognized in 2019 | 916 | 435 |

Assumptions for the expected return on plan assets and discount rates in the Company's Plan and Supplemental Plan are periodically reviewed. As part of the review, management in consultation with independent consulting actuaries performs an analysis of expected returns based on the plan's asset allocation. This forecast reflects the Company's and actuarial firm'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. Also, as a part of the review, the Company's management in consultation with independent consulting actuaries performs an analysis of discount rates based on expected returns of high-grade fixed income debt securities.

Effective January 1, 2016, the Company changed its estimate of the service and interest components of the net periodic benefit cost. Previously, the Company estimated the service and interest cost components utilizing a single weightedaverage discount rate derived from the yield curve used to measure the benefit obligation. The new estimate utilizes a full yield curve approach in the estimation of these components by applying the specific spot rates along the yield curve used in the determination of the benefit obligation to their underlying projected cash flows. The new estimate provided a more precise measurement of service and interests costs by improving the correlation between projected benefit cash flows and their corresponding spot rates. The change does not affect the measurement of the Company's benefit obligations and it is accounted for as a change in accounting estimate, which is applied prospectively. For 2016, the change in estimate reduced periodic plan cost by $\$ 859,000$ compared to the prior estimate. Mortality assumptions are based on the RP 2015 Mortality Table projected with Scale MP 2016.

At December 31, 2018, the discount rate was determined by preparing an analysis of the respective plan's expected future cash flows and high-quality fixedincome investments currently available and expected to be available during the period to maturity of the benefits.

This methodology more accurately matches yields to the expected benefit payments than the previous method. The discount rate used is an estimate of the rate at which the plans could settle their obligations. Rather than using a rate and curve developed using a bond portfolio, this method selects individual bonds to match to the expected cash flows of the Plans. This provides a more accurate depiction of the true cost to the plans to settle the obligations as the Plans could theoretically go into the marketplace and purchase the specific bonds used in the analysis in order to settle the obligations of the Plans.
The financial impact of the enhanced estimate to the discount rate amounted to approximately $\$ 6,800,000$ decrease in the projected benefit obligations for the combined plans.

The Company offers a $401(k)$ defined contribution plan for all employees reaching minimum age and service requirements. The plan is voluntary and employee contributions are matched by the Company at a rate of $33.3 \%$ for the first $6 \%$ of compensation contributed by each employee. The Company's match totaled $\$ 454,000$ for 2018, $\$ 445,000$ for 2017 and $\$ 418,000$ for 2016. Administrative costs associated with the plan are absorbed by the Company.

The Company has a cash incentive plan that is designed to reward our executives and officers for the achievement of annual financial performance goals of the Company as well as business line, department and individual performance. The plan supports the philosophy that management be measured for their performance as a team in the attainment of these goals. Discretionary bonus expense amounted to $\$ 2,355,000, \$ 1,859,000$ and $\$ 1,418,000$ in 2018, 2017, and 2016, respectively.

The Company does not offer any postretirement programs other than pensions.

## 18. Commitments and Contingencies

A number of legal claims against the Company arising in the normal course of business were outstanding at December 31, 2018. Management, after reviewing these claims with legal counsel, is of the opinion that their resolution will not have a material adverse effect on the Company's consolidated financial position or results of operations.

On September 7, 2017, Crimson Galeria Limited Partnership, Raj \& Raj, LLC, Harvard Square Holdings LLC, and Charles River Holdings LLC (collectively, the "Plaintiffs") filed suit in the United States District Court for the District of Massachusetts against the Attorney General of the Commonwealth of Massachusetts, the Massachusetts Department of Public Health, the City of Cambridge, the Town of Georgetown, as well as against the Bank, Healthy Pharms, Inc., ("Healthy Pharms"), Timbuktu Real Estate, LLC, Paul Overgaag, Nathaniel Averill, 4Front Advisors, LLC, 4Front Holdings LLC, Kristopher T. Krane, 3 Brothers Real Estate, LLC, Red Line Management, LLC, unspecified insurance providers to certain Plaintiffs, and Tomolly, Inc., (collectively, the "Defendants").

The Plaintiffs allege that they own property in Cambridge, MA, and claim that the value and use of their property will be impaired by Healthy Pharms decision to open a registered medicinal marijuana dispensary in abutting or nearby situated property. The Plaintiffs further allege that the Bank has a banking relationship with Healthy Pharms and that, by entering into such relationship, the Bank conspired with Healthy Pharms to violate the Racketeer Influenced and Corrupt Organizations Act, 18 U.S.C. § 1961 et seq. The Plaintiffs seek unspecified treble damages, and attorney's costs and fees, as well as injunctive and declaratory relief.

On November 13, 2018, the complaint was dismissed with prejudice, effectively barring the plaintiff from ever rebringing the case against the Bank.

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19. Financial Instruments with Off-Balance-Sheet Risk

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 primarily include commitments to originate and sell loans, standby letters of credit, unused lines 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 amount recognized in the consolidated balance sheet. The contract or notional amounts of those instruments reflect the extent of involvement the Company has in these particular classes of financial instruments.

The Company's exposure to credit loss in the event of nonperformance by the other party to the financial instrument for loan commitments, standby letters of credit and unadvanced portions of construction loans is represented by the contractual amount of those instruments. The Company uses the same credit policies in making commitments and conditional obligations as it does for on-balance-sheet instruments. Financial instruments with off-balance-sheet risk at December 31 are as follows:

## Contract or Notional Amount

(dollars in thousands)

| Financial instruments whose contract |  |  |  |  |
| :--- | ---: | ---: | ---: | ---: |
| amount represents credit risk: |  |  |  |  |
| Commitments to originate |  |  |  |  |
| 1-4 family mortgages | $\$$ | 5,075 | $\$$ | 5,748 |
| Standby and commercial letters of credit | 4,258 | 5,520 |  |  |
| Unused lines of credit | 553,045 | 434,618 |  |  |
| Unadvanced portions of construction loans | 28,746 | 15,152 |  |  |
| Unadvanced portions of other loans | 20,305 | 35,602 |  |  |

Commitments to originate loans, unadvanced portions of construction loans, unused lines of credit and unused letters of credit are generally 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 many of the commitments are expected to expire without being drawn upon, the total commitment amounts do not necessarily represent future cash requirements. The Company evaluates each customer's creditworthiness on a case-by-case basis. The amount of collateral obtained, if deemed necessary by the Company upon extension of credit, is based on management's credit evaluation of the borrower.

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.
20. Other Operating Expenses

| Year ended December 31, | 2018 | 2017 | 2016 |
| :--- | ---: | ---: | ---: | ---: |
| (dollars in thousands) |  |  |  |
| Marketing | $\$ 2,346$ | $\$ 2,315$ | $\$ 2,185$ |
| Software maintenance/amortization | 2,002 | 1,859 | 1,863 |
| Legal and audit | 1,444 | 1,543 | 1,255 |
| Contributions | 1,077 | 993 | 789 |
| Processing services | 1,740 | 1,160 | 1,040 |
| Consulting | 1,464 | 1,199 | 1,168 |
| Postage and delivery | 1,021 | 966 | 987 |
| Supplies | 987 | 945 | 948 |
| Telephone | 946 | 1,020 | 1,032 |
| Directors' fees | 438 | 440 | 413 |
| Insurance | 420 | 308 | 323 |
| Pension | 678 | 1,396 | 1,532 |
| Other | 1,725 | 1,845 | 1,812 |
| Total | $\$ 16,288$ | $\$ 15,989$ | $\$ 15,347$ |

21. Fair Values of Financial Instruments

The following methods and assumptions were used by the Company in estimating fair values of its financial instruments. Excluded from this disclosure are all nonfinancial instruments. Accordingly, the aggregate fair value amounts presented do not represent the underlying value of the Company.

The assumptions used below are expected to approximate those that market participants would use in valuing these financial instruments.

Fair value estimates are made at a specific point in time, based on available market information and judgments about the financial instrument, including estimates of timing, amount of expected future cash flows and the credit standing of the issuer. Such estimates do not consider the tax impact of the realization of unrealized gains or losses. In some cases, the fair value estimates cannot be substantiated by comparison to independent markets. In addition, the disclosed fair value may not be realized in the immediate settlement of the financial instrument. Care should be exercised in deriving conclusions about our business, its value or financial position based on the fair value information of financial instruments presented below.

## SECURITIES HELD-TO-MATURITY

The fair values of these securities were based on quoted market prices, where available, as provided by third-party investment portfolio pricing vendors. If quoted market prices were not available, fair values provided by the vendors were based on quoted market prices of comparable instruments in active markets and/or based on a matrix pricing methodology which employs The Bond Market Association's standard calculations for cash flow and price/yield analysis, live benchmark bond pricing and terms/condition data available from major pricing sources. Management regards the inputs and methods used by third party pricing vendors to be "Level 2 inputs and methods" as defined in the "fair value hierarchy" provided by FASB.

## LOANS

The fair value of loans is estimated using the exit price notion consistent with Topic 820, Fair Value Measurement. Fair value is determined based on a discounted cash flow analysis. The discounted cash flow analysis was based on the contractual maturity of the loan and market indications of rates, prepayment speeds, defaults and credit risk. For certain non-performing assets fair value is determined based on the estimated values of the underlying collateral of individual analysis of receipts.

## TIME DEPOSITS

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

## OTHER BORROWED FUNDS

The fair value of other borrowed funds is based on the discounted value of contractual cash flows. The discount rate used is estimated based on the rates currently offered for other borrowed funds of similar remaining maturities.

## SUBORDINATED DEBENTURES

The fair value of subordinated debentures is based on the discounted value of contractual cash flows. The discount rate used is estimated based on the rates currently offered for other subordinated debentures of similar remaining maturities.

The following presents (in thousands) the carrying amount, estimated fair value, and placement in the fair value hierarchy of the Company's financial instruments as of December 31, 2018 and December 31, 2017. This table excludes financial instruments for which the carrying amount approximates fair value. Financial assets for which the fair value approximates carrying value include cash and cash equivalents, short-term investments, FHLBB stock and accrued interest receivable. Financial liabilities for which the fair value approximates carrying value include non-maturity deposits, short-term borrowings and accrued interest payable.

Fair Value Measurements

|  | Carrying Amount |  | Estimated <br> Fair Value |  | Level 1 Inputs |  | Level 2 Inputs |  | Level 3 Inputs |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (dollars in thousands) |  |  |  |  |  |  |  |  |  |
| December 31, 2018 |  |  |  |  |  |  |  |  |  |
| Financial assets: |  |  |  |  |  |  |  |  |  |
| Securities held-to-maturity | \$ | 2,046,647 | \$ | 1,991,421 | \$ | - |  | 1,991,421 | \$ |
| Loans ${ }^{(1)}$ |  | 2,257,035 |  | 2,279,712 |  | - |  | - |  |
| Financial liabilities: |  |  |  |  |  |  |  |  |  |
| Time deposits |  | 560,579 |  | 559,988 |  | - |  | 559,988 |  |
| Other borrowed funds |  | 202,378 |  | 203,122 |  | - |  | 203,122 |  |
| Subordinated debentures |  | 36,083 |  | 36,083 |  | - |  | 36,083 |  |
| December 31, 2017 |  |  |  |  |  |  |  |  |  |
| Financial assets: |  |  |  |  |  |  |  |  |  |
| Securities held-to-maturity | \$ | 1,701,233 | \$ | 1,668,827 | \$ | - | \$ | 1,668,827 | \$ |
| Loans ${ }^{(1)}$ |  | 2,149,689 |  | 2,094,517 |  | - |  | - |  |
| Financial liabilities: |  |  |  |  |  |  |  |  |  |
| Time deposits |  | 625,361 |  | 627,517 |  | - |  | 627,517 |  |
| Other borrowed funds |  | 347,778 |  | 349,364 |  | - |  | 349,364 |  |
| Subordinated debentures |  | 36,083 |  | 36,083 |  | - |  | 36,083 |  |

${ }^{(1)}$ Comprised of loans (including collateral dependent impaired loans), net of deferred loan costs and the allowance for loan losses.

## LIMITATIONS

Fair value estimates are made at a specific point in time, based on relevant market information and information about the type of financial instrument. These estimates do not reflect any premium or discount that could result from offering for sale at one time the Bank's entire holdings of a particular financial instrument. Because no active market exists for some of the Bank's financial instruments, fair value estimates are based on judgments regarding future expected loss experience, cash flows, current economic conditions, risk characteristics and other factors. These estimates are subjective in nature and involve uncertainties and matters of significant judgment and therefore cannot be determined with precision. Changes in assumptions and changes in the loan, debt and interest rate markets could significantly affect the estimates. Further, the income tax ramifications related to the realization of the unrealized gains and losses can have a significant effect on the fair value estimates and have not been considered.
22. Revenue from Contracts with Customers

Revenue from contracts with customers in the scope of ASC Topic 606 is measured based on the consideration specified in the contract with a customer, and excludes amounts collected on behalf of third parties. The Company recognizes revenue from contracts with customers when it satisfies its performance obligations.

The Company's performance obligations are typically satisfied as services are rendered, and our contracts do not include multiple performance obligations. Payment is generally collected at the time services are rendered, or monthly. Unsatisfied performance obligations at the report date are not material to our consolidated financial statements.

The Company pays sales commissions to its employees in accordance with certain incentive plans. The Company expenses sales commissions when incurred if we do not expect to recover these costs from the terms of the contract with the customer. Sales commissions are included in compensation expense.

In certain cases, other parties are involved with providing products and services to our customers. If the Company is a principal in the transaction (providing goods or services itself), revenues are reported based on the gross consideration received from the customer and any related expenses are reported gross in noninterest expense. If the Company is an agent in the transaction (arranging for another party to provide goods or services), the Company reports its net fee or commission retained as revenue.

Waivers and reversals are recorded as a reduction of revenue either when the revenue is recognized by the Company or at the time the waiver or reversal is earned by the customer.

## A. Change in Accounting Policy

The Company adopted Topic 606 Revenue from Contracts with Customers with a date of initial application of January 1, 2018 and has applied the guidance to all contracts within the scope of Topic 606 as of that date. As a result, the Company has changed its accounting policy for revenue recognition as detailed in this footnote.

The Company applied Topic 606 using the cumulative effect method. Therefore, the comparative information has not been adjusted and continues to be reported under Topic 605. There was no cumulative effect adjustment as of January 1 , 2018, and there were no material changes to the financial statements at or for the years ended December 31, 2018, 2017, and 2016 as a result of adopting Topic 606.

## B. Practical Expedients

The Company applies the practical expedient in paragraph 606-10-50-14 and does not disclose information about remaining performance obligations that have original expected durations of one year or less.
The Company applies the practical expedient in paragraph 606-10-32-18 and does not adjust the consideration from customers for the effects of a significant financing component if at contract inception the period between when the entity transfers the goods or services and when the customer pays for that good or service will be one year or less.

## C. Nature of Goods and Services

The vast majority of the Company's revenue is specifically out-of-scope of Topic 606. For the revenue in-scope, the following is a description of principal activities, separated by the timing of revenue recognition, from which the Company generates its revenue from contracts with customers.
a. Revenue earned at a point in time - Examples of revenue earned at a point in time are ATM transaction fees, wire transfer fees, NSF fees, credit and debit card interchange fees and foreign exchange transaction fees. Revenue is generally derived from transactional information accumulated by our systems and is recognized as revenue immediately as the transactions occur or upon providing the service to complete the customer's transaction. The Company is the principal in each of these contracts, with the exception of credit and debit card interchange fees, in which case we are acting as the agent and record revenue net of expenses paid to the principal.
b. Revenue earned over time - The Company earns revenue from contracts with customers in a variety of ways in which the revenue is earned over a period of time - generally monthly or quarterly. Examples of this type of revenue are deposit account service fees, lockbox fees, investment management fees, merchant referral services, and safe deposit box fees. Account service charges, management fees and referral fees are recognized on a monthly basis while any transaction based income is recorded as the activity occurs. Revenue is primarily based on the number and type of transactions or assets managed and is generally derived from transactional information accumulated by our systems. Revenue is recorded in the same period as the related transactions occur or services are rendered to the customer.

## D. Disaggregation of revenue

The following table presents total revenues as presented in the Consolidated Statements of Income and the related amounts which are from contracts with customers within the scope of Topic 606. As illustrated here, the vast majority of our revenues are specifically excluded from the scope of Topic 606.

|  | $\begin{gathered} \text { Year ended } \\ \text { December 31, } \\ 2018 \end{gathered}$ | Revenue from Contracts in Scope of Topic 606 | $\begin{gathered} \text { Year ended } \\ \text { December 31, } \\ 2017 \end{gathered}$ | Revenue from Contracts in Scope of Topic 606 | $\begin{gathered} \text { Year ended } \\ \text { December 31, } \\ 2016 \end{gathered}$ | Revenue from Contracts in Scope of Topic 606 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (dollars in thousands) |  |  |  |  |  |  |
| Total net interest income | \$ 92,576 | \$ | \$ 85,616 | \$ | \$ 74,082 | \$ |
| Noninterest income: |  |  |  |  |  |  |
| Service charges on deposit accounts | 8,560 | 8,560 | 8,586 | 8,586 | 7,907 | 7,907 |
| Lockbox fees | 3,274 | 3,274 | 3,290 | 3,290 | 3,164 | 3,164 |
| Brokerage commissions | 348 | - | 353 | - | 315 | - |
| Net gains on sales of securities | 302 | - | 47 | - | 64 | - |
| Gains on sales of mortgage loans | - | - | 370 | - | 1,331 | - |
| Other income | 3,764 | 2,536 | 3,906 | 2,429 | 3,441 | 1,966 |
| Total noninterest income | 16,248 | 14,370 | 16,552 | 14,305 | 16,222 | 13,037 |
| Total revenues | \$ 108,824 | \$ 14,370 | \$ 102,168 | \$ 14,305 | \$ 90,304 | \$ 13,037 |

The following table provides information about receivables with customers.

| December 31, <br> (dollars in thousands) <br> Receivables, which are included in "Other assets" | 2018 | 2017 | 2016 |
| :--- | :---: | :---: | :---: |

23. Quarterly Results of Operations (unaudited)

| 2018 Quarters | Fourth |  | Third |  | Second |  | First |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| (in thousands, except share data) |  |  |  |  |  |  |  |  |
| Interest income | \$ | 37,453 | \$ | 34,765 | \$ | 33,408 | \$ | 31,430 |
| Interest expense |  | 13,748 |  | 11,561 |  | 10,209 |  | 8,962 |
| Net interest income |  | 23,705 |  | 23,204 |  | 23,199 |  | 22,468 |
| Provision for loan losses |  | 450 |  | - |  | 450 |  | 450 |
| Net interest income after provision for loan losses |  | 23,255 |  | 23,204 |  | 22,749 |  | 22,018 |
| Other operating income |  | 4,164 |  | 4,169 |  | 3,722 |  | 4,193 |
| Operating expenses |  | 17,185 |  | 17,348 |  | 17,159 |  | 18,001 |
| Income before income taxes |  | 10,234 |  | 10,025 |  | 9,312 |  | 8,210 |
| Provision for income taxes |  | 309 |  | 444 |  | 314 |  | 501 |
| Net income | \$ | 9,925 | \$ | 9,581 | \$ | 8,998 | \$ | 7,709 |
| Share data: |  |  |  |  |  |  |  |  |
| Average shares outstanding, basic |  |  |  |  |  |  |  |  |
| Class A |  | 08,329 |  | 08,329 |  | 08,029 |  | 08,029 |
| Class B |  | 59,580 |  | 59,580 |  | 59,880 |  | 59,880 |
| Average shares outstanding, diluted |  |  |  |  |  |  |  |  |
| Class A |  | 67,909 |  | 67,909 |  | 67,909 |  | 67,909 |
| Class B |  | 59,580 |  | 59,580 |  | 59,880 |  | 59,880 |
| Earnings per share, basic |  |  |  |  |  |  |  |  |
| Class A | \$ | 2.16 | \$ | 2.09 | \$ | 1.96 | \$ | 1.68 |
| Class B | \$ | 1.08 | \$ | 1.04 | \$ | 0.98 | \$ | 0.84 |
| Earnings per share, diluted |  |  |  |  |  |  |  |  |
| Class A | \$ | 1.78 | \$ | 1.72 | \$ | 1.62 | \$ | 1.38 |
| Class B | \$ | 1.08 | \$ | 1.04 | \$ | 0.98 | \$ | 0.84 |
| 2017 Quarters |  | urth |  | hird |  | cond |  | irst |
| (in thousands, except share data) |  |  |  |  |  |  |  |  |
| Interest income | \$ | 29,470 | \$ | 28,521 | \$ | 28,806 | \$ | 26,639 |
| Interest expense |  | 7,768 |  | 7,168 |  | 6,701 |  | 6,183 |
| Net interest income |  | 21,702 |  | 21,353 |  | 22,105 |  | 20,456 |
| Provision for loan losses |  | 450 |  | 450 |  | 490 |  | 400 |
| Net interest income after provision for loan losses |  | 21,252 |  | 20,903 |  | 21,615 |  | 20,056 |
| Other operating income |  | 4,410 |  | 3,942 |  | 4,291 |  | 3,909 |
| Operating expenses |  | 15,992 |  | 16,205 |  | 17,197 |  | 17,725 |
| Income before income taxes |  | 9,670 |  | 8,640 |  | 8,709 |  | 6,240 |
| Provision for income taxes |  | 9,645 |  | 617 |  | 552 |  | 144 |
| Net income | \$ | 25 | \$ | 8,023 | \$ | 8,157 | \$ | 6,096 |
| Share data: |  |  |  |  |  |  |  |  |
| Average shares outstanding, basic |  |  |  |  |  |  |  |  |
| Class A |  | 05,829 |  | 05,829 |  | 03,729 |  | 00,729 |
| Class B |  | 62,080 |  | 62,080 |  | 64,180 |  | 67,180 |
| Average shares outstanding, diluted |  |  |  |  |  |  |  |  |
| Class A |  | 67,909 |  | 67,909 |  | 67,909 |  | 67,909 |
| Class B |  | 62,080 |  | 62,080 |  | 64,180 |  | 67,180 |
| Earnings per share, basic |  |  |  |  |  |  |  |  |
| Class A | \$ | 0.01 | \$ | 1.75 | \$ | 1.78 | \$ | 1.33 |
| Class B | \$ | - | \$ | 0.87 | \$ | 0.89 | \$ | 0.66 |
| Earnings per share, diluted |  |  |  |  |  |  |  |  |
| Class A | \$ | - | \$ | 1.44 | \$ | 1.47 | \$ | 1.09 |
| Class B | \$ | - | \$ | 0.87 | \$ | 0.89 | \$ | 0.66 |

Century Bancorp, Inc. AR '18
24. Parent Company Financial Statements

The balance sheets of Century Bancorp, Inc. ("Parent Company") as of December 31, 2018 and 2017 and the statements of income and cash flows for each of the years in the three-year period ended December 31, 2018, are presented below. The statements of changes in stockholders' equity are identical to the consolidated statements of changes in stockholders' equity and are therefore not presented here.

| BALANCE SHEETS |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| December 31, | 2018 |  | 2017 |  |  |  |
| (dollars in thousands) |  |  |  |  |  |  |
| ASSETS: |  |  |  |  |  |  |
| Cash |  | 1,263 |  | 1,981 |  |  |
| Investment in subsidiary, at equity |  | 322,775 |  | 283,881 |  |  |
| Other assets |  | 16,991 |  | 16,833 |  |  |
| Total assets |  | 341,029 |  | 302,695 |  |  |
| LIABILITIES AND STOCKHOLDERS' EQUITY: |  |  |  |  |  |  |
| Liabilities |  | 4,507 |  | 6,315 |  |  |
| Subordinated debentures |  | 36,083 |  | 36,083 |  |  |
| Stockholders' equity |  | 300,439 |  | 260,297 |  |  |
| Total liabilities and stockholders' equity |  | 341,029 |  | \$ 302,695 |  |  |
| STATEMENTS OF INCOME |  |  |  |  |  |  |
| Year Ended December 31, |  | 2018 |  | 2017 |  | 2016 |
| (dollars in thousands) |  |  |  |  |  |  |
| Income: |  |  |  |  |  |  |
| Dividends from subsidiary | \$ | 4,750 |  | 2,500 | \$ | 2,000 |
| Interest income from deposits in bank |  | - |  | 1 |  | 3 |
| Other income |  | 53 |  | 34 |  | 28 |
| Total income |  | 4,803 |  | 2,535 |  | 2,031 |
| Interest expense |  | 1,474 |  | 1,121 |  | 937 |
| Operating expenses |  | 225 |  | 209 |  | 220 |
| Income before income taxes and equity in undistributed income of subsidiary |  | 3,104 |  | 1,205 |  | 874 |
| Benefit from income taxes |  | (347) |  | (440) |  | (383) |
| Income before equity in undistributed income of subsidiary |  | 3,451 |  | 1,645 |  | 1,257 |
| Equity in undistributed income of subsidiary |  | 32,762 |  | 20,656 |  | 23,277 |
| Net income | \$ | 36,213 | \$ | 22,301 | \$ | 24,534 |
| STATEMENTS OF CASH FLOWS |  |  |  |  |  |  |
| December 31, |  | 2018 |  | 2017 |  | 2016 |
| (dollars in thousands) |  |  |  |  |  |  |
| CASH FLOWS FROM OPERATING ACTIVITIES: |  |  |  |  |  |  |
| Net income | \$ | 36,213 |  | 22,301 | \$ | 24,534 |
| Adjustments to reconcile net income to net cash provided by operating activities |  |  |  |  |  |  |
| Undistributed income of subsidiary |  | $(32,762)$ |  | $(20,656)$ |  | $(23,277)$ |
| Increase in other assets |  | (158) |  | $(6,498)$ |  | $(1,527)$ |
| (Decrease) increase in liabilities |  | $(1,808)$ |  | 6,266 |  | 9 |
| Net cash provided by (used in) operating activities |  | 1,485 |  | 1,413 |  | (261) |
| CASH FLOWS FROM FINANCING ACTIVITIES: |  |  |  |  |  |  |
| Cash dividends paid |  | $(2,203)$ |  | $(2,200)$ |  | $(2,201)$ |
| Net cash used in financing activities |  | $(2,203)$ |  | $(2,200)$ |  | $(2,201)$ |
| Net (decrease) in cash |  | (718) |  | (787) |  | $(2,462)$ |
| Cash at beginning of year |  | 1,981 |  | 2,768 |  | 5,230 |
| Cash at end of year | \$ | 1,263 |  | 1,981 | \$ | 2,768 |

KPMG LLP

Independent Registered Public Accounting Firm
Two Financial Center
60 South Street
Boston, Massachusetts 02111-2759

The Board of Directors and Stockholders
Century Bancorp, Inc.:
Opinion on the Consolidated Financial Statements
We have audited the accompanying consolidated balance sheets of Century Bancorp, Inc. and its subsidiary (the "Company") as of December 31, 2018 and 2017 , the related consolidated statements of income, comprehensive income, changes in stockholders' equity, and cash flows for each of the years in the three-year period ended December 31, 2018, and the related notes, collectively, the consolidated financial statements. In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company as of December 31, 2018 and 2017, and the results of its operations and its cash flows for each of the years in the three-year period ended December 31, 2018, in conformity with U.S. generally accepted accounting principles.
We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) ("PCAOB"), the Company's internal control over financial reporting as of December 31, 2018, based on criteria established in Internal Control_Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission, and our report dated March 15, 2019 expressed an unqualified opinion on the effectiveness of the Company's internal control over financial reporting.

## Basis for Opinion

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

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud. Our audits included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

## KPMG LLP

We have served as the Company's auditor since 1982.
Boston, Massachusetts
March 15, 2019

## KPMG LLP

Independent Registered Public Accounting Firm
Two Financial Center
60 South Street
Boston, Massachusetts 02111-2759

## The Board of Directors and Stockholders <br> Century Bancorp, Inc.:

## Opinion on Internal Control Over Financial Reporting

We have audited Century Bancorp, Inc. and its subsidiary's (the "Company") internal control over financial reporting as of December 31, 2018, based on criteria established in Internal Control—Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission. In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2018, based on criteria established in Internal Control—Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) ("PCAOB"), the consolidated balance sheets of the Company as of December 31, 2018 and 2017, the related consolidated statements of income, comprehensive income, changes in stockholders' equity, and cash flows for each of the years in the three-year period ended December 31, 2018, and the related notes, collectively, the consolidated financial statements, and our report dated March 15, 2019 expressed an unqualified opinion on those consolidated financial statements.

## Basis for Opinion

The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control Over Financial Reporting. Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

## Definition and Limitations of Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

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

Boston, Massachusetts

March 15, 2019

400 Mystic Avenue
Medford, Massachusetts 02155

We, together with the other members of executive management of Century Bancorp, Inc. and our subsidiary (the "Company"), are responsible for establishing and maintaining adequate internal control over financial reporting. The Company's internal control system was designed to provide reasonable assurance to the Company's management and board of directors regarding the preparation and fair presentation of published financial statements.

All internal control systems, no matter how well designed, have inherent limitations. Therefore, even those systems determined to be effective can provide only reasonable assurance with respect to financial statement preparation and presentation.

The Company's management assessed the effectiveness of the Company's internal control over financial reporting as of December 31, 2018. In making this assessment, it used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission ("COSO") in Internal Control—Integrated Framework (2013). Based on our assessment, we believe that, as of December 31, 2018, the Company's internal control over financial reporting is effective based on those criteria.

The Company's independent registered public accounting firm has issued an audit report on the effectiveness of the Company's internal control over financial reporting. Their report appears on page 57.


Barry R. Sloane
President \& CEO


March 15, 2019

## Stockholder Information

| Corporate Headquarters | Transfer Agent and Registrar |
| :--- | :--- |
| Century Bank | Computershare Investor Services |
| 400 Mystic Avenue | P.O. Box 505000 |
| Medford, MA 02155-6316 | Louisville, KY 40233 |
| TEL (866) 823-6887 | TEL (781) 575-3400 |
| CenturyBank.com | Computershare.com |

## Annual Meeting

The annual meeting of stockholders will be held on Tuesday, April 9, 2019, at 10:00 a.m. The meeting will take place at Century Bank, 400 Mystic Avenue, Medford, MA.

## Stock Listing

Century Bancorp, Inc. became a public company in 1987. Century's Class A Common Stock is listed on the NASDAQ market and is traded under the symbol "CNBKA."

## 10-K Report

A copy of the Company's annual report to the Securities and Exchange Commission on Form 10-K may be obtained without charge upon written request to: Century Bancorp, Inc., Investor Relations, 400 Mystic Avenue, Medford, MA 02155 or online at http://www.centurybank.com/about/investorrelations.

About Century
Century Bancorp, Inc. is a $\$ 5.2$ billion banking and financial services company headquartered in Medford, Massachusetts. The Company operates 27 banking offices in 20 cities and towns in Massachusetts and provides a full range of business, personal, and institutional services.


Headquarters


Beverly


Cambridge


Federal Street


Medford Square


Quincy


Wellestey


Allston


Braintree


Chestnut Hill Square


Fellsway


Newton Centre


## Salem



Winchester


Andover


Brookline


Coolidge Corner


Lynn


North End


Somenvile


Woburn


Back Bay


Burlington


Everett


Malden


Peabody


State Street


## Celabrating <br> 50 <br> Century Bank.

400 Mystic Avenue, Medford, MA 02155
(866) 823-6887 CenturyBank.com


[^0]:    Somerville Ed Foundation
    Somerville High School
    Somerville Kiwanis Club
    Somerville Museum
    Somerville Pop Warner
    Somerville Rotary Club
    Sophia Academy
    South End Community Health Center
    South Shore Chamber of Commerce
    Special Olympics Massachusetts
    Spirit of Adventure Council, Boy Scouts of America
    Sportsmen's Tennis \& Enrichment Center
    St. John the Evangelist Church
    St. Joseph Parish
    St. Jude Children's Research Hospital
    Steps to Success
    Stonehill College
    Suzuki School of Newton
    Teamsters Local 25, Autism Fund Inc.
    Temple Beth Avodah
    Temple Beth Shalom
    Temple Beth Zion
    Temple Emanuel Andover
    Temple Emanuel Newton
    Temple Reyim

[^1]:    ${ }^{1}$ Audit Committee, ${ }^{2}$ Compensation Committee, ${ }^{3}$ Nominating Committee, ${ }^{4}$ Executive Committee, ${ }^{5}$ Asset Liability Committee,
    ${ }^{6}$ Non-deposit Investment and Insurance Products Committee, ${ }^{7}$ Trust Committee, *Committee Chairperson

[^2]:    *Assumes that the value of the investment in the Company's Common Stock and each index was $\$ 100$ on

[^3]:    Management believes that the allowance for loan losses is adequate. In addition, various regulatory agencies, as part of the examination process, periodically review the Company's allowance for loan losses. Such agencies may require the Company to recognize additions to the allowance based on their judgments about information available to them at the time of their examination. The enhancements described above have resulted in a lower level of unallocated allowance for loan losses. Further information regarding the allocation of the allowance is contained within Note 6 of the "Notes to Consolidated Financial Statements."

[^4]:    ${ }^{(1)}$ On a fully taxable equivalent basis calculated using a federal tax rate of $21 \%$.
    ${ }^{(2)}$ On a fully taxable equivalent basis calculated using a federal tax rate of $34 \%$.
    ${ }^{(3)}$ Nonaccrual loans are included in average amounts outstanding.
    ${ }^{(4)}$ At amortized cost.

[^5]:    See accompanying "Notes to Consolidated Financial Statements."

[^6]:    ${ }^{(1)}$ In accordance with Subtopic 820-10, certain investments that were measured at net asset value per share (or its equivalent) have not been classified in the fair value hierarchy.

