Section 1: 10-Q (10-Q)

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 20549

FORM 10-Q

(Mark One)

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

For the quarterly period ended September 30, 2019

OR

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

For the transition period from ________________ to _________________

Commission File Number: 001-38184

CAMBRIDGE BANCORP
(Exact Name of Registrant as Specified in its Charter)

Massachusetts **(State or other jurisdiction of incorporation or organization)**	**04-2777442** **(I.R.S. Employer Identification No.)**
1336 Massachusetts Avenue **Cambridge, MA** **(Address of principal executive offices)**	**02138** **(Zip Code)**

Registrant's telephone number, including area code: (617) 876-5500

Common Stock **(Title of each class)**	**CATC** **(Trading symbol)**	**NASDAQ** **(Name of each exchange on which registered)**

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

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

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

Large accelerated filer	☐	Accelerated filer	☒
Non-accelerated filer	☐	Small reporting company	☐
		Emerging growth Company	☐

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

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

As of October 31, 2019, the registrant had 4,849,738 shares of common stock, $1.00 par value per share, outstanding.

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CAMBRIDGE BANCORP AND SUBSIDIARIES

PART I—FINANCIAL INFORMATION

Item 1. Financial Statements.

CAMBRIDGE BANCORP AND SUBSIDIARIES
UNAUDITED CONSOLIDATED BALANCE SHEETS

	September 30, 2019	December 31, 2018
	(dollars in thousands, except par value)	
Assets		
Cash and cash equivalents	$ 68,949	$ 18,473
Investment securities		
Available for sale, at fair value (amortized cost $148,606 and $172,290, respectively)	148,068	168,163
Held to maturity, at amortized cost (fair value $276,241 and $281,310, respectively)	269,475	282,869
Total investment securities	417,543	451,032
Loans held for sale, at lower of cost or fair value	2,082	—
Loans		
Residential mortgage	909,822	604,331
Commercial mortgage	1,016,772	757,957
Home equity	82,713	69,336
Commercial & Industrial	138,072	93,712
Consumer	32,503	34,436
Total loans	2,179,882	1,559,772
Less: allowance for loan losses	(18,035)	(16,768)
Net loans	2,161,847	1,543,004
Federal Home Loan Bank of Boston Stock, at cost	9,159	6,844
Bank owned life insurance	37,161	30,933
Banking premises and equipment, net	14,954	8,578
Right-of-use asset operating leases	34,553	—
Deferred income taxes, net	7,939	8,717
Accrued interest receivable	6,959	5,762
Goodwill	31,206	412
Merger related intangibles	3,429	—
Other assets	46,087	27,629
Total assets	$ 2,841,868	$ 2,101,384
Liabilities		
Deposits		
Demand	$ 654,133	$ 494,492
Interest bearing checking	429,755	431,702
Money market	214,721	135,585
Savings	876,392	628,212
Certificates of deposit	232,858	121,419
Total deposits	2,407,859	1,811,410
Short-term borrowings	113,935	90,000
Long-term borrowings	—	3,409
Operating lease liabilities	35,990	—
Other liabilities	40,739	29,539
Total liabilities	2,598,523	1,934,358
Shareholders' Equity		
Common stock, par value $1.00; Authorized: 10,000,000 shares; Outstanding: 4,849,988 shares and 4,107,051 shares, respectively	4,850	4,107
Additional paid-in capital	98,256	38,271
Retained earnings	142,237	131,135
Accumulated other comprehensive loss	(1,998)	(6,487)
Total shareholders' equity	243,345	167,026
Total liabilities and shareholders' equity	$ 2,841,868	$ 2,101,384

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

CAMBRIDGE BANCORP AND SUBSIDIARIES
UNAUDITED CONSOLIDATED STATEMENTS OF INCOME

	Three Months Ended September 30, 2019	Three Months Ended September 30, 2018	Nine Months Ended September 30, 2019	Nine Months Ended September 30, 2018
	(dollars in thousands, except share data)			
Interest and dividend income				
Interest on taxable loans	$ 23,280	$ 14,808	$ 60,919	$ 42,318
Interest on tax-exempt loans	172	91	385	279
Interest on taxable investment securities	1,978	1,936	6,074	5,570
Interest on tax-exempt investment securities	563	591	1,709	1,817
Dividends on FHLB of Boston stock	124	93	281	202
Interest on overnight investments	219	83	556	484
Total interest and dividend income	26,336	17,602	69,924	50,670
Interest expense				
Interest on deposits	4,609	1,275	11,489	3,290
Interest on borrowed funds	676	156	1,347	202
Total interest expense	5,285	1,431	12,836	3,492
Net interest and dividend income	21,051	16,171	57,088	47,178
Provision for Loan Losses	2,170	457	2,673	787
Net interest and dividend income after provision for loan losses	18,881	15,714	54,415	46,391
Noninterest income				
Wealth management revenue	7,033	6,779	19,576	19,044
Deposit account fees	814	782	2,395	2,306
ATM/Debit card income	391	294	1,046	875
Bank owned life insurance income	165	129	454	393
Gain (loss) on disposition of investment securities	2	—	(79)	2
Gain on loans held for sale	460	37	491	82
Loan related derivative income	1,130	636	1,571	1,220
Other income	371	272	1,014	1,029
Total noninterest income	10,366	8,929	26,468	24,951
Noninterest expense				
Salaries and employee benefits	12,067	10,326	34,353	30,842
Occupancy and equipment	2,792	2,290	7,813	6,736
Data processing	1,652	1,329	4,532	3,848
Professional services	844	761	2,411	2,477
Marketing	263	595	1,175	1,369
FDIC insurance	91	151	369	437
Merger expenses	339	—	3,880	—
Other expenses	815	427	2,216	1,436
Total noninterest expense	18,863	15,879	56,749	47,145
Income before income taxes	10,384	8,764	24,134	24,197
Income tax expense	2,708	2,105	5,988	5,622
Net income	$ 7,676	6,659	$ 18,146	$ 18,575
Share data:				
Weighted average number of shares outstanding, basic	4,815,020	4,064,620	4,525,178	4,059,608
Weighted average number of shares outstanding, diluted	4,842,965	4,101,378	4,552,092	4,095,447
Basic earnings per share	$ 1.58	$ 1.62	$ 3.98	$ 4.53
Diluted earnings per share	$ 1.57	$ 1.61	$ 3.95	$ 4.49

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

CAMBRIDGE BANCORP AND SUBSIDIARIES
UNAUDITED CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
	(dollars in thousands)			
Net income	$ 7,676	$ 6,659	$ 18,146	$ 18,575
Other comprehensive income/(loss), net of tax:				
Unrealized gains/(losses) on available for sale securities				
Unrealized holding gains/(losses) arising during period	141	(172)	2,689	(1,947)
Less: reclassification adjustment for losses/(gains) included in net income	(1)	—	61	(2)
Total unrealized gains/(losses) on securities	140	(172)	2,750	(1,949)
Derivatives				
Change in interest rate contracts	472	—	1,661	—
Defined benefit retirement plans				
Change in retirement liabilities	26	10	78	30
Other comprehensive income/(loss)	638	(162)	4,489	(1,919)
Comprehensive income	$ 8,314	$ 6,497	$ 22,635	$ 16,656

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

CAMBRIDGE BANCORP AND SUBSIDIARIES
UNAUDITED CONSOLIDATED STATEMENTS OF CHANGES IN SHAREHOLDERS' EQUITY

	Three Months Ended September 30,				
	Common Stock	Additional Paid-In Capital	Retained Earnings	Accumulated Other Comprehensive (Loss) / Income	Total Shareholders' Equity
	(dollars in thousands, except per share data)				
Balance at June 30, 2018	$ 4,104	$ 37,152	$ 123,276	$ (8,840)	$ 155,692
Cumulative effect of accounting changes	—	—	—	—	—
Net income	—	—	6,659	—	6,659
Other comprehensive income (loss)	—	—	—	(162)	(162)
Share based compensation	2	637	—	—	639
Dividends declared ($0.50 per share)	—	—	(2,052)	—	(2,052)
Balance at September 30, 2018	$ 4,106	$ 37,789	$ 127,883	$ (9,002)	$ 160,776
Balance at June 30, 2019	$ 4,850	$ 97,844	$ 137,036	$ (2,636)	$ 237,094
Net income	—	—	7,676	—	7,676
Other comprehensive income (loss)	—	—	—	638	638
Share based compensation	—	412	—	—	412
Dividends declared ($0.51 per share)	—	—	(2,475)	—	(2,475)
Common stock issued for merger	—	—	—	—	—
Balance at September 30, 2019	$ 4,850	$ 98,256	$ 142,237	$ (1,998)	$ 243,345

	Nine Months Ended September 30,				
	Common Stock	Additional Paid-In Capital	Retained Earnings	Accumulated Other Comprehensive (Loss) / Income	Total Shareholders' Equity
	(dollars in thousands, except per share data)				
Balance at December 31, 2017	$ 4,082	$ 35,663	$ 114,093	$ (5,881)	$ 147,957
Cumulative effect of accounting changes	—	—	1,202	(1,202)	—
Net income	—	—	18,575	—	18,575
Other comprehensive income (loss)	—	—	—	(1,919)	(1,919)
Share based compensation	24	2,126	—	—	2,150
Dividends declared ($1.46 per share)	—	—	(5,987)	—	(5,987)
Balance at September 30, 2018	$ 4,106	$ 37,789	$ 127,883	$ (9,002)	$ 160,776
Balance at December 31, 2018	$ 4,107	$ 38,271	$ 131,135	$ (6,487)	$ 167,026
Net income	—	—	18,146	—	18,146
Other comprehensive income (loss)	—	—	—	4,489	4,489
Share based compensation	20	1,291	—	—	1,311
Dividends declared ($1.53 per share)	—	—	(7,044)	—	(7,044)
Common stock issued for merger	723	58,694	—	—	59,417
Balance at September 30, 2019	$ 4,850	$ 98,256	$ 142,237	$ (1,998)	$ 243,345

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

CAMBRIDGE BANCORP AND SUBSIDIARIES
UNAUDITED CONSOLIDATED STATEMENTS OF CASH FLOWS

	Nine Months Ended September 30,	
	2019	2018
	(dollars in thousands)	
CASH FLOWS FROM OPERATING ACTIVITIES		
Net income	$ 18,146	$ 18,575
Adjustments to reconcile net income to net cash provided by operating activities:		
Provision for loan losses	2,673	787
Amortization of deferred charges and fees, net	378	676
Net (Accretion)/Amortization of merger-related intangibles	(854)	—
Depreciation and amortization	1,403	1,454
Bank owned life insurance income	(454)	(393)
Loss/(gain) on disposition of investment securities	79	(2)
Share based compensation	1,311	2,150
Change in accrued interest receivable	(69)	(408)
Deferred income tax (benefit)/expense	455	(156)
Change in other assets, net	(15,500)	(9,702)
Change in other liabilities, net	12,739	4,365
Change in loans held for sale	(2,082)	—
Net cash provided by operating activities	18,225	17,346
CASH FLOWS FROM INVESTING ACTIVITIES		
Origination of loans	(563,239)	(393,864)
Proceeds from principal payments of loans	381,597	293,091
Proceeds from principal loan pool sale	36,971	—
Purchase of securities available for sale	(10,449)	—
Proceeds from calls/maturities of securities available for sale	29,405	21,084
Proceeds from sales of securities available for sale and held to maturity	26,552	702
Proceeds from calls/maturities of securities held to maturity	48,549	25,750
Purchase of securities held to maturity	(35,958)	(64,960)
Proceeds from settlement of bank owned life insurance policies	—	676
Redemption (purchase) of FHLB of Boston stock	(849)	(2,424)
Purchase of banking premises and equipment	(1,494)	(980)
Net cash acquired in business combinations	2,063	—
Net cash (used in) provided by investing activities	(86,852)	(120,925)
CASH FLOWS FROM FINANCING ACTIVITIES		
Change in demand, interest bearing, money market and savings accounts	170,237	2,082
Change in certificates of deposit	(51,157)	(46,249)
Change in borrowings	7,067	66,573
Cash dividends paid on common stock	(7,044)	(5,987)
Net cash provided by (used in) financing activities	119,103	16,419
Net (decrease)/increase in cash and cash equivalents	50,476	(87,160)
Cash and cash equivalents at beginning of period	18,473	103,591
Cash and cash equivalents at end of period	$ 68,949	$ 16,431
SUPPLEMENTAL DISCLOSURES OF CASH FLOW INFORMATION:		
Cash paid during the period for:		
Interest	$ 7,792	$ 3,516
Income taxes	5,760	6,275
Significant non-cash transactions		
Right-of-use assets for lessee operating leases	34,553	—
Right-of-use liabilities for lessee operating leases	35,990	—
Transfer of other real estate owned	185	—
Common Stock issued to Optima shareholders	59,417	—
Fair value of assets acquired, net of cash acquired	548,801	—
Fair value of liabilities assumed	491,447	—

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

1. BASIS OF PRESENTATION

The unaudited consolidated financial statements include the accounts of Cambridge Bancorp (the "Company") and its wholly owned subsidiary, Cambridge Trust Company (the "Bank"), and the Bank's wholly owned subsidiaries, Cambridge Trust Company of New Hampshire Inc., CTC Security Corporation, and CTC Security Corporation III. References to the Company herein relate to the consolidated group of companies. All significant intercompany accounts and transactions have been eliminated in preparation of the consolidated financial statements.

The Company is a state-chartered, federally registered bank holding company headquartered in Cambridge, Massachusetts and was incorporated in 1983. The Company is the sole shareholder of the Bank, a Massachusetts trust company chartered in 1890, which is a commercial bank. We are a private bank offering a full range of private banking and wealth management services to our clients. The private banking business, the Company's only reportable operating segment, is managed as a single strategic unit.

The unaudited consolidated financial statements reflect all adjustments (consisting of normal recurring adjustments) and disclosures necessary to present fairly the Company's financial position, as of September 30, 2019 and December 31, 2018, respectively, and the results of operations and cash flows for the interim periods presented in accordance with U.S. generally accepted accounting principles ("GAAP"). Interim results are not necessarily reflective of the results of the entire year.

For further information, refer to the consolidated financial statements and notes thereto included in the Company's Annual Report on Form 10-K for the year ended December 31, 2018, filed with the Securities and Exchange Commission.

2. USE OF ESTIMATES

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements. Actual results could differ from those estimates. The allowance for loan losses and the valuation of deferred tax assets are particularly subject to change.

3. SUBSEQUENT EVENTS

Management has reviewed events occurring through November 7, 2019, the date the unaudited consolidated financial statements were available to be issued, and determined that no other subsequent events occurred requiring adjustment to or disclosure in these financial statements.

4. RECENTLY ISSUED AND ADOPTED ACCOUNTING GUIDANCE

Accounting Standards Update 2018-16 - *Inclusion of the Secured Overnight Financing Rate ("SOFR") Overnight Index Swap ("OIS") Rate as a Benchmark Interest Rate for Hedge Accounting Purposes* ("ASU 2018-16"). On October 25, 2018, the FASB issued ASU 2018-16 to introduce OIS Rate based on the SOFR as an acceptable US benchmark interest for the purpose of applying hedge accounting under Topic 815. This update is effective for interim and annual reporting periods beginning after December 15, 2018 because the Company has already adopted ASU 2017-12 - *Derivatives and Hedging: Targeted Improvements to Accounting for Hedging Activities*. The Company adopted this update on January 1, 2019, and the update did not have a material impact on the consolidated financial statements.

Accounting Standards Update 2018-15 - *Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract* ("ASU 2018-15"). On August 29, 2018, the FASB issued amended guidance to 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). The ASU is effective for fiscal years beginning after December 15, 2019, including interim periods within those fiscal years; early adoption is permitted and should be applied either retrospectively or prospectively to all implementation costs incurred after the date of adoption. We are currently assessing the impact the adoption of this guidance will have on our consolidated balance sheets, statements of income, and cash flows.

Accounting Standards Update 2018-14 - *Changes to the Disclosure Requirements for Defined Benefit Plans* ("ASU 2018-14"). On August 28, 2018, the FASB issued guidance to remove, add, and clarify certain disclosures for defined benefit plans. The ASU is effective for fiscal years ending after December 15, 2020; early adoption is permitted and should be applied using the retrospective method to all periods presented. We are currently assessing the impact the adoption of this guidance will have on our consolidated balance sheets, statements of income, and cash flows.

Accounting Standards Update 2018-13 - *Changes to the Disclosure Requirements for Fair Value Measurement* ("ASU 2018-13"). On August 28, 2018, the FASB issued guidance to remove, add, and clarify certain disclosures for fair value measurement. The ASU is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2019; early adoption is permitted and should be applied using either retrospective method or the prospective method as specified in the ASU. We are currently assessing the impact the adoption of this guidance will have on our consolidated balance sheets, statements of income, and cash flows.

Accounting Standards Update 2018-07 - *Improvements to Nonemployee Share-Based Payment Accounting* ("ASU 2018-07"). On June 20, 2018, the FASB issued ASU 2018-07 to align the accounting for share-based payment awards issued to employees and nonemployees. The new guidance also clarifies that any share-based payment awards issued to customers should be evaluated under ASC 606, *Revenue from Contracts with Customers*. Currently, the accounting for nonemployee share-based payments differs from that applied to employee awards, particularly with regard to the measurement date and the impact of performance conditions. Under the new guidance, the existing employee guidance will apply to nonemployee share-based transactions, with certain exceptions. The cost of nonemployee awards will continue to be recorded as if the grantor had paid cash for the goods or services. The ASU is effective for public companies for fiscal years beginning after December 15, 2018, including interim periods within that fiscal year, and early adoption is permitted. The adoption of this guidance did not have a material impact on our consolidated balance sheets, statements of income, and cash flows.

Accounting Standard Update No. 2017-12 - *Derivatives and Hedging: Targeted Improvements to Accounting for Hedging Activities* ("ASU 2017-12"). On August 28, 2017, the FASB issued a new standard that allows companies to better align their hedge accounting and risk management activities. The new standard will also reduce the cost and complexity of applying hedge accounting. The standard requires companies to change the recognition and presentation of the effects of hedge accounting by:

- eliminating the requirement to separately measure and report hedge ineffectiveness; and
- requiring companies to present all of the elements of hedge accounting that affect earnings in the same income statement line as the hedged item.

The standard also permits hedge accounting for strategies for which hedge accounting was not historically permitted and includes new alternatives for measuring the hedged item for fair value hedges of interest rate risk. Furthermore, the standard eases the requirements for effectiveness testing, hedge documentation, applying the critical terms match method, and introduces new alternatives that will permit companies to reduce the risk of material error corrections if they misapply the shortcut method. The new accounting standard was effective for fiscal years beginning after December 15, 2018 and interim periods within those fiscal years.

The new standard requires a modified retrospective transition method in which the Company will recognize the cumulative effect of the change on the opening balance of each affected component of equity in the statement of financial position as of the date of adoption. The Company early adopted the standard during the fourth quarter of 2018, using a modified retrospective transition method, and it did not have an effect on our consolidated balance sheets, statements of income, and cash flows. See note 18 – DERIVATIVE AND HEDGING ACTIVITIES.

Accounting Standards Update No. 2016-13 - *Financial Instruments - Measurement of Credit Losses on Financial Instruments* ("ASU 2016-13"). On June 16, 2016, the FASB issued ASU 2016-13, which will significantly change how entities measure and recognize credit impairment for many financial assets. Under this standard, the new current expected credit loss model will require entities to immediately recognize an estimate of credit losses expected to occur over the remaining life of the financial assets that are in the scope of the standard. This new guidance also made targeted amendments to the current impairment model for available for sale debt securities. This guidance will be effective for the Company for the fiscal years beginning after December 15, 2019, including interim periods within those fiscal years. Early adoption for fiscal years and interim periods beginning after December 15, 2018 is permitted. We are in the process of evaluating this guidance and its effect on our consolidated balance sheets, statements of income, and cash flows. We have developed an implementation plan which includes assessment of processes, portfolio segmentation, model development, system requirements, and the identification of data and resource needs to implement this standard. During the fourth quarter of 2019, the Company expects to perform a full parallel run of the current expected credit loss ("CECL") model alongside the current incurred loss model, using September 30, 2019 balances. In addition, the Company has also begun developing accounting policies, as well as considering the need for new internal controls relevant to the updated methodologies and models.

Accounting Standards Update No. 2016-02 - *Leases* (“ASU 2016-02”). On February 25, 2016, the FASB issued guidance that requires recognition of lease assets and lease liabilities on the statement of condition and disclosure of key information about leasing arrangements. In particular, this guidance requires a lessee of operating or finance leases to recognize on the statement of condition a liability to make lease payments and a right-of-use asset representing its right to use the underlying asset for the lease term. However, for leases with a term of 12 months or less, a lessee is permitted to make an accounting policy election not to recognize lease assets and lease liabilities. Under previous GAAP, a lessee was not required to recognize lease assets and lease liabilities arising from operating leases on the statement of condition. The guidance became effective for the Company on January 1, 2019. Also in July 2018, the FASB issued Accounting Standards Update No. 2018-11, “*Targeted Improvements*” (“ASU 2018-11”), to allow 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. Using the optional transition method discussed above, the Company adopted the new lease guidance on January 1, 2019 and recorded a right-of-use asset of $32.9 million and a corresponding net lease liability. See note 14 – LEASES.

Accounting Standards Update No. 2014-09 - *Revenue from Contracts with Customers* (“ASU 2014-09”). On May 28, 2014, the FASB issued Accounting Standards Update (“ASU”) No. 2014-09, “*Revenue from Contracts with Customers*,” which 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. The new guidance supersedes current U.S. GAAP guidance on revenue recognition and requires the use of more estimates and judgments than the current revenue standards. Topic 606 does not apply to revenue associated with financial instruments, including revenue from loans and securities. In addition, certain noninterest income streams, such as fees associated with mortgage servicing rights, financial guarantees, derivatives, and certain credit card fees, are also not in scope of the new guidance.

On January 1, 2018, the Company adopted ASU No. 2014-09 and all subsequent ASUs that modified Topic 606. Topic 606 is applicable to noninterest revenue streams such as trust and asset management income, deposit related fees, interchange fees, and merchant income. The Company completed its overall assessment of revenue streams and review of related contracts potentially affected by the ASU, including trust and asset management fees, deposit related fees, and other income within noninterest income. Based on this assessment, the Company concluded that ASU 2014-09 did not materially change the method in which the Company currently recognizes revenue for these revenue streams. The Company adopted ASU 2014-09 and its related amendments utilizing the modified retrospective approach. Since there was no net income impact upon adoption of the new guidance, a cumulative effect adjustment to opening retained earnings was not deemed necessary. Noninterest income considered in-scope of Topic 606 is discussed below.

Wealth Management and Trust Fees

The Company earns wealth management fees for providing investment management, trust administration, and financial planning services to clients. The Company’s performance obligation under these contracts is satisfied over time as the wealth management services are provided. Fees are recognized monthly based on the average monthly value of the assets under management and the applicable fee rate, or at a fixed annual rate, depending on the terms of the contract. No performance-based incentives are earned on wealth management contracts.

The Company earns trust fees for serving as trustee for certain clients. As trustee, the Company serves as a fiduciary, administers the client’s trust, and in some cases, manages the assets of the trust. The Company’s performance obligation under these agreements is satisfied over time as the administration and management services are provided. Fees are recognized monthly based on a percentage of the market value of the account or at a fixed annual rate as outlined in the agreement. The Company also earns fees for trust related activities. The Company’s performance obligation under these agreements is satisfied at a point in time and recognized when these services have been performed.

All of the wealth management and trust fee income on the consolidated statement of income is considered in-scope of Topic 606.

Other Banking Fee Income

The Company charges a variety of fees to its clients for services provided on the deposit and deposit management related accounts. Each fee is either transaction-based or assessed monthly. The types of fees include service charges on accounts, overdraft fees, wire transfer fees, maintenance fees, ATM fee charges, and other miscellaneous charges related to the accounts. These fees are not governed by individual contracts with clients. They are charges to clients based on disclosures presented to clients upon opening these accounts along with updated disclosures when changes are made to the fee structures. The transaction-based fees are recognized in revenue when charged to the client based on specific activity on the client’s account. Monthly service and maintenance charges are recognized in the month they are earned and are charged directly to the client’s account.

5. MERGERS

Optima Bank & Trust Company

The Company completed its merger with Optima Bank & Trust Company ("Optima") on April 17, 2019. Under the terms of the Agreement and Plan of Merger (the "Merger Agreement"), each outstanding share of Optima common stock was converted into $32.00 in cash or 0.3468 shares of the Company's common stock, with the transaction structured as 95 percent common stock and 5 percent cash. As a result of the merger, former Optima shareholders received an aggregate of approximately 722,746 shares of the Company's common stock and an aggregate of approximately $3.5 million in cash. The total consideration paid amounted to $64.3 million.

The Company accounted for the merger using the acquisition method pursuant to the Business Combinations Topic of the Financial Accounting Standards Board ("FASB") Accounting Standards Codification ("ASC"). Accordingly, the Company recorded merger expenses during the three months and nine months ended September 30, 2019 of approximately $339,000 and $3.9 million, respectively. Additionally, the acquisition method requires the acquirer to recognize the assets acquired and the liabilities assumed at their fair values as of the acquisition date. The following table summarizes the estimated fair value of the assets acquired and liabilities assumed as of the date of the acquisition:

		Net Assets Acquired at Fair Value
		(dollars in thousands)
Assets		
Cash and cash equivalents	$	6,902
Investments		23,298
Loans		475,406
Premises and equipment		6,286
Goodwill		30,794
Core deposit and other intangibles		3,609
Other assets		9,408
Total assets acquired		555,703
Liabilities		
Deposits		477,189
Borrowings		13,459
Other liabilities		799
Total liabilities assumed		491,447
Purchase price	$	64,256

Fair value adjustments to assets acquired and liabilities assumed are generally amortized using either an effective yield or straight-line basis over periods consistent with the average life, useful life, and/or contractual term of the related assets and liabilities.

Fair values of the major categories of assets acquired and liabilities assumed were determined as follows:

Cash and Cash Equivalents

The fair values of cash and cash equivalents approximate the respective carrying amounts because the instruments are payable on demand or have short-term maturities.

Investments

The fair values of securities were based on quoted market prices for identical securities received from an independent, nationally-recognized, third-party pricing service. Prices provided by the independent pricing service were based on recent trading activity and other observable information including, but not limited to, market interest rate curves, referenced credit spreads, and estimated prepayment rates where applicable.

Loans

The loans acquired were recorded at fair value without a carryover of the allowance for loan losses. Fair value of the loans portfolio is determined using market participant assumptions in estimating the amount and timing of both principal and interest cash flows expected to be collected, as adjusted for an estimate of future credit losses and prepayments, and then applying a market-based discount rate to those cash flows. The overall discount on the loans acquired in this transaction was due to anticipated credit loss, as well as considerations for liquidity and market interest rates.

Premises and Equipment

The fair value of the premises, including buildings and improvements, was determined based upon appraisals by licensed real estate appraisers. The appraisals were based upon the best and highest use of the property with final values determined based upon an analysis of the cost, sales comparison, and income capitalization approaches for each property appraised.

Core Deposit Intangible

The fair value of the core deposit intangible is derived by comparing the interest rate and servicing costs that the financial institution pays on the core deposit liability versus the current market rate for alternative sources of financing, while factoring in estimates over the remaining life and attrition rate of the deposit accounts. The intangible asset represents the stable and relatively low cost source of funds that the deposits and accompanying relationships provide the Company, when compared to alternative funding sources.

Deposits

The fair value of acquired savings and transaction deposit accounts was assumed to approximate the carrying value as these accounts have no stated maturity and are payable on demand. The fair value of time deposits were determined based on the present value of the contractual cash flows over the remaining period to maturity using a market interest rate.

Borrowings

Federal Home Loan Bank ("FHLB") borrowings were recorded at their carrying value which approximates fair value.

6. CASH AND CASH EQUIVALENTS

At September 30, 2019 and December 31, 2018, cash and cash equivalents totaled $68.9 million and $18.5 million, respectively. Of this amount, $30.4 million and $12.7 million, respectively, were maintained to satisfy the reserve requirements of the Federal Reserve Bank of Boston ("FRB Boston"). Additionally, at September 30, 2019 and December 31, 2018, the Company pledged $500,000 to the New Hampshire Banking Department relating to Cambridge Trust Company of New Hampshire, Inc.'s operations in that state.

7. INVESTMENT SECURITIES

Investment securities have been classified in the unaudited consolidated balance sheets according to management's intent. The carrying amounts of securities and their approximate fair values were as follows:

	September 30, 2019				December 31, 2018			
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
	(dollars in thousands)							
Available for sale securities								
U.S. GSE obligations	$ 40,000	$ 3	$ (111)	$ 39,892	$ 75,004	$ —	$ (965)	$ 74,039
Mortgage-backed securities	108,606	314	(744)	108,176	92,271	118	(3,121)	89,268
Corporate debt securities	—	—	—	—	5,015	—	(159)	4,856
Total available for sale securities	$ 148,606	$ 317	$ (855)	$148,068	$ 172,290	$ 118	$ (4,245)	$168,163
Held to maturity securities								
U.S. GSE obligations	$ 17,573	$ 2	$ (6)	$ 17,569	$ 32,571	$ —	$ (238)	$ 32,333
Mortgage-backed securities	171,502	3,435	(147)	174,790	168,118	134	(2,290)	165,962
Corporate debt securities	6,978	129	—	7,107	6,972	—	(107)	6,865
Municipal securities	73,422	3,353	—	76,775	75,208	1,297	(355)	76,150
Total held to maturity securities	$ 269,475	$ 6,919	$ (153)	$276,241	$ 282,869	$ 1,431	$ (2,990)	$281,310
Total	$ 418,081	$ 7,236	$ (1,008)	$424,309	$ 455,159	$ 1,549	$ (7,235)	$449,473

All of the Company's mortgage-backed securities have been issued by, or are collateralized by securities issued by, either Government National Mortgage Association (Ginnie Mae), Federal National Mortgage Association (Fannie Mae), or Federal Home Loan Mortgage Corporation (Freddie Mac).

The following tables show the Company's securities with gross unrealized losses aggregated by investment category and length of time that individual securities have been in a continuous loss position:

	September 30, 2019					
	Less than 12 months		12 months or longer		Total	
	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses
	(dollars in thousands)					
Temporarily Impaired Securities						
Available for sale securities						
U.S. GSE obligations	$ —	$ —	$ 34,889	$ (111)	$ 34,889	$ (111)
Mortgage-backed securities	24,687	(111)	54,732	(633)	79,419	(744)
Corporate debt securities	—	—	—	—	—	—
Total available for sale securities	$ 24,687	$ (111)	$ 89,621	$ (744)	$ 114,308	$ (855)
Held to maturity securities						
U.S. GSE obligations	$ —	$ —	$ 4,992	$ (6)	$ 4,992	$ (6)
Mortgage-backed securities	24,226	(51)	13,653	(96)	37,879	(147)
Corporate debt securities	—	—	—	—	—	—
Municipal securities	—	—	—	—	—	—
Total held to maturity securities	$ 24,226	$ (51)	$ 18,645	$ (102)	$ 42,871	$ (153)
Total temporarily impaired securities	$ 48,913	$ (162)	$ 108,266	$ (846)	$ 157,179	$ (1,008)

	December 31, 2018					
	Less than 12 months		12 months or longer		Total	
	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses
	(dollars in thousands)					
Temporarily Impaired Securities						
Available for sale securities						
U.S. GSE obligations	$ —	$ —	$ 74,039	$ (965)	$ 74,039	$ (965)
Mortgage-backed securities	—	—	86,815	(3,121)	86,815	(3,121)
Corporate debt securities	902	(98)	3,954	(61)	4,856	(159)
Total available for sale securities	$ 902	$ (98)	$ 164,808	$ (4,147)	$ 165,710	$ (4,245)
Held to maturity securities						
U.S. GSE obligations	$ 4,995	$ (5)	$ 27,338	$ (233)	$ 32,333	$ (238)
Mortgage-backed securities	30,719	(216)	93,225	(2,074)	123,944	(2,290)
Corporate debt securities	6,865	(107)	—	—	6,865	(107)
Municipal securities	8,484	(82)	8,313	(273)	16,797	(355)
Total held to maturity securities	$ 51,063	$ (410)	$ 128,876	$ (2,580)	$ 179,939	$ (2,990)
Total temporarily impaired securities	$ 51,965	$ (508)	$ 293,684	$ (6,727)	$ 345,649	$ (7,235)

Management evaluates securities for other-than-temporary impairment on at least a quarterly basis, and more frequently, when economic or market conditions warrant such evaluation. Consideration is given to: (1) the length of time and the extent to which the fair value has been less than cost; (2) the financial condition and near-term prospects of the issuer; and (3) the intent and ability of the Company to retain its investment in the issuer for a period of time sufficient to allow for any anticipated recovery in fair value.

As of September 30, 2019, 65 debt securities had gross unrealized losses, with an aggregate depreciation of 0.64% from the Company's amortized cost basis. The largest unrealized loss percentage and largest unrealized loss dollar amount of any single security was 2.21%, or $69,000, of its amortized cost.

As of December 31, 2018, 142 debt securities had gross unrealized losses, with an aggregate depreciation of 2.05% from the Company's amortized cost basis. The largest unrealized loss percentage of any single security was 9.79%, or $98,000, of its amortized cost. The largest unrealized dollar loss of any single security was $189,000, or 5.34%, of its amortized cost.

The Company believes that the nature and duration of impairment on its debt security positions are primarily a function of interest rate movements and changes in investment spreads and does not consider full repayment of principal on the reported debt obligations to be at risk. Since nearly all of these securities are rated "investment grade" and (a) the Company does not intend to sell these securities before recovery and (b) that it is more likely than not that the Company will not be required to sell these securities before recovery, the Company does not consider these securities to be other-than-temporarily impaired as of September 30, 2019 and December 31, 2018.

The amortized cost and fair value of debt securities, aggregated by the earlier of guaranteed call date or contractual maturity, are shown below. Maturities of mortgage-backed securities do not take into consideration scheduled amortization or prepayments. Actual maturities may differ from contractual maturities because issuers may have the right to call or prepay obligations with or without call or prepayment penalties.

	Within One Year		After One, But Within Five Years		After Five, But Within Ten Years		After Ten Years		Total	
	Amortized Cost	Fair Value	Amortized Cost	Fair Value	Amortized Cost	Fair Value	Amortized Cost	Fair Value	Amortized Cost	Fair Value
At September 30, 2019					(dollars in thousands)					
Available for sale securities										
U.S. GSE obligations	$ 5,000	$ 4,986	$ 35,000	$34,906	$ —	$ —	$ —	$ —	$ 40,000	$ 39,892
Mortgage-backed securities	—	—	45	46	38,178	37,989	70,383	70,141	108,606	108,176
Corporate debt securities	—	—	—	—	—	—	—	—	—	—
Total available for sale securities	$ 5,000	$ 4,986	$ 35,045	$34,952	$ 38,178	$ 37,989	$ 70,383	$ 70,141	$ 148,606	$148,068
Held to maturity securities										
U.S. GSE obligations	$ 4,998	$ 4,992	$ 12,575	$12,577	$ —	$ —	$ —	$ —	$ 17,573	$ 17,569
Mortgage-backed securities	3	3	—	—	50,021	51,398	121,478	123,389	171,502	174,790
Corporate debt securities	—	—	6,978	7,107	—	—	—	—	6,978	7,107
Municipal securities	2,945	2,968	11,151	11,361	45,366	47,774	13,960	14,672	73,422	76,775
Total held to maturity securities	$ 7,946	$ 7,963	$ 30,704	$31,045	$ 95,387	$ 99,172	$ 135,438	$138,061	$ 269,475	$276,241
Total	$ 12,946	$12,949	$ 65,749	$65,997	$ 133,565	$137,161	$ 205,821	$208,202	$ 418,081	$424,309

The following table sets forth information regarding sales of investment securities and the resulting gains (losses) from such sales:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
	(dollars in thousands)			
Amortized cost of securities sold	$ 400	$ —	$ 26,631	$ 700
Gain/(loss) realized on securities sold	2	—	(79)	2
Net proceeds from securities sold	$ 402	$ —	$ 26,552	$ 702

8. LOANS AND THE ALLOWANCE FOR LOAN LOSSES

The Company's lending activities are conducted primarily in Eastern Massachusetts and New Hampshire. The Company grants single- and multi-family residential loans, commercial & industrial ("C&I"), commercial real estate ("CRE"), construction loans, and a variety of consumer loans. Most of the loans granted by the Company are secured by real estate collateral. Repayment of the Company's residential loans are generally dependent on the health of the employment market in the borrowers' geographic areas and that of the general economy with liquidation of the underlying real estate collateral being typically viewed as the primary source of repayment in the event of borrower default. The repayment of C&I loans depends primarily on the cash flow and credit worthiness of the borrower and secondarily on the underlying collateral provided by the borrower. As borrower cash flow may be difficult to predict, liquidation of the underlying collateral securing these loans is typically viewed as the primary source of repayment in the event of borrower default. However, collateral typically consists of equipment, inventory, accounts receivable, or other business assets that may fluctuate in value, so the liquidation of collateral in the event of default is often an insufficient source of repayment. The Company's CRE loans are primarily made based on the cash flow from the collateral property and secondarily on the underlying collateral provided by the borrower, with liquidation of the underlying real estate collateral typically being viewed as the primary source of repayment in the event of borrower default. The Company's construction loans are primarily made based on the borrower's expected ability to execute and the future completed value of the collateral property, with sale of the underlying real estate collateral typically being viewed as the primary source of repayment.

Loans outstanding are detailed by category as follows:

	September 30, 2019	December 31, 2018
	(dollars in thousands)	
Residential mortgage		
Mortgages - fixed rate	$ 437,787	$ 293,267
Mortgages - adjustable rate	441,375	309,656
Construction	28,712	—
Deferred costs net of unearned fees	1,948	1,408
Total residential mortgages	909,822	604,331
Commercial mortgage		
Mortgages - nonowner occupied	821,567	654,394
Mortgages - owner occupied	113,316	59,335
Construction	81,751	44,146
Deferred costs net of unearned fees	138	82
Total commercial mortgages	1,016,772	757,957
Home equity		
Home equity - lines of credit	76,108	63,421
Home equity - term loans	6,367	5,665
Deferred costs net of unearned fees	238	250
Total home equity	82,713	69,336
Commercial & industrial		
Commercial & industrial	138,171	93,728
Deferred costs (fees) net of unearned fees	(99)	(16)
Total commercial & industrial	138,072	93,712
Consumer		
Secured	31,312	33,252
Unsecured	1,167	1,171
Deferred costs net of unearned fees	24	13
Total consumer	32,503	34,436
Total loans	$ 2,179,882	$ 1,559,772

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.

At September 30, 2019 and December 31, 2018, total loans outstanding to such directors and officers were $37,000 and $488,000, respectively. During the nine months ended September 30, 2019, $85,000 of additions and $536,000 of repayments and other adjustments were made to these loans. There were $139,000 of additions and $167,000 of repayments during the year ended December 31, 2018. At September 30, 2019 and December 31, 2018, all loans to directors and officers were performing according to their original terms.

The following tables set forth information regarding non-performing loans disaggregated by loan category:

	September 30, 2019					
	Residential Mortgages	Commercial Mortgages	Home Equity	Commercial & Industrial	Consumer	Total
	(dollars in thousands)					
Non-performing loans:						
Non-accrual loans	$ 563	$ 2,591	$ 14	$ 51	$ —	$ 3,219
Loans past due >90 days, but still accruing	—	—	30	—	—	30
Troubled debt restructurings	102	—	—	132	—	234
Total	$ 665	$ 2,591	$ 44	$ 183	$ —	$ 3,483

	December 31, 2018					
	Residential Mortgages	Commercial Mortgages	Home Equity	Commercial & Industrial	Consumer	Total
	(dollars in thousands)					
Non-performing loans:						
Non-accrual loans	$ 512	$ —	$ 13	$ —	$ —	$ 525
Loans past due >90 days, but still accruing	—	—	—	—	—	—
Troubled debt restructurings	111	—	—	6	—	117
Total	$ 623	$ —	$ 13	$ 6	$ —	$ 642

There were no commitments to lend additional funds to borrowers whose loans were on nonaccrual status at September 30, 2019 and December 31, 2018.

Troubled Debt Restructurings ("TDRs")

Loans are considered restructured in a troubled debt restructuring when the Company has granted concessions to a borrower due to the borrower's financial condition that it otherwise would not have considered. These concessions may include modifications of the terms of the debt such as deferral of payments, extension of maturity, reduction of principal balance, reduction of the stated interest rate other than normal market rate adjustments, or a combination of these concessions. Debt may be bifurcated with separate terms for each tranche of the restructured debt. Restructuring a loan in lieu of aggressively enforcing the collection of the loan may benefit the Company by increasing the ultimate probability of collection.

Restructured loans are classified as accruing or non-accruing based on management's assessment of the collectability of the loan. Loans which are already on nonaccrual status at the time of the restructuring generally remain on nonaccrual status for approximately six months or longer before management considers such loans for return to accruing status. Accruing restructured loans are placed into nonaccrual status if and when the borrower fails to comply with the restructured terms and management deems it unlikely that the borrower will return to a status of compliance in the near term.

Troubled debt restructurings are classified as impaired loans. The Company identifies loss allocations for impaired loans on an individual loan basis.

There was one new TDR during the three and nine months ended September 30, 2019. At September 30, 2019, three loans were determined to be TDRs with a total carrying value of $234,000. There were no TDR defaults during the three and nine months ended September 30, 2019.

There were no new TDRs during the year ended December 31, 2018. At December 31, 2018, three loans were determined to be TDRs with a total carrying value of $117,000. There were no TDR defaults during the year ended December 31, 2018.

The allowance for loan losses includes a specific reserve for these TDRs of approximately $84,000 as of September 30, 2019. There were no specific allowances for TDRs at December 31, 2018.

As of September 30, 2019 and December 31, 2018, there were no significant commitments to lend additional funds to borrowers whose loans were restructured.

Loans by Credit Quality Indicator. The following tables contain period-end balances of loans receivable disaggregated by credit quality indicator:

	September 30, 2019		
	Residential Mortgages	Home Equity	Consumer
	(dollars in thousands)		
Credit risk profile based on payment activity:			
Performing	$ 909,157	$ 82,669	$ 32,503
Non-performing	665	44	—
Total	$ 909,822	$ 82,713	$ 32,503

	Commercial Mortgages	Commercial & Industrial
Credit risk profile by internally assigned grade:		
1-6 (Pass)	$ 1,007,380	$ 129,324
7 (Special Mention)	6,436	3,545
8 (Substandard)	2,956	5,203
9 (Doubtful)	—	—
10 (Loss)	—	—
Total	$ 1,016,772	$ 138,072

	December 31, 2018		
	Residential Mortgages	Home Equity	Consumer
	(dollars in thousands)		
Credit risk profile based on payment activity:			
Performing	$ 603,708	$ 69,323	$ 34,436
Non-performing	623	13	—
Total	$ 604,331	$ 69,336	$ 34,436

	Commercial Mortgages	Commercial & Industrial
Credit risk profile by internally assigned grade:		
1-6 (Pass)	$ 753,338	$ 85,821
7 (Special Mention)	4,619	4,186
8 (Substandard)	—	3,705
9 (Doubtful)	—	—
10 (Loss)	—	—
Total	$ 757,957	$ 93,712

With respect to residential real estate mortgages, home equity, and consumer loans, the Bank utilizes the following categories as indicators of credit quality:

- Performing – These loans are accruing and are considered having low to moderate risk.
- Non-performing – These loans are on non-accrual, are past due more than 90 days but are still accruing, or are restructured. These loans may contain greater than average risk.

With respect to commercial real estate mortgages and commercial loans, the Bank utilizes a 10 grade internal loan rating system as an indicator of credit quality. The grades are as follows:

- Loans rated 1-6 (Pass) – These loans are considered "pass" rated with low to moderate risk.
- Loans rated 7 (Special Mention) – These loans have potential weaknesses warranting close attention, which, if left uncorrected, may result in deterioration of the credit at some future date.

- Loans rated 8 (Substandard) – These loans have well-defined weaknesses that jeopardize the orderly liquidation of the debt under the original loan terms. Loss potential exists but is not identifiable in any one customer.
- Loans rated 9 (Doubtful) – These loans have pronounced weaknesses that make full collection highly questionable and improbable.
- Loans rated 10 (Loss) – These loans are considered uncollectible and continuance as a bankable asset is not warranted.

Delinquencies

The past due status of a loan is determined in accordance with its contractual repayment terms. All loan types are reported past due when one scheduled payment is due and unpaid for 30 days or more. Loan delinquencies can be attributed to many factors, such as but not limited to, a continuing weakness in, or deteriorating, economic conditions in the region in which the collateral is located, the loss of a tenant or lower lease rates for commercial borrowers, or the loss of income for consumers and the resulting liquidity impacts on the borrowers.

The following tables contain period-end balances of loans receivable disaggregated by past due status:

	September 30, 2019					
	30-59 Days Past Due	60-89 Days Past Due	90 Days or Greater	Total Past Due	Current Loans	Total
	(dollars in thousands)					
Residential Mortgages	$ 3,153	$ 1,850	$ 407	$ 5,410	$ 904,412	$ 909,822
Commercial Mortgages	446	62	—	508	1,016,264	1,016,772
Home Equity	507	—	43	550	82,163	82,713
Commercial & Industrial	87	83	—	170	137,902	138,072
Consumer loans	16	86	—	102	32,401	32,503
Total	$ 4,209	$ 2,081	$ 450	$ 6,740	$ 2,173,142	$ 2,179,882

	December 31, 2018					
	30-59 Days Past Due	60-89 Days Past Due	90 Days or Greater	Total Past Due	Current Loans	Total
	(dollars in thousands)					
Residential Mortgages	$ 1,034	$ 121	$ 351	$ 1,506	$ 602,825	$ 604,331
Commercial Mortgages	—	—	—	—	757,957	757,957
Home Equity	—	—	—	—	69,336	69,336
Commercial & Industrial	—	—	—	—	93,712	93,712
Consumer loans	108	—	—	108	34,328	34,436
Total	$ 1,142	$ 121	$ 351	$ 1,614	$ 1,558,158	$ 1,559,772

There were no significant commitments to lend additional funds to borrowers whose loans were on nonaccrual status at September 30, 2019 and December 31, 2018.

Foreclosure Proceedings

Other Real Estate Owned ("OREO")

During the nine months ended September 30, 2019, the Company recorded other real estate owned assets of $185,000. OREO consists of real estate properties, which have primarily served as collateral to secure loans that are controlled or owned by the Bank. These properties are recorded at fair value less estimated costs to sell at the date control is established, resulting in a new cost basis. The amount by which the recorded investment in the loan exceeds the fair value (net of estimated costs to sell) of the foreclosed asset is charged to the allowance for loan losses. Subsequent declines in the fair value of the foreclosed asset below the new cost basis are recorded through the use of a valuation allowance. Subsequent increases in the fair value are recorded as reductions in the valuation allowance, but not below zero. All costs incurred thereafter in maintaining the property are generally charged to noninterest expense.

In Process of Foreclosure

As of September 30, 2019, there were no loans in process of foreclosure. As of December 31, 2018, one loan secured by one- to four-family residential property with a carrying value of $351,000 was in process of foreclosure.

Impaired Loans

Impaired loans are loans for which it is probable that the Company will not be able to collect all amounts due according to the contractual terms of the loan agreements and loans restructured in a troubled debt restructuring. The recorded investment in impaired loans consists of unpaid principal balance, net of charge-offs, interest payments received applied to principal, and unamortized deferred loan origination fees and costs.

The following tables present information pertaining to impaired loans:

	For the Three Months Ended September 30, 2019				
	Carrying Value	Average Carrying Value	Unpaid Principal Balance	Related Allowance	Interest Income Recognized
	(dollars in thousands)				
With no required reserve recorded:					
Commercial and industrial	$ —	$ —	$ —	$ —	$ —
Commercial mortgage	2,500	1,813	3,715	—	—
Residential mortgage	609	611	776	—	1
Home equity	94	94	132	—	—
Total	3,203	2,518	4,623	—	1
With required reserve recorded:					
Commercial and industrial	132	104	170	84	—
Commercial mortgage	—	—	—	—	—
Residential mortgage	—	—	—	—	—
Home equity	—	—	—	—	—
Total	132	104	170	84	—
Total:					
Commercial and industrial	132	104	170	84	—
Commercial mortgage	2,500	1,813	3,715	—	—
Residential mortgage	609	611	776	—	1
Home equity	94	94	132	—	—
Total	$ 3,335	$ 2,622	$ 4,793	$ 84	$ 1

	For the Nine Months Ended September 30, 2019				
	Carrying Value	Average Carrying Value	Unpaid Principal Balance	Related Allowance	Interest Income Recognized
	(dollars in thousands)				
With no required reserve recorded:					
Commercial and industrial	$ —	$ —	$ —	$ —	$ —
Commercial mortgage	2,500	612	3,715	—	—
Residential mortgage	609	620	776	—	3
Home equity	94	97	132	—	1
Total	3,203	1,329	4,623	—	4
With required reserve recorded:					
Commercial and industrial	132	35	170	84	—
Commercial mortgage	—	—	—	—	—
Residential mortgage	—	—	—	—	—
Home equity	—	—	—	—	—
Total	132	35	170	84	—
Total:					
Commercial and industrial	132	35	170	84	—
Commercial mortgage	2,500	612	3,715	—	—
Residential mortgage	609	620	776	—	3
Home equity	94	97	132	—	1
Total	$ 3,335	$ 1,364	$ 4,793	$ 84	$ 4

	For the Three Months Ended September 30, 2018				
	Carrying Value	Average Carrying Value	Unpaid Principal Balance	Related Allowance	Interest Income Recognized
			(dollars in thousands)		
With no required reserve recorded:					
Commercial and industrial	$ 12	$ 14	$ 12	$ —	$ —
Commercial mortgage	—	—	—	—	—
Residential mortgage	565	569	712	—	—
Home equity	77	79	112	—	—
Total	654	662	836	—	—
With required reserve recorded:					
Commercial and industrial	148	148	148	77	1
Commercial mortgage	—	—	—	—	—
Residential mortgage	—	—	—	—	—
Home equity	—	—	—	—	—
Total	148	148	148	77	1
Total:					
Commercial and industrial	160	162	160	77	1
Commercial mortgage	—	—	—	—	—
Residential mortgage	565	569	712	—	—
Home equity	77	79	112	—	—
Total	$ 802	$ 810	$ 984	$ 77	$ —

	For the Nine Months Ended September 30, 2018				
	Carrying Value	Average Carrying Value	Unpaid Principal Balance	Related Allowance	Interest Income Recognized
			(dollars in thousands)		
With no required reserve recorded:					
Commercial and industrial	$ 12	$ 20	$ 12	$ —	$ 1
Commercial mortgage	—	—	—	—	—
Residential mortgage	565	574	712	—	—
Home equity	77	80	112	—	—
Total	654	674	836	—	1
With required reserve recorded:					
Commercial and industrial	148	148	148	77	6
Commercial mortgage	—	—	—	—	—
Residential mortgage	—	—	—	—	—
Home equity	—	—	—	—	—
Total	148	148	148	77	6
Total:					
Commercial and industrial	160	168	160	77	7
Commercial mortgage	—	—	—	—	—
Residential mortgage	565	574	712	—	—
Home equity	77	80	112	—	—
Total	$ 802	$ 822	$ 984	$ 77	$ 7

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. We provide for loan losses based upon the consistent application of our documented allowance for loan loss methodology. All loan losses are charged to the allowance for loan losses and all recoveries are credited to it. Additions to the allowance for loan losses are provided by charges to income based on various factors which, in our judgment, deserve current recognition in estimating probable losses. We regularly review the loan portfolio, including a review of our classified assets, and make provisions for loan losses in order to maintain the allowance for loan losses in accordance with GAAP. The allowance for loan losses consists primarily of two components:

1. Specific allowances established for impaired loans, as defined by GAAP. The amount of impairment provided for as a specific allowance is measured based on the deficiency, if any, between the present value of expected future cash flows discounted at the loan's effective interest rate at the time of impairment or, as a practical expedient, at the loan's observable market price, or the fair value of the collateral if the loan is collateral-dependent, and the carrying value of the loan; and

2. General allowances established for loan losses on a portfolio basis for loans that do not meet the definition of impaired loans. The portfolio is grouped into homogenous pools by similar risk characteristics, primarily by loan type and regulatory classification. We apply an estimated incurred loss rate to each loan group. The loss rates applied are based upon our historical loss experience over a designated look back period adjusted, as appropriate, for the quantitative, qualitative, and environmental factors discussed below. This evaluation is inherently subjective, as it requires material estimates that may be susceptible to significant revisions based upon changes in economic and real estate market conditions.

Actual loan losses may be significantly more than the allowance for loan losses we have established, which could have a material negative effect on our financial results.

The adjustments to historical loss experience are based on our evaluation of several quantitative, qualitative, and environmental factors, including:

- the loss emergence period, which represents the average amount of time between when loss events occur for specific loan types and when such problem loans are identified and the related loss amounts are confirmed through charge-offs;
- changes in any concentration of credit (including, but not limited to, concentrations by geography, industry, or collateral type);
- changes in the number and amount of non-accrual loans and past due loans;
- changes in national, state, and local economic trends;
- changes in the types of loans in the loan portfolio;
- changes in the experience and ability of personnel;
- changes in lending strategies; and
- changes in lending policies and procedures.

In addition, we may establish an unallocated allowance to provide for probable losses that have been incurred as of the reporting date but are not reflected in the allocated allowance.

We evaluate the allowance for loan losses based upon the combined total of the specific and general components. Generally, when the loan portfolio increases, absent other factors, the allowance for loan loss methodology results in a higher dollar amount of estimated probable losses than would be the case without the increase. Generally, when the loan portfolio decreases, absent other factors, the allowance for loan losses methodology results in a lower dollar amount of estimated probable losses than would be the case without the decrease. Periodically, management conducts an analysis to estimate the loss emergence period for various loan categories based on samples of historical charge-offs. Model output by loan category is reviewed to evaluate the reasonableness of the reserve levels in comparison to the estimated loss emergence period applied to historical loss experience.

We evaluate the loan portfolio on a quarterly basis and the allowance is adjusted accordingly. While we use the best information available to make evaluations, future adjustments to the allowance may be necessary if conditions differ substantially from the information used in making the evaluations. In addition, various regulatory agencies, as an integral part of their examination process, will periodically review the allowance for loan losses. Such agencies may require us to recognize additions to the allowance based on their analysis of information available to them at the time of their examination.

The following tables contain changes in the allowance for loan losses disaggregated by loan category September 30, 2019:

	For the Three Months Ended September 30, 2019						
	Residential Mortgages	Commercial Mortgages	Home Equity	Commercial & Industrial	Consumer	Impaired	Total
	(dollars in thousands)						
Allowance for loan losses:							
Balance at June 30, 2019	$ 5,463	$ 9,429	$ 531	$ 1,445	$ 231	$ —	$ 17,099
Charge-offs	—	(1,215)	—	(26)	(9)	—	(1,250)
Recoveries	—	—	—	15	1	—	16
Provision for (Release of)	(340)	2,469	(43)	(3)	3	84	2,170
Balance at September 30, 2019	$ 5,123	$ 10,683	$ 488	$ 1,431	$ 226	$ 84	$ 18,035

	For the Nine Months Ended September 30, 2019						
	Residential Mortgages	Commercial Mortgages	Home Equity	Commercial & Industrial	Consumer	Impaired	Total
	(dollars in thousands)						
Allowance for loan losses:							
Balance at December 31, 2018	$ 4,946	$ 9,626	$ 517	$ 1,415	$ 264	$ —	$ 16,768
Charge-offs	—	(1,270)	—	(156)	(29)	—	(1,455)
Recoveries	—	—	—	40	9	—	49
Provision for (Release of)	177	2,327	(29)	132	(18)	84	2,673
Balance at September 30, 2019	$ 5,123	$ 10,683	$ 488	$ 1,431	$ 226	$ 84	$ 18,035

	For the Three Months Ended September 30, 2018						
	Residential Mortgages	Commercial Mortgages	Home Equity	Commercial & Industrial	Consumer	Impaired	Total
	(dollars in thousands)						
Allowance for loan losses:							
Balance at June 30, 2018	$ 4,879	$ 8,674	$ 601	$ 1,195	$ 296	$ —	$ 15,645
Charge-offs	—	—	—	—	(10)	—	(10)
Recoveries	—	—	—	13	1	—	14
Provision for (Release of)	267	149	(56)	9	11	77	457
Balance at September 30, 2018	$ 5,146	$ 8,823	$ 545	$ 1,217	$ 298	$ 77	$ 16,106

	For the Nine Months Ended September 30, 2018						
	Residential Mortgages	Commercial Mortgages	Home Equity	Commercial & Industrial	Consumer	Impaired	Total
	(dollars in thousands)						
Allowance for loan losses:							
Balance at December 31, 2017	$ 5,047	$ 8,289	$ 630	$ 946	$ 315	$ 93	$ 15,320
Charge-offs	—	—	—	(11)	(31)	—	(42)
Recoveries	—	—	—	35	6	—	41
Provision for (Release of)	99	534	(85)	247	8	(16)	787
Balance at September 30, 2018	$ 5,146	$ 8,823	$ 545	$ 1,217	$ 298	$ 77	$ 16,106

The following tables contain period-end balances of the allowance for loan losses and related loans receivable disaggregated by impairment method:

	September 30, 2019					
	Residential Mortgages	Commercial Mortgages	Home Equity	Commercial & Industrial	Consumer	Total
	(dollars in thousands)					
Allowance for loan losses						
Individually evaluated for impairment	$ —	$ —	$ —	$ 84	$ —	$ 84
Collectively evaluated for impairment	5,123	10,683	488	1,431	226	17,951
Total	$ 5,123	$ 10,683	$ 488	$ 1,515	$ 226	$ 18,035
Loans receivable						
Individually evaluated for impairment	$ 607	$ 2,500	$ 94	$ 132	$ —	$ 3,333
Collectively evaluated for impairment	909,215	1,014,272	82,619	137,940	32,503	2,176,549
Total	$ 909,822	$ 1,016,772	$ 82,713	$ 138,072	$ 32,503	$ 2,179,882

	December 31, 2018					
	Residential Mortgages	Commercial Mortgages	Home Equity	Commercial & Industrial	Consumer	Total
	(dollars in thousands)					
Allowance for loan losses						
Individually evaluated for impairment	$ —	$ —	$ —	$ —	$ —	$ —
Collectively evaluated for impairment	4,946	9,626	517	1,415	264	16,768
Total	$ 4,946	$ 9,626	$ 517	$ 1,415	$ 264	$ 16,768
Loans receivable						
Individually evaluated for impairment	$ 647	$ —	$ 88	$ 5	$ —	$ 740
Collectively evaluated for impairment	603,684	757,957	69,248	93,707	34,436	1,559,032
Total	$ 604,331	$ 757,957	$ 69,336	$ 93,712	$ 34,436	$ 1,559,772

9. GOODWILL AND OTHER INTANGIBLE ASSETS

Goodwill. As of September 30, 2019 and December 31, 2018, the carrying value of goodwill totaled $31.2 million and $412,000, respectively. The Company recorded additional goodwill of $30.8 million related to the merger with Optima during the second quarter of 2019. Goodwill is tested for impairment, based on its fair value, at least annually. As of September 30, 2019 and December 31, 2018, no goodwill impairment has been recognized.

Core deposit intangibles. The Company recorded an asset for the core deposit intangible ("CDI") of $3.6 million related to the Optima merger. Amortization of CDI assets totaled $90,000 and $180,000 for the three and nine months ended September 30, 2019, respectively. As of September 30, 2019, the carrying value of CDI assets totaled $3.4 million. The weighted-average remaining amortization period for CDI was approximately ten years at September 30, 2019.

Mortgage servicing rights. Periodically, the Company sells certain residential mortgage loans to the secondary market. Generally, these loans are sold without recourse or other credit enhancements. As of September 30, 2019, loans held for sale totaled $2.1 million. The Company did not have any loans held for sale at and December 31, 2018.

The Company sells loans and either releases or retains the servicing rights. For loans sold with servicing rights retained, we provide the servicing for the loans on a per-loan fee basis. Mortgage loans sold and servicing rights retained during the nine months ended September 30, 2019 and the year ended December 31, 2018 were $42.0 million and $1.6 million, respectively. Total gain on loans held for sale were $460,000 and $37,000, for the three months ended September 30, 2019 and September 30, 2018, respectively. Total gain on loans held for sale were $491,000 and $82,000, for the nine months ended September 30, 2019 and September 30, 2018, respectively.

An analysis of mortgage servicing rights, which are included in other assets, follows:

	Mortgage Servicing Rights	Valuation Allowance	Total
		(dollars in thousands)	
Balance at December 31, 2017	$ 823	$ (30)	$ 793
Mortgage servicing rights capitalized	17	—	17
Amortization charged against servicing income	(109)	—	(109)
Change in impairment reserve	(30)	30	—
Balance at September 30, 2018	$ 701	$ —	$ 701
Balance at December 31, 2018	$ 666	$ —	$ 666
Mortgage servicing rights acquired as a result of the merger	334	—	334
Mortgage servicing rights capitalized	308	—	308
Amortization charged against servicing income	(159)	—	(159)
Change in impairment reserve	(10)	(29)	(39)
Balance at September 30, 2019	$ 1,139	$ (29)	$ 1,110

The fair value of our mortgage servicing rights ("MSR") portfolio was $1.3 million and $1.0 million as of September 30, 2019 and September 30, 2018, respectively. The fair value of mortgage servicing rights is estimated based on the present value of expected cash flows, incorporating assumptions for discount rate, prepayment speed, and servicing cost.

The weighted-average amortization period for the mortgage servicing rights portfolio was 5.5 years and 7.5 years at September 30, 2019 and December 31, 2018, respectively.

The estimated aggregate future amortization expense for mortgage servicing rights for each of the next five years and thereafter is as follows:

	Future Amortization Expense
	(dollars in thousands)
Remainder of 2019	$ 54
2020	195
2021	162
2022	135
2023	111
Thereafter	482
Total	$ 1,139

10. INCOME TAXES

The effective tax rate was 26.1% and 24.8% for the three and nine months ended September 30, 2019, respectively, as compared to 24.0% and 23.2% for the three and nine months ended September 30, 2018, respectively.

Net deferred tax assets totaled $7.9 million at September 30, 2019 and $8.7 million at December 31, 2018. The Company recorded no valuation allowance for deferred tax assets at September 30, 2019 or December 31, 2018.

The components of income tax expense were as follows:

	Three Months Ended September 30, 2019	Three Months Ended September 30, 2018	Nine Months Ended September 30, 2019	Nine Months Ended September 30, 2018
	(dollars in thousands)			
Current				
Federal	$ 2,186	$ 1,812	$ 3,862	$ 4,047
State	952	799	1,671	1,731
Total current expense	3,138	2,611	5,533	5,778
Deferred				
Federal	(352)	(344)	249	(106)
State	(78)	(162)	206	(50)
Total deferred	(430)	(506)	455	(156)
Total income tax expense	$ 2,708	$ 2,105	$ 5,988	$ 5,622

11. PENSION AND RETIREMENT PLANS

The components of net periodic benefit cost (credit) were as follows:

Three Months Ended September 30,	Pension Plan 2019	Pension Plan 2018	Supplemental Retirement Plan 2019	Supplemental Retirement Plan 2018	Retirement Healthcare Plan 2019	Retirement Healthcare Plan 2018
	(dollars in thousands)					
Net periodic benefit cost						
Service cost	$ —	$ —	$ 71	$ 88	$ 5	$ 6
Interest cost	420	389	87	78	6	6
Expected return on assets	(680)	(723)	—	—	—	—
Amortization of prior service cost (credit)	(1)	(1)	—	—	—	—
Amortization of net actuarial loss	39	27	—	1	(1)	—
Net periodic benefit cost (credit)	$ (222)	$ (308)	$ 158	$ 167	$ 10	$ 12

Nine Months Ended September 30,	Pension Plan 2019	Pension Plan 2018	Supplemental Retirement Plan 2019	Supplemental Retirement Plan 2018	Retirement Healthcare Plan 2019	Retirement Healthcare Plan 2018
	(dollars in thousands)					
Net periodic benefit cost						
Service cost	$ —	$ —	214	$ 265	15	$ 17
Interest cost	1,260	1,167	262	232	18	17
Expected return on assets	(2,040)	(2,168)	—	—	—	—
Amortization of prior service (credit)	(3)	(3)	—	—	—	—
Amortization of net actuarial loss	116	80	—	3	(3)	—
Net periodic benefit cost (credit)	$ (667)	$ (924)	$ 476	$ 500	$ 30	$ 34

The Company made no contributions to the qualified defined benefit pension plan during the three and nine months ended September 30, 2019. We do not expect to make any contributions to the qualified defined benefit plan during the remainder of 2019.

Employee Profit Sharing and 401(k) Plan

The Company maintains a Profit Sharing Plan ("PSP") that provides for deferral of federal and state income taxes on employee contributions allowed under Section 401(k) of federal law. Beginning in 2018, the Company matched employee contributions up to 100% of the first 4% of each participant's salary, eligible bonus, and eligible incentive, up from 3% in 2017. Employees are eligible to participate in the PSP on the first day of their initial date of service. Each year, the Company may also make a discretionary contribution to the PSP. In 2018, employees were eligible to participate in the discretionary contribution portion of the PSP after completing 12 months of employment and 1,000 hours of service. The employee must be employed on the last day of the calendar year or retire at the normal retirement age of 65 during the calendar year to receive the discretionary contribution. Effective in 2019, employees are eligible to participate in the discretionary contribution portion of the PSP on the first day of their initial date of service.

Employee Stock Ownership Plan

The Company has an Employee Stock Ownership Plan ("ESOP") for its eligible employees. Employees are eligible to participate in the ESOP on January 1 or July 1 following the completion of 12 months of service consisting of at least 1,000 hours and upon the attainment of age 21. Purchases of the Company's stock by the ESOP will be funded by employer contributions or reinvestment of cash dividends.

Total expenses related to the PSP and ESOP for the three months ended September 30, 2019 and September 30, 2018 amounted to approximately $721,000 and $595,000, respectively. Total expenses related to the PSP and ESOP for the nine months ended September 30, 2019 and September 30, 2018 amounted to approximately $1.9 million and $2.0 million, respectively.

Defined Contribution SERP Plan

For executives participating in the Defined Contribution SERP Plan ("DC SERP"), the Company made a discretionary contribution of 10% of each executive's base salary and bonus to his or her account. Total expenses related to the DC SERP for the three months ended September 30, 2019 and September 30, 2018 amounted to approximately $40,000 and $42,000, respectively. Total expenses related to the DC SERP for the nine months ended September 30, 2019 and September 30, 2018 amounted to approximately $126,000 and $167,000, respectively.

12. STOCK BASED COMPENSATION

Time Vested Restricted Stock Awards ("RSAs") and Time Vested Restricted Stock Units ("RSUs")

During the three months ended September 30, 2019, the Company issued the following RSAs from the 2017 Equity and Cash Incentive Plan. The fair value of RSAs is based upon the Company's common stock closing share price on the date of the grant. The holders of RSAs participate fully in the rewards of stock ownership of the Company, including voting and dividend rights. There were no RSUs issued during the three months ended September 30, 2019.

Shares Granted	Weighted-Average Fair Value at Grant Date	Type of Award
375	$ 76.00	RSAs

Performance-Based Restricted Stock Units ("PRSUs")

There were no PRSUs issued during the three months ended September 30, 2019.

The following table presents the pre-tax expense associated with all outstanding non-vested RSAs, RSUs, PRSUs, and the related tax benefits recognized:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
	(dollars in thousands)			
Stock based compensation expense	$ 401	$ 705	$ 1,718	$ 2,052
Related tax benefits	$ 112	$ 198	$ 479	$ 577

13. FINANCIAL INSTRUMENTS WITH OFF-BALANCE-SHEET RISK

To meet the financing needs of its customers, the Company is a party to financial instruments with off-balance-sheet risk in the normal course of business. These financial instruments are primarily comprised of commitments to extend credit, commitments to sell residential mortgage loans, derivatives contracts, risk participation agreements, and standby letters of credit. Those instruments involve, to varying degrees, elements of credit and interest rate risk in excess of the amounts recognized in the consolidated balance sheets.

The Company's exposure to credit loss in the event of nonperformance by the other party to the financial instrument for loan commitments and standby letters of credit is represented by the contractual amount of those instruments assuming that the amounts are fully advanced and that collateral, or other security, is of no value. The Company uses the same credit policies in making commitments and conditional obligations as it does for on-balance-sheet instruments.

Off-balance-sheet financial instruments with contractual amounts that present credit risk include the following:

	September 30, 2019	December 31, 2018
	(dollars in thousands)	
Financial instruments whose contractual amount represents credit risk:		
Commitments to extend credit:		
Unused portion of existing lines of credit	$ 359,798	$ 368,410
Origination of new loans	64,676	24,505
Standby letters of credit	8,639	8,752
Financial instruments whose notional amount exceeds the amount of credit risk:		
Commitments to sell residential mortgage loans	6,383	—

14. LEASES

The Company is obligated under various lease agreements covering its main office, private banking offices, and other locations. These agreements are accounted for as operating leases and their terms expire between 2019 and 2030 and, in some instances, contain options to renew for periods up to 30 years.

The Company adopted Accounting Standards Update No. 2016-02 - *Leases* ("ASU 2016-02") during the quarter ended March 31, 2019 and began recognizing its operating leases on its balance sheet by recording a lease liability, representing the Company's legal obligation to make lease payments, and a Right-Of-Use (ROU) Asset, representing the Company's legal right to use the leased office space and banking centers. The Company, by policy, does not include renewal options for leases as part of its right-of-use assets and lease liabilities unless they are deemed reasonably certain to exercise. The Company does not have any material sub-lease agreements.

The following table summarizes information related to the Company's right-of-use asset and net lease liability:

	September 30, 2019	
	Operating Leases	Balance Sheet Location
	(dollars in thousands)	
Right-of-use asset	$ 34,553	Right-of-use asset operating leases
Lease liability	$ 35,990	Operating lease liabilities

Operating lease expenses are comprised of operating lease costs and variable lease costs, net of sublease income. The pattern and measurement of expense recognition of these costs were not significantly impacted by ASU 2016-02 and subsequent ASUs issued to amend this Topic.

Variable lease payments that are not dependent on an index or a rate or changes in variable payments based on an index or rate after the commencement date are excluded from the measurement of the lease liability, recognized in the period incurred and included within variable lease costs below.

The Company determines whether a contract contains a lease based on whether a contract, or a part of a contract, conveys the right to control the use of an identified asset for a period of time in exchange for consideration. The discount rate is determined as either the rate implicit in the lease or when a rate cannot be readily determined, the Company's incremental borrowing rate. The incremental borrowing rate is the rate of interest that the Company would have to pay to borrow on a collateralized basis over a similar term.

The components of operating lease cost and other related information are as follows:

	Three Months Ended September 30, 2019	Nine Months Ended September 30, 2019
	(dollars in thousands)	
Operating lease cost	$ 1,389	$ 3,888
Short-term lease cost	—	—
Variable lease cost (Cost excluded from lease payments)	—	1
Sublease income	(16)	(47)
Total Operating Lease Cost	$ 1,373	$ 3,842
Other Information		
Cash paid for amounts included in the measurement of lease liabilities - operating cash flows from operating leases	$ 1,327	$ 3,634
Operating Lease - Operating Cash Flows (Liability reduction)	1,026	2,768
Right-of-use assets obtained in exchange for new operating lease liabilities	—	4,656
Weighted average lease term - operating leases	8.36 Years	8.36 Years
Weighted average discount rate - operating leases	3.38%	3.38%

The total minimum rentals due in future periods under these agreements in effect at September 30, 2019 and December 31, 2018 were as follows:

September 30, 2019	Future Minimum Lease Payments
	(dollars in thousands)
Remainder of 2019	$ 5,458
2020	5,507
2021	5,405
2022	5,072
2023	4,644
Thereafter	15,438
Total minimum lease payments	41,524
Less: interest	(5,534)
Total lease liability	$ 35,990

Year Ended December 31,	Future Minimum Lease Payments
	(dollars in thousands)
2019	$ 4,448
2020	4,661
2021	4,662
2022	4,553
2023	4,455
Thereafter	17,128
Total minimum lease payments	$ 39,907

Several of the Company's lease agreements contain clauses calling for escalation of minimum lease payments contingent on increases in real estate taxes, gross income adjustments, percentage increases in the consumer price index, and certain ancillary maintenance costs. Total rental expense was $1.5 million and $1.1 million for the quarter ended September 30, 2019 and September 30, 2018, respectively. Total rental expense was $4.2 million and $3.4 million for the nine months ended September 30, 2019 and September 30, 2018, respectively.

15. SHAREHOLDERS' EQUITY

As of September 30, 2019 and December 31, 2018, the Company and the Bank met all applicable minimum capital requirements and were considered "well-capitalized" by both the FRB and the FDIC.

	Actual		Minimum Capital Required For Capital Adequacy Plus Capital Conservation Buffer (1)		Minimum To Be Well-Capitalized Under Prompt Corrective Action Provisions	
	Amount	Ratio	Amount	Ratio	Amount	Ratio
			(dollars in thousands)			
At September 30, 2019						
Cambridge Bancorp:						
Total capital (to risk-weighted assets)	$ 228,793	11.6%	$ 207,847	10.5%	N/A	N/A
Tier I capital (to risk-weighted assets)	210,708	10.6%	168,257	8.5%	N/A	N/A
Common equity tier I capital (to risk-weighted assets)	210,708	10.6%	138,565	7.0%	N/A	N/A
Tier I capital (to average assets)	210,708	7.7%	109,666	4.0%	N/A	N/A
Cambridge Trust Company:						
Total capital (to risk-weighted assets)	$ 224,600	11.3%	$ 207,846	10.5%	$ 197,948	10.0%
Tier I capital (to risk-weighted assets)	206,515	10.4%	168,256	8.5%	158,358	8.0%
Common equity tier I capital (to risk-weighted assets)	206,515	10.4%	138,564	7.0%	128,666	6.5%
Tier I capital (to average assets)	206,515	7.5%	109,666	4.0%	137,083	5.0%

(1) The 2013 Capital Rules adopted by the Federal Reserve, Office of the Comptroller of the Currency, and the Federal Deposit Insurance Corporation implementing Basel III were fully phased-in effective January 1, 2019.

	Actual		Minimum Capital Required For Capital Adequacy		Minimum Capital Required For Capital Adequacy Plus Capital Conservation Buffer Basel III Phase-In Schedule		Minimum Capital Required For Capital Adequacy Plus Capital Conservation Buffer Basel III Fully Phased In		Minimum To Be Well-Capitalized Under Prompt Corrective Action Provisions	
	Amount	Ratio	Amount	Ratio	Amount	Ratio	Amount	Ratio	Amount	Ratio
					(dollars in thousands)					
At December 31, 2018										
Cambridge Bancorp:										
Total capital (to risk-weighted assets)	$189,888	13.2%	$114,666	8.0%	$ 141,541	9.875%	$ 150,500	10.5%	N/A	N/A
Tier I capital (to risk-weighted assets)	173,070	12.1%	86,000	6.0%	112,875	7.875%	121,833	8.5%	N/A	N/A
Common equity tier I capital (to risk-weighted assets)	173,070	12.1%	64,500	4.5%	91,375	6.375%	100,333	7.0%	N/A	N/A
Tier I capital (to average assets)	173,070	8.5%	81,507	4.0%	81,507	4.000%	81,507	4.0%	N/A	N/A
Cambridge Trust Company:										
Total capital (to risk-weighted assets)	$185,507	12.9%	$114,666	8.0%	$ 141,541	9.875%	$ 150,500	10.5%	$143,333	10.0%
Tier I capital (to risk-weighted assets)	168,689	11.8%	86,000	6.0%	112,875	7.875%	121,833	8.5%	114,666	8.0%
Common equity tier I capital (to risk-weighted assets)	168,689	11.8%	64,500	4.5%	91,375	6.375%	100,333	7.0%	93,166	6.5%
Tier I capital (to average assets)	168,689	8.3%	81,507	4.0%	81,507	4.000%	81,507	4.0%	101,884	5.0%

16. OTHER COMPREHENSIVE INCOME

The following table presents the changes in accumulated other comprehensive income (loss) during the period, by component, net of tax:

	Three Months Ended September 30, 2019			Three Months Ended September 30, 2018		
	Before Tax Amount	Tax (Expense) or Benefit	Net-of-tax Amount	Before Tax Amount	Tax (Expense) or Benefit	Net-of-tax Amount
	(dollars in thousands)					
Unrealized (losses)/gains on available for sale securities						
Unrealized holding (losses)/gains arising during period	$ 176	$ (35)	$ 141	$ (228)	$ 56	$ (172)
Reclassification adjustment for (gains)/losses recognized in net income	(2)	1	(1)	—	—	—
Derivatives						
Change in interest rate contracts	654	(182)	472	—	—	—
Defined benefit retirement plans						
Change in retirement liability	36	(10)	26	14	(4)	10
Total Other Comprehensive (Loss)/Income	$ 864	$ (226)	$ 638	$ (214)	$ 52	$ (162)

	Nine Months Ended September 30, 2019			Nine Months Ended September 30, 2018		
	Before Tax Amount	Tax (Expense) or Benefit	Net-of-tax Amount	Before Tax Amount	Tax (Expense) or Benefit	Net-of-tax Amount
	(dollars in thousands)					
Unrealized (losses)/gains on available for sale securities						
Unrealized holding (losses)/gains arising during period	$ 3,510	$ (821)	$ 2,689	$ (2,456)	$ 509	$ (1,947)
Reclassification adjustment for (gains)/losses recognized in net income	79	(18)	61	(2)	—	(2)
Derivatives						
Change in interest rate contracts	2,308	(647)	1,661	—	—	—
Defined benefit retirement plans						
Change in retirement liability	108	(30)	78	43	(13)	30
Total Other Comprehensive (Loss)/Income	$ 6,005	$ (1,516)	$ 4,489	$ (2,415)	$ 496	$ (1,919)

Reclassifications out of Accumulated Other Comprehensive Income ("AOCI") that have an impact on net income are presented below:

Details about Accumulated Other Comprehensive Income Components	Three Months Ended September 30, 2019	2018	Affected Line Item in the Statement where Net Income is Presented
	(dollars in thousands)		
Unrealized gains and losses on available for sale securities	$ 2	$ —	Gain/(loss) on disposition of investment securities
Tax benefit or (expense)	(1)	—	Provision for income taxes
Net of tax	$ 1	$ —	Net income

Details about Accumulated Other Comprehensive Income Components	Nine Months Ended September 30, 2019	2018	Affected Line Item in the Statement where Net Income is Presented
	(dollars in thousands)		
Unrealized gains and losses on available for sale securities	$ (79)	$ 2	Gain/(loss) on disposition of investment securities
Tax benefit or (expense)	18	—	Provision for income taxes
Net of tax	$ (61)	$ 2	Net income

17. EARNINGS PER SHARE

The following represents a reconciliation between basic and diluted earnings per share:

	Three Months Ended September 30, 2019	2018	Nine Months Ended September 30, 2019	2018
	(dollars in thousands, except per share data)			
Earnings per common share - basic:				
Numerator:				
Net income	$ 7,676	$ 6,659	$ 18,146	$ 18,575
Less dividends and undistributed earnings allocated to participating securities	(57)	(66)	(156)	(189)
Net income applicable to common shareholders	$ 7,619	$ 6,593	$ 17,990	$ 18,386
Denominator:				
Weighted average common shares outstanding	4,815	4,065	4,525	4,060
Earnings per common share - basic	$ 1.58	$ 1.62	$ 3.98	$ 4.53
Earnings per common share - diluted:				
Numerator:				
Net income	$ 7,676	$ 6,659	$ 18,146	$ 18,575
Less dividends and undistributed earnings allocated to participating securities	(57)	(66)	(156)	(189)
Net income applicable to common shareholders	$ 7,619	$ 6,593	$ 17,990	$ 18,386
Denominator:				
Weighted average common shares outstanding	4,815	4,065	4,525	4,060
Dilutive effect of common stock equivalents	28	36	27	35
Weighted average diluted common shares outstanding	4,843	4,101	4,552	4,095
Earnings per common share - diluted	$ 1.57	$ 1.61	$ 3.95	$ 4.49

18. DERIVATIVE AND HEDGING ACTIVITIES

The Company utilizes interest rate swaps and floors to mitigate exposure to interest rate risk and to facilitate the needs of our customers. The Company's derivative financial instruments are used to manage differences in the amount, timing, and duration of the Company's known or expected cash receipts principally related to the Company's assets.

Cash Flow Hedges of Interest Rate Risk

The Company uses interest rate floors to manage its exposure to interest rate movements. Interest rate floors designated as cash flow hedges involve the receipt of variable-rate amounts from a counterparty if interest rates fall below the strike rate on the contract in exchange for an up-front premium.

For derivatives designated and that qualify as cash flow hedges of interest rate risk, the gain or loss on the derivative is recorded in accumulated other comprehensive income and subsequently reclassed into interest income in the same period(s) during which the hedged transaction affects earnings. The earnings recognition of excluded components is presented in interest income. Amounts reported in accumulated other comprehensive income related to derivatives will be reclassed to interest income as the Company receives interest payments on its variable-rate assets.

Non-designated Hedges

Derivatives not designated as hedges are not speculative and result from a service the Company provides to certain customers. For the Company's customers, these are interest rate swaps and risk participation agreements.

Interest Rate Swaps. The Company enters into interest rate swap contracts to help commercial loan borrowers manage their interest rate risk. The interest rate swap contracts with commercial loan borrowers allow them to convert floating-rate loan payments to fixed rate loan payments. When the Bank enters into an interest rate swap contract with a commercial loan borrower, it simultaneously enters into a "mirror" swap contract with a third party. The third party exchanges the client's fixed-rate loan payments for floating-rate loan payments. These derivatives are not designated as hedges and therefore, changes in fair value are recognized in earnings. Because these derivatives have mirror-image contractual terms, the changes in fair value substantially offset each other through earnings. Fees earned in connection with the execution of derivatives related to this program are recognized in earnings in other loan related derivative income.

The credit risk associated with swap transactions is the risk of default by the counterparty. To minimize this risk, the Company only enters into interest rate agreements with highly rated counterparties that management believes to be creditworthy. The notional amounts of these agreements do not represent amounts exchanged by the parties and, thus, are not a measure of the potential loss exposure.

Risk Participation Agreements

The Company enters into risk participation agreements ("RPAs") with other banks participating in commercial loan arrangements. Participating banks guarantee the performance on borrower-related interest rate swap contracts. RPAs are derivative financial instruments and are recorded at fair value. These derivatives are not designated as hedges and therefore, changes in fair value are recognized in earnings with a corresponding offset within other assets or other liabilities.

Under a risk participation-out agreement, a derivative asset, the Company participates out a portion of the credit risk associated with the interest rate swap position executed with the commercial borrower and pays a fee to the participating bank. Under a risk participation-in agreement, a derivative liability, the Company assumes, or participates in, a portion of the credit risk associated with the interest rate swap position with the commercial borrower and receives a fee from the other bank.

The following tables present the notional amount, the location, and fair values of derivative instruments in the Company's Consolidated Balance Sheets:

	September 30, 2019					
	Derivative Assets			Derivative Liabilities		
	Notional Amount	Balance Sheet Location	Fair Value	Notional Amount	Balance Sheet Location	Fair Value
	(dollars in thousands)			(dollars in thousands)		
Derivatives designated as hedging instruments						
Interest rate contracts	$ 150,000	Other Assets	$ 4,134	$ —	Other Liabilities	$ —
Total derivatives designated as hedging instruments			$ 4,134			$ —
Derivatives not designated as hedging instruments						
Loan related derivative contracts						
Interest rate swaps with customers	$ 228,685	Other Assets	$ 17,773	$ —	Other Liabilities	$ —
Mirror swaps with counterparties	—	Other Assets	—	228,685	Other Liabilities	17,773
Risk participation agreements out to counterparties	19,000	Other Assets	28	—	Other Liabilities	—
Risk participation agreements in with counterparties	—	Other Assets	—	88,599	Other Liabilities	360
Total derivatives not designated as hedging instruments			$ 17,801			$ 18,133

	December 31, 2018					
	Derivative Assets			Derivative Liabilities		
	Notional Amount	Balance Sheet Location	Fair Value	Notional Amount	Balance Sheet Location	Fair Value
	(dollars in thousands)			(dollars in thousands)		
Derivatives designated as hedging instruments						
Interest rate contracts	$ 150,000	Other Assets	$ 1,970	$ —	Other Liabilities	$ —
Total derivatives designated as hedging instruments			$ 1,970			$ —
Derivatives not designated as hedging instruments						
Loan related derivative contracts						
Interest rate swaps with customers	$ 150,489	Other Assets	$ 5,782	$ —	Other Liabilities	$ —
Mirror swaps with counterparties	—	Other Assets	—	150,489	Other Liabilities	5,782
Risk participation agreements out to counterparties	19,000	Other Assets	28	—	Other Liabilities	—
Risk participation agreements in with counterparties	—	Other Assets	—	63,825	Other Liabilities	179
Total derivatives not designated as hedging instruments			$ 5,810			$ 5,961

The following table presents the effect of cash flow hedge accounting on accumulated other comprehensive income ("AOCI") at September 30, 2019:

	Amount of Gain or (Loss) Recognized in OCI	Amount of Gain or (Loss) Recognized in OCI Included Component	Amount of Gain or (Loss) Recognized in OCI Excluded Component	Location of Gain or (Loss)	Amount of Gain or (Loss) Reclassified from AOCI into Income	Amount of Gain or (Loss) Reclassified from AOCI into Income Included Component	Amount of Gain or (Loss) Reclassified from AOCI into Income Excluded Component
	Three Months Ended September 30,				Three Months Ended September 30,		
	(dollars in thousands)				(dollars in thousands)		
Interest rate contracts	$ 605	$ 1,232	$ (627)	Interest Income	$ (49)	$ —	$ (49)
Total	$ 605	$ 1,232	$ (627)		$ (49)	$ —	$ (49)

	Amount of Gain or (Loss) Recognized in OCI	Amount of Gain or (Loss) Recognized in OCI Included Component	Amount of Gain or (Loss) Recognized in OCI Excluded Component	Location of Gain or (Loss)	Amount of Gain or (Loss) Reclassified from AOCI into Income	Amount of Gain or (Loss) Reclassified from AOCI into Income Included Component	Amount of Gain or (Loss) Reclassified from AOCI into Income Excluded Component
	Nine Months Ended September 30,				Nine Months Ended September 30,		
	(dollars in thousands)				(dollars in thousands)		
Interest rate contracts	$ 2,163	$ 3,312	$ (1,149)	Interest Income	$ (145)	$ —	$ (145)
Total	$ 2,163	$ 3,312	$ (1,149)		$ (145)	$ —	$ (145)

Over the next 12 months, the Company estimates that an additional $255,000 will be reclassified out of AOCI into earnings, as a reduction to interest income.

The following table presents the effect of the Company's derivative financial instruments on the Income Statement at September 30, 2019:

	Three Months Ended September 30,	Nine Months Ended September 30,
	Interest Income	Interest Income
	(dollars in thousands)	
Total amount of income presented in the income statement in which the effects of fair value or cash flow hedges are recorded	$ (49)	$ (145)
The effects of fair value and cash flow hedging:		
Gain or (loss) on cash flow hedging relationships in Subtopic 815-20		
Interest rate contracts		
Amount of gain or (loss) reclassed from AOCI into income	$ (49)	$ (145)
Amount of gain or (loss) reclassed from AOCI into income - Included Component	—	—
Amount of gain or (loss) reclassed from AOCI into income - Excluded Component	$ (49)	$ (145)

The following tables present the effect of the Company's derivative financial instruments that are not designated as hedging instruments on the Income Statement as of the periods presented:

		Amount of Gain or (Loss) Recognized in Income on Derivative	
		Three Months Ended September 30, 2019	Three Months Ended September 30, 2018
	Location of Gain or (Loss)	(dollars in thousands)	
Other contracts	Other income	$ 195	$ 358
Total		$ 195	$ 358

		Amount of Gain or (Loss) Recognized in Income on Derivative	
		Nine Months Ended September 30, 2019	Nine Months Ended September 30, 2018
	Location of Gain or (Loss)	(dollars in thousands)	
Other contracts	Other income	$ 208	$ 398
Total		$ 208	$ 398

Credit-risk-related Contingent Features

By using derivatives, the Company is exposed to credit risk to the extent that counterparties to the derivative contracts do not perform as required. Should a counterparty fail to perform under the terms of a derivative contract, the Company's credit exposure on interest rate swaps is limited to the net positive fair value and accrued interest of all swaps with each counterparty. The Company seeks to minimize counterparty credit risk through credit approvals, limits, monitoring procedures, and obtaining collateral, where appropriate. Institutional counterparties must have an investment grade credit rating and be approved by the Company's Board of Directors. As such, management believes the risk of incurring credit losses on derivative contracts with institutional counterparties is remote.

The Company has agreements with its derivative counterparties that contain a provision where if the Company defaults on any of its indebtedness, including default where repayment of the indebtedness has not been accelerated by the lender, then the Company could also be declared in default on its derivative obligations. In addition, the Company also has agreements with certain of its derivative counterparties that contain a provision where if the Company fails to maintain its status as a well-capitalized institution, then the counterparty could terminate the derivative positions, and the Company would be required to settle its obligations under the agreements.

As of September 30, 2019, the fair value of derivatives in a net liability position, which includes accrued interest but excludes any adjustment for nonperformance risk related to these agreements was $13.6 million. As of September 30, 2019, the Company has minimum collateral posting thresholds with certain of its derivative counterparties and has posted collateral of $13.3 million. If the Company had breached any of these provisions at September 30, 2019, then it could have been required to settle its obligations under the agreements at their termination value of $13.6 million.

Balance Sheet Offsetting

Certain financial instruments may be eligible for offset in the consolidated balance sheet and/or subject to master netting arrangements or similar agreements. The Company's derivative transactions with institutional counterparties are generally executed under International Swaps and Derivative Association ("ISDA") master agreements which include "right of set-off" provisions. In such cases there is generally a legally enforceable right to offset recognized amounts and there may be an intention to settle such amounts on a net basis. Generally, the Company does not offset such financial instruments for financial reporting purposes.

The following tables present the information about financial instruments that are eligible for offset in the consolidated balance sheet as September 30, 2019 and December 31, 2018:

				Gross Amounts Not Offset		
	Gross Amounts of Recognized	Gross Amounts Offset	Net Amounts Recognized	Financial Instruments	Collateral Pledged (Received)	Net Amount
	September 30, 2019 (dollars in thousands)					
Offsetting of Derivative Assets						
Derivative Assets	$ 21,935	$ —	$ 21,935	$ 4,178	$ —	$ 17,757
Offsetting of Derivative Liabilities						
Derivative Liabilities	$ 18,133	$ —	$ 18,133	$ 4,178	$ 13,650	$ 305

				Gross Amounts Not Offset		
	Gross Amounts of Recognized	Gross Amounts Offset	Net Amounts Recognized	Financial Instruments	Collateral Pledged (Received)	Net Amount
	December 31, 2018 (dollars in thousands)					
Offsetting of Derivative Assets						
Derivative Assets	$ 7,780	$ —	$ 7,780	$ 3,099	$ (743)	$ 3,938
Offsetting of Derivative Liabilities						
Derivative Liabilities	$ 5,961	$ —	$ 5,961	$ 3,099	$ 260	$ 2,602

19. FAIR VALUE MEASUREMENTS

The following is a summary of the carrying values and estimated fair values of the Company's significant financial instruments as of the dates indicated:

	September 30, 2019		December 31, 2018	
	Carrying Value	Estimated Fair Value	Carrying Value	Estimated Fair Value
	(dollars in thousands)			
Financial assets				
Cash and cash equivalents	$ 68,949	$ 68,949	$ 18,473	$ 18,473
Securities available for sale	148,068	148,068	168,163	168,163
Securities held to maturity	269,475	276,241	282,869	281,310
Loans, net	2,161,847	2,120,227	1,543,004	1,484,905
Loans held for sale	2,082	2,123	—	—
FHLB Boston stock	9,159	9,159	6,844	6,844
Accrued interest receivable	6,959	6,959	5,762	5,762
Mortgage servicing rights	1,110	1,316	666	941
Interest rate contracts	4,134	4,134	1,970	1,970
Loan level interest rate swaps	17,773	17,773	5,782	5,782
Risk participation agreements out to counterparties	28	28	28	28
Financial liabilities				
Deposits	2,407,859	2,407,015	1,811,410	1,809,051
Short-term borrowings	113,935	113,981	90,000	90,000
Long-term borrowings	—	—	3,409	3,363
Loan level interest rate swaps	17,773	17,773	5,782	5,782
Risk participation agreements in with counterparties	360	360	179	179

The Company follows ASC 820, *"Fair Value Measurements and Disclosures,"* for financial assets and liabilities. ASC 820 defines fair value, establishes a framework for measuring fair value, and expands disclosure requirements about fair value measurements. ASC 820, among other things, emphasizes that fair value is a market-based measurement, not an entity-specific measurement, and states that a fair value measurement should be determined based on the assumptions the market participants would use in pricing the asset or liability. In addition, ASC 820 specifies a hierarchy of valuation techniques based on whether the types of valuation information ("inputs") are observable or unobservable. Observable inputs reflect market data obtained from independent sources, while unobservable inputs reflect the Company's market assumptions. These two types of inputs have created the following fair value hierarchy:

- Level 1 – Quoted prices for identical assets or liabilities in active markets.
- Level 2 – Quoted prices for similar assets or liabilities in active markets; quoted prices for identical or similar assets or liabilities in inactive markets; and model-derived valuations in which all significant inputs and significant value drivers are observable in active markets.
- Level 3 – Valuations derived from techniques in which one or more significant inputs or significant value drivers are unobservable in the markets and which reflect the Company's market assumptions.

Under ASC 820, fair values are based on the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the measurement date. When available, the Company uses quoted market prices to determine fair value. If quoted prices are not available, fair value is based upon valuation techniques, such as matrix pricing or other models that use, where possible, current market-based or independently sourced market parameters, such as interest rates. If observable market-based inputs are not available, the Company uses unobservable inputs to determine appropriate valuation adjustments using methodologies applied consistently over time.

Valuation techniques based on unobservable inputs are highly subjective and require judgments regarding significant matters, such as the amount and timing of future cash flows and the selection of discount rates that may appropriately reflect market and credit risks.

Changes in these judgments often have a material impact on the fair value estimates. In addition, since these estimates are as of a specific point in time, they are susceptible to material near-term changes. The fair values disclosed do not reflect any premium or discount that could result from offering significant holdings of financial instruments at bulk sale, nor do they reflect the possible tax ramifications or estimated transaction costs. Changes in economic conditions may also dramatically affect the estimated fair values.

The Company uses fair value measurements to record fair value adjustments to certain assets and liabilities and to determine fair value disclosures. Securities available for sale, derivative instruments, and hedges are recorded at fair value on a recurring basis. Additionally, from time to time, the Company may be required to record at fair value other assets on a nonrecurring basis, such as collateral dependent impaired loans.

In accordance with the requirements of ASU 2016-01, the Company uses an exit price notion for its fair value disclosures as of September 30, 2019.

The following tables summarize certain assets reported at fair value on a recurring basis:

	Fair Value as of September 30, 2019			
	Level 1	Level 2	Level 3	Total
	(dollars in thousands)			
Measured on a recurring basis				
Securities available for sale				
U.S. GSE obligations	$ —	$ 39,892	$ —	$ 39,892
Mortgage-backed securities	—	108,176	—	108,176
Corporate debt securities	—	—	—	—
Other assets				
Interest rate swaps with customers	—	17,773	—	17,773
Risk participation agreements out to counterparties	—	28	—	28
Interest rate contracts	—	4,134	—	4,134
Other liabilities				
Mirror swaps with counterparties	—	17,773	—	17,773
Risk participation agreements in with counterparties	—	360	—	360

	Fair Value as of December 31, 2018			
	Level 1	Level 2	Level 3	Total
	(dollars in thousands)			
Measured on a recurring basis				
Securities available for sale				
U.S. GSE obligations	$ —	$ 74,039	$ —	$ 74,039
Mortgage-backed securities	—	89,268	—	89,268
Corporate debt securities	—	4,856	—	4,856
Other assets				
Interest rate swaps with customers	—	5,782	—	5,782
Risk participation agreements out to counterparties	—	28	—	28
Interest rate contracts	—	1,970	—	1,970
Other liabilities				
Mirror swaps with counterparties	—	5,782	—	5,782
Risk participation agreements in with counterparties	—	179	—	179

The following table presents the carrying value of assets held at September 30, 2019, which were measured at fair value on a non-recurring basis during the three and nine months ended September 30, 2019:

	September 30, 2019			
	Level 1	Level 2	Level 3	Total
	(dollars in thousands)			
Items recorded at fair value on a non-recurring basis				
Assets				
Collateral dependent impaired loans	$ —	$ —	$ 2,550	$ 2,550
Loans held for sale	2,082	—	—	2,082
Other real estate owned	—	—	185	185
Total	$ 2,082	$ —	$ 2,735	$ 4,817

The following is a description of the principal valuation methodologies used by the Company to estimate the fair values of its financial instruments:

Collateral dependent impaired loans. Collateral dependent loans are carried at the lower of cost or fair value of the collateral less estimated costs to sell which approximates fair value. The Company uses the appraisal value of the collateral and applies certain adjustments depending on the nature, quality, and type of collateral securing the loan.

Loans held for sale. Loans held for sale are carried at the lower of fair value or carrying value (unpaid principal and unamortized loans fees).

Other Real Estate Owned. These properties are carried at fair value less estimated costs to sell. There were no assets measured at fair value on a non-recurring basis during the year ended December 31, 2018.

There were no transfers between levels for the three and nine months ended September 30, 2019 and the three and nine months ended September 30, 2018.

The following is a description of the principal valuation methodologies used by the Company to estimate the fair values of its financial instruments:

Investment Securities

For investment securities, fair values are primarily based upon valuations obtained from a national pricing service which uses matrix pricing with inputs that are observable in the market or can be derived from, or corroborated by, observable market data. When available, quoted prices in active markets for identical securities are utilized.

Loans Held for Sale

For loans held for sale, fair values are estimated using projected future cash flows, discounted at rates based upon either trades of similar loans or mortgage-backed securities, or at current rates at which similar loans would be made to borrowers with similar credit ratings and for similar remaining maturities.

Loans

For most categories of loans, fair values are estimated using projected future cash flows, discounted at rates based upon current rates at which similar loans would be made to borrowers with similar credit ratings, and for similar remaining maturities. Projected estimated cash flows are adjusted for prepayment assumptions, liquidity premium assumptions, and credit loss assumptions. Loans that are deemed to be impaired in accordance with ASC 310, "*Receivables*," are valued based upon the lower of cost or fair value of the underlying collateral.

FHLB of Boston Stock

The fair value of FHLB of Boston stock equals its carrying value since such stock is only redeemable at its par value.

Deposits

The fair value of non-maturity deposit accounts is the amount payable on demand at the reporting date. This amount does not take into account the value of the Bank's long-term relationships with core depositors. The fair value of fixed-maturity certificates of deposit is estimated using a replacement cost of funds approach and is based upon rates currently offered for deposits of similar remaining maturities.

Long-Term Borrowings

For long-term borrowings, fair values are estimated using future cash flows, discounted at rates based upon current costs for debt securities with similar terms and remaining maturities.

Other Financial Assets and Liabilities

Cash and cash equivalents, accrued interest receivable, and short-term borrowings have fair values which approximate their respective carrying values because these instruments are payable on demand or have short-term maturities and present relatively low credit risk and interest rate risk.

Derivative Instruments and Hedges

The valuation of these instruments is determined using widely accepted valuation techniques including discounted cash flow analysis on the expected cash flows of each derivative. This analysis reflects the contractual terms of the derivatives, including the period to maturity, and uses observable market-based inputs, including interest rate curves and implied volatilities. The Bank incorporates credit valuation adjustments to appropriately reflect nonperformance risk in the fair value measurements. In adjusting the fair value of its derivative contracts for the effect of nonperformance risk, the Bank has considered the impact of netting and any applicable credit enhancements, such as collateral postings.

Off-Balance-Sheet Financial Instruments

In the course of originating loans and extending credit, the Bank will charge fees in exchange for its commitment. While these commitment fees have value, the Bank has not estimated their value due to the short-term nature of the underlying commitments and their immateriality.

Values Not Determined

In accordance with ASC 820, the Company has not estimated fair values for non-financial assets such as banking premises and equipment, goodwill, the intangible value of the Bank’s portfolio of loans serviced for itself, and the intangible value inherent in the Bank’s deposit relationships (i.e., core deposits), among others. Accordingly, the aggregate fair value amounts presented do not represent the underlying value of the Company.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations.

The following analysis discusses the changes in financial condition and results of operation of Cambridge Bancorp (together with its bank subsidiary, unless the context otherwise requires, the "Company") and should be read in conjunction with Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2018, filed with the Securities and Exchange Commission.

Forward-Looking Statements

This report contains forward-looking statements as defined in the Private Securities Litigation Reform Act of 1995. Such forward-looking statements about the Company and its industry involve substantial risks and uncertainties. Statements other than statements of current or historical fact, including statements regarding the Company's future financial condition, results of operations, business plans, liquidity, cash flows, projected costs, and the impact of any laws or regulations applicable to the Company, are forward-looking statements. Words such as "anticipates," "believes," "estimates," "expects," "forecasts," "intends," "plans," "projects," "may," "will," "should," and other similar expressions are intended to identify these forward-looking statements. Such statements are subject to factors that could cause actual results to differ materially from anticipated results. Such factors include, but are not limited to, the following:

- national, regional and local economic conditions may be less favorable than expected, resulting in, among other things, increased charge offs of loans, higher provisions for credit losses and/or reduced demand for the Company's services;
- disruptions to the credit and financial markets, either nationally or globally;
- weakness in the real estate market, including the secondary residential mortgage market, which can affect, among other things, the value of collateral securing mortgage loans, mortgage loan originations and delinquencies, and profits on sales of mortgage loans;
- legislative, regulatory or accounting changes, including changes resulting from the adoption and implementation of the Dodd-Frank Act, which may adversely affect our business and/or competitive position, impose additional costs on the Company or cause us to change our business practices;
- the Dodd-Frank Act's consumer protection regulations which could adversely affect the Company's business, financial condition or results of operations;
- disruptions in the Company's ability to access capital markets which may adversely affect its capital resources and liquidity;
- the Company's heavy reliance on communications and information systems to conduct its business and reliance on third parties and affiliates to provide key components of its business infrastructure, any disruptions of which could interrupt the Company's operations or increase the costs of doing business;
- that the Company's financial reporting controls and procedures may not prevent or detect all errors or fraud;
- the Company's dependence on the accuracy and completeness of information about clients and counterparties;
- the fiscal and monetary policies of the federal government and its agencies;
- the failure to satisfy capital adequacy and liquidity guidelines applicable to the Company;
- downgrades in the Company's credit rating;
- changes in interest rates which could affect interest rate spreads and net interest income;
- costs and effects of litigation, regulatory investigations or similar matters;
- the inability to realize expected cost savings or implement integration plans and other adverse consequences associated with the merger with Optima Bank & Trust Company ("Optima");
- a failure by the Company to effectively manage the risks the Company faces, including credit, operational and cyber security risks;
- increased pressures from competitors (both banks and non-banks) and/or an inability by the Company to remain competitive in the financial services industry, particularly in the markets which the Company serves, and keep pace with technological changes;
- unpredictable natural or other disasters, which could impact the Company's customers or operations;
- a loss of customer deposits, which could increase the Company's funding costs;
- the disparate impact that can result from having loans concentrated by loan type, industry segment, borrower type or location of the borrower or collateral;

- changes in the creditworthiness of customers;
- increased loan losses or impairment of goodwill and other intangibles;
- negative public opinion which could damage the Company's reputation and adversely impact business and revenues;
- the Company depends on the expertise of key personnel, and if these individuals leave or change their roles without effective replacements, operations may suffer;
- the Company may not be able to hire or retain additional qualified personnel, including those acquired in previous acquisitions, and recruiting and compensation costs may increase as a result of turnover, both of which may increase costs and reduce profitability and may adversely impact the Company's ability to implement the Company's business strategies; and
- changes in the Company's accounting policies or in accounting standards which could materially affect how the Company reports financial results and condition.

The Company does not undertake, and specifically disclaims any obligation, to publicly release the result of any revisions which may be made to any forward-looking statements to reflect the occurrence of anticipated or unanticipated events or circumstances after the date of such statements. You are cautioned not to place undue reliance on these forward-looking statements.

OVERVIEW

Cambridge Bancorp (together with its bank subsidiary, unless the context otherwise requires, the "Company") is a Massachusetts state-chartered, federally registered bank holding company headquartered in Cambridge, Massachusetts. The Company is a Massachusetts corporation formed in 1983 and has one bank subsidiary: Cambridge Trust Company (the "Bank"), formed in 1890. As of September 30, 2019, the Company had total assets of approximately $2.8 billion. The Bank operates 16 full-service banking offices in Eastern Massachusetts and New Hampshire. As a private bank, we focus on four core services that center around client needs. Our core services include Wealth Management, Commercial Banking, Residential Lending, and Personal Banking. The Bank's customers consist primarily of consumers and small- and medium-sized businesses in these communities and surrounding areas throughout Massachusetts and New Hampshire. The Company's Wealth Management Group has five offices, two in Boston, Massachusetts and three in New Hampshire in Concord, Manchester, and Portsmouth. As of September 30, 2019, the Company had Assets under Management and Administration of approximately $3.3 billion. The Wealth Management Group offers comprehensive investment management, as well as trust administration, estate settlement, and financial planning services. Our wealth management clients value personal service and depend on the commitment and expertise of our experienced banking, investment, and fiduciary professionals.

The Wealth Management Group customizes its investment portfolios to help its clients meet their long-term financial goals while moderating short-term stock market volatility. Through careful monitoring of asset allocation and disciplined security selection, the Bank's in-house investment team provides clients with long-term capital growth while minimizing risk. Our internally developed, research-driven process is managed by our team of portfolio managers and analysts. We build discretionary portfolios consisting of our best investment ideas, focusing on individual global equities, fixed income securities, exchange-traded funds, and mutual funds. Our team-oriented approach fosters spirited discussion and rigorous evaluation of investments.

The Company offers a wide range of services to commercial enterprises, non-profit organizations, and individuals. The Company emphasizes service to consumers and small- and medium-sized businesses in its market area. The Company makes commercial loans, commercial real estate loans, construction loans, consumer loans, and real estate loans (including one-to-four family and home equity lines of credit), and accepts savings, time, and demand deposits. In addition, the Company offers a wide range of commercial and personal banking services, which include cash management, online banking, mobile banking, and global payments.

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, and non-interest income largely from its wealth management services. The results of operations are 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, the relative levels of interest rates, and local and national economic activity.

Through the Bank, the Company focuses on wealth management, the commercial banking business, and private banking for clients, including residential lending and personal banking. Within the commercial loan portfolio, the Company has traditionally been a commercial real estate lender and in recent years has diversified commercial operations within the areas of commercial and industrial lending to include Innovation Banking, which specializes in working with New England-based entrepreneurs, and asset based lending that helps companies throughout New England and New York grow by borrowing against existing assets. The Innovation Banking group has a narrow client focus for lending and provides a local banking option for technology and entrepreneurial companies within our market area that are primarily serviced by out-of-market institutions. Personal banking focuses on providing exceptional service to clients and in deepening relationships.

Merger with Optima Bank & Trust Company

On April 17, 2019, the Company completed its merger with Optima, adding six banking offices in New Hampshire. As a result of the merger, the Company paid total consideration of $64.3 million, which consisted of 722,746 shares of Cambridge Bancorp common stock issued to former Optima shareholders and $3.5 million in cash. The transaction included the acquisition of $475.4 million in loans and the assumption of $477.2 million in deposits, each at fair value.

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. There have been no significant changes to the Company's critical accounting policies and estimates from those disclosed in our Annual Report on Form 10-K for the fiscal year ended December 31, 2018.

Recent Accounting Developments

See Note 4 to the Unaudited Consolidated Financial Statements for details of recently issued and adopted accounting pronouncements and their expected impact on the Company's financial statements.

RESULTS OF OPERATIONS

Results of Operations for the three months ended September 30, 2019 and September 30, 2018

General. Net income increased $1.0 million, or 15.3%, to $7.7 million for the quarter ended September 30, 2019, as compared to net income of $6.7 million for the quarter ended September 30, 2018, primarily due to higher net interest income before provision for loan losses and higher noninterest income. Diluted earnings per share were $1.57 for the third quarter of 2019, representing a 2.5% decrease over diluted earnings per share of $1.61 for the same quarter last year. Net income for the third quarter of 2019 included after-tax merger expenses of $265,000, which the Company considers to be non-operating.

Excluding merger expenses related to the Optima merger and other non-operating adjustments, operating net income was $7.9 million for the quarter ended September 30, 2019, an increase of $1.3 million, or 19.2%, as compared to operating net income of $6.7 million for the quarter ended September 30, 2018. Operating diluted earnings per share were $1.63 for the third quarter of 2019, representing a 1.2% increase over operating diluted earnings per share of $1.61 for the same quarter last year.

The third quarter of 2019 also included a $1.2 million pre-tax loan charge-off that reduced diluted operating earnings by approximately $0.18 per share. The charge-off was taken in connection with an acquired commercial real estate loan upon receipt of information indicating misstatements of fact and potential borrower fraud. We believe this to be an isolated incident and do not have any additional exposure to the borrower.

Net Interest and Dividend Income. Net interest and dividend income before provision for loan losses increased by $4.9 million, or 30.2%, to $21.1 million for the quarter ended September 30, 2019, as compared to $16.2 million for the same quarter in 2018, primarily due to loan growth (both organic and as a result of the Optima merger) and higher levels of interest-earning assets.

- Interest on loans increased $8.6 million, or 57.4%, due to organic and merger related loan growth combined with higher loan rates.
- Interest on deposits increased $3.3 million, or 261.5%, due to an increase in cost of deposits combined with organic and merger related deposit growth.

Average interest earning assets increased by $684.1 million, or 35.5%, to $2.6 billion as of September 30, 2019, from $1.9 billion as of September 30, 2018. Average interest-bearing liabilities increased by $601.8 million, or 47.6%, to $1.9 billion as of September 30, 2019 from $1.3 billion as of September 30, 2018. The Company's net interest margin, on a fully taxable equivalent basis, decreased 14 basis points to 3.21% for the quarter ended September 30, 2019, as compared to 3.35% for the quarter ended September 30, 2018.

Interest and Dividend Income. Total interest and dividend income increased $8.7 million, or 49.6%, to $26.3 million for the quarter ended September 30, 2019, as compared to $17.6 million for the quarter ended September 30, 2018, primarily due to an $8.6 million increase in interest income from loans.

Interest Expense. Interest expense increased $3.9 million, or 269.3%, to $5.3 million for the quarter ended September 30, 2019, as compared to $1.4 million for the quarter ended September 30, 2018, primarily driven by an increase in cost of deposits combined with merger related and organic deposit growth.

Average interest-bearing liabilities increased by $601.8 million, which contributed to a 51 basis points increase in the average cost of funds of 0.80% from 0.29%. The increase in average interest-bearing liabilities was primarily driven by higher average savings balances of $255.8 million, higher average certificates of deposit of $120.0 million, and higher average money market balances of $102.8 million.

Provision for Loan Losses. The Company recorded a provision for loan losses of $2.2 million for the quarter ended September 30, 2019, as compared to a provision for loan losses of $457,000 in the same quarter of 2018, primarily due to strong loan growth and the aforementioned $1.2 million loan charge-off. The Company recorded net charge-offs of $1.2 million for the quarter ended September 30, 2019, as compared to a net recovery of $4,000 during the same quarter in 2018.

The allowance for loan losses was $18.0 million, or 0.83%, of total loans at September 30, 2019, as compared to $16.1 million, or 1.11%, of total loans at September 30, 2018. The decrease in the allowance to loans ratio during 2019 is primarily due to the impact of loans acquired in connection with the Optima merger. These acquired loans are recorded at fair value, including an adjustment for estimated credit losses, and without carryover of the respective portfolio's historical allowance for loan losses.

Noninterest Income. Total noninterest income increased $1.4 million, or 16.1%, to $10.4 million for the quarter ended September 30, 2019, as compared to $8.9 million for the quarter ended September 30, 2018, primarily due to higher wealth management revenue, higher loan related derivative income, and higher gains on loan sales. Noninterest income was 33.0% of total revenue for the quarter ended September 30, 2019.

- Wealth Management revenue increased by $254,000, or 3.7%, for the third quarter of 2019 as compared to the third quarter of 2018. Wealth Management Assets under Management increased by $71.1 million, or 2.3%, to $3.1 billion as of September 30, 2019, as compared to $3.0 billion as of September 30, 2018.
- Loan related derivative income increased by $494,000, or 77.7%, for the third quarter of 2019, as compared to the third quarter of 2018, due to increased loan volume and the associated derivative transactions executed throughout the quarter.
- Gain on loans held for sale increased by $423,000, as compared to the third quarter of 2018, primarily due to the sale of a pool of $37.0 million in residential mortgages during the quarter.

The categories of Wealth Management revenues are shown in the following table:

	For the Three Months Ended September 30, 2019	2018
	(dollars in thousands)	
Wealth Management revenues:		
Trust and investment advisory fees	$ 6,456	$ 6,249
Asset-based revenues	6,456	6,249
Financial planning fees and other service fees	577	530
Total wealth management revenues	$ 7,033	$ 6,779

The following table presents the changes in Wealth Management assets under management:

	For the Three Months Ended September 30, 2019	2018
	(dollars in thousands)	
Wealth Management Assets under Management		
Balance at the beginning of the period	$ 3,079,770	$ 3,003,494
Gross client asset inflows	95,770	96,163
Gross client asset outflows	(81,619)	(181,964)
Net market impact	25,120	130,290
Balance at the end of the period	$ 3,119,041	$ 3,047,983
Weighted average management fee	0.83%	0.82%

There were no significant changes to the average fee rates and fee structure for the three months ended September 30, 2019 and 2018.

Noninterest Expense. Total noninterest expense increased by $3.0 million, or 18.8%, to $18.9 million for the quarter ended September 30, 2019, as compared to $15.9 million for the quarter ended September 30, 2018, primarily driven by an increase in salaries and employee benefit expense, occupancy and equipment expense, data processing fees, and merger expenses of $339,000. The increase in noninterest expense was partially offset by lower marketing expenses.

- Salaries and employee benefits expense increases of $1.7 million were due to increased staffing associated with the merger with Optima, increased staffing to support business growth initiatives, and higher employee benefit costs.
- Occupancy and equipment expense increases of $502,000 were primarily due to the additional office locations associated with the merger with Optima and additional office space in Boston, MA.
- Data processing expense increases of $323,000 were due to the increased volume of client transactions related to the merger with Optima and investments made in technology.

Income Tax Expense. The Company recorded a provision for income taxes of $2.7 million for the quarter ended September 30, 2019, as compared to $2.1 million for the same quarter in 2018. The effective tax rate was 26.1% for the quarter ended September 30, 2019, as compared to 24.0% for the same quarter in 2018. Additionally, the Company recognized $1,000 of tax benefit resulting from the accounting for share-based payments during the quarter ended September 30, 2019.

Results of Operations for the nine months ended September 30, 2019 and September 30, 2018

General. Net income decreased $429,000, or 2.3%, to $18.1 million for the nine months ended September 30, 2019, as compared to net income of $18.6 million for the same period in 2018, primarily due to merger expenses of $3.9 million associated with the Optima merger and a higher provision for loan losses, partially offset by higher net interest income and noninterest income during the nine months ended September 30, 2019. Diluted earnings per share were $3.95 for the first nine months of 2019, representing a 12.0% decrease over diluted earnings per share of $4.49 for the same nine months of 2018.

Excluding merger expenses and other non-operating adjustments, operating net income was $21.2 million for the nine months ended September 30, 2019, an increase of $2.7 million, or 14.3%, as compared to operating net income of $18.6 million for the nine months ended September 30, 2018. Operating diluted earnings per share were $4.62 for the first nine months of 2019, representing a 2.9% increase over operating diluted earnings per share of $4.49 for the first nine months of 2018.

Net Interest and Dividend Income. Net interest and dividend income before provision for loan losses increased by $9.9 million, or 21.0%, to $57.1 million, as compared to $47.2 million for the nine months ended September 30, 2018, primarily due to loan growth (both as a result of the Optima merger and organic growth) and higher levels of interest-earning assets.

- Interest on loans increased by $18.7 million, or 43.9%, due to organic and merger related loan growth combined with higher loan rates.
- Interest on deposits increased by $8.2 million, or 249.2%, due to an increase in cost of deposits combined with organic and merger related deposit growth.

Average interest earning assets increased by $465.8 million, or 24.4%, to $2.4 billion as of September 30, 2019, from $1.9 billion as of September 30, 2018. Average interest-bearing liabilities increased by $427.0 million, or 33.8%, to $1.7 billion as of September 30, 2019 from $1.3 billion as of September 30, 2018. The Company's net interest margin, on a fully taxable equivalent basis, decreased 10 basis points to 3.23% for the nine months ended September 30, 2019, as compared to 3.33% for the same period in 2018.

Interest and Dividend Income. Total interest and dividend income increased $19.3 million, or 38.0%, to $69.9 million for the nine months ended September 30, 2019, as compared to $50.7 million for the nine months ended September 30, 2018, resulting from merger related and organic loan growth combined with higher loan rates.

Interest Expense. Interest expense increased $9.3 million, or 267.6%, to $12.8 million for the nine months ended September 30, 2019, as compared to $3.5 million for the nine months ended September 30, 2018, primarily driven by an increase in cost of deposits combined with merger related and organic deposit growth.

Average interest-bearing liabilities increased by $427.0 million, which contributed to a 48 basis points increase in the average cost of funds of 0.72% from 0.24%. The increase in average interest-bearing liabilities was primarily driven by an increase in average savings account balances of $177.2 million, increase in average money market account balances of $101.9 million, and an increase in average certificates of deposit of $87.2 million. The Company experienced an increase in the average cost of deposits for the nine months ended September 30, 2019, as compared to September 30, 2018 primarily due to higher rates on the acquired deposit portfolio.

Provision for Loan Losses. The Company recorded a provision for loan losses of $2.7 million for the nine months ended September 30, 2019, as compared to $787,000 for the nine months ended September 30, 2018, primarily due to loan growth and a $1.2 million loan charge-off during the third quarter. We recorded net charge-offs of $1.4 million for the nine months ended September 30, 2019, as compared to net charge-offs of $1,000 during the same period in 2018. The allowance for loan losses was $18.0 million, or 0.83%, of total loans at September 30, 2019, as compared to $16.1 million, or 1.11%, of total loans at September 30, 2018. The decrease in the allowance to loans ratio from September 30, 2018 is primarily due the impact of loans acquired in connection with the Optima merger. These acquired loans are recorded at fair value, including an adjustment for estimated credit losses, and without carryover of the respective portfolio's historical allowance for loan losses.

Noninterest Income. Total noninterest income increased by $1.5 million, or 6.1%, to $26.5 million for the nine months ended September 30, 2019, as compared to $25.0 million for the nine months ended September 30, 2018, primarily as a result of higher wealth management revenue, higher loan related derivative income, and higher gains on loan sales. Noninterest income was 31.7% of total revenue for the nine months ended September 30, 2019.

- Wealth Management revenue increased by $532,000, or 2.8%, for the nine months ended September 30, 2019, primarily due to appreciation in the equity markets. Wealth Management Assets under Management increased by $71.1 million, or 2.3%, to $3.1 billion as of September 30, 2019, as compared to $3.0 billion as of September 30, 2018.
- Gain on loans held for sale increased by $409,000 as compared to the same period in 2018, primarily due to higher sales volume in 2019.
- Loan related derivative income increased by $351,000 due to increased loan volume and the associated derivative transactions executed throughout 2019.

The categories of Wealth Management revenues are shown in the following table:

	For the Nine Months Ended September 30,	
	2019	2018
	(dollars in thousands)	
Wealth Management revenues:		
Trust and investment advisory fees	$ 18,763	$ 18,181
Asset-based revenues	18,763	18,181
Financial planning fees and other service fees	813	863
Total wealth management revenues	$ 19,576	$ 19,044

The following table presents the changes in Wealth Management Assets under Management:

	For the Nine Months Ended September 30,	
	2019	2018
	(dollars in thousands)	
Wealth Management Assets under Management		
Balance at the beginning of the period	$ 2,759,547	$ 2,971,322
Gross client asset inflows	245,209	256,397
Gross client asset outflows	(251,071)	(373,832)
Net market impact	365,356	194,096
Balance at the end of the period	$ 3,119,041	$ 3,047,983
Weighted average management fee	0.83%	0.81%

There were no significant changes to the average fee rates and fee structure for the nine months ended September 30, 2019 and 2018.

Noninterest Expense. Total noninterest expense increased by $9.6 million, or 20.4%, to $56.7 million for the nine months ended September 30, 2019, as compared to $47.1 million for the nine months ended September 30, 2018, primarily driven by merger expenses of $3.9 million combined with higher salaries and employee benefits expense, occupancy and equipment expense, and data processing expense.

- Merger expenses of $3.9 million were related to professional fees, compensation and severance agreements, as well as contract termination costs associated with the closing of the Optima merger.
- Salaries and employee benefits increases of $3.5 million were driven by increased staffing associated with new banking office locations in New Hampshire as a result of the merger with Optima,, increased staffing to support business initiatives, and higher employee benefit costs.
- Occupancy and equipment expense increases of $1.1 million were primarily due to the additional office locations associated with the merger with Optima.
- Data processing expense increases of $684,000 were due to the increased volume of client transactions related to the merger with Optima and investments made in technology.

Income Tax Expense. The Company recorded a provision for income taxes of $6.0 million for the nine months ended September 30, 2019, as compared to $5.6 million for 2018. The effective tax rate was 24.81% for the nine months ended September 30, 2019, as compared to 23.2% for the same period in 2018. Additionally, the Company recognized $196,000 of tax benefit resulting from the accounting for share-based payments during the nine months ended September 30, 2019.

CHANGES IN FINANCIAL CONDITION

Total Assets. Total assets increased $740.5 million, or 35.2%, from December 31, 2018, and were $2.8 billion as of September 30, 2019.

Cash and Cash Equivalents. Cash and cash equivalents increased by $50.5 million to $68.9 million at September 30, 2019 from $18.5 million at December 31, 2018.

Investment Securities. The carrying value of total investment securities decreased by $33.5 million to $417.5 million at September 30, 2019, from $451.0 million at December 31, 2018, as cash flows were used to reduce wholesale funding.

Loans. Total loans increased $620.1 million, or 39.8%, from December 31, 2018, and stood at $2.2 billion as of September 30, 2019. The increase in total loans was due to a combination of the merger with Optima and organic growth.

Inclusive of Optima:

- Residential mortgage loans increased $305.5 million, or 50.6%, to $909.8 million at September 30, 2019, from $604.3 million at December 31, 2018 .
- Commercial real estate loans increased $258.8 million, or 34.1%, to $1.0 billion at September 30, 2019, from $758.0 million at December 31, 2018 . Total loan originations during the first nine months of the year were strong.
- Commercial and industrial loans increased $44.4 million, or 47.3%, to $138.1 at September 30, 2019, from $93.7 million at December 31, 2018 .

Excluding the impact of the Optima merger, total loans grew by $144.7 million, or 9.3%, from $1.6 billion at December 31, 2018. For further details on the loans and deposits acquired, see the Organic Loan and Deposit Growth table provided at the end of this section.

Bank-Owned Life Insurance. The Company invests in bank-owned life insurance to help offset the costs of our employee benefit plan obligations. Bank-owned life insurance also generally provides noninterest income that is nontaxable. At September 30, 2019, our investment in bank-owned life insurance was $37.2 million, representing an increase of $6.2 million from $30.9 million at December 31, 2018, primarily due to additional policies associated with the merger.

Goodwill and merger related intangibles. The Company recorded additional goodwill of $30.8 million and other merger related intangibles of $3.6 million during the second quarter of 2019, due to the merger with Optima. Goodwill and merger related intangible assets were $31.2 million and $3.4 million, respectively, at September 30, 2019.

Right of use assets. At September 30, 2019, the Company had right of use assets of $34.6 million due to the adoption of new lease accounting guidance in 2019.

Other assets. Other assets increased $18.5 million, or 66.8%, to $46.1 million at September 30, 2019, from $27.6 million at December 31, 2018, primarily due to higher loan related derivative assets.

Deposits. Inclusive of Optima, total deposits grew by $596.4 million, or 32.9%, to $2.4 billion at September 30, 2019, from $1.8 billion, at December 31, 2018, primarily driven by a combination of the impact of the Optima merger and organic growth.

- Core deposits, which the Company defines as all deposits other than certificates of deposit, increased by $485.0 million, or 28.7%, to $2.2 billion from $1.7 billion at December 31, 2018, inclusive of the Optima merger.
- Excluding the impact of the Optima merger, organic growth in core deposits was $170.4 million, or 10.1%, at September 30, 2019, from December 31, 2018. Growth in core deposits during 2019 was attributable to successful deposit campaigns as we strive to attract and deepen client relationships.
- The cost of total deposits for the quarter ended September 30, 2019 was 0.78%, as compared to 0.29% for the quarter ended September 30, 2018, driven by a combination of deposit growth and higher interest rates during 2019. The cost of total deposits for the nine months ended September 30, 2019 was 0.71%, as compared to 0.25% for the nine months ended September 30, 2018, driven by the cost of the acquired deposit portfolio and a combination of deposit growth and higher interest rates during 2019.

Certificates of deposit, which totaled $232.9 million at September 30, 2019, increased by $111.4 million from $121.4 million at December 31, 2018, primarily due to the merger with Optima. Total brokered certificates of deposit, which are included within certificates of deposit, were $14.0 million and $27.5 million at September 30, 2019 and December 31, 2018, respectively.

For further details on the loans and deposits acquired, see the Organic Loan and Deposit Growth table provided at the end of this section.

Borrowings. At September 30, 2019, borrowings consisted of advances from the FHLB of Boston. Total borrowings increased to $113.9 million at September 30, 2019, from $93.4 million at December 31, 2018.

Shareholders' Equity. Total shareholders' equity increased $76.3 million, or 45.7%, to $243.3 million at September 30, 2019 from $167.0 million at December 31, 2018, primarily due to $59.4 million of equity issued as a result of the Optima merger, net income of $18.1 million, and decreases in unrealized losses on available for sale securities of $3.4 million, which were partially offset by regular dividend payments of $7.0 million.

The Company's ratio of tangible common equity to tangible assets decreased 50 basis points to 7.43% at September 30, 2019 from 7.93% at December 31, 2018, primarily due to the impact of goodwill and acquisition related intangibles recorded as a result of the Optima merger. Tangible book value per share grew by $3.97, or 10.1%, to $43.03 as of September 30, 2019, as compared to $39.06 as of September 30, 2018.

Organic Loan and Deposit Growth (dollars in thousands)

	September 30, 2019	June 30, 2019	December 31, 2018	Balance Acquired	December 2018 vs September 2019 Organic Growth/(Loss) $	December 2018 vs September 2019 Organic Growth/(Loss) %
Loans						
Residential mortgage	$ 909,822	$ 938,559	$ 604,331	$ 314,552	$ (9,061)	(1.5%)
Commercial mortgage	1,016,772	905,442	757,957	114,338	144,477	19.1%
Home equity	82,713	85,814	69,336	15,452	(2,075)	(3.0%)
Commercial & Industrial	138,072	134,307	93,712	30,215	14,145	15.1%
Consumer	32,503	32,428	34,436	849	(2,782)	(8.1%)
Total loans	$ 2,179,882	$ 2,096,550	$ 1,559,772	$ 475,406	$ 144,704	9.3%
Deposits						
Demand	$ 654,133	$ 587,030	$ 494,492	$ 58,722	$ 100,919	20.4%
Interest bearing checking	429,755	422,426	431,702	49,454	(51,401)	(11.9%)
Money market	214,721	200,935	135,585	68,183	10,953	8.1%
Savings	876,392	853,356	628,212	138,285	109,895	17.5%
Core deposits	2,175,001	2,063,747	1,689,991	314,644	170,366	10.1%
Certificates of deposit	232,858	265,918	121,419	162,545	(51,106)	(42.1%)
Total deposits	$ 2,407,859	$ 2,329,665	$ 1,811,410	$ 477,189	$ 119,260	6.6%

GAAP to Non-GAAP Reconciliations (dollars in thousands except per share data)

Statement on Non-GAAP Measures: The Company believes the presentation of the following non-GAAP financial measures provides useful supplemental information that is essential to an investor's proper understanding of the results of operations and financial condition of the Company. Management uses non-GAAP financial measures in its analysis of the Company's performance. These non-GAAP measures should not be viewed as substitutes for the financial measures determined in accordance with GAAP, nor are they necessarily comparable to non-GAAP performance measures that may be presented by other companies.

The following table summarizes the calculation of the Company's operating net income and operating diluted earnings per share for the periods indicated:

Operating Net Income / Operating Diluted EPS	Three Months Ended September 30, 2019	Three Months Ended September 30, 2018	Nine Months Ended September 30, 2019	Nine Months Ended September 30, 2018
	(in thousands, except share data)			
Net Income (a GAAP measure)	$ 7,676	$ 6,659	$ 18,146	$ 18,575
Add: Merger Expenses (Pretax)	339	—	3,880	—
Add: (Gain)/loss on disposition of investment securities	(2)	—	79	(2)
Tax effect of Merger Expenses and Gain (loss) on disposition of investment securities(1)	(74)	—	(873)	1
Operating Net Income (a non-GAAP measure)	$ 7,939	$ 6,659	$ 21,232	$ 18,574
Less: Dividends and Undistributed Earnings Allocated to Participating Securities (GAAP)	(59)	(66)	(183)	(189)
Operating Income Applicable to Common Shareholders (a non-GAAP measure)	$ 7,880	$ 6,593	$ 21,049	$ 18,385
Weighted Average Diluted Shares	4,842,965	4,101,378	4,552,092	4,095,447
Operating Diluted earnings per share (a non-GAAP measure)	$ 1.63	$ 1.61	$ 4.62	$ 4.49

(1) The net tax benefit associated with noncore items is determined by assessing whether each noncore item is included or excluded from net taxable income and applying the Company's combined marginal tax rate to only those items included in net taxable income.

The following tables summarize the calculation of the Company's tangible common equity ratio and tangible book value per share for the periods indicated:

	September 30, 2019	December 31, 2018	September 30, 2018
	(in thousands, except share data)		
Tangible Common Equity:			
Shareholders' equity (GAAP)	$ 243,345	$ 167,026	$ 160,776
Less: Goodwill and acquisition related intangibles (GAAP)	(34,635)	(412)	(412)
Tangible Common Equity (a non-GAAP measure)	208,710	166,614	160,364
Total assets (GAAP)	2,841,868	2,101,384	1,988,944
Less: Goodwill and acquisition related intangibles (GAAP)	(34,635)	(412)	(412)
Tangible assets (a non-GAAP measure)	$ 2,807,233	$ 2,100,972	$ 1,988,532
Tangible Common Equity Ratio (a non-GAAP measure)	7.43%	7.93%	8.06%
Tangible Book Value Per Share:			
Tangible Common Equity (a non-GAAP measure)	$ 208,710	$ 166,614	$ 160,364
Common shares outstanding	4,849,988	4,107,051	4,105,742
Tangible Book Value Per Share (a non-GAAP measure)	$ 43.03	$ 40.57	$ 39.06

INVESTMENT SECURITIES

The Company's securities portfolio consists of securities available for sale ("AFS") and securities held to maturity ("HTM"). The largest component of the securities portfolio is mortgage-backed securities, all of which are issued by U.S. government agencies or U.S. government-sponsored enterprises.

Securities available for sale consist of certain U.S. Government Sponsored Enterprises ("GSE") and U.S. GSE mortgage-backed securities and corporate debt securities. These securities are carried at fair value, and except for equity securities, unrealized gains and losses, net of applicable income taxes, are recognized as a separate component of shareholders' equity. Changes in fair value for equity securities are recognized in earnings in accordance with ASU 2016-01.

The fair value of securities available for sale totaled $148.1 million and included gross unrealized gains of $317,000 and gross unrealized losses of $855,000 at September 30, 2019. At December 31, 2018, the fair value of securities available for sale totaled $168.2 million and included gross unrealized gains of $118,000 and gross unrealized losses of $4.2 million.

Securities classified as held to maturity consist of certain U.S. GSE and U.S. GSE mortgage-backed securities, corporate debt securities, and state, county, and municipal securities. Securities held to maturity as of September 30, 2019 are carried at their amortized cost of $269.5 million. At December 31, 2018, securities held to maturity totaled $282.9 million.

The following table sets forth the fair value of available for sale investment securities, the amortized costs of held to maturity investment securities, and the percentage distribution at the dates indicated:

	September 30, 2019		December 31, 2018	
	Amount	Percent	Amount	Percent
	(dollars in thousands)			
Available for sale securities				
U.S. GSE obligations	$ 39,892	27%	$ 74,039	44%
Mortgage-backed securities	108,176	73%	89,268	53%
Corporate debt securities	-	0%	4,856	3%
Total securities available for sale	$ 148,068	100%	$ 168,163	100%
Held to maturity securities				
U.S. GSE obligations	$ 17,573	7%	$ 32,571	12%
Mortgage-backed securities	171,502	64%	168,118	59%
Corporate debt securities	6,978	3%	6,972	2%
Municipal securities	73,422	26%	75,208	27%
Total securities held to maturity	$ 269,475	100%	$ 282,869	100%
Total	$ 417,543	100%	$ 451,032	100%

The following tables set forth the composition and maturities of debt investment securities. 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.

	Within One Year		After One, But Within Five Years		After Five, But Within Ten Years		After Ten Years		Total	
At September 30, 2019	Amortized Cost	Weighted Average Yield (1)	Amortized Cost	Weighted Average Yield (1)	Amortized Cost	Weighted Average Yield (1)	Amortized Cost	Weighted Average Yield (1)	Amortized Cost	Weighted Average Yield (1)
					(dollars in thousands)					
Available for sale securities										
U.S. GSE obligations	$ 5,000	1.4%	$ 35,000	1.6%	$ —	—	$ —	—	$ 40,000	1.5%
Mortgage-backed securities	—	—	45	5.4%	38,178	1.9%	70,383	2.1%	108,606	2.1%
Corporate debt securities	—	—	—	—	—	—	—	—	—	—
Total available for sale securities	$ 5,000	1.4%	$ 35,045	1.6%	$ 38,178	1.9%	$ 70,383	2.1%	$ 148,606	1.9%
Held to maturity securities										
U.S. GSE obligations	$ 4,998	1.6%	$ 12,575	2.7%	$ —	—	$ —	—	$ 17,573	2.4%
Mortgage-backed securities	3	3.8%	—	—	50,021	2.7%	121,478	2.7%	171,502	2.7%
Corporate debt securities	—	—	6,978	2.6%	—	—	—	—	6,978	2.6%
Municipal securities	2,945	4.8%	11,151	4.2%	45,366	3.8%	13,960	3.6%	73,422	3.8%
Total held to maturity securities	$ 7,946	2.8%	$ 30,704	3.2%	$ 95,387	3.2%	$ 135,438	2.8%	$ 269,475	3.0%
Total	$ 12,946	2.2%	$ 65,749	2.3%	$ 133,565	2.8%	$ 205,821	2.5%	$ 418,081	2.6%

	Within One Year		After One, But Within Five Years		After Five, But Within Ten Years		After Ten Years		Total	
At December 31, 2018	Amortized Cost	Weighted Average Yield (1)	Amortized Cost	Weighted Average Yield (1)	Amortized Cost	Weighted Average Yield (1)	Amortized Cost	Weighted Average Yield (1)	Amortized Cost	Weighted Average Yield (1)
					(dollars in thousands)					
Available for sale securities										
U.S. GSE obligations	$ 10,004	1.1%	$ 65,000	1.5%	$ —	—	$ —	—	$ 75,004	1.4%
Mortgage-backed securities	—	—	78	5.4%	33,768	1.8%	58,425	2.0%	92,271	1.9%
Corporate debt securities	2,008	1.5%	3,007	2.5%	—	—	—	—	5,015	2.1%
Total available for sale securities	$ 12,012	1.1%	$ 68,085	1.5%	$ 33,768	1.8%	$ 58,425	2.0%	$ 172,290	1.7%
Held to maturity securities										
U.S. GSE obligations	$ 5,001	1.4%	$ 27,570	2.5%	$ —	—	$ —	—	$ 32,571	2.4%
Mortgage-backed securities	50	4.2%	—	—	34,434	2.4%	133,634	2.9%	168,118	2.8%
Corporate debt securities	—	—	6,972	2.6%	—	—	—	—	6,972	2.6%
Municipal securities	4,630	4.8%	13,259	4.4%	41,390	3.8%	15,929	3.6%	75,208	3.9%
Total held to maturity securities	$ 9,681	3.1%	$ 47,801	3.1%	$ 75,824	3.2%	$ 149,563	3.0%	$ 282,869	3.1%

Total	$ 21,693	2.0%	$ 115,886	2.2%	$ 109,592	2.7%	$ 207,988	2.7%	$ 455,159	2.5%

(1) Weighted Average Yield is shown on a fully taxable equivalent basis using a federal tax rate of 21% at September 30, 2019 and December 31, 2018.

Management evaluates securities for other-than-temporary impairment on at least a quarterly basis and more frequently when economic or market conditions warrant such evaluation. Consideration is given to: (1) the length of time and the extent to which the fair value has been less than cost; (2) the financial condition and near-term prospects of the issuer; and (3) the intent and ability of the Company to retain its investment in the issuer for a period of time sufficient to allow for any anticipated recovery in fair value.

LOANS

The Company's lending activities are conducted principally in Eastern Massachusetts and New Hampshire. The Company grants single- and multi-family residential loans, commercial & industrial ("C&I"), commercial real estate ("CRE"), construction loans, and a variety of consumer loans. Most of the loans granted by the Company are secured by real estate collateral. Repayment of the Company's residential loans are generally dependent on the health of the employment market in the borrowers' geographic areas and that of the general economy with liquidation of the underlying real estate collateral being typically viewed as the primary source of repayment in the event of borrower default. The repayment of C&I loans depends primarily on the cash flow and credit worthiness of the borrower and secondarily on the underlying collateral provided by the borrower. As borrower cash flow may be difficult to predict, liquidation of the underlying collateral securing these loans is typically viewed as the primary source of repayment in the event of borrower default. However, collateral typically consists of equipment, inventory, accounts receivable, or other business assets that may fluctuate in value, so the liquidation of collateral in the event of default is often an insufficient source of repayment. The Company's CRE loans are primarily made based on the cash flow from the collateral property and secondarily on the underlying collateral provided by the borrower, with liquidation of the underlying real estate collateral typically being viewed as the primary source of repayment in the event of borrower default. The Company's construction loans are primarily made based on the borrower's expected ability to execute and the future completed value of the collateral property, with sale of the underlying real estate collateral typically being viewed as the primary source of repayment.

The following table shows the composition of the loan portfolio at the dates indicated:

	September 30,		December 31,	
	2019	% of Total	2018	% of Total
	(dollars in thousands)			
Residential mortgage				
Mortgages - fixed rate	$ 437,787	20%	$ 293,267	19%
Mortgages - adjustable rate	441,375	21%	309,656	20%
Construction	28,712	1%	—	0%
Deferred costs net of unearned fees	1,948	0%	1,408	0%
Total residential mortgages	909,822	42%	604,331	39%
Commercial mortgage				
Mortgages - nonowner occupied	821,567	38%	654,394	42%
Mortgages - owner occupied	113,316	5%	59,335	4%
Construction	81,751	4%	44,146	3%
Deferred costs net of unearned fees	138	0%	82	0%
Total commercial mortgages	1,016,772	47%	757,957	49%
Home equity				
Home equity - lines of credit	76,108	3%	63,421	4%
Home equity - term loans	6,367	1%	5,665	0%
Deferred costs net of unearned fees	238	0%	250	0%
Total home equity	82,713	4%	69,336	4%
Commercial & industrial				
Commercial & industrial	138,171	6%	93,728	6%
Deferred costs net of unearned fees	(99)	0%	(16)	0%
Total commercial & industrial	138,072	6%	93,712	6%
Consumer				
Secured	31,312	1%	33,252	2%
Unsecured	1,167	0%	1,171	0%
Deferred costs net of unearned fees	24	0%	13	0%
Total consumer	32,503	1%	34,436	2%
Total loans	$ 2,179,882	100%	$ 1,559,772	100%

Residential Mortgage. Residential real estate loans held in portfolio amounted to $909.8 million at September 30, 2019, an increase of $305.5 million, or 50.6%, from $604.3 million at December 31, 2018, and consisted of one-to-four family residential mortgage and construction loans. The residential mortgage portfolio represented 42% and 39% of total loans at September 30, 2019 and December 31, 2018, respectively. During the third quarter of 2019, the Company sold $37.0 million of residential mortgages.

The average loan balance outstanding in the residential portfolio was $362,000 and the largest individual residential mortgage loan outstanding was $9.0 million as of September 30, 2019. At September 30, 2019, this loan was performing in accordance with its original terms.

The Bank offers fixed and adjustable rate residential mortgage and construction loans with maturities up to 30 years. One-to-four family residential mortgage loans are generally underwritten according to Fannie Mae and Freddie Mac guidelines, and we refer to loans that conform to such guidelines as “conforming loans.” The Bank generally originates and purchases both fixed and adjustable rate mortgage loans in amounts up to the maximum conforming loan limits as established by the Federal Housing Finance Agency, which increased to $484,350 in 2019 from $453,100 in 2018, for one-unit properties. In addition, the Bank also offers loans above conforming lending limits typically referred to as “jumbo” loans. These loans are typically underwritten to jumbo conforming guidelines, however, the Bank may choose to hold a jumbo loan within its portfolio with underwriting criteria that does not exactly match conforming guidelines. The Bank may also, from time to time, purchase residential loans that are either jumbo, conforming, or meet our Community Reinvestment Act (“CRA”) requirements. Purchases have historically been made to satisfy CRA requirements for lending to low and moderate income borrowers within the Bank’s CRA Assessment Area.

The Company does not offer reverse mortgages, nor do we offer loans that provide for negative amortization of principal, such as “Option ARM” loans, where the borrower can pay less than the interest owed on the loan, resulting in an increased principal balance during the life of the loan. We do not offer “subprime loans” (loans that are made with low down payments to borrowers with weakened credit histories typically characterized by payment delinquencies, previous charge-offs, judgments, bankruptcies, or borrowers with questionable repayment capacity as evidenced by low credit scores or high debt-burden ratios) or Alt-A loans (defined as loans having less than full documentation).

Residential real estate loans are originated both for sale to the secondary market, as well as for retention in the Bank’s loan portfolio. The decision to sell a loan to the secondary market or retain within the portfolio is determined based on a variety of factors including but not limited to the Bank’s asset/liability position, the current interest rate environment, and customer preference.

The Company is servicing mortgage loans sold to others without recourse of approximately $160.1 million at September 30, 2019 and $90.2 million at December 31, 2018.

The table below presents residential real estate loan origination activity for the periods indicated:

	For the Nine Months Ended September 30,	
	2019	2018
	(dollars in thousands)	
Originations for retention in portfolio	$ 133,213	$ 89,870
Originations for sale to the secondary market	10,624	6,599
Total	$ 143,837	$ 96,469

Loans are sold with servicing retained or released. The table below presents residential real estate loan sale activity for the periods indicated:

	For the Nine Months Ended September 30,	
	2019	2018
	(dollars in thousands)	
Loans sold with servicing rights retained	$ 41,956	$ 1,390
Loans sold with servicing rights released	3,557	5,209
Total	$ 45,513	$ 6,599

Loans sold with the retention of servicing typically result in the capitalization of servicing rights. Loan servicing rights are included in other assets and are subsequently amortized as an offset to other income over the estimated period of servicing. The net balance of capitalized servicing rights amounted to $1.1 million and $666,000 as of September 30, 2019 and December 31, 2018, respectively.

Commercial Mortgage. The commercial real estate loans portfolio represented 47% and 49% of total loans at September 30, 2019 and December 31, 2018, respectively. Commercial real estate loans were $1.0 billion as of September 30, 2019, an increase of $258.8 million, or 34.1%, from $758.0 million at December 31, 2018, respectively.

Commercial real estate loans are secured by a variety of property types, with approximately 88.3% of the total at September 30, 2019 composed of multi-family dwellings, retail facilities, office buildings, commercial mixed use, lodging, and industrial and warehouse properties. The average loan balance outstanding in this portfolio was $1.4 million, and the largest individual commercial real estate loan outstanding was $24.0 million as of September 30, 2019. At September 30, 2019, this commercial mortgage was performing in accordance with its original terms.

Generally, our commercial real estate loans are for terms of up to ten years, with loan-to-values that generally do not exceed 75%. 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.

Home Equity. The home equity portfolio totaled $82.7 million as of September 30, 2019, an increase of $13.4 million, or 19.3%, from $69.3 million at December 31, 2018. The home equity portfolio represented 4% of total loans at September 30, 2019 and December 31, 2018. At September 30, 2019, the average loan balance outstanding in this portfolio was $101,000, and the largest home equity line of credit was a $1.0 million line of credit and had an outstanding balance of $1.0 million. At September 30, 2019, this line of credit was performing in accordance with its original terms.

Home equity lines of credit are extended as both first and second mortgages on owner-occupied residential and one-to-four family investment properties in the Bank's market area. Home equity lines of credit are generally underwritten with the same criteria that we use to underwrite one-to-four family residential mortgage loans.

Our home equity lines of credit are revolving lines of credit, which generally have a term between 15 and 20 years, with draws available for the first 10 years. Our 15-year lines of credit are interest only during the first 10 years and amortize on a five-year basis thereafter. Our 20-year lines of credit are interest only during the first 10 years and amortize on a 10-year basis thereafter. We generally originate home equity lines of credit with loan-to-value ratios of up to 80% when combined with the principal balance of the existing first mortgage loan, although loan-to-value ratios may occasionally exceed 80% on a case-by-case basis. Maximum combined loan-to-values are determined based on an applicant's loan/line amount and the estimated property value. Lines of credit above $1.0 million generally will not exceed combined loan-to-value of 75%. Rates are adjusted monthly based on changes in a designated market index. We also offer home equity term loans, which are extended as second mortgages on owner-occupied residential properties in our market area. Our home equity term loans are fixed-rate second mortgage loans, which generally have a term between 5 and 20 years.

Commercial and Industrial (C&I). Commercial and industrial loans increased $44.4 million, or 47.3%, from $93.7 million at December 31, 2018 to $138.1 million at September 30, 2019. The C&I portfolio represented 6% of total loans at September 30, 2019 and December 31, 2018. The average loan balance outstanding in this portfolio was $252,000, and the largest individual commercial and industrial loan outstanding was $9.8 million as of September 30, 2019. At September 30, 2019, this loan was performing in accordance with its original terms.

The Company's Innovation Banking and Asset-Based loans are reported within the C&I portfolio.

- At September 30, 2019, Innovation Banking loans totaled $24.3 million, and the average loan balance outstanding in this portfolio was $1.0 million. The largest individual loan outstanding was $5.2 million, and this loan was performing in accordance with its original terms.
- At September 30, 2019, Asset-Based loans totaled $38.4 million, and the average loan balance outstanding in this portfolio was $3.0 million. The largest individual loan outstanding was $9.8 million, and this loan was performing in accordance with its original terms.

The Company's C&I loan customers represent various small- and middle-market established businesses involved in professional services, accommodation and food services, health care, wholesale trade, manufacturing, distribution, retailing, and non-profits. 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 Company also makes loans to entrepreneurial and technology businesses. 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.

Consumer Loans. Consumer loans decreased $1.9 million, or 5.6%, from $34.4 million at December 31, 2018 to $32.5 million at September 30, 2019. Consumer loans represented 1% of the total loans portfolio at September 30, 2019 and 2% December 31, 2018. Consumer loans include secured and unsecured loans, lines of credit, and personal installment loans. Unsecured consumer loans generally have greater risk compared to longer-term loans secured by improved, owner-occupied real estate, particularly consumer loans that are secured by rapidly depreciable assets. The secured consumer loans and lines portfolio are generally fully secured by pledged assets such as bank accounts or investments.

Loan Portfolio Maturities. The following table summarizes the dollar amount of loans maturing in the portfolio based on their loan type and contractual terms to maturity at September 30, 2019. The table does not include any estimate of prepayments, which can significantly shorten the average life of all loans and may cause our actual repayment experience to differ from that shown below. Demand loans, loans having no stated repayment schedule or maturity, and overdraft loans are reported as being due in one year or less.

	September 30, 2019			
	One Year or Less	One to Five Years	Over Five Years	Total
	(dollars in thousands)			
Residential mortgage	$ 6,550	$ 12,755	$ 890,517	$ 909,822
Commercial mortgage	49,509	267,053	700,210	1,016,772
Home equity	304	1,642	80,767	82,713
Commercial & Industrial	41,180	73,825	23,067	138,072
Consumer	32,214	152	137	32,503
Total	$ 129,757	$ 355,427	$ 1,694,698	$ 2,179,882

Loan Portfolio by Interest Rate Type. The following table summarizes the dollar amount of loans in our portfolio based on whether the loan has a fixed, adjustable, or floating rate of interest at September 30, 2019. Floating rate loans are tied to a market index, while adjustable rate loans are adjusted based on the contractual terms of the loan.

	September 30, 2019			
	Fixed	Adjustable	Floating	Total
	(dollars in thousands)			
Residential mortgage	$ 462,688	$ 447,134	$ —	$ 909,822
Commercial mortgage	377,798	288,728	350,246	1,016,772
Home equity	6,591	—	76,122	82,713
Commercial & Industrial	48,692	6,614	82,766	138,072
Consumer	792	627	31,084	32,503
Total	$ 896,561	$ 743,103	$ 540,218	$ 2,179,882

NONPERFORMING LOANS AND TROUBLED DEBT RESTRUCTURINGS (TDRs)

The composition of nonperforming assets is as follows:

	September 30, 2019	December 31, 2018
	(dollars in thousands)	
Nonaccruals	$ 3,219	$ 525
Loans past due > 90 days, but still accruing	30	—
Troubled debt restructurings	234	117
Total nonperforming loans	$ 3,483	$ 642
Accruing troubled debt restructured loans	$ —	$ 6
Nonperforming loans as a percentage of total loans	0.16%	0.04%
Nonperforming loans as a percentage of total assets	0.12%	0.03%

At September 30, 2019 and December 31, 2018, impaired loans had specific reserves of $84,000 and $0 respectively.

Nonaccrual Loans. Loans are typically 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 the monitoring and review of loan performance internally, 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. Senior management reviews the status of delinquent loans, as well as situations identified as potential problems, on a regular basis.

Troubled Debt Restructurings. Loans are considered restructured in a troubled debt restructuring when the Company has granted concessions to a borrower due to the borrower's financial condition that it otherwise would not have considered. These concessions may include modifications of the terms of the debt such as deferral of payments, extension of maturity, reduction of principal balance, reduction of the stated interest rate other than normal market rate adjustments, or a combination of these concessions. Debt may be bifurcated with separate terms for each tranche of the restructured debt. Restructuring a loan in lieu of aggressively enforcing the collection of the loan may benefit the Company by increasing the ultimate probability of collection.

Restructured loans are classified as accruing or non-accruing based on management's assessment of the collectability of the loan. Loans which are already on nonaccrual status at the time of the restructuring generally remain on nonaccrual status for approximately six months or longer before management considers such loans for return to accruing status. Accruing restructured loans are placed into nonaccrual status if and when the borrower fails to comply with the restructured terms and management deems it unlikely that the borrower will return to a status of compliance in the near term.

Troubled debt restructurings are classified as impaired loans. The Company identifies loss allocations for impaired loans on an individual loan basis. Total nonperforming loans were $3.5 million, or 0.16% of total loans outstanding at September 30, 2019, primarily due to an increase in loans on nonaccrual.

The Company continues to closely monitor the portfolio of nonperforming 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 September 30, 2019 and December 31, 2018, although such values may fluctuate with changes in the economy and the real estate market.

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. We provide for loan losses based upon the consistent application of our documented allowance for loan loss methodology. All loan losses are charged to the allowance for loan losses, and all recoveries are credited to it. Additions to the allowance for loan losses are provided by charges to income based on various factors which, in our judgment, deserve current recognition in estimating probable losses. We regularly review the loan portfolio, including a review of our classified assets, and make provisions for loan losses in order to maintain the allowance for loan losses in accordance with GAAP. See additional discussion regarding the allowance for loan losses, in Item 7 under the caption "*Critical Accounting Policies*" of the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2018 and in Note 8 to the Unaudited Consolidated Financial Statements.

The following table summarizes the changes in the Company's allowance for loan losses for the periods indicated:

	Nine Months Ended September 30, 2019	December 31, 2018
	(dollars in thousands)	
Period-end loans outstanding (net of unearned discount and deferred loan fees)	$ 2,179,882	$ 1,559,772
Average loans outstanding (net of unearned discount and deferred loan fees)	$ 1,882,875	$ 1,417,237
Balance of allowance for loan losses at the beginning of year	$ 16,768	$ 15,320
Loans charged-off:		
Commercial and industrial	(156)	(73)
Commercial mortgage	(1,270)	—
Residential mortgage	—	—
Home Equity	—	—
Consumer	(29)	(36)
Total loans charged-off	$ (1,455)	$ (109)
Recovery of loans previously charged-off:		
Commercial and industrial	40	48
Commercial mortgage	—	—
Residential mortgage	—	—
Home Equity	—	—
Consumer	9	7
Total recoveries of loans previously charged-off:	49	55
Net loan (charge-offs) recoveries	$ (1,406)	$ (54)
Provision charged to operating expense	2,673	1,502
Balance at end of period	$ 18,035	$ 16,768
Ratio of net (charge-offs) recoveries during the year to average loans outstanding	(0.07)%	(0.00)%
Ratio of allowance for loan losses to loans outstanding	0.83%	1.08%

The level of 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. The dollar amount of the allowance for loan losses increased primarily as a result of loan growth and changes in the portfolio composition. Although the allowance is allocated between categories, the entire allowance is available to absorb losses attributable to all loan categories. Management believes that the allowance for loan losses is adequate.

SOURCES OF FUNDS

General. Deposits traditionally have been our primary source of funds for our investment and lending activities. The Company also borrows from the FHLB of Boston to supplement cash flow needs, to lengthen the maturities of liabilities for interest rate risk management purposes, and to manage our cost of funds. Our additional sources of funds are scheduled payments and prepayments of principal and interest on loans and investment securities and fee income and proceeds from the sales of loans and securities.

Deposits. The Company accepts deposits primarily from customers in the communities in which our branches and offices are located, as well as from small- and medium-sized businesses and other customers throughout our lending area. We rely on our competitive pricing and products, convenient locations, and client service to attract and retain deposits. We offer a variety of deposit accounts with a range of interest rates and terms. Our deposit accounts consist of relationship checking for consumers and businesses, statement savings accounts, certificates of deposit, money market accounts, interest on lawyer trust accounts, commercial and regular checking accounts, individual retirement accounts, and health saving accounts. Deposit rates and terms are based primarily on current business strategies, market interest rates, liquidity requirements, and our deposit growth goals. The Bank may also access the brokered deposit market for funding.

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

	September 30, 2019			December 31, 2018		
	Average Balance	Percent	Weighted Average Rate	Average Balance	Percent	Weighted Average Rate
	(dollars in thousands)					
Demand deposits (non-interest bearing)	$ 541,110	25.1%	—	$ 521,091	29.2%	—
Interest bearing checking	413,773	19.2%	0.12%	409,178	23.0%	0.08%
Money Market	180,729	8.4%	1.40%	93,449	5.2%	1.14%
Savings	797,187	36.8%	1.16%	624,421	35.1%	0.78%
Retail certificates of deposit under $100,000	58,712	2.7%	1.32%	36,408	2.0%	0.69%
Retail certificates of deposit of $100,000 or greater	102,045	4.7%	1.89%	59,226	3.3%	1.27%
Wholesale certificates of deposit	66,151	3.1%	1.77%	38,373	2.2%	1.69%
Total	$ 2,159,707	100%	0.75%	$ 1,782,146	100%	0.44%

At September 30, 2019, we had a total of $218.8 million in certificates of deposit, excluding brokered deposits, of which $172.4 million had remaining maturities of one year or less. Based on historical experience and our current pricing strategy, we believe we will retain a large portion of these accounts upon maturity. As of September 30, 2019, we had a total of $14.0 million of brokered deposits and $27.5 million of brokered deposits at December 31, 2018.

Borrowings. The Bank's borrowings consisted of FHLB of Boston advances collateralized by a blanket pledge agreement on the Bank's FHLB of Boston stock and residential mortgages held in the Bank's portfolios. The Bank's borrowings with the FHLB of Boston totaled $113.9 million at September 30, 2019 and $93.4 million at December 31, 2018.

NET INTEREST MARGIN

Net interest income represents the difference between interest earned, primarily on loans and investments, and interest paid on funding sources, primarily deposits and borrowings. Interest rate spread is the difference between the average rate earned on total interest-earning assets and the average rate paid on total interest-bearing liabilities. Net interest margin is the amount of net interest income, on a fully taxable-equivalent basis, expressed as a percentage of average interest-earning assets. The average rate earned on earning assets is the amount of annualized taxable equivalent interest income expressed as a percentage of average earning assets. The average rate paid on interest-bearing liabilities is equal to annualized interest expense as a percentage of average interest-bearing liabilities.

The following tables set forth the distribution of the Company’s average assets, liabilities and shareholders’ equity, and average rates earned or paid on a fully taxable equivalent basis for each of the periods indicated:

	Three Months Ended					
	September 30, 2019			September 30, 2018		
	Average Balance	Interest Income/ Expenses (1)	Rate Earned/ Paid (1)	Average Balance	Interest Income/ Expenses (1)	Rate Earned/ Paid (1)
	(dollars in thousands)					
ASSETS						
Interest-earning assets						
Loans (2)						
Taxable	$ 2,103,892	$ 23,280	4.39%	$ 1,417,426	$ 14,808	4.14%
Tax-exempt	19,441	218	4.45	9,855	116	4.67
Securities available for sale (3)						
Taxable	149,045	704	1.87	193,703	790	1.62
Securities held to maturity						
Taxable	204,279	1,274	2.47	199,841	1,146	2.28
Tax-exempt	74,246	713	3.81	76,030	749	3.91
Cash and cash equivalents	57,937	219	1.50	27,875	83	1.18
Total interest-earning assets (4)	2,608,840	26,408	4.02%	1,924,730	17,692	3.65%
Non interest-earning assets	184,151			74,738		
Allowance for loan losses	(17,392)			(15,845)		
Total assets	$ 2,775,599			$ 1,983,623		
LIABILITIES AND SHAREHOLDERS’ EQUITY						
Interest-bearing deposits						
Checking accounts	$ 422,395	$ 117	0.11%	$ 388,460	$ 64	0.07%
Savings accounts	873,853	2,591	1.18	618,021	707	0.45
Money market accounts	209,922	743	1.40	107,096	206	0.76
Certificates of deposit	243,892	1,158	1.88	123,900	298	0.95
Total interest-bearing deposits	1,750,062	4,609	1.04	1,237,477	1,275	0.41
Other borrowed funds	115,809	676	2.32	26,626	156	2.32
Total interest-bearing liabilities	1,865,871	5,285	1.12%	1,264,103	1,431	0.45%
Non-interest-bearing liabilities						
Demand deposits	596,646			535,777		
Other liabilities	73,293			25,669		
Total liabilities	2,535,810			1,825,549		
Shareholders’ equity	239,789			158,074		
Total liabilities & shareholders’ equity	$ 2,775,599			$ 1,983,623		
Net interest income on a fully taxable equivalent basis		21,123			16,261	
Less taxable equivalent adjustment		(196)			(183)	
Net interest income		$ 20,927			$ 16,078	
Net interest spread (5)			2.89%			3.20%
Net interest margin (6)			3.21%			3.35%

(1) Annualized on a fully taxable equivalent basis calculated using a federal tax rate of 21%.
(2) Non-accrual loans are included in average amounts outstanding.
(3) Average balances of securities available for sale calculated utilizing amortized cost.
(4) Federal Home Loan Bank stock balance and dividend income is excluded from interest-earning assets.
(5) Interest rate spread represents the difference between the weighted average yield on interest-earning assets and the weighted average cost of interest-bearing liabilities.
(6) Net interest margin represents net interest income on a fully tax equivalent basis as a percentage of average interest-earning assets.

	Nine Months Ended					
	September 30, 2019			September 30, 2018		
	Average Balance	Interest Income/ Expenses (1)	Rate Earned/ Paid (1)	Average Balance	Interest Income/ Expenses (1)	Rate Earned/ Paid (1)
	(dollars in thousands)					
ASSETS						
Interest-earning assets						
Loans (2)						
Taxable	$ 1,868,256	$ 60,919	4.36%	$ 1,383,503	$ 42,318	4.09%
Tax-exempt	14,619	487	4.45	10,279	354	4.60
Securities available for sale (3)						
Taxable	156,414	2,164	1.85	200,259	2,449	1.64
Securities held to maturity						
Taxable	210,747	3,910	2.48	187,167	3,121	2.23
Tax-exempt	74,508	2,163	3.88	77,458	2,300	3.97
Cash and cash equivalents	48,750	556	1.52	48,817	484	1.33
Total interest-earning assets (4)	2,373,294	70,199	3.95%	1,907,483	51,026	3.58%
Non interest-earning assets	153,760			71,539		
Allowance for loan losses	(16,999)			(15,701)		
Total assets	$ 2,510,055			$ 1,963,321		
LIABILITIES AND SHAREHOLDERS' EQUITY						
Interest-bearing deposits						
Checking accounts	$ 413,773	$ 319	0.10%	$ 414,691	$ 166	0.05%
Savings accounts	797,187	6,288	1.05	620,036	1,907	0.41
Money market accounts	180,729	1,803	1.33	78,798	261	0.44
Certificates of deposit	226,908	3,079	1.81	139,683	956	0.92
Total interest-bearing deposits	1,618,597	11,489	0.95%	1,253,208	3,290	0.35%
Other borrowed funds	73,686	1,347	2.44	12,030	202	2.24
Total interest-bearing liabilities	1,692,283	12,836	1.01%	1,265,238	3,492	0.37%
Non-interest-bearing liabilities						
Demand deposits	541,110			520,787		
Other liabilities	66,141			24,123		
Total liabilities	2,299,534			1,810,148		
Shareholders' equity	210,521			153,173		
Total liabilities & shareholders' equity	$ 2,510,055			$ 1,963,321		
Net interest income on a fully taxable equivalent basis		57,363			47,534	
Less taxable equivalent adjustment		(556)			(558)	
Net interest income		$ 56,807			$ 46,976	
Net interest spread (5)			2.94%			3.21%
Net interest margin (6)			3.23%			3.33%

(1) Annualized on a fully taxable equivalent basis calculated using a federal tax rate of 21%.
(2) Non-accrual loans are included in average amounts outstanding.
(3) Average balances of securities available for sale calculated utilizing amortized cost.
(4) Federal Home Loan Bank stock balance and dividend income is excluded from interest-earning assets.
(5) Interest rate spread represents the difference between the weighted average yield on interest-earning assets and the weighted average cost of interest-bearing liabilities.
(6) Net interest margin represents net interest income on a fully tax equivalent basis as a percentage of average interest-earning assets.

Rate/Volume Analysis

The following table describes the extent to which changes in interest rates and changes in the volume of interest-earning assets and interest-bearing liabilities have affected the Company's interest income and interest expense during the periods indicated. Information is provided in each category with respect to: (i) changes attributable to changes in volumes (changes in average balance multiplied by prior year average rate) and (ii) changes attributable to changes in rate (change in average interest rate multiplied by prior year average balance), while (iii) changes attributable to the combined impact of volumes and rates have been allocated proportionately to separate volume and rate categories.

	Three Months Ended September 30, 2019 Compared with Three Months Ended September 30, 2018			Nine Months Ended September 30, 2019 Compared with Nine Months Ended September 30, 2018		
	Increase/(Decrease) Due to Change in			Increase/(Decrease) Due to Change in		
	Volume	Rate	Total	Volume	Rate	Total
	(dollars in thousands)			(dollars in thousands)		
Interest income						
Loans						
Taxable	$ 7,550	$ 922	$ 8,472	$ 15,651	$ 2,950	$ 18,601
Tax-exempt	108	(6)	102	145	(12)	133
Securities available for sale						
Taxable	(199)	113	(86)	(580)	295	(285)
Securities held to maturity						
Taxable	26	102	128	417	372	789
Tax-exempt	(17)	(19)	(36)	(86)	(51)	(137)
Cash and cash equivalents	109	27	136	(1)	73	72
Total interest income	$ 7,577	$ 1,139	$ 8,716	$ 15,546	$ 3,627	$ 19,173
Interest expense						
Deposits						
Checking accounts	6	47	53	-	153	153
Savings accounts	389	1,495	1,884	676	3,705	4,381
Money market accounts	286	251	537	603	939	1,542
Certificates of deposit	429	431	860	825	1,298	2,123
Total interest-bearing deposits	1,110	2,224	3,334	2,104	6,095	8,199
Other borrowed funds	521	(1)	520	1,126	19	1,145
Total interest expense	$ 1,631	$ 2,223	$ 3,854	$ 3,230	$ 6,114	$ 9,344
Change in net interest income	$ 5,946	$ (1,084)	$ 4,862	$ 12,316	$ (2,487)	$ 9,829

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.

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.

Interest Rate Sensitivity. The Company actively manages its interest rate sensitivity position. The objectives of interest rate risk management are to control exposure of net interest income to risks associated with interest rate movements and to achieve sustainable growth in net interest income. The Company's Asset Liability Committee ("ALCO"), using policies and procedures approved by the Company's board of directors, is responsible for the management of the Company's interest rate sensitivity position. The Company manages interest rate sensitivity by changing the mix, pricing, and re-pricing characteristics of its assets and liabilities, through the management of its investment portfolio, its offerings of loan and selected deposit terms, and through wholesale funding. Wholesale funding consists of, but is not limited to, multiple sources including borrowings with the FHLB of Boston, the Federal Reserve Bank of Boston's discount window, and certificates of deposit from institutional brokers.

The Company uses several tools to manage its interest rate risk including interest rate sensitivity analysis, or gap analysis, market value of portfolio equity analysis, interest rate simulations under various rate scenarios, and net interest margin reports. The results of these reports are compared to limits established by the Company's ALCO policies and appropriate adjustments may be made if the results are outside the established limits.

The following table demonstrates the annualized result of an interest rate simulation and the estimated effect that a parallel interest rate shift, or "shock," in the yield curve and subjective adjustments in deposit pricing might have on the Company's projected net interest income over the next 12 months and 24 months.

As of September 30, 2019:

	12 months	24 months
Change in Interest Rates (in Basis Points)	**Percentage Change in Net Interest Income**	**Percentage Change in Net Interest Income**
Parallel rate shocks		
+400	(5.9)	5.6
+300	(4.2)	4.4
+200	(2.6)	3.0
+100	(1.2)	1.1
–100	0.7	(7.5)

The following table demonstrates the annualized result of an interest rate simulation and the estimated effect that a gradual interest rate shift in the yield curve and subjective adjustments in deposit pricing might have on the Company's projected net interest income over the next 12 months and 24 months.

As of September 30, 2019:

	12 months	24 months
Change in Interest Rates (in Basis Points)	**Percentage Change in Net Interest Income**	**Percentage Change in Net Interest Income**
Gradual rate shifts		
+200	(1.8)	0.2
–100	1.4	(4.2)

These simulations assume that there is no growth in interest-earning assets or interest-bearing liabilities over the next 12 months and 24 months. The changes to net interest income shown above are in compliance with the Company's policy guidelines.

Economic Value of Equity Analysis. The Company also analyzes the sensitivity of the Bank's financial condition to changes in interest rates through our economic value of equity model. This analysis measures the difference between estimated changes in the present value of the Bank's assets and estimated changes in the present value of the Bank's liabilities assuming various changes in current interest rates.

The Bank's economic value of equity analysis as of September 30, 2019 estimated that, in the event of an instantaneous 200 basis point increase in interest rates, the Bank would experience a 4.6% increase in the economic value of equity for the next 12 months, and a 9.0% increase in the economic value of equity for the next 24 months. At the same date, our analysis estimated that, in the event of an instantaneous 100 basis point decrease in interest rates, the Bank would experience a 24.2% increase in the economic value of equity over the next 12 months, and a 9.9% increase in the economic value of equity for the next 24 months. The estimates within the economic value of equity calculation are significantly impacted by management's assumption that the value of non-maturity deposits do not fall below their stated balance as of September 30, 2019. This assumption has the impact of increasing the Bank's economic value of equity in the falling rate scenario as lower market rates increase the value of the loan and investment portfolios while the value of the non-maturity deposit base remains static. The Company believes retaining customer relationships is the most desirable strategy over the long term.

The estimates of changes in the economic value of our equity require us to make certain assumptions including loan- and mortgage-related investment prepayment speeds, reinvestment rates, and deposit maturities and decay rates. These assumptions are inherently uncertain and, as a result, we cannot precisely predict the impact of changes in interest rates on the economic value of our equity. Although our economic value of equity analysis provides an indication of our interest rate risk exposure at a particular point in time, such estimates are not intended to, and do not, provide a precise forecast of the effect of changes in market interest rates on the economic value of our equity and will differ from actual results.

LIQUIDITY AND CAPITAL RESOURCES

Impact of Inflation and Changing Prices. Our Consolidated Financial Statements and related notes have been prepared in accordance with GAAP. GAAP generally requires the measurement of financial position and operating results in terms of historical dollars without consideration of changes in the relative purchasing power of money over time due to inflation. The impact of inflation is reflected in the increased cost of our operations. Unlike industrial companies, our assets and liabilities are primarily monetary in nature. As a result, changes in market interest rates have a greater impact on performance than the effects of inflation.

Liquidity. Liquidity is defined as the Company's ability to generate adequate cash to meet its needs for day-to-day operations and material long- and short-term commitments. Liquidity risk is the risk of potential loss if the Company were unable to meet its funding requirements at a reasonable cost. The Company manages its liquidity based on demand and specific events and uncertainties to meet current and future financial obligations of a short-term nature. The Company's objective in managing liquidity is to respond to the needs of depositors and borrowers, as well as increase to earnings enhancement opportunities in a changing marketplace.

The Company's liquidity position is managed on a daily basis as part of the daily settlement function and continuously as part of the formal asset liability management process. The Bank's liquidity is maintained by managing its core deposits as the primary source, selling investment securities, selling loans in the secondary market, borrowing from the FHLB of Boston, and purchasing wholesale certificates of deposit as its secondary sources.

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.

Quarterly, the ALCO reviews the Company's liquidity needs and reports any findings (if required) to the Board of Directors.

Capital Adequacy. Inclusive of the merger, total shareholders' equity was $243.3 million at September 30, 2019, compared to $167.0 million at December 31, 2018, primarily as a result of the merger with Optima and earnings during the period. The ratio of total equity to total assets amounted to 8.56% at September 30, 2019 and 7.95% at December 31, 2018. Book value per share at September 30, 2019 and December 31, 2018 amounted to $50.17 and $40.67, respectively.

The Company's ratio of tangible common equity to tangible assets decreased 50 basis points to 7.43% at September 30, 2019 from 7.93% at December 31, 2018, primarily due to the impact of goodwill and acquisition related intangibles recorded as a result of the merger with Optima. Tangible book value per share grew by $3.97, or 10.1%, to $43.03 as of September 30, 2019, as compared to $39.06 as of September 30, 2018.

The Company and the Bank are subject to various regulatory capital requirements. As of September 30, 2019, the Company and the Bank exceeded the regulatory minimum levels to be considered "well-capitalized." See Item 1 - Notes to Unaudited Consolidated Financial Statements – Note 15 – SHAREHOLDERS' EQUITY.

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.

Off-Balance-Sheet Arrangements. Our significant off-balance-sheet arrangements consist of the following:

- commitments to originate and sell loans,
- standby and commercial letters of credit,
- unused lines of credit,
- unadvanced portions of construction loans,
- unadvanced portions of other loans,
- loan related derivatives, and
- risk participation agreements.

Off-balance-sheet arrangements are more fully discussed within Note 13 – FINANCIAL INSTRUMENTS WITH OFF-BALANCE-SHEET RISK.

Item 3. Quantitative and Qualitative Disclosures about Market Risk.

The information required by this item is included in Item 2 of this report under “MARKET RISK ASSET AND LIABILITY MANAGEMENT.”

Item 4. Controls and Procedures.

Conclusion Regarding the Effectiveness of Disclosure Controls and Procedures. As of September 30, 2019, the Company carried out an evaluation, under the supervision and with the participation of the Company's management, including its Chief Executive Officer and its Chief Financial Officer, of the effectiveness of the Company’s disclosure controls and procedures (as defined in Rules 13a-15(e) or 15d-15(e) of the Securities Exchange Act of 1934). Based on this evaluation, the Company's Chief Executive Officer and Chief Financial Officer concluded that the Company's disclosure controls and procedures were effective as of September 30, 2019 for recording, processing, summarizing, and reporting the information the Company is required to disclose in the reports it files under the Securities Exchange Act of 1934, within the time periods specified in SEC rules and forms.

The effectiveness of a system of disclosure controls and procedures is subject to various inherent limitations, including cost limitations, judgments used in decision making, assumptions about the likelihood of future events, the soundness of our systems, the possibility of human error, and the risk of fraud. Moreover, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions and the risk that the degree of compliance with policies or procedures may deteriorate over time. Due to such inherent limitations, there can be no assurance that any system of disclosure controls and procedures will be successful in preventing all errors or fraud or in making all material information known in a timely manner to the appropriate levels of management.

Changes in Internal Controls over Financial Reporting. During the period ended September 30, 2019, there were no changes in the Company’s internal control over financial reporting that have materially affected, or are reasonably likely to materially affect, the Company’s internal control over financial reporting.

PART II—OTHER INFORMATION

Item 1. Legal Proceedings.

From time to time, the Company and its subsidiaries may be parties to various claims and lawsuits arising in the ordinary course of their normal business activities. Although the ultimate outcome of these suits, if any, cannot be ascertained at this time, it is the opinion of management that none of these matters, even if it resolved adversely to the Company, will have a material adverse effect on the Company's consolidated financial position. The Company is not currently party to any material pending legal proceedings.

Item 1A. Risk Factors.

Please read "Risk Factors" in the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2018. There have been no material changes since this 10-K was filed, except as set forth below. These risks are not the only ones facing the Company. Additional risks and uncertainties not currently known to the Company or that the Company currently deems to be immaterial also may materially adversely affect the Company's business, financial condition, and operating results.

Replacement of the LIBOR benchmark interest rate could adversely affect our business, financial condition, and results of operations.

In 2017, the United Kingdom's Financial Conduct Authority ("FCA"), which regulates the London Interbank Offered Rate ("LIBOR"), announced that the FCA intends to stop persuading or compelling banks to submit the rates required to calculate LIBOR after 2021. This announcement indicates that the continuation of LIBOR on the current basis cannot and will not be guaranteed after 2021. Consequently, at this time, it is not possible to predict whether and to what extent banks will continue to provide submissions for the calculation of LIBOR. Similarly, it is not possible to predict whether LIBOR will continue to be viewed as an acceptable market benchmark, what rate or rates may become accepted alternatives to LIBOR or what the effect of any such changes in views or alternatives may be on the markets for LIBOR-indexed financial instruments.

We have a significant number of loans, derivative contracts, borrowings and other financial instruments with attributes that are either directly or indirectly dependent on LIBOR. The transition from LIBOR, or any changes or reforms to the determination or supervision of LIBOR, could have an adverse impact on the market for or value of any LIBOR-linked securities, loans, and other financial obligations or extensions of credit held by or due to us, could create considerable costs and additional risk and could have an adverse impact on or overall financial condition or results of operations. Since proposed alternative rates are calculated differently, payments under contracts referencing new rates will differ from those referencing LIBOR. The transition will change our market risk profiles, requiring changes to risk and pricing models, valuation tools, product design and hedging strategies. Furthermore, failure to adequately manage this transition process with our customers could adversely impact our reputation. Although we are currently unable to assess what the ultimate impact of the transition from LIBOR will be, failure to adequately manage the transition could have a material adverse effect on our business, financial condition and results of operations.

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds.

The following table sets forth the information regarding the Company's repurchases of its common stock during the three months ended September 30, 2019:

	Total Number of Shares Repurchased (1)	Weighted Average Price Paid Per Share
Period		
July 1 to July 31, 2019	107	$ 79.30
August 1 to August 31, 2019	131	$ 76.00
September 1 to September 30, 2019	153	$ 77.42
Total	391	

(1) Shares repurchased by the Company relate to shares tendered by employees to pay their income tax liability on current period RSA, RSU, or PRSU vestings.

The Company does not currently have a stock repurchase program or plan in place.

Item 3. Defaults Upon Senior Securities

None.

Item 4. Mine Safety Disclosures.

Not applicable.

Item 5. Other Information.

None.

Item 6. Exhibits.

Furnish the exhibits required by Item 601 of Regulation S-K (§ 229.601 of this chapter).

Exhibit Number	Description
31.1*	Certification of Principal Executive Officer Pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
31.2*	Certification of Principal Financial Officer Pursuant to Rules 13a-14(a) and 15d-14(a) under the Securities Exchange Act of 1934, as Adopted Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002.
32.1*	Certification of Principal Executive Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
32.2*	Certification of Principal Executive Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.
101.INS	XBRL Instance Document
101.SCH	XBRL Taxonomy Extension Schema Document
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	XBRL Taxonomy Extension Label Linkbase Document
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document

* Filed herewith.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned thereunto duly authorized.

CAMBRIDGE BANCORP

November 7, 2019

By: /s/ Denis K. Sheahan
Denis K. Sheahan
Chairman, Chief Executive Officer
(Principal Executive Officer)

November 7, 2019

By: /s/ Michael F. Carotenuto
Michael F. Carotenuto
Chief Financial Officer
(Principal Financial Officer and Principal Accounting Officer)

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Section 2: EX-31.1 (EX-31.1)

Exhibit 31.1

**CERTIFICATION PURSUANT TO
RULES 13a-14(a) AND 15d-14(a) UNDER THE SECURITIES EXCHANGE ACT OF 1934,
AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002**

I, Denis K. Sheahan, Chief Executive Officer of Cambridge Bancorp, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q, for the period ended September 30, 2019, of Cambridge Bancorp;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):

   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

November 7, 2019

By: /s/ Denis K. Sheahan
Denis K. Sheahan
Chairman, Chief Executive Officer
(Principal Executive Officer)

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Section 3: EX-31.2 (EX-31.2)

Exhibit 31.2

**CERTIFICATION PURSUANT TO
RULES 13a-14(a) AND 15d-14(a) UNDER THE SECURITIES EXCHANGE ACT OF 1934,
AS ADOPTED PURSUANT TO SECTION 302 OF THE SARBANES-OXLEY ACT OF 2002**

I, Michael F. Carotenuto, Chief Financial Officer of Cambridge Bancorp, certify that:

1. I have reviewed this Quarterly Report on Form 10-Q, for the period ended September 30, 2019, of Cambridge Bancorp;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
   (a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
   (c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
   (d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of the registrant's board of directors (or persons performing the equivalent functions):
   (a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
   (b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

November 7, 2019

By: /s/ Michael F. Carotenuto
Michael F. Carotenuto
Chief Financial Officer
(Principal Financial Officer and Principal Accounting Officer)

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Section 4: EX-32.1 (EX-32.1)

Exhibit 32.1

**CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Quarterly Report on Form 10-Q of Cambridge Bancorp (the "Company") for the period ending September 30, 2019 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I hereby certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that:

(1) The Form 10-Q Report fully complies with the requirements of section 13(a) or 15(d) as applicable, of the Securities Exchange Act of 1934, as amended; and

(2) The information contained in the Form 10-Q Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

November 7, 2019

By: /s/ Denis K. Sheahan
Denis K. Sheahan
Chairman, Chief Executive Officer
(Principal Executive Officer)

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Section 5: EX-32.2 (EX-32.2)

Exhibit 32.2

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350, AS ADOPTED PURSUANT TO
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report on Form 10-Q of Cambridge Bancorp (the "Company") for the period ending September 30, 2019 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I hereby certify, pursuant to 18 U.S.C. § 1350, as adopted pursuant to § 906 of the Sarbanes-Oxley Act of 2002, that:

(1) The Form 10-Q Report fully complies with the requirements of section 13(a) or 15(d) as applicable, of the Securities Exchange Act of 1934, as amended; and

(2) The information contained in the Form 10-Q Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

November 7, 2019

By: /s/ Michael F. Carotenuto
Michael F. Carotenuto
Chief Financial Officer
(Principal Financial Officer and Principal Accounting Officer)

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