UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 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 March 31, 2018

☐ 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: 001-31343

Associated Banc-Corp

(Exact name of registrant as specified in its charter)

Wisconsin	**39-1098068**
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
433 Main Street Green Bay, Wisconsin	**54301**
(Address of principal executive offices)	(Zip Code)

(920) 491-7500

(Registrant's telephone number, including area code)

(Former name, former address and former fiscal year, if changed since last report)

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 and posted on its corporate Website, if any, every Interactive Data File required to be submitted and posted 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 and post such files).

Yes ☑ No ☐

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, a smaller reporting company, or an emerging growth company. See 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 ☐ (Do not check if a smaller reporting company)	Smaller reporting company ☐
Emerging growth company ☐	

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act).

Yes ☐ No ☑

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. ☐

APPLICABLE ONLY TO CORPORATE ISSUERS:

The number of shares outstanding of registrant's common stock, par value $0.01 per share, at April 27, 2018 was 170,794,622.

ASSOCIATED BANC-CORP
TABLE OF CONTENTS

PART I - FINANCIAL INFORMATION

ITEM 1. Financial Statements:

ASSOCIATED BANC-CORP
Consolidated Balance Sheets

	March 31, 2018 (Unaudited)	December 31, 2017 (Audited)
	(In Thousands, except share and per share data)	
Assets		
Cash and due from banks	$ 328,260	$ 483,666
Interest-bearing deposits in other financial institutions	94,918	199,702
Federal funds sold and securities purchased under agreements to resell	10,000	32,650
Investment securities held to maturity, at amortized cost	2,443,203	2,282,853
Investment securities available for sale, at fair value	4,485,875	4,043,446
Federal Home Loan Bank and Federal Reserve Bank stocks, at cost	233,216	165,331
Residential loans held for sale	103,953	85,544
Commercial loans held for sale	6,091	—
Loans	22,810,491	20,784,991
Allowance for loan losses	(257,058)	(265,880)
Loans, net	22,553,433	20,519,111
Bank and corporate owned life insurance	657,841	591,057
Tax credit and other investments	142,368	147,099
Trading assets	102,890	69,675
Premises and equipment, net	381,327	330,963
Goodwill	1,153,156	976,239
Mortgage servicing rights, net	66,407	58,384
Other intangible assets, net	79,714	15,580
Other assets	523,855	482,294
Total assets	$ 33,366,505	$ 30,483,594
Liabilities and Stockholders' Equity		
Noninterest-bearing demand deposits	$ 5,458,473	$ 5,478,416
Interest-bearing deposits	18,367,129	17,307,546
Total deposits	23,825,602	22,785,962
Federal funds purchased and securities sold under agreements to repurchase	283,954	324,815
Other short-term funding	1,862,420	351,467
Long-term funding	3,233,338	3,397,450
Trading liabilities	100,247	67,660
Accrued expenses and other liabilities	348,246	318,797
Total liabilities	29,653,806	27,246,151
Stockholders’ Equity		
Preferred equity	159,853	159,929
Common equity		
Common stock	1,741	1,618
Surplus	1,823,800	1,454,188
Retained earnings	1,859,068	1,819,230
Accumulated other comprehensive income (loss)	(107,673)	(62,758)
Treasury stock, at cost	(24,089)	(134,764)
Total common equity	3,552,847	3,077,514
Total stockholders’ equity	3,712,699	3,237,443
Total liabilities and stockholders’ equity	$ 33,366,505	$ 30,483,594
Preferred shares issued	165,000	165,000
Preferred shares authorized (par value $1.00 per share)	750,000	750,000
Common shares issued	174,107,786	161,751,975
Common shares authorized (par value $0.01 per share)	250,000,000	250,000,000
Treasury shares of common stock	1,925,673	8,908,448

Numbers may not add due to rounding.

See accompanying notes to consolidated financial statements.

Item 1. Financial Statements Continued:

ASSOCIATED BANC-CORP
Consolidated Statements of Income (Unaudited)

	Three Months Ended March 31,	
	2018	2017
	(In Thousands, except per share data)	
Interest Income		
Interest and fees on loans	$ 220,034	$ 173,649
Interest and dividends on investment securities:		
Taxable	30,104	23,475
Tax-exempt	9,217	8,129
Other interest	2,177	1,536
Total interest income	261,532	206,789
Interest Expense		
Interest on deposits	33,412	16,924
Interest on Federal funds purchased and securities sold under agreements to repurchase	522	515
Interest on other short-term funding	3,005	1,080
Interest on long-term funding	14,722	7,996
Total interest expense	51,661	26,515
Net Interest Income	209,871	180,274
Provision for credit losses	—	9,000
Net interest income after provision for credit losses	209,871	171,274
Noninterest Income		
Insurance commissions and fees	22,648	21,620
Service charges on deposit account fees	16,420	16,356
Card-based and loan fees	13,422	12,465
Trust and asset management fees	13,369	11,935
Brokerage commission and fees	7,273	4,333
Mortgage banking, net	6,370	4,579
Capital markets, net	5,306	3,883
Bank and corporate owned life insurance	3,187	2,615
Asset gains (losses), net	(107)	(234)
Other	2,492	2,279
Total noninterest income	90,380	79,831
Noninterest Expense		
Personnel [(1)]	117,685	106,782
Occupancy	15,357	15,219
Technology	17,715	14,420
Equipment	5,556	5,485
Business development and advertising	6,693	5,835
Legal and professional	5,413	4,166
Card issuance and loan costs	3,304	2,620
Foreclosure / OREO expense, net	723	1,505
FDIC assessment	8,250	8,000
Other intangible amortization	1,525	513
Acquisition related costs[(2)]	20,605	—
Other[(1)]	10,140	9,146
Total noninterest expense	212,965	173,691
Income before income taxes	87,285	77,414
Income tax expense	17,829	21,144
Net Income	69,456	56,270
Preferred stock dividends	2,339	2,330
Net income available to common equity	$ 67,117	$ 53,940
Earnings per common share:		
Basic	$ 0.41	$ 0.36
Diluted	$ 0.40	$ 0.35
Average common shares outstanding:		
Basic	163,520	150,815
Diluted	166,432	153,869

Numbers may not add due to rounding.

(1) During the first quarter of 2018, the Corporation adopted a new accounting standard related to the presentation of net periodic pension cost and net periodic postretirement benefit cost which required the disaggregation of the service cost component from the other components of net benefit cost and net periodic postretirement benefit cost. Under this new accounting standard, the other components of net benefit cost and net periodic postretirement benefit cost were reclassified from personnel expense to other noninterest expense. All prior periods have been adjusted to reflect this change in presentation.

(2) Includes Bank Mutual acquisition-related costs only.

See accompanying notes to consolidated financial statements.

Item 1. Financial Statements Continued:

ASSOCIATED BANC-CORP
Consolidated Statements of Comprehensive Income (Unaudited)

	Three Months Ended March 31,	
	2018	2017
	($ in Thousands)	
Net income	$ 69,456	$ 56,270
Other comprehensive income, net of tax		
Investment securities available for sale		
Net unrealized gains (losses)	(41,834)	3,152
Net unrealized gain (loss) on available for sale securities transferred to held to maturity securities	—	(5,264)
Amortization of net unrealized gain (loss) on available for sale securities transferred to held to maturity securities	(297)	(1,027)
Reclassification from OCI due to change in accounting principle	(84)	—
Reclassification of certain tax effects from OCI	(8,419)	—
Income tax (expense) benefit	10,635	1,195
Other comprehensive income (loss) on investment securities available for sale	(40,000)	(1,944)
Defined benefit pension and postretirement obligations		
Amortization of prior service cost	(38)	(38)
Amortization of actuarial loss (gains)	465	488
Reclassification of certain tax effects from OCI	(5,235)	—
Income tax (expense) benefit	(107)	(171)
Other comprehensive income (loss) on pension and postretirement obligations	(4,915)	279
Total other comprehensive income (loss)	(44,915)	(1,665)
Comprehensive income	$ 24,541	$ 54,605

Numbers may not add due to rounding.

See accompanying notes to consolidated financial statements.

Item 1. Financial Statements Continued:

ASSOCIATED BANC-CORP
Consolidated Statements of Changes in Stockholders' Equity (Unaudited)

	Preferred Equity	Common Stock	Surplus	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Treasury Stock	Total
	(In Thousands, except per share data)						
Balance, December 31, 2016	$ 159,929	$ 1,630	$ 1,459,498	$ 1,695,764	$ (54,679)	$ (170,830)	$ 3,091,312
Comprehensive income							
Net income	—	—	—	56,270	—	—	56,270
Other comprehensive income	—	—	—	—	(1,665)	—	(1,665)
Comprehensive income							54,605
Common stock issued							
Stock-based compensation plans, net	—	—	868	(21,822)	—	38,894	17,940
Purchase of treasury stock	—	—	—	—	—	(7,743)	(7,743)
Cash dividends							
Common stock, $0.12 per share	—	—	—	(18,368)	—	—	(18,368)
Preferred stock	—	—	—	(2,330)	—	—	(2,330)
Stock-based compensation expense, net	—	—	8,344	—	—	—	8,344
Other	—	—	1,034	—	—	—	1,034
Balance, March 31, 2017	$ 159,929	$ 1,630	$ 1,469,744	$ 1,709,514	$ (56,344)	$ (139,679)	$ 3,144,794
Balance, December 31, 2017	$ 159,929	$ 1,618	$ 1,454,188	$ 1,819,230	$ (62,758)	$ (134,764)	$ 3,237,443
Comprehensive income							
Net income	—	—	—	69,456	—	—	69,456
Other comprehensive income	—	—	—	—	(31,177)	—	(31,177)
Adoption of new accounting standards	—	—	—	—	(13,738)	—	(13,738)
Comprehensive income							24,541
Common stock issued							
Stock-based compensation plans, net	—	—	2,148	(16,076)	—	24,619	10,691
Acquisition of Bank Mutual	—	134	390,258	—	—	91,296	481,688
Purchase of common stock returned to authorized but unissued		(11)	(26,469)	—	—	—	(26,480)
Purchase of treasury stock	—	—	—	—	—	(5,240)	(5,240)
Cash dividends							
Common stock, $0.15 per share	—	—	—	(25,710)	—	—	(25,710)
Preferred stock	—	—	—	(2,339)	—	—	(2,339)
Redemption of preferred stock	(76)	—	—	(2)	—	—	(78)
Stock-based compensation expense, net	—	—	3,675	—	—	—	3,675
Tax Act reclassification	—	—	—	13,654		—	13,654
Change in accounting principle	—	—	—	84		—	84
Other	—	—	—	771	—	—	771
Balance, March 31, 2018	$ 159,853	$ 1,741	$ 1,823,800	$ 1,859,068	$ (107,673)	$ (24,089)	$ 3,712,699

Numbers may not add due to rounding.

See accompanying notes to consolidated financial statements.

Item 1. Financial Statements Continued:

ASSOCIATED BANC-CORP
Consolidated Statements of Cash Flows (Unaudited)

	Three Months Ended March 31, 2018	Three Months Ended March 31, 2017
	($ in Thousands)	
Cash Flow From Operating Activities		
Net income	$ 69,456	$ 56,270
Adjustments to reconcile net income to net cash provided by operating activities		
Provision for credit losses	—	9,000
Depreciation and amortization	12,208	11,505
Addition to (recovery of) valuation allowance on mortgage servicing rights, net	(474)	217
Amortization of mortgage servicing rights	2,324	2,477
Amortization of other intangible assets	1,525	513
Amortization and accretion on earning assets, funding, and other, net	2,188	8,215
Net amortization of tax credit investments	4,881	1,713
Asset (gains) losses, net	107	234
(Gain) loss on mortgage banking activities, net	624	5,171
Mortgage loans originated and acquired for sale	(197,603)	(101,280)
Proceeds from sales of mortgage loans held for sale	187,624	196,578
(Increase) decrease in interest receivable	(12,859)	(761)
Increase (decrease) in interest payable	1,206	(185)
Net change in other assets and other liabilities	(28,114)	(27,968)
Net cash provided by operating activities	43,093	161,699
Cash Flow From Investing Activities		
Net increase in loans	(160,921)	(113,051)
Purchases of		
Available for sale securities	(646,444)	(163,442)
Held to maturity securities	(208,517)	(2,655)
Federal Home Loan Bank and Federal Reserve Bank stocks	(144,515)	(58,362)
Premises, equipment, and software, net of disposals	(9,892)	(13,586)
Proceeds from		
Sales of available for sale securities	452,866	—
Sale of Federal Home Loan Bank and Federal Reserve Bank stocks	96,656	59,090
Prepayments, calls, and maturities of available for sale investment securities	158,724	231,019
Prepayments, calls, and maturities of held to maturity investment securities	58,160	22,916
Sales, prepayments, calls, and maturities of other assets	1,182	3,293
Net change in tax credit investments	(7,240)	2,621
Net cash (paid) received in acquisition	59,605	(217)
Net cash used in investing activities	(350,336)	(32,374)
Cash Flow From Financing Activities		
Net increase (decrease) in deposits	(801,310)	(60,413)
Net increase (decrease) in short-term funding	1,124,869	(11,168)
Repayment of long-term funding	(250,000)	(8)
Proceeds from issuance of common stock for stock-based compensation plans	10,691	17,940
Redemption of preferred shares	(78)	—
Purchase of common stock returned to authorized but unissued	(26,480)	—
Purchase of treasury stock for tax withholding	(5,240)	(7,743)
Cash dividends on common stock	(25,710)	(18,368)
Cash dividends on preferred stock	(2,339)	(2,330)
Net cash provided by financing activities	24,403	(82,090)
Net increase (decrease) in cash, cash equivalents, and restricted cash	(282,840)	47,235
Cash, cash equivalents, and restricted cash at beginning of period	716,018	642,233
Cash, cash equivalents, and restricted cash at end of period	$ 433,178	$ 689,468
Supplemental disclosures of cash flow information		
Cash paid for interest	$ 50,286	$ 26,531
Cash paid for income taxes	926	1,052
Loans and bank premises transferred to other real estate owned	2,129	921
Capitalized mortgage servicing rights	9,873	1,920
Loans transferred into held for sale from portfolio, net	3,012	13,905
Unsettled trades to purchase securities	12,095	—
Acquisition		
Fair value of assets acquired, including cash and cash equivalents	2,567,123	—
Fair value ascribed to goodwill and intangible assets	242,576	217
Fair value of liabilities assumed	2,809,565	—
Common stock issued in acquisition	134	—

Numbers may not add due to rounding.

See accompanying notes to consolidated financial statements.

The following table provides a reconciliation of cash, cash equivalents, and restricted cash reported within the statement of financial position that sum to the total of the same sum amounts shown in the statement of cash flows.

	Three Months Ended March 31,	
	2018	2017
	($ in Thousands)	
Cash and cash equivalents	$ 350,837	$ 618,903
Restricted cash	82,341	70,565
Total cash, cash equivalents, and restricted cash shown in the statement of cash flows	$ 433,178	$ 689,468

Amounts included in restricted cash represent required reserve balances with the Federal Reserve Bank, included in cash and due from banks on the face of the Consolidated Balance Sheet, and cash collateral for public fund customers, included in interest-bearing deposits in other financial institutions on the face of the Consolidated Balance Sheet.

ASSOCIATED BANC-CORP
Notes to Consolidated Financial Statements

These interim consolidated financial statements have been prepared according to the rules and regulations of the Securities and Exchange Commission and, therefore, certain information and footnote disclosures normally presented in accordance with U.S. generally accepted accounting principles have been omitted or abbreviated. The information contained in the consolidated financial statements and footnotes in the Corporation's 2017 Annual Report on Form 10-K, should be referred to in connection with the reading of these unaudited interim financial statements.

Note 1 Basis of Presentation

In the opinion of management, the accompanying unaudited consolidated financial statements contain all adjustments necessary to present fairly the financial position, results of operations and comprehensive income, changes in stockholders' equity, and cash flows of Associated Banc-Corp (individually referred to herein as the "Parent Company," and together with all of its subsidiaries and affiliates, collectively referred to herein as the "Corporation") for the periods presented, and all such adjustments are of a normal recurring nature. The consolidated financial statements include the accounts of all subsidiaries. All significant intercompany transactions and balances have been eliminated in consolidation. The results of operations for the interim periods are not necessarily indicative of the results to be expected for the full year.

In preparing the consolidated financial statements, management is required to make estimates and assumptions that affect the reported amounts of assets and liabilities as of the date of the balance sheet and revenues and expenses for the period. Actual results could differ significantly from those estimates. Estimates that are particularly susceptible to significant change include the determination of the allowance for loan losses, goodwill impairment assessment, mortgage servicing rights valuation, and income taxes. Management has evaluated subsequent events for potential recognition or disclosure.

Within the tables presented, certain columns and rows may not sum due to the use of rounded numbers for disclosure purposes.

Note 2 Acquisitions

Bank Mutual Acquisition

On February 1, 2018, the Corporation completed its acquisition of Bank Mutual Corporation ("Bank Mutual") in a stock transaction valued at approximately $482 million. Bank Mutual was a diversified financial services company headquartered in Milwaukee, Wisconsin. The merger resulted in a combined company with a larger market presence in markets the Corporation currently operates in, as well as expansion into nearly a dozen new markets. The merger is also expected to provide significant efficiency opportunities and economies of scale associated with a larger financial institution.

Under the terms of the Merger Agreement, Bank Mutual's shareholders received 0.422 shares of the Corporation's common stock for each share of Bank Mutual common stock. The Corporation issued approximately 19.5 million shares for a total deal value of approximately $482 million based on the closing sale price of a share of Associated common stock on January 31, 2018.

The acquisition of Bank Mutual constituted a business combination. The merger has been accounted for using the acquisition method of accounting and, accordingly, assets acquired, liabilities assumed, and consideration exchanged were recorded at estimated fair value on the acquisition date. The determination of estimated fair values required management to make certain estimates that are subjective in nature and may require adjustments upon the availability of new information regarding facts and circumstances which existed at the date of acquisition (i.e. appraisals) for up to a year following the acquisition. The Corporation continues to review information relating to events or circumstances existing at the acquisition date. Management anticipates that this review could result in adjustments to the acquisition date valuation amounts presented herein but does not anticipate that these adjustments would be material.

The following table presents the estimated fair values of the assets acquired and liabilities assumed as of the acquisition date related to Bank Mutual.

	Purchase Accounting Adjustments	February 1, 2018
	($ in Thousands)	
Assets		
Cash and cash equivalents	$ —	$ 78,052
Investment securities	(6,238)	452,867
Federal Home Loan Bank stock, at cost	—	20,026
Loans	(48,533)	1,875,386
Premises and equipment, net	11,172	50,930
Bank owned life insurance	(24)	65,390
Goodwill		166,870
Core deposit intangibles (included in other intangible assets, net on the face of the Consolidated Balance Sheet)	58,100	58,100
Other real estate owned	(246)	4,403
Others assets	$ 5,098	$ 37,151
Total assets		$ 2,809,175
Liabilities		
Deposits	$ 2,498	$ 1,840,950
Other borrowings	935	430,946
Other liabilities	$ 2,148	$ 55,591
Total liabilities		$ 2,327,487
Total consideration paid		$ 481,688

The Corporation recorded approximately $167 million of goodwill, which is not tax deductible, related to the Bank Mutual acquisition. See Note 8 for additional information on goodwill, as well as the carrying amount and amortization of core deposit and other intangible assets related to the Bank Mutual acquisition.

The following is a description of the methods used to determine the fair value of significant assets and liabilities presented on the balance sheet above.

Loans: Fair values for loans were based on a discounted cash flow methodology that considered factors including the type of loan and related collateral, classification status, fixed or variable interest rate, term of loan, amortization status and current discount rates. Loans were grouped together according to similar characteristics when applying various valuation techniques.

Core deposit intangible ("CDI"): This intangible asset represents the value of the relationships with deposit customers. The fair value was estimated based on a discounted cash flow methodology that gave appropriate consideration to expected customer attrition rates, net maintenance cost of the deposit base, alternative cost of funds, and the interest costs associated with customer deposits. The CDI is being amortized on a straight-line basis over 10 years.

Time deposits: The fair values for time deposits are estimated using a discounted cash flow calculation that applies interest rates currently being offered to the contractual interest rates on such time deposits.

Federal Home Loan Bank ("FHLB") borrowings: The fair values of FHLB advances are estimated based on quoted market prices for the instrument if available, or for similar instruments if not available, or by using discounted cash flow analyses, based on current incremental borrowing rates for similar types of instruments.

See Note 13 for additional information on fair value measurements.

Other Acquisitions

During the first quarter of 2018, the Corporation completed the acquisition of Diversified Insurance Solutions ("Diversified"). The acquisition improved Associated Benefits and Risk Consulting's ("ABRC") ability to achieve greater scale in the Metro Milwaukee market and to further expand its Wisconsin employee benefits and property and casualty market position and capabilities. The transaction was valued at approximately $19 million. As a result of the acquisition, the Corporation recorded goodwill of approximately $10 million and other intangibles of approximately $8 million. The other intangibles related to the acquisition are being amortized on a straight-line basis over 10 years. See Note 8 for more information on goodwill and other intangible assets.

Note 3 Summary of Significant Accounting Policies

The accounting and reporting policies of the Corporation conform to U.S. generally accepted accounting principles and to general practice within the financial services industry. A discussion of these policies can be found in Note 1 Summary of Significant Accounting Policies section included in the Corporation's 2017 Annual Report on Form 10-K. There have been two changes to the Corporation's significant accounting policies since December 31, 2017.

Business combinations

The Corporation accounts for its acquisitions using the purchase accounting method. Purchase accounting requires the total purchase price to be allocated to the estimated fair values of assets acquired and liabilities assumed, including certain intangible assets that must be recognized. Typically, this allocation results in the purchase price exceeding the fair value of net assets acquired, which is recorded as goodwill. Core deposit intangibles are a measure of the value of checking, money market and savings deposits acquired in business combinations accounted for under the purchase method. Core deposit intangibles and other identified intangibles with finite useful lives are amortized using the straight line method over their estimated useful lives of up to ten years.

Loans that the Corporation acquires in connection with acquisitions are recorded at fair value with no carryover of the related allowance for credit losses. Fair value of the loans involves estimating the amount and timing of principal and interest cash flows expected to be collected on the loans and discounting those cash flows at a market rate of interest. The excess of cash flows expected at acquisition over the estimated fair value is referred to as the accretable discount and is recognized into interest income over the remaining life of the loan. The difference between contractually required payments at acquisition and the cash flows expected to be collected at acquisition is referred to as the non-accretable discount. The non-accretable discount includes estimated future credit losses expected to be incurred over the life of the loan. Subsequent decreases to the expected cash flows will require the Corporation to evaluate the need for an additional allowance for credit losses. Subsequent improvement in expected cash flows will result in the reversal of a corresponding amount of the non-accretable discount which the Corporation will then reclassify as accretable discount that will be recognized into interest income over the remaining life of the loan.

The Corporation accounts for performing loans acquired in business combinations using the contractual cash flows method of recognizing discount accretion based on the acquired loans' contractual cash flows. Purchased performing loans are recorded at fair value, including credit, interest, and liquidity discounts. The fair value discount is accreted as an adjustment to yield over the estimated lives of the loans. There is no allowance for loan losses established at the acquisition date for purchased performing loans. A provision for loan losses is recorded for any further deterioration in these loans subsequent to the acquisition.

Revenue Recognition

The Corporation recognizes revenue in accordance with ASC 606, "Revenue from Contracts with Customers". ASC 606 requires the Corporation to follow a five step process: (1) identify the contract(s) with a customer, (2) identify the performance obligations in the contract, (3) determine the transaction price, (4) allocate the transaction price to the performance obligations in the contract, and (5) recognize revenue when (or as) the entity satisfies a performance obligation. Revenue recognition under ASC 606 depicts the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for the goods or services.

New Accounting Pronouncements Adopted

Standard	Description	Date of adoption	Effect on financial statements
ASU 2018-02 Income Statement - Reporting Comprehensive Income (Topic 220): Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income	The FASB issued the amendment to allow a reclassification from accumulated other comprehensive income to retained earnings, the stranded tax effects resulting from the Tax Cuts and Jobs Act. The amendments in this update are effective for all entities for fiscal years beginning after December 15, 2018, including interim periods within those fiscal years. Early adoption of the update is permitted and should be applied in the period of adoption or retrospectively to each period in which the effect of the change in the U.S. federal corporate income tax rate related to the Act is recognized.	1st Quarter 2018	The Corporation has elected to early adopt this Update. During the quarter, the Corporation reclassified approximately $14 million from accumulated other comprehensive income to retained earnings as a result of the Tax Cuts and Jobs Act. No material impact to its results of operations, financial position, and liquidity. See Consolidated Statements of Comprehensive Income and the Statement of Changes in Stockholders' Equity.

Standard	Description	Date of adoption	Effect on financial statements
ASU 2017-12 Derivatives and Hedging (Topic 815): Targeted Improvements to Accounting for Hedging Activities	The FASB issued the amendment to better align a company's financial reporting for hedging activities with the economic objectives of those activities for both financial (e.g., interest rate) and commodity risks. The provisions create more transparency around how economic results are presented, both on the face of the financial statements and in the footnotes. It also contains targeted improvements to simplify the application of hedge accounting guidance. This amendment is effective for fiscal years beginning after December 15, 2018, including interim periods within those fiscal years. Entities should apply the amendment on a modified retrospective transition method in which the cumulative effect of the change will be recognized within equity in the consolidated balance sheet as of the date of adoption. Early adoption is permitted, including in an interim period. If an entity early adopts in an interim period, any adjustments should be reflected as of the beginning of the fiscal year that includes the interim period.	1st Quarter 2018	The Corporation has elected to early adopt this Update. No material impact to its results of operations, financial position, and liquidity. See Note 10 for expanded disclosures.
ASU 2017-07 Compensation — Retirement Benefits (Topic 715): Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost	The FASB issued the update to improve the presentation of net periodic pension cost and net periodic postretirement benefit cost, including a requirement that employers disaggregate the service cost component from the other components of net benefit cost. In addition, the amendments provide explicit guidance on how to present the service cost component and the other components of net benefit cost in the income statement and allow only the service cost component of net benefit cost to be eligible for capitalization. This amendment is effective for fiscal years beginning after December 15, 2017, including interim periods within those fiscal years. Entities should apply the amendment retrospectively to each period presented and prospectively only for the capitalization component. Early adoption is permitted, but should be within the first interim period if interim financial statements are issued.	1st Quarter 2018	No impact to its results of operations, financial position, and liquidity. The Update required retrospective restatement. For the full year 2017, the Corporation reclassified approximately $9 million from personnel expense to other noninterest expense for the non-service cost components of net periodic pension cost and net periodic postretirement benefit cost. See Note 14 for expanded disclosure.
ASU 2017-01 Business Combinations (Topic 805): Clarifying the Definition of a Business	The FASB issued amendments to clarify the definition of a business in order to assist entities with evaluating whether transactions should be accounted for as acquisitions (or disposals) of assets versus businesses. The new standard narrows the definition of a business by adding three principal clarifications if: (1) substantially all the fair value of the gross assets in the asset group is concentrated in either a single identifiable asset or group of similar identifiable assets the transaction does not involve a business (2) the asset group does not include a minimum of an input and a substantive process, it does not represent a business, and (3) the integrated set of activities (including its inputs and processes) does not create, or have the ability to create, goods or services to customers, investment income (e,g. dividends or interest) or other revenues, it is not a business. The overall intention is to provide consistency in applying the guidance, reduce the costs of application, and make the definition of a business more operable.	1st Quarter 2018	No material impact on results of operations, financial position, or liquidity.
ASU 2016-18 Statement of Cash Flows (Topic 230): Restricted Cash	The FASB issued an amendment to improve GAAP by providing guidance on the presentation of restricted cash or restricted cash equivalents in the statement of cash flows, in order to reduce diversity in practice. The amendment requires that a statement of cash flow explain the change during the period in the total cash, cash equivalents, and amounts generally described as restricted cash or restricted cash equivalents. Therefore, amounts generally described as restricted cash and restricted cash equivalents should be included in cash and cash equivalents when reconciling the beginning and end of period total amounts shown on the statement of cash flow. This amendment is effective for fiscal years beginning after December 15, 2017, including interim periods within those fiscal years. Entities should apply the amendment retrospectively to each period presented. Early adoption is permitted, including in an interim period.	1st Quarter 2018	No impact to its results of operations, financial position, and liquidity. See Consolidated Statements of Cash Flows.
ASU 2016-16 Income Taxes (Topic 740): Intra-Entity Transfers of Assets Other Than Inventory	The FASB issued an amendment requiring an entity to recognize income tax consequences on an intra-entity transfer of an asset other than inventory at the time the transaction occurs. This amendment is effective for fiscal years beginning after December 15, 2017, including interim periods within those fiscal years. Entities should apply the amendment by means of a cumulative-effect adjustment to retained earnings as of the beginning of the fiscal year of adoption. Early adoption is permitted for all entities in the first interim period if an entity issues interim financial statements.	1st Quarter 2018	No material impact on results of operations, financial position, or liquidity.
ASU 2016-15 Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments	The FASB issued an amendment to provide clarification on where to classify cash flows involving certain cash receipts and cash payments. Under the new guidance, cash payments for debt prepayment or debt extinguishment costs should be classified as cash outflows for financing activities. The new guidance also details the specific classification of contingent consideration cash payments made after a business combination depending on the timing of payments. Lastly, cash proceeds received from corporate owned life insurance policies (including BOLI) should be classified as cash inflows from investing, while the cash payments for the premiums may be classified as cash outflows for investing, operating, or a combination of both. This amendment is effective for fiscal years beginning after December 15, 2017, including interim periods within those fiscal years. Entities should apply the amendment retrospectively to each period presented. Early adoption is permitted, including in an interim period; however, all of the amendments must be adopted in the same period.	1st Quarter 2018	No material impact on results of operations, financial position, or liquidity.

Standard	Description	Date of adoption	Effect on financial statements
ASU 2016-01 Financial Instruments - Overall (Subtopic 825-10): Recognition and Measurement of Financial Assets and Financial Liabilities	The FASB issued an amendment to address certain aspects of recognition, measurement, presentation, and disclosure of financial instruments. This amendment supersedes the guidance to classify equity securities with readily determinable fair values into different categories, requires equity securities to be measured at fair value with changes in the fair value recognized through net income, and simplifies the impairment assessment of equity investments without readily determinable fair values. The amendment requires public business entities that are required to disclose the fair value of financial instruments measured at amortized cost on the balance sheet to measure that fair value using the exit price notion. The amendment requires an entity to present separately in other comprehensive income the portion of the total change in the fair value of a liability resulting from a change in the instrument-specific credit risk when the entity has elected to measure the liability at fair value in accordance with the fair value option. The amendment requires separate presentation of financial assets and financial liabilities by measurement category and form of financial asset on the balance sheet or in the accompanying notes to the financial statements. The amendment reduces diversity in current practice by clarifying that an entity should evaluate the need for a valuation allowance on a deferred tax asset related to available for sale securities in combination with the entity's other deferred tax assets. This amendment is effective for fiscal years beginning after December 15, 2017, including interim periods within those fiscal years. Entities are required to apply the amendment by means of a cumulative-effect adjustment as of the beginning of the fiscal year of adoption, with the exception of the amendment related to equity securities without readily determinable fair values, which should be applied prospectively to equity investments that exist as of the date of adoption. ASC 2018-04 supersedes previous SEC guidance in the Codification in SAB Topic 5 M. Other-Than-Temporary Impairment of certain investments in equity securities and special balance sheet requirements in Reg S-X rule 3A-05 for public utility Holding companies.	1st Quarter 2018	The Corporation has adopted with Update using the cumulative-effect adjustment as of the beginning of the fiscal year of adoption. Immaterial impact to the result of operations, financial position and liquidity. In 2008, the Corporation received Visa Class B restricted shares as part of Visa's initial public offering. Based on the existing transfer restriction and the uncertainty of the covered litigation, the approximately 119 thousand Class B shares remaining that the Corporation owned as of March 31, 2018 are carried at a zero cost basis. See Consolidated Statements of Comprehensive Income and Note 13 Fair Value Measurements.
ASU 2014-09 Revenue from Contracts with Customers (Topic 606)	The FASB issued an amendment to clarify the principles for recognizing revenue and to develop a common revenue standard. The standard outlines a single comprehensive model for entities to use in accounting for revenue arising from contracts with customers and supersedes most current revenue recognition guidance, including industry-specific guidance. The core principle of the revenue model is that "an entity recognizes revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services." In applying the revenue model to contracts within its scope, an entity should apply the following steps: (1) identify the contract(s) with a customer, (2) identify the performance obligations in the contract, (3) determine the transaction price, (4) allocate the transaction price to the performance obligations in the contract, and (5) recognize revenue when (or as) the entity satisfies a performance obligation. The standard applies to all contracts with customers except those that are within the scope of other topics in the FASB Codification. The standard also requires significantly expanded disclosures about revenue recognition. The FASB continues to release new accounting guidance related to the adoption of this standard, which could impact the Corporation's preliminary materiality analysis and may change the conclusions reached as to the application of this new guidance. The amendment was originally to be effective for annual reporting periods beginning after December 15, 2016 (including interim reporting periods within those periods); however, in July 2015, the FASB approved a one year deferral of the effective date to December 31, 2017.	1st Quarter 2018	The Corporation chose to adopt this Update using the modified retrospective approach with no material impact on the Corporation's results of operations, financial position, or liquidity. See Note 17 for expanded disclosure requirements.

Note 4 Earnings Per Common Share

Earnings per common share are calculated utilizing the two-class method. Basic earnings per common share are calculated by dividing the sum of distributed earnings to common shareholders and undistributed earnings allocated to common shareholders by the weighted average number of common shares outstanding. Diluted earnings per common share are calculated by dividing the sum of distributed earnings to common shareholders and undistributed earnings allocated to common shareholders by the weighted average number of common shares outstanding adjusted for the dilutive effect of common stock awards (outstanding stock options and unvested restricted stock awards) and common stock warrants. Presented below are the calculations for basic and diluted earnings per common share.

	For the Three Months Ended March 31,	
	2018	2017
	(In Thousands, except per share data)	
Net income	$ 69,456	$ 56,270
Preferred stock dividends	(2,339)	(2,330)
Net income available to common equity	$ 67,117	$ 53,940
Common shareholder dividends	(25,572)	(18,251)
Unvested share-based payment awards	(138)	(117)
Undistributed earnings	$ 41,407	$ 35,572
Undistributed earnings allocated to common shareholders	41,225	35,294
Undistributed earnings allocated to unvested share-based payment awards	182	278
Undistributed earnings	$ 41,407	$ 35,572
Basic		
Distributed earnings to common shareholders	$ 25,572	$ 18,251
Undistributed earnings allocated to common shareholders	41,225	35,294
Total common shareholders earnings, basic	$ 66,797	$ 53,545
Diluted		
Distributed earnings to common shareholders	$ 25,572	$ 18,251
Undistributed earnings allocated to common shareholders	41,225	35,294
Total common shareholders earnings, diluted	$ 66,797	$ 53,545
Weighted average common shares outstanding	163,520	150,815
Effect of dilutive common stock awards	2,038	2,216
Effect of dilutive common stock warrants	874	838
Diluted weighted average common shares outstanding	166,432	153,869
Basic earnings per common share	$ 0.41	$ 0.36
Diluted earnings per common share	$ 0.40	$ 0.35

Non-dilutive common stock options of approximately 1 million and 500,000 for the three months ended March 31, 2018 and 2017, respectively, were excluded from the earnings per common share calculation

Note 5 Stock-Based Compensation

The fair value of stock options granted is estimated on the date of grant using a Black-Scholes option pricing model, while the fair value of restricted stock awards is their fair market value on the date of grant. The fair values of stock options and restricted stock awards are amortized as compensation expense on a straight-line basis over the vesting period of the grants. For retirement eligible colleagues, expenses related to stock options and restricted stock awards are fully recognized on the date the colleague meets the definition of normal or early retirement. Compensation expense recognized is included in personnel expense in the consolidated statements of income.

Assumptions are used in estimating the fair value of stock options granted. The weighted average expected life of the stock option represents the period of time stock options are expected to be outstanding and is estimated using historical data of stock option exercises and forfeitures. The risk-free interest rate is based on the U.S. Treasury yield curve in effect at the time of grant. The expected volatility is based on the implied volatility of the Corporation’s stock.

The following assumptions were used in estimating the fair value for options granted in the first three months of 2018 and full year 2017.

	2018	2017
Dividend yield	2.50%	2.00%
Risk-free interest rate	2.60%	2.00%
Weighted average expected volatility	22.00%	25.00%
Weighted average expected life	5.75 years	5.5 years
Weighted average per share fair value of options	$4.47	$5.30

A summary of the Corporation's stock option activity for the three months ended March 31, 2018 is presented below.

Stock Options	Shares		Weighted Average Exercise Price	Weighted Average Remaining Contractual Term		Aggregate Intrinsic Value[a]
Outstanding at December 31, 2017	5,118,687	$	18.02	6.48	$	38,028
Granted	938,740		24.50			
Assumed from Bank Mutual acquisition	370,051		14.35			
Exercised	(529,869)		17.37			
Forfeited or expired	(24,130)		23.35			
Outstanding at March 31, 2018	5,873,479	$	18.86	6.80	$	35,879
Options Exercisable at March 31, 2018	3,659,277	$	16.72	5.55	$	30,009

(a) $ in Thousands

Intrinsic value represents the amount by which the fair market value of the underlying stock exceeds the exercise price of the stock option. For the three months ended March 31, 2018, the intrinsic value of stock options exercised was approximately $5 million. For the three months ended March 31, 2017, the intrinsic value of the stock options exercised was $10 million. The total fair value of stock options vested was $3 million for the three months ended March 31, 2018 and March 31, 2017. The Corporation recognized compensation expense for the vesting of stock options of $1 million for both the three months ended March 31, 2018 and March 31, 2017. Included in compensation expense for 2018 was approximately $450,000 of expense for the accelerated vesting of stock options granted to retirement eligible colleagues. At March 31, 2018, the Corporation had approximately $8 million of unrecognized compensation expense related to stock options that is expected to be recognized over the remaining requisite service periods that extend through first quarter 2022.

The following table summarizes information about the Corporation's restricted stock activity for the three months ended March 31, 2018.

Restricted Stock	Shares		Weighted Average Grant Date Fair Value
Outstanding at December 31, 2017	2,026,071	$	19.68
Granted	570,341		24.63
Vested	(498,988)		17.97
Forfeited	(5,799)		20.16
Outstanding at March 31, 2018	2,091,625	$	21.86

The Corporation amortizes the expense related to restricted stock awards as compensation expense over the vesting period specified in the grant's award agreement. Performance-based restricted stock awards granted during 2017 and 2018 will vest ratably over a three year period, while service-based restricted stock awards granted during 2017 and 2018 will vest ratably over a four year period. Expense for restricted stock awards of approximately $3 million was recorded the three months ended March 31, 2018 and $7 million was recorded for the three months ended March 31, 2017. Included in compensation expense for 2018 was approximately $1 million of expense for the accelerated vesting of restricted stock awards granted to retirement eligible colleagues. The Corporation had $29 million of unrecognized compensation costs related to restricted stock awards at March 31, 2018, that is expected to be recognized over the remaining requisite service periods that extend through first quarter 2022.

The Corporation has the ability to issue shares from treasury or new shares upon the exercise of stock options or the granting of restricted stock awards. The Board of Directors has authorized management to repurchase shares of the Corporation's common stock in the market, to be made available for issuance in connection with the Corporation's employee incentive plans and for other corporate purposes. The repurchase of shares will be based on market and investment opportunities, capital levels, growth prospects, and regulatory constraints. Such repurchases may occur from time to time in open market purchases, block transactions, private transactions, accelerated share repurchase programs, or similar facilities.

Note 6 Investment Securities

Investment securities are generally classified as available for sale or held to maturity at the time of purchase. The majority of the Corporation's investment securities are mortgage-related securities issued by the Government National Mortgage Association (“GNMA”) or government-sponsored enterprises ("GSE") such as the Federal National Mortgage Association (“FNMA”) and the Federal Home Loan Mortgage Corporation (“FHLMC”). A portion of the portfolio is also comprised of asset-backed securities backed by student loans made under the Federal Family Education Loan Program ("FFELP"). The amortized cost and fair values of securities available for sale and held to maturity were as follows.

March 31, 2018	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
	($ in Thousands)			
Investment securities available for sale				
U. S. Treasury securities	$ 1,002	$ —	$ (7)	$ 995
Residential mortgage-related securities				
FNMA / FHLMC	427,480	7,331	(4,738)	430,073
GNMA	2,364,339	21	(54,054)	2,310,306
Private-label	1,051	—	(7)	1,044
GNMA commercial mortgage-related securities	1,497,573	—	(49,204)	1,448,369
FFELP asset backed securities	288,519	1,835	(54)	290,300
Other debt securities	3,200	—	(12)	3,188
Other equity securities	1,599	—	—	1,599
Total investment securities available for sale	$ 4,584,763	$ 9,186	$ (108,076)	$ 4,485,875
Investment securities held to maturity				
Obligations of state and political subdivisions (municipal securities)	$ 1,424,925	$ 4,110	$ (16,579)	$ 1,412,456
Residential mortgage-related securities				
FNMA / FHLMC	76,069	227	(1,665)	74,631
GNMA	410,275	2,210	(11,624)	400,861
GNMA commercial mortgage-related securities	531,934	9,008	(21,694)	519,248
Total investment securities held to maturity	$ 2,443,203	$ 15,555	$ (51,561)	$ 2,407,197

December 31, 2017	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
	($ in Thousands)			
Investment securities available for sale				
U. S. Treasury securities	$ 1,003	$ —	$ (7)	$ 996
Residential mortgage-related securities				
FNMA / FHLMC	457,680	9,722	(2,634)	464,768
GNMA	1,944,453	275	(31,378)	1,913,350
Private-label	1,067	—	(8)	1,059
GNMA commercial mortgage-related securities	1,547,173	5	(33,901)	1,513,277
FFELP asset backed securities	144,322	867	(13)	145,176
Other debt securities	3,200	—	(12)	3,188
Other equity securities	1,519	127	(14)	1,632
Total investment securities available for sale	$ 4,100,417	$ 10,996	$ (67,967)	$ 4,043,446
Investment securities held to maturity				
Obligations of state and political subdivisions (municipal securities)	$ 1,281,320	$ 13,899	$ (3,177)	$ 1,292,042
Residential mortgage-related securities				
FNMA / FHLMC	40,995	398	(489)	40,904
GNMA	414,440	2,700	(6,400)	410,740
GNMA commercial mortgage-related securities	546,098	9,546	(15,756)	539,888
Total investment securities held to maturity	$ 2,282,853	$ 26,543	$ (25,822)	$ 2,283,574

The expected maturities of investment securities available for sale and held to maturity at March 31, 2018, are shown below. Expected maturities may differ from contractual maturities because borrowers may have the right to call or prepay obligations with or without call or prepayment penalties.

	Available for Sale		Held to Maturity	
	Amortized Cost	Fair Value	Amortized Cost	Fair Value
	($ in Thousands)			
Due in one year or less	$ 2,002	$ 1,995	$ 44,019	$ 44,261
Due after one year through five years	2,200	2,188	221,411	219,411
Due after five years through ten years	—	—	346,521	341,147
Due after ten years	—	—	812,974	807,638
Total debt securities	4,202	4,183	1,424,925	1,412,456
Residential mortgage-related securities				
FNMA / FHLMC	427,480	430,073	76,069	74,631
GNMA	2,364,339	2,310,306	410,275	400,861
Private-label	1,051	1,044	—	—
GNMA commercial mortgage-related securities	1,497,573	1,448,369	531,934	519,248
FFELP asset backed securities	288,519	290,300	—	—
Equity securities	1,599	1,599	—	—
Total investment securities	$ 4,584,763	$ 4,485,875	$ 2,443,203	$ 2,407,197
Ratio of Fair Value to Amortized Cost		97.8%		98.5%

Investment securities with a carrying value of approximately $3.0 billion and $3.1 billion at March 31, 2018, and December 31, 2017, respectively, were pledged to secure certain deposits or for other purposes as required or permitted by law.

On the acquisition date, the Corporation sold Bank Mutual's entire securities portfolio.

The following represents gross unrealized losses and the related fair value of investment securities available for sale and held to maturity, aggregated by investment category and length of time individual securities have been in a continuous unrealized loss position, at March 31, 2018.

	Less than 12 months			12 months or more			Total	
March 31, 2018	Number of Securities	Unrealized Losses	Fair Value	Number of Securities	Unrealized Losses	Fair Value	Unrealized Losses	Fair Value
	($ in Thousands)							
Investment securities available for sale								
U.S. Treasury securities	1	$ (7)	$ 995	—	$ —	$ —	$ (7)	$ 995
Residential mortgage-related securities								
FNMA / FHLMC	12	(1,389)	94,231	9	(3,349)	135,316	(4,738)	229,547
GNMA	65	(25,956)	1,590,545	26	(28,098)	718,971	(54,054)	2,309,516
Private-label	—	—	—	1	(7)	1,044	(7)	1,044
GNMA commercial mortgage-related securities	28	(9,895)	385,319	76	(39,309)	1,063,082	(49,204)	1,448,401
FFELP asset backed securities	6	(54)	86,988	—	—	—	(54)	86,988
Other debt securities	1	(12)	188	—	—	—	(12)	188
Total	113	$ (37,313)	$2,158,266	112	$ (70,763)	$1,918,413	$ (108,076)	$4,076,679
Investment securities held to maturity								
Obligations of state and political subdivisions (municipal securities)	821	$ (9,876)	$ 523,716	132	$ (6,703)	$ 122,632	$ (16,579)	$ 646,348
Residential mortgage-related securities								
FNMA / FHLMC	19	(939)	54,122	10	(725)	15,230	(1,665)	69,352
GNMA	58	(7,239)	279,707	18	(4,385)	113,561	(11,624)	393,268
GNMA commercial mortgage-related securities	2	(837)	49,711	23	(20,857)	469,538	(21,694)	519,249
Total	900	$ (18,891)	$ 907,256	183	$ (32,670)	$ 720,961	$ (51,561)	$1,628,217

For comparative purposes, the following represents gross unrealized losses and the related fair value of investment securities available for sale and held to maturity, aggregated by investment category and length of time that individual securities have been in a continuous unrealized loss position, at December 31, 2017.

	Less than 12 months			12 months or more			Total	
December 31, 2017	Number of Securities	Unrealized Losses	Fair Value	Number of Securities	Unrealized Losses	Fair Value	Unrealized Losses	Fair Value
				($ in Thousands)				
Investment securities available for sale								
U.S. Treasury securities	1	$ (7)	$ 996	—	$ —	$ —	$ (7)	$ 996
Residential mortgage-related securities								
FNMA / FHLMC	9	(572)	69,939	9	(2,062)	142,093	(2,634)	212,032
GNMA	44	(8,927)	1,028,221	25	(22,451)	737,198	(31,378)	1,765,419
Private-label	—	—	—	1	(8)	1,059	(8)	1,059
GNMA commercial mortgage-related securities	33	(5,554)	480,514	70	(28,347)	1,026,642	(33,901)	1,507,156
FFELP asset backed securities	1	(13)	12,158	—	—	—	(13)	12,158
Other debt securities	1	(12)	188	—	—	—	(12)	188
Other equity securities	3	(14)	1,487	—	—	—	(14)	1,487
Total	92	$ (15,099)	$1,593,503	105	$ (52,868)	$1,906,992	$ (67,967)	$3,500,495
Investment securities held to maturity								
Obligations of state and political subdivisions (municipal securities)	157	$ (746)	$ 122,761	132	$ (2,431)	$ 127,043	$ (3,177)	$ 249,804
Residential mortgage-related securities								
FNMA / FHLMC	8	(73)	13,143	10	(417)	16,262	(490)	29,405
GNMA	35	(3,373)	268,388	18	(3,026)	120,892	(6,399)	389,280
GNMA commercial mortgage-related securities	2	(299)	52,997	23	(15,457)	486,891	(15,756)	539,888
Total	202	$ (4,491)	$ 457,289	183	$ (21,331)	$ 751,088	$ (25,822)	$1,208,377

The Corporation reviews the investment securities portfolio on a quarterly basis to monitor its exposure to other-than-temporary impairment. A determination as to whether a security's decline in fair value is other-than-temporary takes into consideration numerous factors and the relative significance of any single factor can vary by security. Some factors the Corporation may consider in the other-than-temporary impairment analysis include the length of time and extent to which the security has been in an unrealized loss position, changes in security ratings, financial condition and near-term prospects of the issuer, as well as security and industry specific economic conditions.

Based on the Corporation's evaluation, management does not believe any unrealized loss at March 31, 2018 represents an other-than-temporary impairment as these unrealized losses are primarily attributable to changes in interest rates and the current market conditions, and not credit deterioration. The unrealized losses reported for municipal securities relate to various state and local political subdivisions and school districts. The unrealized losses at March 31, 2018 for mortgage-related securities is due to the increase in overall interest rates. The U.S. Treasury 3 year and 5 year rates increased by 41 bp and 36 bp, respectively, from December 31, 2017. The Corporation does not intend to sell nor does it believe that it will be required to sell the securities contained in the above unrealized losses table before recovery of their amortized cost basis.

Federal Home Loan Bank ("FHLB") and Federal Reserve Bank stocks: The Corporation is required to maintain Federal Reserve stock and FHLB stock as a member of both the Federal Reserve System and the FHLB, and in amounts as required by these institutions. These equity securities are "restricted" in that they can only be sold back to the respective institutions or another member institution at par. Therefore, they are less liquid than other marketable equity securities and their fair value is equal to amortized cost. At March 31, 2018, and December 31, 2017, the Corporation had FHLB stock of $157 million and $89 million, respectively. The Corporation had Federal Reserve Bank stock of $76 million at both March 31, 2018 and December 31, 2017.

Note 7 Loans

The period end loan composition was as follows.

	March 31, 2018[(a)]	December 31, 2017
	($ in Thousands)	
Commercial and industrial	$ 6,756,983	$ 6,399,693
Commercial real estate — owner occupied	900,913	802,209
Commercial and business lending	7,657,896	7,201,902
Commercial real estate — investor	4,077,671	3,315,254
Real estate construction	1,579,778	1,451,684
Commercial real estate lending	5,657,449	4,766,938
Total commercial	13,315,345	11,968,840
Residential mortgage	8,197,223	7,546,534
Home equity	923,470	883,804
Other consumer	374,453	385,813
Total consumer	9,495,146	8,816,151
Total loans	$ 22,810,491	$ 20,784,991

(a) Includes $15 million of purchased credit-impaired loans

The following table presents commercial and consumer loans by credit quality indicator at March 31, 2018.

	Pass	Special Mention	Potential Problem	Nonaccrual	Total
			($ in Thousands)		
Commercial and industrial	$ 6,325,258	$ 132,292	$ 196,766	$ 102,667	$ 6,756,983
Commercial real estate - owner occupied	830,489	15,378	34,410	20,636	900,913
Commercial and business lending	7,155,747	147,670	231,176	123,303	7,657,896
Commercial real estate - investor	3,960,155	54,972	46,970	15,574	4,077,671
Real estate construction	1,547,443	29,421	1,695	1,219	1,579,778
Commercial real estate lending	5,507,598	84,393	48,665	16,793	5,657,449
Total commercial	12,663,345	232,063	279,841	140,096	13,315,345
Residential mortgage	8,134,387	5,580	2,155	55,100	8,197,223
Home equity	908,682	1,383	188	13,218	923,470
Other consumer	373,714	600	—	139	374,453
Total consumer	9,416,783	7,563	2,343	68,456	9,495,146
Total	$ 22,080,128	$ 239,626	$ 282,184	$ 208,553	$ 22,810,491

The following table presents commercial and consumer loans by credit quality indicator at December 31, 2017.

	Pass	Special Mention	Potential Problem	Nonaccrual	Total
			($ in Thousands)		
Commercial and industrial	$ 6,015,884	$ 157,245	$ 113,778	$ 112,786	$ 6,399,693
Commercial real estate - owner occupied	723,291	14,181	41,997	22,740	802,209
Commercial and business lending	6,739,175	171,426	155,775	135,526	7,201,902
Commercial real estate - investor	3,266,389	24,845	19,291	4,729	3,315,254
Real estate construction	1,421,504	29,206	—	974	1,451,684
Commercial real estate lending	4,687,893	54,051	19,291	5,703	4,766,938
Total commercial	11,427,068	225,477	175,066	141,229	11,968,840
Residential mortgage	7,490,860	426	1,616	53,632	7,546,534
Home equity	868,958	1,137	195	13,514	883,804
Other consumer	384,990	652	—	171	385,813
Total consumer	8,744,808	2,215	1,811	67,317	8,816,151
Total	$ 20,171,876	$ 227,692	$ 176,877	$ 208,546	$ 20,784,991

Factors that are important to managing overall credit quality are sound loan underwriting and administration, systematic monitoring of existing loans and commitments, effective loan review on an ongoing basis, early identification of potential problems, and appropriate allowance for loan losses, allowance for unfunded commitments, nonaccrual, and charge off policies.

For commercial loans, management has determined the pass credit quality indicator to include credits that exhibit acceptable financial statements, cash flow, and leverage. If any risk exists, it is mitigated by the loan structure, collateral, monitoring, or control. For consumer loans, performing loans include credits that are performing in accordance with the original contractual terms. Loans are considered past due if the required principal and interest payments have not been received as of the date such payments were due. Special mention credits have potential weaknesses that deserve management's attention. If left uncorrected, these potential weaknesses may result in deterioration of the repayment prospects for the credit. Potential problem loans are considered inadequately protected by the current net worth and paying capacity of the obligor or the collateral pledged. These loans generally have a well-defined weakness, or weaknesses, that may jeopardize liquidation of the debt and are characterized by the distinct possibility that the Corporation will sustain some loss if the deficiencies are not corrected. Lastly, management considers a loan to be impaired when it is probable that the Corporation will be unable to collect all amounts due according to the original contractual terms of the note agreement, including both principal and interest. Management has determined that commercial and consumer loan relationships that have nonaccrual status or have had their terms restructured in a troubled debt restructuring meet this impaired loan definition. Commercial loans classified as special mention, potential problem, and nonaccrual are reviewed at a minimum on a quarterly basis, while pass and performing rated credits are reviewed on an annual basis or more frequently if the loan renewal is less than one year or if otherwise warranted.

The following table presents loans by past due status at March 31, 2018.

	Current	30-59 Days Past Due	60-89 Days Past Due	90 Days or More Past Due[(a)]	Nonaccrual[(b)]	Total
			($ in Thousands)			
Commercial and industrial	$ 6,653,188	$ 793	$ 87	$ 248	$ 102,667	$ 6,756,983
Commercial real estate - owner occupied	879,766	511	—	—	20,636	900,913
Commercial and business lending	7,532,954	1,304	87	248	123,303	7,657,896
Commercial real estate - investor	4,061,600	240	—	257	15,574	4,077,671
Real estate construction	1,578,069	220	270	—	1,219	1,579,778
Commercial real estate lending	5,639,669	460	270	257	16,793	5,657,449
Total commercial	13,172,623	1,764	357	505	140,096	13,315,345
Residential mortgage	8,125,707	9,876	5,257	1,283	55,100	8,197,223
Home equity	904,305	4,485	1,383	79	13,218	923,470
Other consumer	370,977	1,058	753	1,526	139	374,453
Total consumer	9,400,989	15,419	7,393	2,888	68,456	9,495,146
Total	$ 22,573,612	$ 17,184	$ 7,750	$ 3,393	$ 208,553	$ 22,810,491

(a) The recorded investment in loans past due 90 days or more and still accruing totaled $3 million at March 31, 2018 (the same as the reported balances for the accruing loans noted above).

(b) Of the total nonaccrual loans, $159 million or 76% were current with respect to payment at March 31, 2018.

The following table presents loans by past due status at December 31, 2017.

	Current	30-59 Days Past Due	60-89 Days Past Due	90 Days or More Past Due[(a)]	Nonaccrual[(b)]	Total
			($ in Thousands)			
Commercial and industrial	$ 6,286,369	$ 170	$ 101	$ 267	$ 112,786	$ 6,399,693
Commercial real estate - owner occupied	779,421	48	—	—	22,740	802,209
Commercial and business lending	7,065,790	218	101	267	135,526	7,201,902
Commercial real estate - investor	3,310,000	374	—	151	4,729	3,315,254
Real estate construction	1,450,459	168	83	—	974	1,451,684
Commercial real estate lending	4,760,459	542	83	151	5,703	4,766,938
Total commercial	11,826,249	760	184	418	141,229	11,968,840
Residential mortgage	7,483,350	9,186	366	—	53,632	7,546,534
Home equity	863,465	5,688	1,137	—	13,514	883,804
Other consumer	382,186	1,227	780	1,449	171	385,813
Total consumer	8,729,001	16,101	2,283	1,449	67,317	8,816,151
Total	$ 20,555,250	$ 16,861	$ 2,467	$ 1,867	$ 208,546	$ 20,784,991

(a) The recorded investment in loans past due 90 days or more and still accruing totaled $2 million at December 31, 2017 (the same as the reported balances for the accruing loans noted above).

(b) Of the total nonaccrual loans, $135 million or 65% were current with respect to payment at December 31, 2017.

The following table presents impaired loans individually evaluated under ASC Topic 310, excluding purchased credit-impaired loans, at March 31, 2018.

	Recorded Investment	Unpaid Principal Balance	Related Allowance	Average Recorded Investment	Interest Income Recognized
			($ in Thousands)		
Loans with a related allowance					
Commercial and industrial	$ 76,452	$ 81,091	$ 18,778	$ 77,130	$ 312
Commercial real estate — owner occupied	16,264	16,617	2,043	22,978	47
Commercial and business lending	92,716	97,708	20,821	100,108	359
Commercial real estate — investor	18,582	18,619	2,721	16,559	464
Real estate construction	458	532	82	461	7
Commercial real estate lending	19,040	19,151	2,803	17,020	471
Total commercial	111,756	116,859	23,624	117,128	830
Residential mortgage	38,438	40,851	6,635	40,475	431
Home equity	10,762	11,383	3,719	10,238	136
Other consumer	1,066	1,069	116	1,067	1
Total consumer	50,266	53,303	10,470	51,780	568
Total loans[(a)]	$ 162,022	$ 170,162	$ 34,094	$ 168,908	$ 1,398
Loans with no related allowance					
Commercial and industrial	$ 52,389	$ 76,720	$ —	$ 55,897	$ (348)
Commercial real estate — owner occupied	6,225	7,276	—	2,403	—
Commercial and business lending	58,614	83,996	—	58,300	(348)
Commercial real estate — investor	1,805	1,853	—	—	—
Real estate construction	—	—	—	—	—
Commercial real estate lending	1,805	1,853	—	—	—
Total commercial	60,419	85,849	—	58,300	(348)
Residential mortgage	10,425	10,871	—	6,317	39
Home equity	212	212	—	639	1
Other consumer	—	—	—	—	—
Total consumer	10,637	11,083	—	6,956	40
Total loans[(a)]	$ 71,056	$ 96,932	$ —	$ 65,256	$ (308)
Total					
Commercial and industrial	$ 128,841	$ 157,811	$ 18,778	$ 133,027	$ (36)
Commercial real estate — owner occupied	22,489	23,893	2,043	25,381	47
Commercial and business lending	151,330	181,704	20,821	158,408	11
Commercial real estate — investor	20,387	20,472	2,721	16,559	464
Real estate construction	458	532	82	461	7
Commercial real estate lending	20,845	21,004	2,803	17,020	471
Total commercial	172,175	202,708	23,624	175,428	482
Residential mortgage	48,863	51,722	6,635	46,792	470
Home equity	10,974	11,595	3,719	10,877	137
Other consumer	1,066	1,069	116	1,067	1
Total consumer	60,903	64,386	10,470	58,736	608
Total loans[(a)]	$ 233,078	$ 267,094	$ 34,094	$ 234,164	$ 1,090

(a) The net recorded investment (defined as recorded investment, net of the related allowance) of the impaired loans represented 74% of the unpaid principal balance at March 31, 2018.

The following table presents impaired loans individually evaluated under ASC Topic 310 at December 31, 2017.

	Recorded Investment	Unpaid Principal Balance	Related Allowance	Average Recorded Investment	Interest Income Recognized
			($ in Thousands)		
Loans with a related allowance					
Commercial and industrial	$ 81,649	$ 83,579	$ 10,838	$ 58,494	$ 2,629
Commercial real estate — owner occupied	23,796	23,937	2,973	12,124	736
Commercial and business lending	105,445	107,516	13,811	70,618	3,365
Commercial real estate — investor	17,823	17,862	1,597	16,924	1,694
Real estate construction	467	578	86	484	29
Commercial real estate lending	18,290	18,440	1,683	17,408	1,723
Total commercial	123,735	125,956	15,494	88,026	5,088
Residential mortgage	40,561	42,922	6,512	40,411	1,614
Home equity	10,250	10,986	3,718	10,521	549
Other consumer	1,135	1,138	122	1,140	3
Total consumer	51,946	55,046	10,352	52,072	2,166
Total loans[(a)]	$ 175,681	$ 181,002	$ 25,846	$ 140,098	$ 7,254
Loans with no related allowance					
Commercial and industrial	$ 60,595	$ 82,839	$ —	$ 89,275	$ 492
Commercial real estate — owner occupied	2,438	2,829	—	1,948	36
Commercial and business lending	63,033	85,668	—	91,223	528
Commercial real estate — investor	1,295	1,295	—	—	45
Real estate construction	—	—	—	—	—
Commercial real estate lending	1,295	1,295	—	—	45
Total commercial	64,328	86,963	—	91,223	573
Residential mortgage	6,925	7,204	—	4,999	217
Home equity	641	645	—	540	7
Other consumer	—	—	—	—	—
Total consumer	7,566	7,849	—	5,539	224
Total loans[(a)]	$ 71,894	$ 94,812	$ —	$ 96,762	$ 797
Total					
Commercial and industrial	$ 142,244	$ 166,418	$ 10,838	$ 147,769	$ 3,121
Commercial real estate — owner occupied	26,234	26,766	2,973	14,072	772
Commercial and business lending	168,478	193,184	13,811	161,841	3,893
Commercial real estate — investor	19,118	19,157	1,597	16,924	1,739
Real estate construction	467	578	86	484	29
Commercial real estate lending	19,585	19,735	1,683	17,408	1,768
Total commercial	188,063	212,919	15,494	179,249	5,661
Residential mortgage	47,486	50,126	6,512	45,410	1,831
Home equity	10,891	11,631	3,718	11,061	556
Other consumer	1,135	1,138	122	1,140	3
Total consumer	59,512	62,895	10,352	57,611	2,390
Total loans[(a)]	$ 247,575	$ 275,814	$ 25,846	$ 236,860	$ 8,051

(a) The net recorded investment (defined as recorded investment, net of the related allowance) of the impaired loans represented 80% of the unpaid principal balance at December 31, 2017.

Troubled Debt Restructurings ("Restructured Loans")

Loans are considered restructured loans if concessions have been granted to borrowers that are experiencing financial difficulty. The Corporation had a recorded investment of approximately $4 million in loans modified in troubled debt restructurings for the three months ended March 31, 2018, of which approximately $1 million were in accrual status and $3 million were in nonaccrual pending a sustained period of repayment. The following table presents nonaccrual and performing restructured loans by loan portfolio.

	March 31, 2018		December 31, 2017	
	Performing Restructured Loans	Nonaccrual Restructured Loans[(a)]	Performing Restructured Loans	Nonaccrual Restructured Loans[(a)]
	($ in Thousands)			
Commercial and industrial	$ 29,580	$ 886	$ 30,047	$ 1,776
Commercial real estate — owner occupied	3,892	—	3,989	—
Commercial real estate — investor	13,683	1,007	14,389	—
Real estate construction	305	152	310	157
Residential mortgage	19,902	18,640	17,068	18,991
Home equity	8,098	3,117	7,705	2,537
Other consumer	1,041	25	1,110	25
Total	$ 76,501	$ 23,827	$ 74,618	$ 23,486

(a) Nonaccrual restructured loans have been included within nonaccrual loans.

The following table provides the number of loans modified in a troubled debt restructuring by loan portfolio during the three months ended March 31, 2018 and 2017, respectively, and the recorded investment and unpaid principal balance as of March 31, 2018 and 2017, respectively.

	Three Months Ended March 31, 2018			Three Months Ended March 31, 2017		
	Number of Loans	Recorded Investment[(a)]	Unpaid Principal Balance[(b)]	Number of Loans	Recorded Investment[(a)]	Unpaid Principal Balance[(b)]
	($ in Thousands)					
Commercial and industrial	2	$ 92	$ 92	20	$ 52,326	$ 60,546
Commercial real estate — owner occupied	—	—	—	1	204	204
Commercial real estate — investor	1	1,007	1,037	1	733	744
Residential mortgage	11	1,807	1,807	16	1,301	1,322
Home equity	17	1,044	1,060	15	347	347
Other consumer	2	8	11	—	—	—
Total	33	$ 3,958	$ 4,007	53	$ 54,911	$ 63,163

(a) Represents post-modification outstanding recorded investment.
(b) Represents pre-modification outstanding recorded investment.

Restructured loan modifications may include payment schedule modifications, interest rate concessions, maturity date extensions, modification of note structure (A/B Note), non-reaffirmed Chapter 7 bankruptcies, principal reduction, or some combination of these concessions. During the three months ended March 31, 2018, restructured loan modifications of commercial and industrial, commercial real estate, and real estate construction loans primarily included maturity date extensions and payment schedule modifications. Restructured loan modifications of home equity and residential mortgage loans primarily included maturity date extensions, interest rate concessions, non-reaffirmed Chapter 7 bankruptcies, or a combination of these concessions for the three months ended March 31, 2018.

The following table provides the number of loans modified in a troubled debt restructuring during the previous twelve months which subsequently defaulted during the three months ended March 31, 2018 and 2017, respectively, as well as the recorded investment in these restructured loans as of March 31, 2018 and 2017, respectively.

	Three Months Ended March 31, 2018		Three Months Ended March 31, 2017	
	Number of Loans	Recorded Investment	Number of Loans	Recorded Investment
	($ in Thousands)			
Residential mortgage	4	467	6	383
Home equity	12	954	2	26
Total	16	$ 1,421	8	$ 409

All loans modified in a troubled debt restructuring are evaluated for impairment. The nature and extent of the impairment of restructured loans, including those which have experienced a subsequent payment default, is considered in the determination of an appropriate level of the allowance for loan losses.

Allowance for Credit Losses

The allowance for credit losses is comprised of the allowance for loan losses and the allowance for unfunded commitments. The level of the allowance for loan losses represents management's estimate of an amount appropriate to provide for probable credit losses in the loan portfolio at the balance sheet date. The allowance for unfunded commitments is maintained at a level believed by management to be sufficient to absorb estimated probable losses related to unfunded credit facilities (including unfunded loan commitments and letters of credit) and is included in accrued expenses and other liabilities on the consolidated balance sheets. See Note 12 for additional information on the allowance for unfunded commitments.

The following table presents a summary of the changes in the allowance for loan losses by portfolio segment for the three months ended March 31, 2018.

($ in Thousands)	Commercial and industrial	Commercial real estate - owner occupied	Commercial real estate - investor	Real estate construction	Residential mortgage	Home equity	Other consumer	Total
December 31, 2017	$ 123,068	$ 10,352	$ 41,059	$ 34,370	$ 29,607	$ 22,126	$ 5,298	$ 265,880
Charge offs	(8,067)	(1,042)	—	(47)	(493)	(1,250)	(1,256)	(12,155)
Recoveries	1,468	17	8	236	362	573	168	2,832
Net Charge offs	(6,599)	(1,025)	8	189	(131)	(677)	(1,088)	(9,323)
Provision for loan losses	1,377	2,520	1,215	(6,125)	536	241	736	500
March 31, 2018	$ 117,847	$ 11,847	$ 42,282	$ 28,434	$ 30,012	$ 21,690	$ 4,946	$ 257,058
Allowance for loan losses								
Individually evaluated for impairment	$ 18,778	$ 2,043	$ 2,721	$ 82	$ 6,635	$ 3,719	$ 116	$ 34,094
Collectively evaluated for impairment	99,069	9,804	39,561	28,352	23,377	17,971	4,830	222,964
Acquired and accounted for under ASC 310-30(a)	—	—	—	—	—	—	—	—
Total allowance for loan losses	$ 117,847	$ 11,847	$ 42,282	$ 28,434	$ 30,012	$ 21,690	$ 4,946	$ 257,058
Loans								
Individually evaluated for impairment	$ 128,841	$ 22,489	$ 20,387	$ 458	$ 48,863	$ 10,974	$ 1,066	$ 233,078
Collectively evaluated for impairment	6,625,314	876,631	4,048,532	1,579,065	8,147,224	912,421	373,388	22,562,575
Acquired and accounted for under ASC 310-30(a)	2,828	1,793	8,752	255	1,136	74	—	14,838
Total loans	$ 6,756,983	$ 900,913	$ 4,077,671	$ 1,579,778	$ 8,197,223	$ 923,470	$ 374,453	$ 22,810,491

(a) Loans acquired in business combinations and accounted for under ASC Subtopic 310-30 "Receivables — Loans and Debt Securities Acquired with Deteriorated Credit Quality."

For comparison purposes, a summary of the changes in the allowance for loan losses by portfolio segment for the year ended December 31, 2017, was as follows.

($ in Thousands)	Commercial and industrial	Commercial real estate - owner occupied	Commercial real estate - investor	Real estate construction	Residential mortgage	Home equity	Other consumer	Total
December 31, 2016	$ 140,126	$ 14,034	$ 45,285	$ 26,932	$ 27,046	$ 20,364	$ 4,548	$ 278,335
Charge offs	(44,533)	(344)	(991)	(604)	(2,611)	(2,724)	(4,439)	(56,246)
Recoveries	11,465	173	242	74	927	3,194	716	16,791
Net Charge offs	(33,068)	(171)	(749)	(530)	(1,684)	470	(3,723)	(39,455)
Provision for loan losses	16,010	(3,511)	(3,477)	7,968	4,245	1,292	4,473	27,000
December 31, 2017	$ 123,068	$ 10,352	$ 41,059	$ 34,370	$ 29,607	$ 22,126	$ 5,298	$ 265,880
Allowance for loan losses								
Individually evaluated for impairment	$ 10,838	$ 2,973	$ 1,597	$ 86	$ 6,512	$ 3,718	$ 122	$ 25,846
Collectively evaluated for impairment	112,230	7,379	39,462	34,284	23,095	18,408	5,176	240,034
Total allowance for loan losses	$ 123,068	$ 10,352	$ 41,059	$ 34,370	$ 29,607	$ 22,126	$ 5,298	$ 265,880
Loans								
Individually evaluated for impairment	$ 142,244	$ 26,234	$ 19,118	$ 467	$ 47,486	$ 10,891	$ 1,135	$ 247,575
Collectively evaluated for impairment	6,257,449	775,975	3,296,136	1,451,217	7,499,048	872,913	384,678	20,537,416
Total loans	$ 6,399,693	$ 802,209	$ 3,315,254	$ 1,451,684	$ 7,546,534	$ 883,804	$ 385,813	$ 20,784,991

The allowance related to the oil and gas portfolio was $19 million at March 31, 2018 and represented 3% of total oil and gas loans.

($ in Millions)	Three Months Ended March 31, 2018	Year Ended December 31, 2017
Balance at beginning of period	$ 27	$ 38
Charge offs	(4)	(25)
Recoveries	—	—
Net Charge offs	(4)	(25)
Provision for loan losses	(4)	14
Balance at end of period	$ 19	$ 27
Allowance for loan losses		
Individually evaluated for impairment	$ 10	$ 5
Collectively evaluated for impairment	9	22
Total allowance for loan losses	$ 19	$ 27
Loans		
Individually evaluated for impairment	$ 69	$ 77
Collectively evaluated for impairment	588	523
Total loans	$ 657	$ 600

The following table presents a summary of the changes in the allowance for unfunded commitments.

	Three Months Ended March 31, 2018	Year Ended December 31, 2017
	($ in Thousands)	
Allowance for Unfunded Commitments		
Balance at beginning of period	$ 24,400	$ 25,400
Provision for unfunded commitments	(500)	(1,000)
Amount recorded at acquisition	2,436	—
Balance at end of period	$ 26,336	$ 24,400

Loans Acquired in Acquisition

Loans acquired in a business combination are recorded at estimated fair value on their purchase date without a carryover of the related allowance for loan and lease losses. Acquired loans are segregated into two types:

- Performing loans are accounted for in accordance with ASC Topic 310-20 "Nonrefundable Fees and Other Costs" as these loans do not have evidence of credit deterioration since origination.
- Nonperforming loans are accounted for in accordance with ASC Topic 310-30 as they display significant credit deterioration since origination.

For performing loans the difference between the estimated fair value of the loans and the principal outstanding is accreted over the remaining life of the loans.

In accordance with ASC 310-30, purchased credit-impaired loans are pooled by loan type and the difference between contractually required payments at acquisition and the cash flows expected to be collected is referred to as the non-accretable difference. Further, any excess of cash flows expected at acquisition over the estimated fair value is referred to as the accretable yield and is recognized into interest income over the remaining life of the loan pools when there is a reasonable expectation about the amount and timing of such cash flows.

Changes in the accretable yield for loans acquired and accounted for under ASC Topic 310-30 were as follows for the three months ended March 31, 2018 and for the year ended December 31, 2017

	Three Months Ended March 31, 2018	Year Ended December 31, 2017
	($ in Thousands)	
Changes in Accretable Yield		
Balance at beginning of period	$ —	$ —
Purchases	4,244	—
Accretion	—	—
Other [(a)]	—	—
Balance at end of period	$ 4,244	$ —

(a) Represents the accretable difference that is relieved when a loan exits the PCI population due to full payoff, full charge-off, or transfer to repossessed assets, etc.

For loans acquired, the fair value of purchased credit-impaired loans, on the acquisition date, was determined based on assigned risk ratings, expected cash flows and the fair value of loan collateral. The fair value of loans that were non-impaired was determined based on estimates of losses on defaults and other market factors.

Note 8 Goodwill and Other Intangible Assets

Goodwill

Goodwill is not amortized but, instead, is subject to impairment tests on at least an annual basis, and more frequently if an event occurs or circumstances change that would more likely than not reduce the fair value of a reporting unit below its carrying amount.

The Corporation conducted its most recent annual impairment testing in May 2017, utilizing a qualitative assessment. Factors that management considered in this assessment included macroeconomic conditions, industry and market considerations, overall financial performance of the Corporation and each reporting unit (both current and projected), changes in management strategy, and changes in the composition or carrying amount of net assets. In addition, management considered the changes in both the Corporation's common stock price and in the overall bank common stock index (based on the S&P 400 Regional Bank Sub-Industry Index), as well as the Corporation's earnings per common share trend over the past year. Based on these assessments, management concluded that the 2017 annual qualitative impairment assessment indicated that it is more likely than not that the estimated fair value exceeded the carrying value (including goodwill) for each reporting unit. Therefore, a step one quantitative analysis was not required. There have been no events since the May 2017 impairment testing that have changed the Corporation's impairment assessment conclusion. There were no impairment charges recorded in 2017 or the first three months of 2018.

At March 31, 2018, the Corporation had goodwill of $1.2 billion, compared to $976 million at December 31, 2017. Goodwill increased $167 million related to the Bank Mutual acquisition and $10 million related to the acquisition of Diversified Insurance Solutions. See Note 2 for additional information on the Corporation's acquisitions.

Other Intangible Assets

The Corporation has other intangible assets that are amortized, consisting of core deposit intangibles, other intangibles (primarily related to customer relationships acquired in connection with the Corporation's insurance agency acquisitions), and mortgage servicing rights. During the first quarter of 2018, the Corporation added approximately $58 million of core deposit intangibles as a result of the Bank Mutual acquisition. In addition, the Corporation added approximately $8 million of other intangibles relating to customer relationships associated with the Diversified acquisition. See Note 2 for additional information on the Corporation's acquisitions. For core deposit intangibles and other intangibles, changes in the gross carrying amount, accumulated amortization, and net book value were as follows.

	Three Months Ended March 31, 2018	Year Ended December 31, 2017
	($ in Thousands)	
Core deposit intangibles		
Gross carrying amount	$ 58,100	$ 4,385
Accumulated amortization	(968)	(4,385)
Net book value	$ 57,132	$ —
Additions during the periods	$ 58,100	$ —
Amortization during the year	$ 968	$ 112
Other intangibles		
Gross carrying amount	$ 42,131	$ 34,572
Accumulated amortization	(19,549)	(18,992)
Net book value	$ 22,582	$ 15,580
Additions during the period	$ 7,559	$ 2,162
Amortization during the year	$ 557	$ 1,847

The Corporation sells residential mortgage loans in the secondary market and typically retains the right to service the loans sold. Mortgage servicing rights are amortized in proportion to and over the period of estimated net servicing income and assessed for impairment at each reporting date.

The Corporation evaluates its mortgage servicing rights asset for impairment at minimum on a quarterly basis. Impairment is assessed based on fair value at each reporting date using estimated prepayment speeds of the underlying mortgage loans serviced and stratifications based on the risk characteristics of the underlying loans (predominantly loan type and note interest rate). As mortgage interest rates fall, prepayment speeds are usually faster and the value of the mortgage servicing rights asset generally decreases, requiring additional valuation reserve. Conversely, as mortgage interest rates rise, prepayment speeds are usually slower and the value of the mortgage servicing rights asset generally increases, requiring less valuation reserve. A valuation allowance is established, through a charge to earnings, to the extent the amortized cost of the mortgage servicing rights exceeds the estimated fair value by stratification. If it is later determined that all or a portion of the temporary impairment no longer exists for a stratification, the valuation is reduced through a recovery to earnings. An other-than-temporary impairment (i.e., recoverability is considered remote when considering interest rates and loan pay off activity) is recognized as a write-down of the mortgage servicing rights asset and the related valuation allowance (to the extent a valuation allowance is available) and then against earnings. A direct write-down permanently reduces the carrying value of the mortgage servicing rights asset and valuation allowance, precluding subsequent recoveries. See Note 12 for a discussion of the recourse provisions on sold residential mortgage loans. See Note 13 which further discusses fair value measurement relative to the mortgage servicing rights asset.

A summary of changes in the balance of the mortgage servicing rights asset and the mortgage servicing rights valuation allowance was as follows.

	Three Months Ended March 31, 2018		Year Ended December 31, 2017	
	($ in Thousands)			
Mortgage servicing rights				
Mortgage servicing rights at beginning of period	$	59,168	$	62,085
Additions from acquisition		8,136		—
Additions		1,737		7,167
Amortization		(2,324)		(10,084)
Mortgage servicing rights at end of period	$	66,717	$	59,168
Valuation allowance at beginning of period		(784)		(609)
(Additions) recoveries, net		474		(175)
Valuation allowance at end of period		(310)		(784)
Mortgage servicing rights, net	$	66,407	$	58,384
Fair value of mortgage servicing rights	$	81,810	$	64,387
Portfolio of residential mortgage loans serviced for others (“servicing portfolio”)	$	8,507,294	$	7,646,846
Mortgage servicing rights, net to servicing portfolio		0.78%		0.76%
Mortgage servicing rights expense [(a)]	$	1,849	$	10,259

(a) Includes the amortization of mortgage servicing rights and additions / recoveries to the valuation allowance of mortgage servicing rights, and is a component of mortgage banking, net in the consolidated statements of income.

The following table shows the estimated future amortization expense for amortizing intangible assets. The projections of amortization expense are based on existing asset balances, the current interest rate environment, and prepayment speeds as of March 31, 2018. The actual amortization expense the Corporation recognizes in any given period may be significantly different depending upon acquisition or sale activities, changes in interest rates, prepayment speeds, market conditions, regulatory requirements, and events or circumstances that indicate the carrying amount of an asset may not be recoverable.

Estimated Amortization Expense	Core Deposit Intangibles		Other Intangibles		Mortgage Servicing Rights	
			($ in Thousands)			
Nine Months Ended December 31, 2018	$	4,358	$	2,045	$	7,115
2019		5,810		2,428		9,324
2020		5,810		2,311		8,078
2021		5,810		2,287		6,977
2022		5,810		2,263		6,035
2023		5,810		2,244		5,234
Beyond 2023		23,724		9,004		23,954
Total Estimated Amortization Expense	$	57,132	$	22,582	$	66,717

Note 9 Short and Long-Term Funding

The following table presents the components of short-term funding (funding with original contractual maturities of one year or less) and long-term funding (funding with original contractual maturities greater than one year).

	March 31, 2018	December 31, 2017
	($ in Thousands)	
Short-Term Funding		
Federal funds purchased	$ 69,085	$ 141,950
Securities sold under agreements to repurchase	214,869	182,865
Federal funds purchased and securities sold under agreements to repurchase	283,954	324,815
FHLB advances	1,780,000	284,000
Commercial paper	82,420	67,467
Other short-term funding	1,862,420	351,467
Total short-term funding	$ 2,146,374	$ 676,282
Long-Term Funding		
FHLB advances	$ 2,735,887	$ 2,900,168
Senior notes, at par	250,000	250,000
Subordinated notes, at par	250,000	250,000
Other long-term funding and capitalized costs	(2,549)	(2,718)
Total long-term funding	3,233,338	3,397,450
Total short and long-term funding	$ 5,379,712	$ 4,073,732

Securities Sold Under Agreements to Repurchase ("Repurchase Agreements")

The Corporation enters into agreements under which it sells securities subject to an obligation to repurchase the same or similar securities. Under these arrangements, the Corporation may transfer legal control over the assets but still retain effective control through an agreement that both entitles and obligates the Corporation to repurchase the assets. The obligation to repurchase the securities is reflected as a liability on the Corporation's consolidated balance sheets, while the securities underlying the repurchase agreements remain in the respective investment securities asset accounts (i.e., there is no offsetting or netting of the investment securities assets with the repurchase agreement liabilities). See Note 11 for additional disclosures on balance sheet offsetting.

The Corporation utilizes securities sold under agreements to repurchase to facilitate the needs of its customers. As of March 31, 2018, the Corporation pledged agency mortgage-related securities with a fair value of $288 million as collateral for the repurchase agreements. Securities pledged as collateral under repurchase agreements are maintained with the Corporation's safekeeping agents and are monitored on a daily basis due to the market risk of fair value changes in the underlying securities. The Corporation generally pledges excess securities to ensure there is sufficient collateral to satisfy short-term fluctuations in both the repurchase agreement balances and the fair value of the underlying securities.

The remaining contractual maturity of the securities sold under agreements to repurchase in the consolidated balance sheets as of March 31, 2018 and December 31, 2017 are presented in the following table.

	Remaining Contractual Maturity of the Agreements				
	Overnight and Continuous	Up to 30 days	30-90 days	Greater than 90 days	Total
March 31, 2018	($ in Thousands)				
Repurchase agreements					
Agency mortgage-related securities	$ 214,869	$ —	$ —	$ —	$ 214,869
Total	$ 214,869	$ —	$ —	$ —	$ 214,869
December 31, 2017					
Repurchase agreements					
Agency mortgage-related securities	$ 182,865	$ —	$ —	$ —	$ 182,865
Total	$ 182,865	$ —	$ —	$ —	$ 182,865

Long-Term Funding

FHLB advances: At March 31, 2018, the long-term FHLB advances had maturity or call dates primarily ranging from 2018 through 2019, and had a weighted average interest rate of 1.50%, compared to 1.26% at December 31, 2017. The majority of FHLB advances are indexed to the FHLB discount note and re-price at varying intervals. The advances offer flexible, low cost, long-term funding that improves the Corporation's liquidity profile.

Senior notes: In November 2014, the Corporation issued $250 million of senior notes, due November 2019, and callable October 2019. The senior notes have a fixed coupon interest rate of 2.75% and were issued at a discount.

Subordinated notes: In November 2014, the Corporation issued $250 million of 10-year subordinated notes, due January 2025, and callable October 2024. The subordinated notes have a fixed coupon interest rate of 4.25% and were issued at a discount.

Note 10 Derivative and Hedging Activities

The Corporation is exposed to certain risk arising from both its business operations and economic conditions. The Corporation principally manages its exposures to a wide variety of business and operational risks through management of its core business activities. The Company manages economic risks, including interest rate, liquidity, and credit risk primarily by managing the amount, sources, and duration of its assets and liabilities and the use of derivative financial instruments. Specifically, the Corporation enters into derivative financial instruments to manage exposures that arise from business activities that result in the receipt or payment of future known and uncertain cash amounts, the value of which are determined by interest rates. The Corporation's derivative financial instruments are used to manage differences in the amount, timing, and duration of the Corporation's known or expected cash receipts and its known or expected cash payments principally related to the Corporation's assets.

The contract or notional amount of a derivative is used to determine, along with the other terms of the derivative, the amounts to be exchanged between the counterparties. The Corporation is exposed to credit risk in the event of nonperformance by counterparties to financial instruments. To mitigate the counterparty risk, interest rate and commodity-related instruments generally contain language outlining collateral pledging requirements for each counterparty. Collateral must be posted when the market value exceeds certain mutually agreed upon threshold limits. The Corporation pledged $28 million of investment securities as collateral at March 31, 2018, and pledged $24 million of investment securities as collateral at December 31, 2017. Federal regulations require the Corporation to clear all LIBOR interest rate swaps through a clearing house if it can be cleared. As such, the Corporation is required to pledge cash collateral for the margin. At March 31, 2018 the Corporation posted $29 million of cash collateral for the margin compared to $22 million at December 31, 2017.

Fair Value Hedges of Interest Rate Risk

The Corporation is exposed to changes in the fair value of certain of its pools of prepayable fixed-rate assets due to changes in benchmark interest rates. The Corporation uses interest rate swaps to manage its exposure to changes in fair value on these instruments attributable to changes in the designated benchmark interest rate. Interest rate swaps designated as fair value hedges involve the payment of fixed-rate amounts to a counterparty in exchange for the Corporation receiving variable-rate payments over the life of the agreements without the exchange of the underlying notional amount.

For derivatives designated and that qualify as fair value hedges, the gain or loss on the derivative as well as the offsetting loss or gain on the hedged item attributable to the hedged risk are recognized in interest income.

Derivatives to Accommodate Customer Needs

The Corporation also facilitates customer borrowing activity by entering into various derivative contracts which are designated as free standing derivative contracts. Free standing derivative products are entered into primarily for the benefit of commercial customers seeking to manage their exposures to interest rate risk, foreign currency, and commodity prices. These derivative contracts are not designated against specific assets and liabilities on the balance sheet or forecasted transactions and, therefore, do not qualify for hedge accounting treatment. Such derivative contracts are carried at fair value on the consolidated balance sheets with changes in the fair value recorded as a component of Capital market fees, net, and typically include interest rate-related instruments (swaps and caps), foreign currency exchange forwards, and commodity contracts. See Note 11 for additional information and disclosures on balance sheet offsetting.

Interest rate-related instruments: The Corporation provides interest rate risk management services to commercial customers, primarily forward interest rate swaps and caps. The Corporation's market risk from unfavorable movements in interest rates related to these derivative contracts is generally economically hedged by concurrently entering into offsetting derivative contracts. The offsetting derivative contracts have identical notional values, terms and indices.

Foreign currency exchange forwards: The Corporation provides foreign currency exchange services to customers, primarily forward contracts. Our customers enter into a foreign currency exchange forward with the Corporation as a means for them to mitigate exchange rate risk. The Corporation mitigates its risk by then entering into an offsetting foreign currency exchange derivative contract.

Commodity contracts: Commodity contracts are entered into primarily for the benefit of commercial customers seeking to manage their exposure to fluctuating commodity prices. The Corporation mitigates its risk by then entering into an offsetting commodity derivative contract.

Mortgage Derivatives

Interest rate lock commitments to originate residential mortgage loans held for sale and forward commitments to sell residential mortgage loans are considered derivative instruments, and the fair value of these commitments is recorded on the consolidated balance sheets with the changes in fair value recorded as a component of mortgage banking, net.

Written and Purchased Options (Time Deposit)

Historically, the Corporation had entered into written and purchased option derivative instruments to facilitate an equity linked time deposit product (the “Power CD”), which the Corporation ceased offering in September 2013. The Power CD was a time deposit that provided the purchaser a guaranteed return of principal at maturity plus a potential equity return (a written option), while the Corporation received a known stream of funds based on the equity return (a purchased option). The written and purchased options are mirror derivative instruments, which are carried at fair value on the consolidated balance sheets.

The table below identifies the balance sheet category and fair values of the Corporation’s derivative instruments.

	March 31, 2018			December 31, 2017		
($ in Thousands)	Notional Amount	Fair Value	Balance Sheet Category	Notional Amount	Fair Value	Balance Sheet Category
Derivatives not designated as hedging instruments						
Interest rate-related instruments — customer and mirror	$ 2,626,982	$ 53,189	Trading assets	$ 2,183,687	$ 28,494	Trading assets
Interest rate-related instruments — customer and mirror	2,626,982	(52,238)	Trading liabilities	2,183,687	(28,035)	Trading liabilities
Foreign currency exchange forwards	140,554	2,612	Trading assets	124,851	2,495	Trading assets
Foreign currency exchange forwards	137,073	(2,484)	Trading liabilities	118,094	(2,339)	Trading liabilities
Commodity contracts	467,979	47,089	Trading assets	457,868	38,686	Trading assets
Commodity contracts	467,957	(45,525)	Trading liabilities	457,108	(37,286)	Trading liabilities
Interest rate lock commitments (mortgage)	312,567	3,032	Other assets	222,736	1,538	Other assets
Forward commitments (mortgage)	245,000	(303)	Other liabilities	164,567	(313)	Other liabilities
Purchased options (time deposit)	26,389	951	Other assets	31,063	1,175	Other assets
Written options (time deposit)	26,389	(951)	Other liabilities	31,063	(1,175)	Other liabilities
Derivatives designated as hedging instruments						
Interest Rate Products	250,000	258	Other assets	—	—	Other assets

The following table presents amounts that were recorded on the balance sheet related to cumulative basis adjustment for fair value hedges.

	Line Item in the Statement of Financial Position in Which the Hedged Item is Included			
	Carrying Amount of the Hedged Assets/ (Liabilities)		Cumulative Amount of Fair Value Hedging Adjustment Included in the Carrying Amount of the Hedged Assets/ (Liabilities)	
($ in Thousands)	March 31, 2018			
Loans and investment securities receivables [(a)]		249,724		276
Total	$	249,724	$	276

(a) These amounts include the amortized cost basis of closed portfolios used to designated hedging relationships in which the hedged item is the last layer expected to be remaining at the end of the hedging relationship. At March 31, 2018, the amortized cost basis of the closed portfolios used in these hedging relationships was $523 million; the cumulative basis adjustments associated with these hedging relationships was $275,767; and the amounts of the designated hedged items were $250 million.

The table below identifies the effect of fair value hedge accounting on the Corporation's statement of performance during the three months ended March 31, 2018.

	Location and Amount of Gain or (Loss) Recognized in Income on Fair Value and Cash Flow Hedging Relationships			
	Three Months Ended March 31, 2018		Year Ended December 31, 2017	
($ in Thousands)	Interest Income	Other Income (Expense)	Interest Income	Other Income (Expense)
Total amounts of income and expense line items presented in the statement of financial performance in which the effects of fair value or cash flow hedges are recorded	18	—	—	—
The effects of fair value and cash flow hedging: Gain or (loss) on fair value hedging relationships in Subtopic 815-20				
Interest contracts				
Hedged items	276	—	—	—
Derivatives designated as hedging instruments	(258)	—	—	—

The table below identifies the effect of derivatives not designated as hedging instruments on the Corporation's statement of performance during the three months ended March 31, 2018.

	Income Statement Category of Gain / (Loss) Recognized in Income	For the Three Months Ended March 31,			
($ in Thousands)		2018		2017	
Derivative Instruments					
Interest rate-related instruments — customer and mirror, net	Capital market fees, net	$	492	$	245
Interest rate lock commitments (mortgage)	Mortgage banking, net		1,494		1,597
Forward commitments (mortgage)	Mortgage banking, net		10		(3,281)
Foreign currency exchange forwards	Capital market fees, net		(28)		(21)
Commodity contracts	Capital market fees, net		164		226

Note 11 Balance Sheet Offsetting

Interest Rate-Related Instruments and Commodity Contracts (“Interest and Commodity Agreements”)

The Corporation enters into interest rate-related instruments to facilitate the interest rate risk management strategies of commercial customers. The Corporation also enters into commodity contracts to manage commercial customers' exposure to fluctuating commodity prices. The Corporation mitigates these risks by entering into equal and offsetting interest and commodity agreements with highly rated third party financial institutions. The Corporation is party to master netting arrangements with its financial institution counterparties that creates a single net settlement of all legal claims or obligations to pay or receive the net amount of settlement of the individual interest and commodity agreements. Collateral, usually in the form of investment securities and cash, is posted by the counterparty with net liability positions in accordance with contract thresholds. The Corporation does not offset assets and liabilities under these arrangements for financial statement presentation purposes. See Note 10 for additional information on the Corporation’s derivative and hedging activities.

Securities Sold Under Agreements to Repurchase (“Repurchase Agreements”)

The Corporation enters into agreements under which it sells securities subject to an obligation to repurchase the same or similar securities. These repurchase agreements are accounted for as collateralized financing arrangements (i.e., secured borrowings) and not as a sale and subsequent repurchase of securities (i.e., there is no offsetting or netting of the investment securities assets with the repurchase agreement liabilities). The right of set-off for a repurchase agreement resembles a secured borrowing, whereby the collateral would be used to settle the fair value of the repurchase agreement should the Corporation be in default (e.g., fails to make an interest payment to the counterparty). In addition, the Corporation does not enter into reverse repurchase agreements; therefore, there is no such offsetting to be done with the repurchase agreements. See Note 9 for additional disclosures on repurchase agreements.

The following table presents the assets and liabilities subject to an enforceable master netting arrangement. The interest and commodity agreements we have with our commercial customers are not subject to an enforceable master netting arrangement, and therefore, are excluded from this table.

	Gross amounts recognized	Gross amounts offset in the balance sheet	Net amounts presented in the balance sheet	Gross amounts not offset in the balance sheet		Net amount
				Financial instruments	Collateral	
			($ in Thousands)			
March 31, 2018						
Derivative assets						
Interest and commodity agreements	$ 47,528	$ —	$ 47,528	$ (43,105)	$ (1,337)	$ 3,086
Derivative liabilities						
Interest and commodity agreements	$ 43,105	$ —	$ 43,105	$ (43,105)	$ —	$ —
December 31, 2017						
Derivative assets						
Interest and commodity agreements	$ 29,503	$ —	$ 29,503	$ (29,503)	$ —	$ —
Derivative liabilities						
Interest and commodity agreements	$ 37,164	$ —	$ 37,164	$ (29,503)	$ (7,661)	$ —

Note 12 Commitments, Off-Balance Sheet Arrangements, Legal Proceedings and Regulatory Matters

The Corporation utilizes a variety of financial instruments in the normal course of business to meet the financial needs of its customers and to manage its own exposure to fluctuations in interest rates. These financial instruments include lending-related and other commitments (see below) as well as derivative instruments (see Note 10). The following is a summary of lending-related commitments.

	March 31, 2018	December 31, 2017
	($ in Thousands)	
Commitments to extend credit, excluding commitments to originate residential mortgage loans held for sale [(a) (b)]	$ 8,481,563	$ 8,027,187
Commercial letters of credit [(a)]	12,456	11,886
Standby letters of credit [(c)]	253,857	235,361

(a) These off-balance sheet financial instruments are exercisable at the market rate prevailing at the date the underlying transaction will be completed and, thus, are deemed to have no current fair value, or the fair value is based on fees currently charged to enter into similar agreements and is not material at March 31, 2018 or December 31, 2017.

(b) Interest rate lock commitments to originate residential mortgage loans held for sale are considered derivative instruments and are disclosed in Note 10.

(c) The Corporation has established a liability of $2 million at March 31, 2018 and December 31, 2017, as an estimate of the fair value of these financial instruments.

Lending-related Commitments

As a financial services provider, the Corporation routinely enters into commitments to extend credit. Such commitments are subject to the same credit policies and approval process accorded to loans made by the Corporation, with each customer's creditworthiness evaluated on a case-by-case basis. The commitments generally have fixed expiration dates or other termination clauses and may require the payment of a fee. The Corporation's exposure to credit loss in the event of nonperformance by the other party to these financial instruments is represented by the contractual amount of those instruments. The amount of collateral obtained, if deemed necessary by the Corporation upon extension of credit, is based on management's credit evaluation of the customer. Since a significant portion of commitments to extend credit are subject to specific restrictive loan covenants or may expire without being drawn upon, the total commitment amounts do not necessarily represent future cash flow requirements. An allowance for unfunded commitments is maintained at a level believed by management to be sufficient to absorb estimated probable losses related to unfunded commitments (including unfunded loan commitments and letters of credit). The allowance for unfunded commitments totaled $26 million at March 31, 2018 and $24 million at December 31, 2017, and is included in accrued expenses and other liabilities on the consolidated balance sheets.

Lending-related commitments include commitments to extend credit, commitments to originate residential mortgage loans held for sale, commercial letters of credit, and standby letters of credit. Commitments to extend credit are legally binding agreements to lend to customers at predetermined interest rates, as long as there is no violation of any condition established in the contracts. Interest rate lock commitments to originate residential mortgage loans held for sale and forward commitments to sell residential mortgage loans are considered derivative instruments, and the fair value of these commitments is recorded on the consolidated balance sheets. The Corporation's derivative and hedging activity is further described in Note 10. Commercial and standby letters of credit are conditional commitments issued to guarantee the performance of a customer to a third party. Commercial letters of credit are issued specifically to facilitate commerce and typically result in the commitment being drawn on when the underlying transaction is consummated between the customer and the third party, while standby letters of credit generally are contingent upon the failure of the customer to perform according to the terms of the underlying contract with the third party.

Other Commitments

The Corporation invests in unconsolidated projects including low-income housing, new market tax credit projects, and historic tax credit projects to promote the revitalization of primarily low-to-moderate-income neighborhoods throughout the local communities of its bank subsidiary. As a limited partner in these unconsolidated projects, the Corporation is allocated tax credits and deductions associated with the underlying projects. The aggregate carrying value of these investments at March 31, 2018 was $142 million, compared to $147 million at December 31, 2017.

The Corporation has principal investment commitments to provide capital-based financing to private and public companies through either direct investments in specific companies or through investment funds and partnerships. The timing of future cash requirements to fund such commitments is generally dependent on the investment cycle, whereby privately held companies are funded by private equity investors and ultimately sold, merged, or taken public through an initial offering, which can vary based on overall market conditions, as well as the nature and type of industry in which the companies operate. The aggregate carrying value of these investments at March 31, 2018 was $24 million, compared to $23 million at December 31, 2017, included in other assets on the consolidated balance sheets.

Related to these investments, the Corporation had remaining commitments to fund $111 million at March 31, 2018, and $119 million at December 31, 2017.

Legal Proceedings

The Corporation is party to various pending and threatened claims and legal proceedings arising in the normal course of business activities, some of which involve claims for substantial amounts. Although there can be no assurance as to the ultimate outcomes, the Corporation believes it has meritorious defenses to the claims asserted against it in its currently outstanding matters, including the matters described below, and with respect to such legal proceedings, intends to continue to defend itself vigorously. The Corporation will consider settlement of cases when, in management's judgment, it is in the best interests of both the Corporation and its shareholders.

On at least a quarterly basis, the Corporation assesses its liabilities and contingencies in connection with all pending or threatened claims and litigation, utilizing the most recent information available. On a matter by matter basis, an accrual for loss is established for those matters which the Corporation believes it is probable that a loss may be incurred and that the amount of such loss can be reasonably estimated. Once established, each accrual is adjusted as appropriate to reflect any subsequent developments. Accordingly, management's estimate will change from time to time, and actual losses may be more or less than the current estimate. For matters where a loss is not probable, or the amount of the loss cannot be estimated, no accrual is established.

Resolution of legal claims is inherently unpredictable, and in many legal proceedings various factors exacerbate this inherent unpredictability, including where the damages sought are unsubstantiated or indeterminate, it is unclear whether a case brought as a class action will be allowed to proceed on that basis, discovery is not complete, the proceeding is not yet in its final stages, the matters present legal uncertainties, there are significant facts in dispute, there are a large number of parties (including where it is uncertain how liability, if any, will be shared among multiple defendants), or there is a wide range of potential results.

A lawsuit, R.J. ZAYED v. Associated Bank, N.A., was filed in the United States District Court for the District of Minnesota on January 29, 2013. The lawsuit relates to a Ponzi scheme perpetrated by Oxford Global Partners and related entities ("Oxford") and individuals and was brought by the receiver for Oxford. Oxford was a depository customer of Associated Bank (the "Bank"). The lawsuit claims that the Bank is liable for failing to uncover the Oxford Ponzi scheme, and specifically alleges the Bank aided and abetted (1) the fraudulent scheme; (2) a breach of fiduciary duty; (3) conversion; and (4) false representations and omissions. The lawsuit seeks unspecified consequential and punitive damages. The District Court granted the Bank's motion to dismiss the complaint on September 30, 2013. On March 2, 2015, the U.S. Court of Appeals for the Eighth Circuit reversed the District Court and remanded the case back to the District Court for further proceedings. On January 31, 2017, the District Court granted the Bank's motion for summary judgment. The receiver has appealed the District Court's summary judgment decision to the Eighth Circuit Court of Appeals. On January 23, 2018, the District Court approved a settlement agreement between the parties. Based on the terms of the settlement agreement, the Bank expects that the litigation will not have a material adverse impact on the Bank regardless of the outcome of the appeal to the Eighth Circuit Court of Appeals. A lawsuit by investors in the same Ponzi scheme, Herman Grad, et al v. Associated Bank, N.A., brought in Brown County, Wisconsin in October 2009 was dismissed by the circuit court, and the dismissal was affirmed by the Wisconsin Court of Appeals in June 2011 in an unpublished opinion.

Two complaints were filed against the Bank on January 11, 2016 in the United States Bankruptcy Court for the Northern District of Illinois, Eastern Division in connection with the In re: World Marketing Chicago, LLC, et al Chapter 11 bankruptcy proceeding. In the first complaint, The Official Committee of Unsecured Creditors of World Marketing Chicago, LLC, et al v. Associated Bank, N.A., the plaintiff seeks to avoid guarantees and pledges of collateral given by the debtors to secure a revolving financing commitment of $6 million to the debtors' parent company from the Bank. The plaintiff alleges a variety of legal theories under federal and state law, including fraudulent conveyance, preferential transfer and conversion, in support of its position. The plaintiff seeks return of approximately $4 million paid to the Bank and the avoidance of the security interest in the collateral securing the remaining indebtedness to the Bank. In the second complaint, American Funds Service Company v. Associated Bank, N.A., the plaintiff alleges that approximately $600,000 of funds it had advanced to the World Marketing entities to apply towards future postage fees was swept by the Bank from World Marketing's bank accounts. Plaintiff seeks the return of such funds from the Bank under several theories, including Sec. 541(d) of the Bankruptcy Code, the creation of a resulting trust, and unjust enrichment. On February 7, 2018, both cases were settled, and the Bank received approximately $540,000 from the proceeds of the liquidation of its collateral. Both cases were dismissed on February 16, 2018.

Subsequent to the announcement on July 20, 2017, of the Merger Agreement between the Corporation and Bank Mutual, several lawsuits were filed in connection with the proposed merger. On July 28, 2017, two substantially identical purported class action complaints, each by various individual plaintiffs, were filed with the Wisconsin Circuit Court for Milwaukee County on behalf of the respective named plaintiffs and other Bank Mutual shareholders against Bank Mutual, the members of the Bank Mutual board, and the Corporation. The lawsuits are captioned Schumel et al v. Bank Mutual Corporation et al. and Paquin et al. v. Bank Mutual Corporation et al. Both complaints allege state law breach of fiduciary duty claims against the Bank Mutual board for, among other things, seeking to sell Bank Mutual through an allegedly defective process, for an allegedly unfair price and on allegedly unfair terms. On August 30, 2017, a third purported class action complaint, captioned Wollenburg et al. v. Bank Mutual Corporation et al., was filed in the Wisconsin Circuit Court for Milwaukee County, on behalf of the same class of shareholders and against the same defendants as the prior two complaints. The Wollenburg complaint asserts similar allegations as the prior two complaints, and further alleges that the preliminary proxy statement/prospectus filed with the SEC contains various alleged misstatements or omissions under federal securities law. The Paquin, Schumel and Wollenburg complaints allege that the Corporation aided and abetted Bank Mutual's directors' alleged breaches of fiduciary duty. The parties have entered into a stipulation seeking to consolidate the three actions. On September 13, 2017, the Corporation filed a notice of removal of the Paquin, Schumel and Wollenburg actions to the United States District Court for the Eastern District of Wisconsin. On September 15, 2017, the plaintiffs in the Paquin, Schumel and Wollenburg actions filed identical motions to remand the three cases back to state court, and on September 27, 2017, the defendants filed oppositions to the motions to remand. On October 3, 2017, the defendants filed motions to dismiss the three actions. On September 6, 2017, a fourth purported class action complaint, captioned Parshall et al., v. Bank Mutual Corporation et al., was filed in the U.S. District Court for the Eastern District of Wisconsin, on behalf of the same class of shareholders and against the same defendants as the prior complaints. The Parshall complaint criticizes the adequacy of the merger consideration and alleges that Bank Mutual, the members of the Bank Mutual board and the Corporation allegedly omitted and/or misrepresented certain information in the registration statement on Form S-4 filed in connection with the proposed merger in violation of the federal securities laws. The lawsuits seek, among other things, to enjoin the consummation of the transaction and damages. The Corporation believes the allegations are without merit. On October 13, 2017, Bank Mutual and the Corporation reached agreement with the plaintiffs in each of the four cases whereby Bank Mutual issued certain additional disclosures in a Form 8-K, and each of the plaintiffs have agreed to dismiss their actions with prejudice as to the named plaintiffs and without prejudice as to the rest of the purported class members.

Regulatory Matters

On May 22, 2015, the Bank entered into a Conciliation Agreement ("Conciliation Agreement") with the U.S. Department of Housing and Urban Development ("HUD") which resolved the HUD investigation into the Bank's lending practices during the years 2008-2010. The Bank's commitments under the Conciliation Agreement are spread over 3 years and include commitments to do the following in minority communities: make mortgage loans of approximately $196 million; open one branch and four loan production offices; establish special financing programs; make affordable home repair grants; engage in affirmative marketing outreach; provide financial education programs; and make grants to support community reinvestment training and education. The cost of these commitments will be spread over four calendar years and is not expected to have a material impact on the Corporation's financial condition or results of operation.

A variety of consumer products, including mortgage and deposit products, and certain fees and charges related to such products, have come under increased regulatory scrutiny. It is possible that regulatory authorities could bring enforcement actions, including civil money penalties, or take other actions against the Corporation and the Bank in regard to these consumer products. The Bank could also determine of its own accord, or be required by regulators, to refund or otherwise make remediation payments to customers in connection with these products. It is not possible at this time for management to assess the probability of a material adverse outcome or reasonably estimate the amount of any potential loss related to such matters.

Mortgage Repurchase Reserve

The Corporation sells residential mortgage loans to investors in the normal course of business. Residential mortgage loans sold to others are predominantly conventional residential first lien mortgages originated under our usual underwriting procedures, and are most often sold on a nonrecourse basis, primarily to the GSEs. The Corporation’s agreements to sell residential mortgage loans in the normal course of business usually require certain representations and warranties on the underlying loans sold, related to credit information, loan documentation, collateral, and insurability. Subsequent to being sold, if a material underwriting deficiency or documentation defect is discovered, the Corporation may be obligated to repurchase the loan or reimburse the GSEs for losses incurred (collectively, “make whole requests”). The make whole requests and any related risk of loss under the representations and warranties are largely driven by borrower performance.

As a result of make whole requests, the Corporation has repurchased loans with principal balances of approximately $394 thousand and $1 million during the three months ended March 31, 2018 and the year ended December 31, 2017, respectively. The loss reimbursement and settlement claims paid for the three months ended March 31, 2018 were zero and negligible for the year ended December 31, 2017. Make whole requests during 2017 and the first three months of 2018 generally arose from loans sold during the period of January 1, 2012 to December 31, 2017, which totaled $10.0 billion at the time of sale, and consisted primarily of loans sold to GSEs. As of March 31, 2018, approximately $6.0 billion of these sold loans remain outstanding.

The balance in the mortgage repurchase reserve at the balance sheet date reflects the estimated amount of potential loss the Corporation could incur from repurchasing a loan, as well as loss reimbursements, indemnifications, and other settlement resolutions. The following summarizes the changes in the mortgage repurchase reserve.

	Three Months Ended March 31, 2018	Year Ended December 31, 2017
	($ in Thousands)	
Balance at beginning of period	$ 987	$ 900
Repurchase provision expense	56	246
Charge offs, net	(48)	(159)
Amount recorded at acquisition	88	—
Balance at end of period	$ 1,083	$ 987

The Corporation may also sell residential mortgage loans with limited recourse (limited in that the recourse period ends prior to the loan's maturity, usually after certain time and / or loan paydown criteria have been met), whereby repurchase could be required if the loan had defined delinquency issues during the limited recourse periods. At March 31, 2018, and December 31, 2017, there were approximately $36 million and $44 million, respectively, of residential mortgage loans sold with such recourse risk. There have been limited instances and immaterial historical losses on repurchases for recourse under the limited recourse criteria.

The Corporation has a subordinate position to the FHLB in the credit risk on residential mortgage loans it sold to the FHLB in exchange for a monthly credit enhancement fee. The Corporation has not sold loans to the FHLB with such credit risk retention since February 2005. At March 31, 2018 and December 31, 2017, there were $69 million and $73 million, respectively, of such residential mortgage loans with credit risk recourse, upon which there have been negligible historical losses to the Corporation.

Note 13 Fair Value Measurements

Fair value represents the estimated price at which an orderly transaction to sell an asset or to transfer a liability would take place between market participants at the measurement date under current market conditions (i.e., an exit price concept).

Following is a description of the valuation methodologies used for the Corporation's more significant instruments measured on a recurring basis at fair value, including the general classification of such instruments pursuant to the valuation hierarchy.

Assets and Liabilities Measured at Fair Value on a Recurring Basis

Investment Securities Available for Sale: Where quoted prices are available in an active market, investment securities are classified in Level 1 of the fair value hierarchy. If quoted market prices are not available for the specific security, then fair values are estimated by using pricing models, quoted prices of securities with similar characteristics or discounted cash flows, with consideration given to the nature of the quote and the relationship of recently evidenced market activity to the fair value estimate, and are classified in Level 2 of the fair value hierarchy. Lastly, in certain cases where there is limited activity or less transparency around inputs to the estimated fair value, securities are classified within Level 3 of the fair value hierarchy. To validate the fair value estimates, assumptions, and controls, the Corporation looks to transactions for similar instruments and utilizes independent pricing provided by third party vendors or brokers and relevant market indices. While none of these sources are solely indicative of fair value, they serve as directional indicators for the appropriateness of the Corporation's fair value estimates. The Corporation has determined that the fair value measures of its investment securities are classified predominantly within Level 1 or 2 of the fair value hierarchy. See Note 6 for additional disclosure regarding the Corporation's investment securities.

Residential Loans Held for Sale: Loans held for sale, which consist generally of current production of certain fixed-rate, first-lien residential mortgage loans, are carried at estimated fair value. Management has elected the fair value option to account for all newly originated mortgage loans held for sale which results in the financial impact of changing market conditions being reflected currently in earnings as opposed to being dependent upon the timing of sales. Therefore, the continually adjusted values better reflect the price the Corporation expects to receive from the sale of such loans. The estimated fair value was based on what secondary markets are currently offering for portfolios with similar characteristics, which the Corporation classifies as a Level 2 fair value measurement.

Derivative Financial Instruments (Interest Rate-Related Instruments): The Corporation utilizes interest rate swaps to hedge exposure to interest rate risk and variability of fair value associated to changes in the underlying interest rate of the hedged item. These hedged interest rate swaps are classified as fair value hedges. See Note 10 for additional disclosure regarding the Corporation's fair value hedges.

In addition, the Corporation offers interest rate-related instruments (swaps and caps) to service our customers' needs, for which the Corporation simultaneously enters into offsetting derivative financial instruments (i.e., mirror interest rate-related instruments) with third parties to manage its interest rate risk associated with these financial instruments. The valuation of the Corporation's derivative financial instruments is determined using discounted cash flow analysis on the expected cash flows of each derivative and also includes a nonperformance / credit risk component (credit valuation adjustment). See Note 10 for additional disclosure regarding the Corporation's interest rate-related instruments.

The discounted cash flow analysis component in the fair value measurement reflects the contractual terms of the derivative financial instruments, including the period to maturity, and uses observable market-based inputs, including interest rate curves and implied volatilities. More specifically, the fair values of interest rate swaps are determined using the market standard methodology of netting the discounted future fixed cash receipts (or payments) with the variable cash payments (or receipts) based on an expectation of future interest rates (forward curves) derived from observable market interest rate curves. Likewise, the fair values of interest rate options (i.e., interest rate caps) are determined using the market standard methodology of discounting the future expected cash receipts that would occur if variable interest rates fall below (or rise above) the strike rate of the floors (or caps), with the variable interest rates used in the calculation of projected receipts on the floor (or cap) based on an expectation of future interest rates derived from observable market interest rate curves and volatilities.

The Corporation also incorporates credit valuation adjustments to appropriately reflect both its own nonperformance risk and the respective counterparty's nonperformance risk in the fair value measurements. In adjusting the fair value of its derivative financial instruments for the effect of nonperformance risk, the Corporation has considered the impact of netting and any applicable credit enhancements, such as collateral postings, thresholds, mutual puts, and guarantees.

While the Corporation has determined that the majority of the inputs used to value its derivative financial instruments fall within Level 2 of the fair value hierarchy, the credit valuation adjustments utilize Level 3 inputs, such as estimates of current credit spreads to evaluate the likelihood of default by itself and its counterparties. The Corporation has assessed the significance of the impact of the credit valuation adjustments on the overall valuation of its derivative positions as of March 31, 2018, and December 31, 2017, and has determined that the credit valuation adjustments are not significant to the overall valuation of its derivative financial instruments. Therefore, the Corporation has determined that the fair value measures of its derivative financial instruments in their entirety are classified within Level 2 of the fair value hierarchy.

Derivative Financial Instruments (Foreign Currency Exchange Forwards): The Corporation provides foreign currency exchange services to customers. In addition, the Corporation may enter into a foreign currency exchange forward to mitigate the exchange rate risk attached to the cash flows of a loan or as an offsetting contract to a forward entered into as a service to our customer. The valuation of the Corporation's foreign currency exchange forwards is determined using quoted prices of foreign currency exchange forwards with similar characteristics, with consideration given to the nature of the quote and the relationship of recently evidenced market activity to the fair value estimate, and are classified in Level 2 of the fair value hierarchy. See Note 10 for additional disclosures regarding the Corporation's foreign currency exchange forwards.

Derivative Financial Instruments (Commodity Contracts): The Corporation enters into commodity contracts to manage commercial customers' exposure to fluctuating commodity prices, for which the Corporation simultaneously enters into offsetting derivative financial instruments (i.e., mirror commodity contracts) with third parties to manage its risk associated with these financial instruments. The valuation of the Corporation's commodity contracts is determined using quoted prices of the underlying instruments, and are classified in Level 2 of the fair value hierarchy. See Note 10 for additional disclosures regarding the Corporation's commodity contracts.

The table below presents the Corporation’s financial instruments measured at fair value on a recurring basis as of March 31, 2018 and December 31, 2017, aggregated by the level in the fair value hierarchy within which those measurements fall.

	Fair Value Hierarchy	March 31, 2018	December 31, 2017
		($ in Thousands)	
Assets			
Investment securities available for sale			
U.S. Treasury securities	Level 1	$ 995	$ 996
Residential mortgage-related securities			
FNMA / FHLMC	Level 2	430,073	464,768
GNMA	Level 2	2,310,306	1,913,350
Private-label	Level 2	1,044	1,059
GNMA commercial mortgage-related securities	Level 2	1,448,369	1,513,277
FFELP asset backed securities	Level 2	290,300	145,176
Other equity securities	Level 1	1,599	1,632
Other debt securities	Level 2	3,188	3,188
Total investment securities available for sale	Level 1	2,594	2,628
Total investment securities available for sale	Level 2	4,483,281	4,040,818
Residential loans held for sale	Level 2	103,953	85,544
Commercial loans held for sale	Level 2	6,091	—
Interest rate-related instruments	Level 2	53,189	28,494
Foreign currency exchange forwards	Level 2	2,612	2,495
Interest rate products (designated as hedging instruments)	Level 2	258	—
Interest rate lock commitments to originate residential mortgage loans held for sale	Level 3	3,032	1,538
Commodity contracts	Level 2	47,089	38,686
Purchased options (time deposit)	Level 2	951	1,175
Liabilities			
Interest rate-related instruments	Level 2	$ 52,238	$ 28,035
Foreign currency exchange forwards	Level 2	2,484	2,339
Forward commitments to sell residential mortgage loans	Level 3	303	313
Commodity contracts	Level 2	45,525	37,286
Written options (time deposit)	Level 2	951	1,175

The table below presents a rollforward of the balance sheet amounts for the three months ended March 31, 2018 and the year ended December 31, 2017, for financial instruments measured on a recurring basis and classified within Level 3 of the fair value hierarchy.

	Investment Securities Available for Sale	Derivative Financial Instruments
	($ in Thousands)	
Balance December 31, 2016	$ 200	$ 3,114
Total net gains (losses) included in income		
Mortgage derivative gain (loss)	—	(1,889)
Transfer out of level 3 securities [(a)]	(200)	—
Balance December 31, 2017	$ —	$ 1,225
Total net gains (losses) included in income		
Mortgage derivative gain (loss)	—	1,501
Balance March 31, 2018	$ —	$ 2,726

(a) During the first quarter of 2017, the $200,000 level 3 investment security was transferred to level 2 based upon new pricing information.

For Level 3 assets and liabilities measured at fair value on a recurring basis as of March 31, 2018, the Corporation utilized the following valuation techniques and significant unobservable inputs.

Derivative Financial Instruments (Mortgage Derivative — Interest Rate Lock Commitments to Originate Residential Mortgage Loans Held for Sale): The fair value is determined by the change in value from each loan's rate lock date to the expected rate lock expiration date based on the underlying loan attributes, estimated closing ratios, and investor price matrix determined to be reasonably applicable to each loan commitment. The closing ratio calculation takes into consideration historical experience and loan-level attributes, particularly the change in the current interest rates from the time of initial rate lock. The closing ratio is periodically reviewed for reasonableness and reported to the Associated Mortgage Risk Management Committee. At March 31, 2018, the closing ratio was 85%.

Derivative Financial Instruments (Mortgage Derivative—Forward Commitments to Sell Mortgage Loans): Mortgage derivatives include forward commitments to deliver closed end residential mortgage loans into conforming Agency Mortgage Backed Securities (To be Announced, "TBA") or conforming Cash Forward sales. The fair value of such instruments is determined by the difference of current market prices for such traded instruments or available from forward cash delivery commitments and the original traded price for such commitments.

The Corporation also relies on an internal valuation model to estimate the fair value of its forward commitments to sell residential mortgage loans (i.e., an estimate of what the Corporation would receive or pay to terminate the forward delivery contract based on market prices for similar financial instruments), which includes matching specific terms and maturities of the forward commitments against applicable investor pricing available. While there are Level 2 and 3 inputs used in the valuation models, the Corporation has determined that the majority of the inputs significant in the valuation of both of the mortgage derivatives fall within Level 3 of the fair value hierarchy. See Note 10 for additional disclosure regarding the Corporation's mortgage derivatives.

Assets and Liabilities Measured at Fair Value on a Nonrecurring Basis

Following is a description of the valuation methodologies used for the Corporation's more significant instruments measured on a nonrecurring basis at the lower of amortized cost or estimated fair value, including the general classification of such instruments pursuant to the valuation hierarchy.

Commercial Loans Held for Sale: Loans held for sale are carried at the lower of cost or estimated fair value. The estimated fair value is based on a discounted cash flow analysis, which the Corporation classifies as a Level 2 nonrecurring fair value measurement.

Other Real Estate Owned: Certain other real estate owned, upon initial recognition, was re-measured and reported at fair value through a charge off to the allowance for loan losses based upon the estimated fair value of the other real estate owned, less estimated selling costs. The fair value of other real estate owned, upon initial recognition or subsequent impairment, was estimated using appraised values, which the Corporation classifies as a Level 2 nonrecurring fair value measurement.

For Level 3 assets and liabilities measured at fair value on a nonrecurring basis as of March 31, 2018, the Corporation utilized the following valuation techniques and significant unobservable inputs.

Impaired Loans: The Corporation considers a loan impaired when it is probable that the Corporation will be unable to collect all amounts due according to the original contractual terms of the note agreement, including both principal and interest. Management has determined that commercial and consumer loan relationships that have nonaccrual status or have had their terms restructured in a troubled debt restructuring meet this impaired loan definition. For individually evaluated impaired loans, the amount of impairment is based upon the present value of expected future cash flows discounted at the loan's effective interest rate, the estimated fair value of the underlying collateral for collateral-dependent loans, or the estimated liquidity of the note. See Note 7 for additional information regarding the Corporation's impaired loans.

Mortgage Servicing Rights: Mortgage servicing rights do not trade in an active, open market with readily observable prices. While sales of mortgage servicing rights do occur, the precise terms and conditions typically are not readily available to allow for a "quoted price for similar assets" comparison. Accordingly, the Corporation utilizes an independent valuation from a third party which uses a discounted cash flow model to estimate the fair value of its mortgage servicing rights. The valuation model incorporates prepayment assumptions to project mortgage servicing rights cash flows based on the current interest rate scenario, which is then discounted to estimate an expected fair value of the mortgage servicing rights. The valuation model considers portfolio characteristics of the underlying mortgages, contractually specified servicing fees, prepayment assumptions, discount rate assumptions, delinquency rates, late charges, other ancillary revenue, costs to service, and other economic factors. The Corporation periodically reviews and assesses the underlying inputs and assumptions used in the model. In addition, the Corporation compares its fair value estimates and assumptions to observable market data for mortgage servicing rights, where available, and to recent market activity and actual portfolio experience. Due to the nature of the valuation inputs, mortgage servicing rights are classified within Level 3 of the fair value hierarchy. The Corporation uses the amortization method (i.e., lower of amortized cost or estimated fair value measured on a nonrecurring basis), not fair value measurement accounting, for its mortgage servicing rights assets.

The discounted cash flow analyses that generate expected market prices utilize the observable characteristics of the mortgage servicing rights portfolio, as well as certain unobservable valuation parameters. The significant unobservable inputs used in the fair value measurement of the Corporation's mortgage servicing rights are the weighted average constant prepayment rate and weighted average discount rate. Significant increases (decreases) in any of those inputs in isolation could result in a significantly lower (higher) fair value measurement.

These parameter assumptions fall within a range that the Corporation, in consultation with an independent third party, believes purchasers of servicing would apply to such portfolios sold into the current secondary servicing market. Discussions are held with members from Treasury and the Community, Consumer, and Business segment to reconcile the fair value estimates and the key assumptions used by the respective parties in arriving at those estimates. The Associated Mortgage Risk Management Committee is responsible for providing control over the valuation methodology and key assumptions. To assess the reasonableness of the fair value measurement, the Corporation also compares the fair value and constant prepayment rate to a value calculated by an independent third party on an annual basis. See Note 8 for additional disclosure regarding the Corporation's mortgage servicing rights.

The table below presents the Corporation’s assets measured at fair value on a nonrecurring basis, aggregated by the level in the fair value hierarchy within which those measurements fall.

($ in Thousands)	Fair Value Hierarchy	Fair Value	Income Statement Category of Adjustment Recognized in Income	Adjustment Recognized in Income
March 31, 2018				
Assets				
Commercial loans held for sale[(a)]	Level 2	$ 6,091	Provision for credit losses	$ —
Impaired loans[(b)]	Level 3	74,038	Provision for credit losses[(c)]	(14,518)
Other real estate owned	Level 2	2,088	Foreclosure / OREO expense, net	(553)
Mortgage servicing rights	Level 3	81,810	Mortgage banking, net	474
December 31, 2017				
Assets				
Impaired loans[(b)]	Level 3	$ 92,534	Provision for credit losses[(c)]	$ (32,159)
Other real estate owned	Level 2	2,604	Foreclosure / OREO expense, net	(939)
Mortgage servicing rights	Level 3	64,387	Mortgage banking, net	(175)

(a) Commercial loans held for sale are carried at the lower of cost or estimated fair value. When the cost is less than or equal to the estimated fair value, no adjustment is recognized in income.

(b) Represents individually evaluated impaired loans, net of the related allowance for loan losses.

(c) Represents provision for credit losses on individually evaluated impaired loans.

Certain nonfinancial assets and nonfinancial liabilities measured at fair value on a nonrecurring basis include the fair value analysis in the second step of a goodwill impairment test, and intangible assets and other nonfinancial long-lived assets measured at fair value for impairment assessment.

The Corporation's significant Level 3 measurements which employ unobservable inputs that are readily quantifiable pertain to mortgage servicing rights and impaired loans.

The table below presents information about these inputs and further discussion is found above.

March 31, 2018	Valuation Technique	Significant Unobservable Input	Weighted Average Input Applied
Mortgage servicing rights	Discounted cash flow	Discount rate	11%
Mortgage servicing rights	Discounted cash flow	Constant prepayment rate	9%
Impaired Loans	Appraisals / Discounted cash flow	Collateral / Discount factor	28%

Fair Value of Financial Instruments

The Corporation is required to disclose estimated fair values for its financial instruments.

Fair value estimates are set forth below for the Corporation's financial instruments.

		March 31, 2018		December 31, 2017	
	Fair Value Hierarchy Level	Carrying Amount	Fair Value	Carrying Amount	Fair Value
		($ in Thousands)			
Financial assets					
Cash and due from banks	Level 1	$ 328,260	$ 328,260	$ 483,666	$ 483,666
Interest-bearing deposits in other financial institutions	Level 1	94,918	94,918	199,702	199,702
Federal funds sold and securities purchased under agreements to resell	Level 1	10,000	10,000	32,650	32,650
Investment securities held to maturity	Level 2	2,443,203	2,407,197	2,282,853	2,283,574
Investment securities available for sale	Level 1	2,594	2,594	2,628	2,628
Investment securities available for sale	Level 2	4,483,281	4,483,281	4,040,818	4,040,818
FHLB and Federal Reserve Bank stocks	Level 2	233,216	233,216	165,331	165,331
Residential loans held for sale	Level 2	103,953	103,953	85,544	85,544
Commercial loans held for sale	Level 2	6,091	6,091	—	—
Loans, net	Level 3	22,553,433	22,195,415	20,519,111	20,314,984
Bank and corporate owned life insurance	Level 2	657,841	657,841	591,057	591,057
Derivatives (trading and other assets)	Level 2	104,099	104,099	70,850	70,850
Derivatives (trading and other assets)	Level 3	3,032	3,032	1,538	1,538
Financial liabilities					
Noninterest-bearing demand, savings, interest-bearing demand, and money market accounts	Level 3	$ 21,148,230	$ 21,148,230	$ 20,436,893	$ 20,436,893
Brokered CDs and other time deposits	Level 2	2,677,372	2,677,372	2,349,069	2,349,069
Short-term funding	Level 2	2,146,374	2,146,374	676,282	676,282
Long-term funding	Level 2	3,233,338	3,242,517	3,397,450	3,411,368
Standby letters of credit[(a)]	Level 2	2,468	2,468	2,402	2,402
Derivatives (trading and other liabilities)	Level 2	101,198	101,198	68,835	68,835
Derivatives (trading and other liabilities)	Level 3	303	303	313	313

(a) The commitment on standby letters of credit was $254 million and $235 million at March 31, 2018 and December 31, 2017, respectively. See Note 12 for additional information on the standby letters of credit and for information on the fair value of lending-related commitments.

Note 14 Retirement Plans

The Corporation has a noncontributory defined benefit retirement plan (the Retirement Account Plan ("RAP")) covering substantially all employees who meet participation requirements. The benefits are based primarily on years of service and the employee's compensation paid. Employees of acquired entities generally participate in the RAP after consummation of the business combinations. Any retirement plans of acquired entities are typically merged into the RAP after completion of the mergers, and credit is usually given to employees for years of service at the acquired institution for vesting and eligibility purposes.

The Corporation also provides legacy healthcare access to a limited group of retired employees from a previous acquisition in the Postretirement Plan. There are no other active retiree healthcare plans.

Bank Mutual was acquired on February 1, 2018. The Bank Mutual Pension Plan has not yet been merged into the Corporation's Retirement Account Plan. However, Bank Mutual's Postretirement Plan was merged into the Corporation's Postretirement Plan during the first quarter of 2018.

The components of net periodic benefit cost for the RAP, Bank Mutual Pension Plan, and \Postretirement Plan for three months ended March 31, 2018 and 2017 were as follows.

	Three Months Ended March 31,	
	2018	2017
	($ in Thousands)	
Components of Net Periodic Benefit Cost		
RAP		
Service cost	$ 1,893	$ 1,781
Interest cost	1,660	1,756
Expected return on plan assets	(4,755)	(4,881)
Amortization of prior service cost	(19)	(19)
Amortization of actuarial loss	463	488
Total net pension cost	$ (759)	$ (875)
Bank Mutual Pension Plan (a)		
Interest cost	$ 433	N/A
Expected return on plan assets	(532)	N/A
Total net pension cost	$ (99)	N/A
Postretirement Plan (b)		
Interest cost	$ 26	$ 24
Amortization of prior service cost	(19)	(19)
Amortization of actuarial loss	2	—
Total net periodic benefit cost	$ 9	$ 5

(a) The reported figures for first quarter 2018 only include two months of expense due to the timing of the Bank Mutual acquisition. See Note 2 for additional information on the Bank Mutual acquisition.

(b) The portion of the Postretirement Plan attributed to Bank Mutual's Postretirement Plan only includes two months of expense due to the timing of the Bank Mutual acquisition. See Note 2 for additional information on the Bank Mutual acquisition.

The components of net periodic benefit cost other than the service cost component are included in the line item "other" of noninterest expense in the Consolidated Statements of Income.

Note 15 Segment Reporting

The Corporation utilizes a risk-based internal profitability measurement system to provide strategic business unit reporting. The profitability measurement system is based on internal management methodologies designed to produce consistent results and reflect the underlying economics of the units. Certain strategic business units have been combined for segment information reporting purposes where the nature of the products and services, the type of customer and the distribution of those products and services are similar. The three reportable segments are Corporate and Commercial Specialty; Community, Consumer, and Business; and Risk Management and Shared Services. The financial information of the Corporation's segments has been compiled utilizing the accounting policies described in the Corporation's 2017 Annual Report on Form 10-K, with certain exceptions. The more significant of these exceptions are described herein.

The Corporation allocates net interest income using an internal funds transfer pricing ("FTP") methodology that charges users of funds (assets) and credits providers of funds (liabilities, primarily deposits) based on the maturity, prepayment and / or repricing characteristics of the assets and liabilities. The net effect of this allocation is recorded in the Risk Management and Shared Services segment.

A credit provision is allocated to segments based on the expected long-term annual net charge off rates attributable to the credit risk of loans managed by the segment during the period. In contrast, the level of the consolidated provision for credit losses is determined based on an incurred loss model using the methodologies described in the Corporation's 2017 Annual Report on Form 10-K to assess the overall appropriateness of the allowance for loan losses. The net effect of the credit provision is recorded in Risk Management and Shared Services. Indirect expenses incurred by certain centralized support areas are allocated to segments based on actual usage (for example, volume measurements) and other criteria. Certain types of administrative expense and bank-wide expense accruals (including amortization of core deposit and other intangible assets associated with acquisitions) are generally not allocated to segments. Income taxes are allocated to segments based on the Corporation's estimated effective tax rate, with certain segments adjusted for any tax-exempt income or non-deductible expenses. Equity is allocated to the segments based on regulatory capital requirements and in proportion to an assessment of the inherent risks associated with the business of the segment (including interest, credit and operating risk).

The management accounting policies and processes utilized in compiling segment financial information are highly subjective and, unlike financial accounting, are not based on authoritative guidance similar to U.S. generally accepted accounting principles. As a result, reported segments and the financial information of the reported segments are not necessarily comparable with similar information reported by other financial institutions. Furthermore, changes in management structure or allocation methodologies and procedures may result in changes in previously reported segment financial data.

A brief description of each business segment is presented below. A more in-depth discussion of these segments can be found in the Segment Reporting footnote in the Corporation's 2017 Annual Report on Form 10-K.

The Corporate and Commercial Specialty segment serves a wide range of customers including larger businesses, developers, not-for-profits, municipalities, and financial institutions. The Community, Consumer, and Business segment serves individuals, as well as small and mid-sized businesses. The Risk Management and Shared Services segment includes key shared operational functions and also includes residual revenue and expenses, representing the difference between actual amounts incurred and the amounts allocated to operating segments, including interest rate risk residuals (FTP mismatches) and credit risk and provision residuals (long-term credit charge mismatches). In addition, the Risk Management and Shared Services segment includes certain unallocated expenses related to Bank Mutual's shared services and operations prior to system conversion in late June 2018.

Information about the Corporation's segments is presented below.

Segment Income Statement Data

($ in Thousands)	Corporate and Commercial Specialty	Community, Consumer, and Business	Risk Management and Shared Services	Consolidated Total
Three Months Ended March 31, 2018				
Net interest income	$ 95,958	$ 103,543	$ 10,370	$ 209,871
Noninterest income	12,683	74,036	3,661	90,380
Total revenue	108,641	177,579	14,031	300,251
Credit provision[(a)]	10,598	4,966	(15,563)	—
Noninterest expense	39,250	127,144	46,571	212,965
Income (loss) before income taxes	58,793	45,469	(16,977)	87,285
Income tax expense (benefit)	11,426	9,549	(3,146)	17,829
Net income (loss)	$ 47,367	$ 35,920	$ (13,831)	$ 69,456
Return on average allocated capital (ROCET1)[(b)]	16.4%	23.0%	(11.2)%	11.4%
Three Months Ended March 31, 2017				
Net interest income	$ 89,388	$ 88,928	$ 1,958	$ 180,274
Noninterest income	11,993	64,870	2,968	79,831
Total revenue	101,381	153,798	4,926	260,105
Credit provision[(a)]	11,580	4,507	(7,087)	9,000
Noninterest expense	37,479	116,097	20,115	173,691
Income (loss) before income taxes	52,322	33,194	(8,102)	77,414
Income tax expense (benefit)	17,649	11,618	(8,123)	21,144
Net income	$ 34,673	$ 21,576	$ 21	$ 56,270
Return on average allocated capital (ROCET1)[(b)]	12.6%	15.2%	(2.5)%	10.6%

Segment Balance Sheet Data

($ in Thousands)	Corporate and Commercial Specialty	Community, Consumer, and Business	Risk Management and Shared Services	Consolidated Total
Three Months Ended March 31, 2018				
Average earning assets	$ 11,389,211	$ 10,137,899	$ 7,755,022	$ 29,282,132
Average loans	11,378,390	10,133,202	566,936	22,078,529
Average deposits	8,057,246	13,096,782	2,496,870	23,650,898
Average allocated capital (CET1)[(b)]	$ 1,171,038	$ 632,723	$ 586,172	$ 2,389,933
Three Months Ended March 31, 2017				
Average earning assets	$ 10,759,811	$ 9,130,457	$ 6,449,046	$ 26,339,314
Average loans	10,753,314	9,128,656	190,755	20,072,725
Average deposits	6,420,401	11,337,064	3,708,257	21,465,722
Average allocated capital (CET1)[(b)]	$ 1,114,610	$ 576,464	$ 370,675	$ 2,061,749

(a) The consolidated credit provision is equal to the actual reported provision for credit losses.

(b) The Federal Reserve establishes capital adequacy requirements for the Corporation, including common equity Tier 1. For segment reporting purposes, the ROCET1 reflects return on average allocated common equity Tier 1. The ROCET1 for the Risk Management and Shared Services segment and the Consolidated Total is inclusive of the annualized effect of the preferred stock dividends.

Note 16 Accumulated Other Comprehensive Income (Loss)

The following tables summarize the components of accumulated other comprehensive income (loss) at March 31, 2018 and 2017, changes during the three month periods then ended, and reclassifications out of accumulated other comprehensive income (loss) during the three month periods ended March 31, 2018 and 2017, respectively.

($ in Thousands)	Investment Securities Available For Sale	Defined Benefit Pension and Post Retirement Obligations	Accumulated Other Comprehensive Income (Loss)
Balance January 1, 2018	$ (38,453)	$ (24,305)	$ (62,758)
Other comprehensive income (loss) before reclassifications	(41,834)	—	(41,834)
Amounts reclassified from accumulated other comprehensive income (loss)			
Personnel expense	—	(38)	(38)
Other expense	—	465	465
Adjustment for adoption of ASU 2016-01	(84)	—	(84)
Adjustment for adoption of ASU 2018-02	(8,419)	(5,235)	(13,654)
Interest income (amortization of net unrealized losses (gains) on available for sale securities transferred to held to maturity securities)	(297)	—	(297)
Income tax (expense) benefit	10,635	(107)	10,528
Net other comprehensive income (loss) during period	(40,000)	(4,915)	(44,915)
Balance March 31, 2018	$ (78,453)	$ (29,220)	$ (107,673)
Balance January 1, 2017	$ (20,079)	$ (34,600)	$ (54,679)
Other comprehensive income (loss) before reclassifications	(2,112)	—	(2,112)
Amounts reclassified from accumulated other comprehensive income (loss)			
Investment securities gain (loss), net	—	—	—
Personnel expense	—	(38)	(38)
Other expense	—	488	488
Interest income (amortization of net unrealized losses (gains) on available for sale securities transferred to held to maturity securities)	(1,027)	—	(1,027)
Income tax (expense) benefit	1,195	(171)	1,024
Net other comprehensive income (loss) during period	(1,944)	279	(1,665)
Balance March 31, 2017	$ (22,023)	$ (34,321)	$ (56,344)

Note 17 Revenues

On January 1, 2018, the Corporation adopted Topic 606 using the modified retrospective method. As stated in Note 3, the implementation of the new standard had an immaterial impact to the Corporation. Results for reporting periods beginning after January 1, 2018 are presented under Topic 606.

Revenue is recognized when obligations under the terms of a contract with our customer are satisfied. Revenue is measured as the amount of consideration we expect to receive in exchange for transferring goods or providing services. We do not have any material significant payment terms as payment is received at or shortly after the satisfaction of the performance obligation.

The following table disaggregates our revenue by major source for the three months ended March 31, 2018 and March 31, 2017.

Three Months Ended March 31, 2018

($ in Thousands)	Corporate and Commercial Specialty	Community, Consumer, and Business	Risk Management and Shared Services	Consolidated Total
Insurance commissions and fees	$ —	$ 22,624	$ 24	$ 22,648
Service charges and deposit account fees	4,225	12,183	12	16,420
Card-based and loan fees[(1)]	315	9,529	25	9,869
Trust and asset management fees	—	13,369	—	13,369
Brokerage commissions and fees	—	7,032	241	7,273
Other revenue	655	2,461	30	3,146
Noninterest Income (in-scope of Topic 606)	$ 5,195	$ 67,198	$ 332	$ 72,725
Noninterest Income (out-of-scope of Topic 606)	7,488	6,838	3,329	17,655
Total Noninterest Income	$ 12,683	$ 74,036	$ 3,661	$ 90,380

(1) Loan fees are out-of-scope of Topic 606.

Three Months Ended March 31, 2017

($ in Thousands)	Corporate and Commercial Specialty	Community, Consumer, and Business	Risk Management and Shared Services	Consolidated Total
Insurance commissions and fees	$ —	$ 21,620	$ —	$ 21,620
Service charges and deposit account fees	4,441	11,889	26	16,356
Card-based and loan fees[(1)]	272	8,144	5	8,421
Trust and asset management fees	—	11,935	—	11,935
Brokerage commissions and fees	—	4,333	—	4,333
Other revenue	44	2,119	53	2,216
Noninterest Income (in-scope of Topic 606)	$ 4,757	$ 60,040	$ 84	$ 64,881
Noninterest Income (out-of-scope of Topic 606)	7,236	4,830	2,884	14,950
Total Noninterest Income	$ 11,993	$ 64,870	$ 2,968	$ 79,831

(1) Loan fees are out-of-scope of Topic 606.

During the first quarter of 2018, the Corporation acquired Bank Mutual. This acquisition resulted in increased service charges and deposit account fees and card-based and loan fees. In addition, the Corporation acquired Diversified Investment Solutions and Whitnell & Co. since the first quarter of 2017, which resulted in increased trust and asset management fees and brokerage commissions and fees.

Below is a listing of performance obligations for our main revenue streams.

Revenue Stream	Noninterest income in-scope of Topic 606
Insurance commissions and fees	The Corporation's insurance revenue has two distinct performance obligations. The first performance obligation is the selling of the policy as an agent for the carrier. This performance obligation is satisfied upon binding of the policy. The second performance obligation is the ongoing servicing of the policy which is satisfied over the life of the policy. For employee benefits, the payment is typically received monthly. For property and casualty, payments can vary, but are typically received at, or in advance, of the policy period.
Service charges and deposit account fees	Service charges on deposit accounts consist of monthly service fees (i.e. business analysis fees and consumer service charges) and other deposit account related fees. The Corporation's performance obligation for monthly service fees is generally satisfied, and the related revenue recognized, over the period in which the service is provided. Other deposit account related fees are largely transactional based, and therefore, the Corporation's performance obligation is satisfied, and related revenue recognized, at a point in time. Payment for service charges on deposit accounts is primarily received immediately or in the following month through a direct charge to customers' accounts.
Card-based and loan fees[(1)]	Card-based and loan fees are primarily comprised of debit and credit card income, ATM fees, and merchant services income. Debit and credit card income is primarily comprised of interchange fees earned whenever the Corporation's debit and credit cards are processed through card payment networks. ATM and merchant fees are largely transactional based, and therefore, the Corporation's performance obligation is satisfied, and related revenue recognized, at a point in time. Payment is typically received immediately or in the following month.
Trust and asset management fees	Trust and asset management income is primarily comprised of fees earned from the management and administration of trusts and other customer assets. The Corporation's performance obligation is generally satisfied over time and the resulting fees are recognized monthly, based upon the month-end market value of the assets under management and the applicable fee rate. Payment is generally received a few days after month end through a direct charge to customers' accounts. The Corporation's performance obligation for these transactional-based services is generally satisfied, and related revenue recognized, at a point in time (i.e., as incurred). Payment is received shortly after services are rendered.
Brokerage commissions and fees	Brokerage commissions and fees primarily consists of investment advisory, brokerage, retirement services, and annuities. The Corporation's performance obligation for investment advisory services and retirement services is generally satisfied, and the related revenue recognized, over the period in which the services are provided. The performance obligation for annuities is satisfied upon sale of the annuity, and therefore, the related revenue is primarily recognized at the time of sale. Payment for these services are typically received immediately or in advance of the service.

(1) Loan fees are out-of-scope of Topic 606.

Arrangements with Multiple Performance Obligations

Our contracts with customers may include multiple performance obligations. For such arrangements, we allocate revenue to each performance obligation based on its relative standalone selling price. We generally determine standalone selling prices based on the expected cost plus margin.

Practical Expedients

We do not disclose the value of unsatisfied performance obligations for contracts with an original expected length of one year or less.

Using the practical expedient, for contracts with a term of one year or less, the Corporation recognizes incremental costs of obtaining those contracts as an expense when incurred.

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

Special Note Regarding Forward-Looking Statements

This report contains statements that may constitute forward-looking statements within the meaning of the safe-harbor provisions for forward-looking statements contained in the Private Securities Litigation Reform Act of 1995, such as statements other than historical facts contained or incorporated by reference into this report. These forward-looking statements include statements with respect to the Corporation's financial condition, results of operations, plans, objectives, future performance and business, including statements preceded by, followed by or that include the words "believes," "expects," or "anticipates," references to estimates or similar expressions. Future filings by the Corporation with the Securities and Exchange Commission ("SEC"), and future statements other than historical facts contained in written material, press releases and oral statements issued by, or on behalf of the Corporation may also constitute forward-looking statements.

All forward-looking statements contained in this report or which may be contained in future statements made for or on behalf of the Corporation are based upon information available at the time the statement is made and the Corporation assumes no obligation to update any forward-looking statements, except as required by federal securities law. Forward-looking statements are subject to significant risks and uncertainties, and the Corporation's actual results may differ materially from the expected results discussed in such forward-looking statements. Factors that might cause actual results to differ from the results discussed in forward-looking statements include, but are not limited to, the risk factors in Item 1A, Risk Factors, in the Corporation's Annual Report on Form 10-K for the year ended December 31, 2017, and as may be described from time to time in the Corporation's subsequent SEC filings.

Overview

The following discussion and analysis is presented to assist in the understanding and evaluation of the Corporation's financial condition and results of operations. It is intended to complement the unaudited consolidated financial statements, footnotes, and supplemental financial data appearing elsewhere in this Quarterly Report on Form 10-Q and should be read in conjunction therewith. Management continually evaluates strategic acquisition opportunities and other various strategic alternatives that could involve the sale or acquisition of branches or other assets, or the consolidation or creation of subsidiaries.

Within the tables presented, certain columns and rows may not sum due to the use of rounded numbers for disclosure purposes.

Performance Summary

- Average loans of 22.1 billion increased $2.0 billion, or 10%, from the first three months of 2017. Average deposits of $23.7 billion increased $2.2 billion, or 10%, from the first three months of 2017. For the remainder of 2018, the Corporation expects 1% to 2% quarterly loan growth and to maintain the loan to deposit ratio under 100%.
- Net interest income of $210 million increased $30 million, or 16%, from the first three months of 2017. Net interest margin was 2.92%, compared to 2.84% for the first three months of 2017. For the remainder of 2018, the Corporation expects an improving year over year net interest margin.
- Provision for credit losses was $0, down from $9 million the first three months of 2017. For the remainder of 2018, the Corporation expects the provision for loan losses will change based on changes in risk grade or other indicators of credit quality, and loan volume.
- Noninterest income of $90 million was up $11 million, or 13% from the first three months of 2017. For 2018, the Corporation expects noninterest income of approximately $365 million to $375 million.
- Noninterest expense of $213 million, including $21 million of acquisition related costs, was up $39 million, or 23% compared to the first three months 2017. For 2018, the Corporation expects noninterest expense to be approximately $825 million, which includes the $40 million of expected acquisition related costs.

Table 1 Summary Results of Operations: Trends

	1Q18	4Q17	3Q17	2Q17	1Q17
	($ in Thousands, except per share data)				
Net income	$ 69,456	$ 50,010	$ 65,001	$ 57,983	$ 56,270
Net income available to common equity	67,117	47,671	62,662	55,644	53,940
Earnings per common share - basic	0.41	0.31	0.41	0.36	0.36
Earnings per common share - diluted	0.40	0.31	0.41	0.36	0.35
Effective tax rate	20.43%	44.34%	30.55%	25.58%	27.31%

Income Statement Analysis

Net Interest Income

Table 2 Net Interest Income Analysis

	Quarter ended								
	March 31, 2018			December 31, 2017			March 31, 2017		
	Average Balance	Interest Income / Expense	Average Yield / Rate	Average Balance	Interest Income / Expense	Average Yield / Rate	Average Balance	Interest Income / Expense	Average Yield / Rate
	($ in Thousands)								
Assets									
Earning assets									
Loans [(1) (2) (3)]									
Commercial and business lending	$ 7,313,621	$ 74,706	4.14%	$ 7,178,384	$ 68,440	3.79%	$ 7,199,481	$ 60,680	3.42%
Commercial real estate lending	5,399,429	61,504	4.62%	4,873,889	49,744	4.05%	4,999,994	45,135	3.66%
Total commercial	12,713,050	136,210	4.34%	12,052,273	118,184	3.89%	12,199,475	105,815	3.52%
Residential mortgage	8,010,381	66,402	3.32%	7,546,288	59,979	3.18%	6,564,600	53,306	3.25%
Retail	1,355,098	17,852	5.29%	1,265,055	16,853	5.31%	1,308,650	15,450	4.74%
Total loans	22,078,529	220,464	4.03%	20,863,616	195,016	3.72%	20,072,725	174,571	3.51%
Investment securities									
Taxable	5,576,826	30,104	2.16%	4,986,279	25,614	2.05%	4,830,421	23,475	1.94%
Tax-exempt [(1)]	1,312,913	11,613	3.54%	1,206,078	12,909	4.28%	1,138,010	12,438	4.37%
Other short-term investments	313,864	2,177	2.80%	382,762	2,138	2.22%	298,158	1,536	2.08%
Investments and other	7,203,603	43,894	2.44%	6,575,119	40,661	2.47%	6,266,589	37,449	2.39%
Total earning assets	29,282,132	$ 264,358	3.64%	27,438,735	$ 235,677	3.42%	26,339,314	$ 212,020	3.24%
Other assets, net	2,884,248			2,542,484			2,441,013		
Total assets	$ 32,166,380			$ 29,981,219			$ 28,780,327		
Liabilities and Stockholders' equity									
Interest-bearing liabilities									
Interest-bearing deposits									
Savings	$ 1,722,665	$ 202	0.05%	$ 1,554,639	$ 209	0.05%	$ 1,465,811	$ 188	0.05%
Interest-bearing demand	4,712,115	8,553	0.74%	4,462,725	7,462	0.66%	4,251,357	4,210	0.40%
Money market	9,415,869	17,827	0.77%	8,743,614	14,274	0.65%	9,169,141	9,388	0.42%
Time deposits	2,715,292	6,830	1.02%	2,354,828	6,198	1.04%	1,613,331	3,138	0.79%
Total interest-bearing deposits	18,565,941	33,412	0.73%	17,115,806	28,143	0.65%	16,499,640	16,924	0.42%
Federal funds purchased and securities sold under agreements to repurchase	275,578	522	0.77%	279,817	420	0.60%	495,311	515	0.42%
Other short-term funding	884,633	3,005	1.38%	600,492	1,731	1.14%	683,306	1,080	0.64%
Total short-term funding	1,160,211	3,527	1.23%	880,309	2,151	0.97%	1,178,617	1,595	0.55%
Long-term funding	3,422,947	14,722	1.74%	3,332,140	13,023	1.55%	2,761,850	7,996	1.17%
Total short and long-term funding	4,583,158	18,249	1.61%	4,212,449	15,174	1.43%	3,940,467	9,591	0.98%
Total interest-bearing liabilities	23,149,099	$ 51,661	0.90%	21,328,255	$ 43,317	0.81%	20,440,107	$ 26,515	0.52%
Noninterest-bearing demand deposits	5,084,957			5,133,977			4,966,082		
Other liabilities	395,008			302,981			250,747		
Stockholders' equity	3,537,316			3,216,006			3,123,391		
Total liabilities and stockholders' equity	$ 32,166,380			$ 29,981,219			$ 28,780,327		
Interest rate spread			2.74%			2.61%			2.72%
Net free funds			0.18%			0.18%			0.12%
Fully tax-equivalent net interest income and net interest margin		$ 212,697	2.92%		$ 192,360	2.79%		$ 185,505	2.84%
Fully tax-equivalent adjustment		2,826			5,355			5,231	
Net interest income		$ 209,871			$ 187,005			$ 180,274	
Bank Mutual net accreted purchase loan discount		$ 6,076			$ —			$ —	

(1) Beginning in 2018, the yield on tax-exempt loans and securities is computed on a fully tax-equivalent basis using a tax rate of 21% and is net of the effects of certain disallowed interest deductions. Prior to 2018, the yield on tax-exempt loans and securities was computed on a fully tax-equivalent basis using a tax rate of 35% and was net of the effects of certain disallowed interest deductions.

(2) Nonaccrual loans and loans held for sale have been included in the average balances.

(3) Interest income includes amortization of net deferred loan origination costs and net accreted purchase loan discount.

Notable Contributions to the Change in Net Interest Income

- Net interest income in the consolidated statements of income (which excludes the fully tax-equivalent adjustment) was $210 million for the first three months of 2018 compared to $180 million for the first three months of 2017. The primary reason for increased net interest income and earning assets from last year was the acquisition of Bank Mutual in February 2018. See sections Interest Rate Risk and Quantitative and Qualitative Disclosures about Market Risk, for a discussion of interest rate risk and market risk.

- Fully tax-equivalent net interest income of $213 million for the first three months of 2018 was $27 million higher than the first three months of 2017.

- Accreted income from the acquisition of the Bank Mutual loan portfolio contributed $6 million to net interest income for the first quarter of 2018. Approximately $2 million of the accreted income was from prepayments and other adjustments.

- Average earning assets of $29.3 billion for the first three months of 2018 were $2.9 billion, or 11%, higher than the first three months of 2017. Average loans increased $2.0 billion, or 10% primarily due to an increase of $1.4 billion, or 22% in residential mortgage loans.

- Average interest-bearing liabilities of $23.1 billion for the first three months of 2018 were up $2.7 billion, or 13% versus the first three months of 2017. On average, interest-bearing deposits increased $2.1 billion and long-term funding increased $661 million from the first three months of 2017.

- The net interest margin for the first three months of 2018 was 2.92%, compared to 2.84% for the first three months of 2017.

- The cost of interest-bearing liabilities was 0.90% for the first three months of 2018, which was 38 bps higher than the first three months of 2017. The increase was primarily due to a 31 bp increase in the cost of average interest-bearing deposits (to 0.73%) and a 68 bp increase in the cost of short-term funding (to 1.23%), both primarily due to increases in the Federal Reserve interest rate.

- The Federal Reserve increased the targeted federal funds rate on March 21, 2018, to a range of 1.50% to 1.75% which compares to a range of 0.75% to 1.00% at the end of the first quarter of 2017. The Federal Reserve has indicated that it expects gradual increases in the Federal Funds rate. However, the timing and magnitude of any such increases are uncertain and will depend on domestic and global economic conditions.

Provision for Credit Losses

There was no provision for credit losses (which includes the provision for loan losses and the provision for unfunded commitments) for the three months ended March 31, 2018, compared to $9 million for the three months ended March 31, 2017. Net charge offs were $9 million (representing 0.17% of average loans) for the three months ended March 31, 2018, compared to $6 million (representing 0.11% of average loans) for the three months ended March 31, 2017. The ratio of the allowance for loan losses to total loans was 1.13% for March 31, 2018 and 1.40% for March 31, 2017.

The provision for credit losses is predominantly a function of the Corporation's reserving methodology and judgments as to other qualitative and quantitative factors used to determine the appropriate level of the allowance for loan losses and the allowance for unfunded commitments, which focuses on changes in the size and character of the loan portfolio, changes in levels of impaired and other nonaccrual loans, historical losses and delinquencies in each portfolio category, the level of loans sold or transferred to held for sale, the risk inherent in specific loans, concentrations of loans to specific borrowers or industries, existing economic conditions, the fair value of underlying collateral, and other factors which could affect potential credit losses. See additional discussion under sections, Loans, Credit Risk, Nonperforming Assets, and Allowance for Credit Losses.

Noninterest Income

Table 3 Noninterest Income

($ in Thousands)	1Q18	4Q17	3Q17	2Q17	1Q17	1Q18 Change vs 4Q17	1Q18 Change vs 1Q17
Insurance commissions and fees	$ 22,648	$ 19,186	$ 19,815	$ 20,853	$ 21,620	18 %	5 %
Service charges and deposit account fees	16,420	15,773	16,268	16,030	16,356	4 %	— %
Card-based and loan fees	13,422	13,840	12,619	13,764	12,465	(3)%	8 %
Trust and asset management fees	13,369	13,125	12,785	12,346	11,935	2 %	12 %
Brokerage commissions and fees	7,273	6,864	4,392	4,346	4,333	6 %	68 %
Total core fee-based revenue	73,132	68,788	65,879	67,339	66,709	6 %	10 %
Mortgage banking income	8,219	5,507	9,147	7,692	7,273	49 %	13 %
Mortgage servicing rights (expense)	1,849	2,337	2,563	2,665	2,694	(21)%	(31)%
Mortgage banking, net	6,370	3,169	6,585	5,027	4,579	101 %	39 %
Capital markets, net	5,306	7,107	4,610	4,042	3,883	(25)%	37 %
Bank and corporate owned life insurance	3,187	3,156	6,580	3,899	2,615	1 %	22 %
Other	2,492	2,777	2,254	2,213	2,279	(10)%	9 %
Subtotal	90,487	84,997	85,908	82,520	80,065	6 %	13 %
Asset gains(losses), net	(107)	(528)	(16)	(466)	(234)	(80)%	(54)%
Investment securities gains(losses), net	—	75	3	356	—	(100)%	N/M
Total noninterest income	$ 90,380	$ 84,544	$ 85,895	$ 82,410	$ 79,831	7 %	13 %
Mortgage loans originated for sale during period	$ 197,603	$ 249,222	$ 245,851	$ 119,004	$ 101,280	(21)%	95 %
Mortgage loan settlements during period	$ 187,624	$ 268,254	$ 187,568	$ 167,550	$ 196,578	(30)%	(5)%
Assets under management, at market value [(a)]	$ 10,540	$ 10,555	$ 9,243	$ 8,997	$ 8,716	0%	21 %

N/M = Not Meaningful
(a) $ in millions. Excludes assets held in brokerage firms

Notable Contributions to the Change in Noninterest Income

- Fee-based revenue was $73 million, an increase of $6 million (10%) compared to the first three months of 2017. Within fee based revenue, brokerage commissions and fees increased $3 million (68%), primarily due to the acquisition of Whitnell & Co in the fourth quarter of 2017. In addition, trust and asset management fees increased $1 million (12%), primarily due to an increase in assets under management.
- Net mortgage banking income for the first three months of 2018 was $6 million, up $2 million (39%) from the first three months of 2017, primarily due to the Corporation's strategy to hold mortgages on balance sheet during the first quarter of 2017.

Noninterest Expense

Table 4 Noninterest Expense

($ in Thousands)	1Q18	4Q17	3Q17	2Q17	1Q17	1Q18 Change vs 4Q17	1Q18 Change vs 1Q17
Personnel[(2)]	$ 117,685	$ 107,031	$ 108,098	$ 107,066	$ 106,782	10 %	10 %
Occupancy	15,357	13,497	12,294	12,832	15,219	14 %	1 %
Technology	17,715	17,878	15,233	15,473	14,420	(1)%	23 %
Equipment	5,556	5,250	5,232	5,234	5,485	6 %	1 %
Business development and advertising	6,693	8,195	7,764	7,152	5,835	(18)%	15 %
Legal and professional	5,413	6,384	6,248	5,711	4,166	(15)%	30 %
Card Issuance and loan costs	3,304	2,836	3,330	2,974	2,620	17 %	26 %
Foreclosure / OREO expense, net	723	1,285	906	1,182	1,505	(44)%	(52)%
FDIC assessment	8,250	7,500	7,800	8,000	8,000	10 %	3 %
Other intangible amortization	1,525	500	450	496	513	205 %	197 %
Acquisition related costs [(1)]	20,605	—	—	—	—	N/M	N/M
Other[(2)]	10,140	11,343	10,072	10,196	9,146	(11)%	11 %
Total noninterest expense	$ 212,965	$ 181,699	$ 177,427	$ 176,316	$ 173,691	17 %	23 %

N/M = Not Meaningful
(1) Includes Bank Mutual acquisition-related costs only.
(2) During the first quarter of 2018, the Corporation adopted a new accounting standard related to the presentation of net periodic pension cost and net periodic postretirement benefit cost which required the disaggregation of the service cost component from the other components of net benefit cost and net periodic postretirement benefit cost. Under this new accounting standard, the other components of net benefit cost and net periodic postretirement benefit cost were reclassified from personnel expense to other noninterest expense. All prior periods have been restated to reflect this change in presentation.

Notable Contributions to the Change in Noninterest Expense

- Personnel expense (which includes salary-related expenses and fringe benefit expenses) was $118 million for the first three months of 2018, up $11 million (10%) from the first three months of 2017, primarily driven by the additional cost of Bank Mutual staff.
- All other nonpersonnel noninterest expense on a combined basis was $95 million, up $25 million compared to the first three months of 2017. The increase was primarily driven by $21 million of acquisition related costs pertaining to Bank Mutual. In addition, technology expense increased $3 million (23%) from the first three months of 2017, driven by investments in technology solutions that meet evolving customer needs and improve operational efficiency.

Income Taxes

The Corporation recognized income tax expense of $18 million for the three months ended March 31, 2018, compared to income tax expense of $21 million for the three months ended March 31, 2017. The change in income tax expense was due primarily to a decrease in federal corporate income tax rates from 35% to 21% coupled with an increase in pre-tax book income. The effective tax rate was 20.43% for the first three months of 2018, compared to an effective tax rate of 27.31% for the first three months of 2017.

Income tax expense recorded in the consolidated statements of income involves the interpretation and application of certain accounting pronouncements and federal and state tax laws and regulations, and is, therefore, considered a critical accounting policy. The Corporation is subject to examination by various taxing authorities. Examination by taxing authorities may impact the amount of tax expense and / or reserve for uncertainty in income taxes if their interpretations differ from those of management, based on their judgments about information available to them at the time of their examinations. See section Critical Accounting Policies, in the Corporation's 2017 Annual Report on Form 10-K for additional information on income taxes.

Balance Sheet Analysis

- At March 31, 2018, total assets were $33.4 billion, up $2.9 billion (9%) from December 31, 2017 and up $4.3 billion (15%) from March 31, 2017. On February 1, 2018, the Corporation added $2.8 billion of assets as a result of the Bank Mutual acquisition.
- Loans of $22.8 billion at March 31, 2018 were up $2.0 billion (10%) from December 31, 2017 and were up $2.7 billion (13%) from March 31, 2017. On February 1, 2018, the Corporation added $1.9 billion of loans as a result of the Bank Mutual acquisition. See section Loans for additional information on loans.
- At March 31, 2018, total deposits of $23.8 billion were up $1.0 billion (5%) from December 31, 2017 and were up $2.0 billion (9%) from March 31, 2017. On February 1, 2018, the Corporation assumed $1.8 billion of deposits as a result of the Bank Mutual acquisition. These inflows were partially offset by seasonal deposit outflows. See section Deposits and Customer Funding for additional information on deposits.
- Short and long-term funding of $5.4 billion increased $1.3 billion (32%) from December 31, 2017 and increased $1.5 billion (40%) from March 31, 2017. During the quarter, the Corporation reduced network transaction deposits with lower costs, fixed rate, short-term FHLB advances.

Loans

Table 5 Period End Loan Composition

	March 31, 2018[a]		December 31, 2017		September 30, 2017		June 30, 2017		March 31, 2017	
	Amount	% of Total	Amount	% of Total	Amount	% of Total	Amount	% of Total	Amount	% of Total
	($ in Thousands)									
Commercial and industrial	$ 6,756,983	30%	$ 6,399,693	31%	$ 6,534,660	31%	$ 6,571,000	32%	$ 6,300,646	31%
Commercial real estate — owner occupied	900,913	4%	802,209	4%	827,064	4%	845,336	4%	878,391	4%
Commercial and business lending	7,657,896	34%	7,201,902	35%	7,361,724	35%	7,416,336	36%	7,179,037	35%
Commercial real estate — investor	4,077,671	18%	3,315,254	16%	3,345,536	16%	3,329,585	16%	3,415,355	17%
Real estate construction	1,579,778	7%	1,451,684	7%	1,552,135	8%	1,651,805	8%	1,553,205	8%
Commercial real estate lending	5,657,449	25%	4,766,938	23%	4,897,671	24%	4,981,390	24%	4,968,560	25%
Total commercial	13,315,345	58%	11,968,840	58%	12,259,395	59%	12,397,726	60%	12,147,597	60%
Residential mortgage	8,197,223	36%	7,546,534	36%	7,408,471	35%	7,115,457	34%	6,715,282	33%
Home equity	923,470	4%	883,804	4%	890,130	4%	897,111	4%	911,969	5%
Other consumer	374,453	2%	385,813	2%	373,464	2%	372,775	2%	372,835	2%
Total consumer	9,495,146	42%	8,816,151	42%	8,672,065	41%	8,385,343	40%	8,000,086	40%
Total loans	$ 22,810,491	100%	$ 20,784,991	100%	$ 20,931,460	100%	$ 20,783,069	100%	$ 20,147,683	100%

[a] Includes $15 million of purchased credit-impaired loans

The Corporation has long-term guidelines relative to the proportion of Commercial and Business, Commercial Real Estate, and Consumer loans within the overall loan portfolio, with each targeted to represent 30-40% of the overall loan portfolio. The targeted long-term guidelines were unchanged during 2017 and the first three months of 2018. Furthermore, certain sub-asset classes within the respective portfolios were further defined and dollar limitations were placed on these sub-portfolios. These guidelines and limits are reviewed quarterly and approved annually by the Enterprise Risk Committee of the Corporation's Board of Directors. These guidelines and limits are designed to create balance and diversification within the loan portfolios.

Credit Risk

An active credit risk management process is used for commercial loans to ensure that sound and consistent credit decisions are made. Credit risk is controlled by detailed underwriting procedures, comprehensive loan administration, and periodic review of borrowers' outstanding loans and commitments. Borrower relationships are formally reviewed and graded on an ongoing basis for early identification of potential problems. Further analysis by customer, industry, and geographic location are performed to monitor trends, financial performance, and concentrations. See Note 7 Loans, for additional information on managing overall credit quality.

The loan portfolio is widely diversified by types of borrowers, industry groups, and market areas within our branch footprint. Significant loan concentrations are considered to exist when there are amounts loaned to numerous borrowers engaged in similar activities that would cause them to be similarly impacted by economic or other conditions. At March 31, 2018, no significant concentrations existed in the Corporation's portfolio in excess of 10% of total loans.

Commercial and business lending: The commercial and business lending classification primarily includes commercial loans to large corporations, middle market companies and small businesses and lease financing. At March 31, 2018, the largest industry group within the commercial and business lending category were manufacturing and wholesale trade, which represented 8% of total loans and 25% of the total commercial and business lending portfolio. The next largest industry group within the commercial and business lending category included the power and utilities portfolio, which represented 5% of total loans and represented 14% of the total commercial and business lending portfolio at March 31, 2018. The credit risk related to commercial loans is largely influenced by general economic conditions and the resulting impact on a borrower's operations or on the value of underlying collateral, if any. Currently, a higher risk segment of the commercial and business lending portfolio is loans to borrowers supporting oil and gas exploration and production, which are further discussed under oil and gas lending below.

Oil and gas lending: The Corporation provides reserve based loans to oil and gas exploration and production firms. At March 31, 2018, the oil and gas portfolio was comprised of 56 credits, totaling $657 million of outstanding balances. The Corporation's oil and gas lending team is based in Houston and focuses on serving the funding needs of small and mid-sized companies in the upstream oil and gas business. The oil and gas loans are generally first lien, reserve-based, and borrowing base dependent lines of credit. A small portion of the portfolio is in a second lien position to which the Corporation also holds the first lien position. The portfolio is diversified across all major U.S. geographic basins. The portfolio is diversified by product line with approximately 60% in oil and 40% in gas at March 31, 2018. Borrowing base re-determinations for the portfolio are completed at least twice a year and are based on detailed engineering reports and discounted cash flow analysis.

The following table summarizes information about the Corporation's oil and gas loan portfolio.

Table 6 Oil and Gas Loan Portfolio

	March 31, 2018	December 31, 2017	September 30, 2017	June 30, 2017	March 31, 2017
			($ in Millions)		
Pass	$ 548	$ 483	$ 446	$ 411	$ 405
Special mention	—	—	—	39	8
Potential problem	40	40	39	37	78
Nonaccrual	69	77	92	114	134
Total oil and gas related loans	$ 657	$ 600	$ 577	$ 601	$ 625
Quarter net charge offs	$ 4	$ 25	$ 8	$ 12	$ 6
Oil and gas related allowance	$ 19	$ 27	$ 30	$ 33	$ 42
Oil and gas related allowance ratio	2.9%	4.5%	5.2%	5.4%	6.7%

During 2017, the market stabilized leading to improvements across the oil and gas portfolio. At March 31, 2018, nonaccrual oil and gas related loans totaled approximately $69 million, representing 11% of the oil and gas loan portfolio, a decrease of $8 million from December 31, 2017.

Commercial real estate - investor: Commercial real estate-investor is comprised of loans secured by various non-owner occupied or investor income producing property types. At March 31, 2018, the two largest property type exposures within the commercial real estate-investor portfolio were loans secured by multi-family properties, which represented 7% of total loans and 36% of the total commercial real estate-investor portfolio and loans secured by retail properties which represented 4% of total loans and 24% of the total commercial real estate-investor portfolio. Credit risk is managed in a similar manner to commercial and business lending by employing sound underwriting guidelines, lending primarily to borrowers in local markets and businesses, periodically evaluating the underlying collateral, and formally reviewing the borrower's financial soundness and relationship on an ongoing basis.

Real estate construction: Real estate construction loans are primarily short-term or interim loans that provide financing for the acquisition or development of commercial income properties, multi-family projects or residential development, both single family and condominium. Real estate construction loans are made to developers and project managers who are generally well known to the Corporation and have prior successful project experience. The credit risk associated with real estate construction loans is generally confined to specific geographic areas but is also influenced by general economic conditions. The Corporation controls the credit risk on these types of loans by making loans in familiar markets to developers, reviewing the merits of individual projects, controlling loan structure, and monitoring project progress and construction advances.

The Corporation's current lending standards for commercial real estate and real estate construction lending are determined by property type and specifically address many criteria, including: maximum loan amounts, maximum loan-to-value ("LTV"), requirements for pre-leasing and / or presales, minimum borrower equity, and maximum loan to cost. Currently, the maximum standard for LTV is 80%, with lower limits established for certain higher risk types, such as raw land that has a 50% LTV maximum. The Corporation's LTV guidelines are in compliance with regulatory supervisory limits. In most cases, for real estate construction loans, the loan amounts include interest reserves, which are built into the loans and sized to fund loan payments through construction and lease up and / or sell out.

Table 7 Commercial Loan Distribution and Interest Rate Sensitivity

March 31, 2018	Within 1 Year [(a)]	1-5 Years	After 5 Years	Total	% of Total
			($ in Thousands)		
Commercial and industrial	$ 5,998,575	$ 555,894	$ 202,514	$ 6,756,983	51%
Commercial real estate — investor	3,217,012	762,322	98,338	4,077,671	31%
Commercial real estate — owner occupied	458,193	296,889	145,832	900,913	7%
Real estate construction	1,428,741	113,082	37,954	1,579,778	12%
Total	$ 11,102,520	$ 1,728,186	$ 484,638	$ 13,315,345	100%
Fixed rate	$ 4,604,032	$ 983,927	$ 371,720	$ 5,959,679	45%
Floating or adjustable rate	6,498,490	744,259	112,917	7,355,666	55%
Total	$ 11,102,522	$ 1,728,186	$ 484,637	$ 13,315,345	100%
Percent by maturity distribution	83%	13%	4%	100%	

(a) Demand loans, past due loans, and overdrafts are reported in the "Within 1 Year" category.

The total commercial loans that were floating or adjustable rate was $7.4 billion (55%) at March 31, 2018. Including the $4.6 billion of fixed rate loans due within one year, 90% of the commercial loan portfolio noted above matures, re-prices, or resets within one year.

Residential mortgages: Residential mortgage loans are primarily first lien home mortgages with a maximum loan to collateral value without credit enhancement (e.g. private mortgage insurance) of 80%. At March 31, 2018, the residential mortgage portfolio was comprised of $2.9 billion of fixed-rate residential real estate mortgages and $5.3 billion of variable-rate residential real estate mortgages, compared to $2.6 billion of fixed-rate mortgages and $4.9 billion variable-rate mortgages at December 31, 2017. The residential mortgage portfolio is focused primarily in our three-state branch footprint, with approximately 88% of the outstanding loan balances in our branch footprint at March 31, 2018. The majority of the on balance sheet residential mortgage portfolio consists of hybrid, adjustable rate mortgage loans with initial fixed rate terms of 3, 5, 7, or 10 years.

Based upon outstanding balances at March 31, 2018, the following table presents the next contractual repricing year for the Corporation's adjustable rate mortgage portfolio.

Table 8 Adjustable Rate Mortgage Repricing [(a)]

	$ in Thousands	% to Total
2018	$ 388,772	7%
2019	584,096	11%
2020	636,717	12%
2021	741,288	14%
2022	813,785	15%
Thereafter	2,106,599	41%
Total adjustable rate mortgages	$ 5,271,257	100%

(a) Based on contractual loan terms for 3/1, 5/1, 7/1, and 10/1 adjustable rate mortgages; does not factor in early prepayments or amortization.

The Corporation also generally retains certain fixed-rate residential real estate mortgages in its loan portfolio, including retail and private banking jumbo mortgages and CRA-related mortgages. As part of management's historical practice of originating and servicing residential mortgage loans, generally the Corporation's 30 year, agency conforming, fixed-rate residential real estate mortgage loans were sold in the secondary market with servicing rights retained. Subject to management's analysis of the current interest rate environment, among other market factors, the Corporation may choose to retain 30 year mortgage loan production on its balance sheet.

The Corporation's underwriting and risk-based pricing guidelines for residential mortgage loans include minimum borrower FICO and maximum LTV of the property securing the loan. Residential mortgage products generally are underwritten using FHLMC and FNMA secondary marketing guidelines.

Home equity: Home equity consists of both home equity lines of credit and closed-end home equity loans. The Corporation's credit risk monitoring guidelines for home equity is based on an ongoing review of loan delinquency status, as well as a quarterly review of FICO score deterioration and property devaluation. The Corporation does not routinely obtain appraisals on performing loans to update LTV ratios after origination; however, the Corporation monitors the local housing markets by reviewing the various home price indices and incorporates the impact of the changing market conditions in its ongoing credit monitoring process. For junior lien home equity loans, the Corporation is unable to track the performance of the first lien loan if it does not own or service the first lien loan. However, the Corporation obtains a refreshed FICO score on a quarterly basis and monitors this as part of its assessment of the home equity portfolio.

The Corporation's underwriting and risk-based pricing guidelines for home equity lines and loans consist of a combination of both borrower FICO and the original cumulative LTV against the property securing the loan. Currently, our policy sets the maximum acceptable LTV at 90% and the minimum acceptable FICO at 670. The Corporation's current home equity line of credit offering is priced based on floating rate indices and generally allows 10 years of interest-only payments followed by a 20-year amortization of the outstanding balance. The Corporation has significantly curtailed its offerings of fixed-rate, closed end home equity loans. The loans in the Corporation's portfolio generally have an original term of 20 years with principal and interest payments required.

Based upon outstanding balances at March 31, 2018, the following table presents the periods when home equity lines of credit revolving periods are scheduled to end.

Table 9 Home Equity Line of Credit - Revolving Period End Dates

	$ in Thousands	% of Total
Less than 5 years	$ 93,578	9%
5 to 10 years	287,038	29%
Over 10 years	617,525	62%
Total home equity revolving lines of credit	$ 998,141	100%

Other consumer: Other consumer consists of student loans, short-term and other personal installment loans and credit cards. The Corporation had $181 million and $183 million of student loans at March 31, 2018, and December 31, 2017, respectively, the majority of which are government guaranteed. Credit risk for non-government guaranteed student, short-term and personal installment loans and credit cards is influenced by general economic conditions, the characteristics of individual borrowers, and the nature of the loan collateral. Risks of loss are generally on smaller average balances per loan spread over many borrowers. Once charged off, there is usually less opportunity for recovery of these smaller consumer loans. Credit risk is primarily controlled by reviewing the creditworthiness of the borrowers, monitoring payment histories, and taking appropriate collateral and guarantee positions. The student loan portfolio is in run-off and no new student loans are being originated.

Nonperforming Assets

Management is committed to a proactive nonaccrual and problem loan identification philosophy. This philosophy is implemented through the ongoing monitoring and review of all pools of risk in the loan portfolio to ensure that problem loans are identified quickly and the risk of loss is minimized. Table 10 provides detailed information regarding nonperforming assets, which include nonaccrual loans and other real estate owned, and other nonperforming assets.

Table 10 Nonperforming Assets

	March 31, 2018	December 31, 2017	September 30, 2017	June 30, 2017	March 31, 2017
			($ in Thousands)		
Nonperforming assets					
Commercial and industrial	$ 102,667	$ 112,786	$ 122,284	$ 141,475	$ 164,891
Commercial real estate — owner occupied	20,636	22,740	15,598	15,800	17,925
Commercial and business lending	123,303	135,526	137,882	157,275	182,816
Commercial real estate — investor	15,574	4,729	3,543	7,206	8,273
Real estate construction	1,219	974	1,540	1,717	1,247
Commercial real estate lending	16,793	5,703	5,083	8,923	9,520
Total commercial	140,096	141,229	142,965	166,198	192,336
Residential mortgage	55,100	53,632	54,654	51,975	54,183
Home equity	13,218	13,514	12,639	13,482	13,212
Other consumer	139	171	259	233	260
Total consumer	68,456	67,317	67,552	65,690	67,655
Total nonaccrual loans	208,553	208,546	210,517	231,888	259,991
Commercial real estate owned	7,511	6,735	5,098	4,825	5,599
Residential real estate owned	5,806	5,873	3,385	2,957	1,941
Bank properties real estate owned	3,601	—	—	—	—
Other real estate owned (“OREO”)	16,919	12,608	8,483	7,782	7,540
Other nonperforming assets	7,117	7,418	7,418	7,418	7,418
Total nonperforming assets (“NPAs”)	$ 232,589	$ 228,572	$ 226,418	$ 247,088	$ 274,949
Accruing loans past due 90 days or more					
Commercial	$ 505	$ 418	$ 308	$ 248	$ 258
Consumer	2,888	1,449	1,303	1,287	1,462
Total accruing loans past due 90 days or more	$ 3,393	$ 1,867	$ 1,611	$ 1,535	$ 1,720
Restructured loans (accruing)					
Commercial	$ 47,460	$ 48,735	$ 51,259	$ 50,634	$ 51,274
Consumer	29,041	25,883	25,919	26,691	27,785
Total restructured loans (accruing)	$ 76,501	$ 74,618	$ 77,178	$ 77,325	$ 79,059
Nonaccrual restructured loans (included in nonaccrual loans)	$ 23,827	$ 23,486	$ 33,520	$ 51,715	$ 78,902
Ratios					
Nonaccrual loans to total loans	0.91%	1.00%	1.01%	1.12%	1.29%
NPAs to total loans plus OREO	1.02%	1.10%	1.08%	1.19%	1.36%
NPAs to total assets	0.70%	0.75%	0.75%	0.83%	0.94%
Allowance for loan losses to nonaccrual loans	123.26%	127.49%	131.37%	121.22%	108.72%

Table 11 Nonperforming Assets (continued)

	March 31, 2018	December 31, 2017	September 30, 2017	June 30, 2017	March 31, 2017
			($ in Thousands)		
Accruing loans 30-89 days past due					
Commercial and industrial	$ 880	$ 271	$ 1,378	$ 1,255	$ 1,675
Commercial real estate — owner occupied	511	48	1,522	1,284	970
Commercial and business lending	1,391	319	2,900	2,539	2,645
Commercial real estate — investor	240	374	1,109	899	1,122
Real estate construction	490	251	700	135	431
Commercial real estate lending	730	625	1,809	1,034	1,553
Total commercial	2,121	944	4,709	3,573	4,198
Residential mortgage	15,133	9,552	8,870	9,165	7,243
Home equity	5,868	6,825	7,191	5,924	4,512
Other consumer	1,811	2,007	1,686	1,746	1,658
Total consumer	22,812	18,384	17,747	16,835	13,413
Total accruing loans 30-89 days past due	$ 24,934	$ 19,328	$ 22,456	$ 20,408	$ 17,611
Potential problem loans					
Commercial and industrial	$ 196,766	$ 113,778	$ 153,779	$ 142,607	$ 218,930
Commercial real estate — owner occupied	34,410	41,997	57,468	60,724	58,994
Commercial and business lending	231,176	155,775	211,247	203,331	277,924
Commercial real estate — investor	46,970	19,291	46,770	48,569	49,217
Real estate construction	1,695	—	118	8,901	10,141
Commercial real estate lending	48,665	19,291	46,888	57,470	59,358
Total commercial	279,841	175,066	258,135	260,801	337,282
Residential mortgage	2,155	1,616	650	1,576	2,155
Home equity	188	195	124	208	220
Total consumer	2,343	1,811	774	1,784	2,375
Total potential problem loans	$ 282,184	$ 176,877	$ 258,909	$ 262,585	$ 339,657

Nonaccrual loans: Nonaccrual loans are considered to be one indicator of potential future loan losses. See Note 7 Loans, of the notes to consolidated financial statements for additional nonaccrual loan disclosures. The ratio of nonaccrual loans to total loans at March 31, 2018 was 0.91%, as compared to 1.00% at December 31, 2017 and 1.29% at March 31, 2017. See also sections Credit Risk and Allowance for Credit Losses.

Accruing loans past due 90 days or more: Loans past due 90 days or more but still accruing interest are classified as such where the underlying loans are both well secured (the collateral value is sufficient to cover principal and accrued interest) and are in the process of collection. Accruing loans 90 days or more past due at March 31, 2018 increased $2 million from both December 31, 2017 and March 31, 2017 as a result of the acquisition of Bank Mutual.

Restructured loans: Loans are considered restructured loans if concessions have been granted to borrowers that are experiencing financial difficulty. See also Note 7 Loans, of the notes to consolidated financial statements for additional restructured loans disclosures.

Potential problem loans: The level of potential problem loans is another predominant factor in determining the relative level of risk in the loan portfolio and in determining the appropriate level of the allowance for loan losses. Potential problem loans are generally defined by management to include loans rated as substandard by management but that are not considered impaired (i.e., nonaccrual loans and accruing troubled debt restructurings); however, there are circumstances present to create doubt as to the ability of the borrower to comply with present repayment terms. The decision of management to include performing loans in potential problem loans does not necessarily mean that the Corporation expects losses to occur, but that management recognizes a higher degree of risk associated with these loans.

OREO: Management actively seeks to ensure OREO properties held are monitored to minimize the Corporation’s risk of loss.

Other nonperforming assets: The asset represents the Bank's ownership interest in a profit participation agreement in an entity created to own certain oil and gas assets obtained as a result of bankruptcy and liquidation of a borrower in partial satisfaction of their loan.

Allowance for Credit Losses

Credit risks within the loan portfolio are inherently different for each loan type. Credit risk is controlled and monitored through the use of lending standards, a thorough review of potential borrowers, and ongoing review of loan payment performance. Active asset quality administration, including early problem loan identification and timely resolution of problems, aids in the management of credit risk and minimization of loan losses. Credit risk management for each loan type is discussed in the section entitled Credit Risk. See Note 7 Loans, for additional disclosures on the allowance for credit losses.

To assess the appropriateness of the allowance for loan losses, an allocation methodology is applied by the Corporation which focuses on evaluation of many factors, including but not limited to: evaluation of facts and issues related to specific loans, management's ongoing review and grading of the loan portfolio, consideration of historical loan loss and delinquency experience on each portfolio category, trends in past due and nonaccrual loans, the level of potential problem loans, the risk characteristics of the various classifications of loans, changes in the size and character of the loan portfolio, concentrations of loans to specific borrowers or industries, existing economic conditions, the fair value of underlying collateral, and other qualitative and quantitative factors which could affect potential credit losses. Assessing these factors involves significant judgment. Because each of the criteria used is subject to change, the allowance for loan losses is not necessarily indicative of the trend of future loan losses in any particular category. Therefore, management considers the allowance for loan losses a critical accounting policy—See section Critical Accounting Policies, in the Corporation's 2017 Annual Report on Form 10-K for additional information on the allowance for loan losses. See section, Nonperforming Assets, for a detailed discussion on asset quality. See also Note 7 Loans, of the notes to consolidated financial statements for additional allowance for loan losses disclosures. Table 5 provides information on loan growth and period end loan composition, Table 10 provides additional information regarding nonperforming assets, and Table 12 and Table 13 provide additional information regarding activity in the allowance for loan losses.

The methodology used for the allocation of the allowance for loan losses at March 31, 2018 and December 31, 2017 was generally comparable, whereby the Corporation segregated its loss factors (used for both criticized and non-criticized loans) into a component primarily based on historical loss rates and a component primarily based on other qualitative factors that are probable to affect loan collectability. The allocation methodology consists of the following components: First, a valuation allowance estimate is established for specifically identified commercial and consumer loans determined by the Corporation to be impaired, using discounted cash flows, estimated fair value of underlying collateral, and / or other data available. Second, management allocates the allowance for loan losses with loss factors, for criticized loan pools by loan type as well as for non-criticized loan pools by loan type, primarily based on historical loss rates after considering loan type, historical loss and delinquency experience, and industry statistics. Loans that have been criticized are considered to have a higher risk of default than non-criticized loans, as circumstances were present to support the lower loan grade, warranting higher loss factors. The loss factors applied in the methodology are periodically re-evaluated and adjusted to reflect changes in historical loss levels or other risks. Lastly, management allocates allowance for loan losses to absorb unrecognized losses that may not be provided for by the other components due to other factors evaluated by management, such as limitations within the credit risk grading process, known current economic or business conditions that may not yet show in trends, industry or other concentrations with current issues that impose higher inherent risks than are reflected in the loss factors, and other relevant considerations. The total allowance is available to absorb losses from any segment of the loan portfolio.

Table 12 Allowance for Credit Losses

	March 31, 2018	December 31, 2017	September 30, 2017	June 30, 2017	March 31, 2017
			($ in Thousands)		
Allowance for Loan Losses					
Balance at beginning of period	$ 265,880	$ 276,551	$ 281,101	$ 282,672	$ 278,335
Provision for loan losses	500	—	6,000	11,000	10,000
Charge offs	(12,155)	(14,289)	(14,727)	(15,376)	(11,854)
Recoveries	2,832	3,618	4,177	2,805	6,191
Net charge offs	(9,323)	(10,671)	(10,550)	(12,571)	(5,663)
Balance at end of period	$ 257,058	$ 265,880	$ 276,551	$ 281,101	$ 282,672
Allowance for Unfunded Commitments					
Balance at beginning of period	$ 24,400	$ 24,400	$ 25,400	$ 24,400	$ 25,400
Provision for unfunded commitments	(500)	—	(1,000)	1,000	(1,000)
Amount recorded at acquisition	2,436	—	—	—	—
Balance at end of period	$ 26,336	$ 24,400	$ 24,400	$ 25,400	$ 24,400
Allowance for credit losses[(a)]	$ 283,394	$ 290,280	$ 300,951	$ 306,501	$ 307,072
Provision for credit losses[(b)]	—	—	5,000	12,000	9,000
Net loan (charge offs) recoveries					
Commercial and industrial	$ (6,599)	$ (8,212)	$ (9,442)	$ (11,046)	$ (4,368)
Commercial real estate — owner occupied	(1,025)	(246)	13	43	19
Commercial and business lending	(7,624)	(8,458)	(9,429)	(11,003)	(4,349)
Commercial real estate — investor	8	(164)	55	(126)	(514)
Real estate construction	189	(365)	(150)	(26)	11
Commercial real estate lending	197	(529)	(95)	(152)	(503)
Total commercial	(7,427)	(8,987)	(9,524)	(11,155)	(4,852)
Residential mortgage	(131)	(966)	(26)	(564)	(128)
Home equity	(677)	330	(87)	54	173
Other consumer	(1,088)	(1,048)	(913)	(906)	(856)
Total consumer	(1,896)	(1,684)	(1,026)	(1,416)	(811)
Total net charge offs	$ (9,323)	$ (10,671)	$ (10,550)	$ (12,571)	$ (5,663)
Ratios					
Allowance for loan losses to total loans	1.13%	1.28%	1.32%	1.35%	1.40%
Allowance for loan losses to net charge offs (annualized)	6.8x	6.3x	6.6x	5.6x	12.3x

(a) Includes the allowance for loan losses and the allowance for unfunded commitments.
(b) Includes the provision for loan losses and the provision for unfunded commitments.

Table 13 Annualized net (charge offs) recoveries[a]

(in basis points)	March 31, 2018	December 31, 2017	September 30, 2017	June 30, 2017	March 31, 2017
Net loan (charge offs) recoveries					
Commercial and industrial	(41)	(51)	(58)	(69)	(28)
Commercial real estate — owner occupied	(48)	(12)	1	2	1
Commercial and business lending	(42)	(47)	(51)	(60)	(24)
Commercial real estate — investor	N/M	(2)	1	(2)	(6)
Real estate construction	5	(10)	(4)	(1)	N/M
Commercial real estate lending	1	(4)	(1)	(1)	(4)
Total commercial	(24)	(30)	(31)	(36)	(16)
Residential mortgage	(1)	(5)	N/M	(3)	(1)
Home equity	(28)	15	(4)	2	8
Other consumer	(115)	(109)	(97)	(98)	(90)
Total consumer	(8)	(8)	(5)	(7)	(4)
Total net charge offs	(17)	(20)	(20)	(25)	(11)

(a) Annualized ratio of net charge offs to average loans by loan type.
N/M = Not Meaningful

At March 31, 2018, the allowance for credit losses was $283 million, compared to $290 million at December 31, 2017 and $307 million at March 31, 2017. At March 31, 2018, the allowance for loan losses to total loans was 1.13% and covered 123.26% of nonaccrual loans, compared to 1.28% and 127.49%, respectively, at December 31, 2017 and 1.40% and 108.72%, respectively, at March 31, 2017. Management believes the level of allowance for loan losses to be appropriate at March 31, 2018.

Notable Contributions to the Change in Allowance for Credit Loss

- Total loans increased $2.0 billion (10%) for the first three months of 2018, including a $679 million (8%) increase in total consumer. Compared to March 31, 2017, total loans increased $2.7 billion (13%), including a $1.5 billion (19%) increase in total consumer, a $689 million (14%) increase in commercial real estate lending, and a $479 million (7%) increase in commercial and business lending. See section Loans for additional information on the changes in the loan portfolio and see section Credit Risk for discussion about credit risk management for each loan type.

- Total nonaccrual loans were relatively unchanged for the first three months of 2018, but decreased $51 million from March 31, 2017, primarily due to migration in the oil and gas related credits. See also Note 7 Loans, of the notes to consolidated financial statements and section Nonperforming Assets for additional disclosures on the changes in asset quality.

- Potential problem loans increased $105 million from December 31, 2017 primarily due to the downward migration of general commercial related credits and the addition of Bank Mutual loans. However, potential problem loans decreased $57 million from March 31, 2017, primarily due to improvements in general commercial related credits and migration in oil and gas related credits, respectively. See Table 10, for additional information on the changes in potential problem loans.

- Net charge offs decreased $1 million from December 31, 2017, but increased $4 million from the first three months of 2017, primarily due to an increase in charge offs outside the oil and gas portfolio. See Table 12 and Table 13 for additional information regarding the activity in the allowance for loan losses.

- The allowance for loan losses attributable to oil and gas related credits (included within the commercial and industrial allowance for loan losses) was $19 million at March 31, 2018, compared to $27 million at December 31, 2017 and $42 million at March 31, 2017. See also Oil and gas lending within the Credit Risk section for additional disclosure.

Deposits and Customer Funding

Table 14 Period End Deposit and Customer Funding Composition

($ in Thousands)	March 31, 2018		December 31, 2017		September 30, 2017		June 30, 2017		March 31, 2017	
	Amount	% of Total	Amount	% of Total	Amount	% of Total	Amount	% of Total	Amount	% of Total
Noninterest-bearing demand	$ 5,458,473	23%	$ 5,478,416	24%	$ 5,177,734	23%	$ 5,038,162	23%	$ 5,338,212	25%
Savings	1,883,638	8%	1,524,992	7%	1,544,037	7%	1,552,820	7%	1,530,155	7%
Interest-bearing demand	4,719,566	20%	4,603,157	20%	4,990,891	22%	3,858,739	18%	4,736,236	22%
Money market	9,086,553	38%	8,830,328	39%	8,299,512	37%	9,228,129	43%	8,608,523	39%
Brokered CDs	44,503	—%	18,609	—%	3,554	—%	131,184	1%	54,993	—%
Other time	2,632,869	11%	2,330,460	10%	2,317,723	11%	1,809,146	8%	1,559,916	7%
Total deposits	$23,825,602	100%	$22,785,962	100%	$22,333,451	100%	$21,618,180	100%	$21,828,035	100%
Customer funding[a]	297,289		250,332		324,042		360,131		448,502	
Total deposits and customer funding	$24,122,891		$23,036,294		$22,657,493		$21,978,311		$22,276,537	
Network transaction deposits[b]	$ 2,244,739		$ 2,520,968		$ 2,622,787		$ 3,220,956		$ 3,417,380	
Net deposits and customer funding (total deposits and customer funding, excluding Brokered CDs and network transaction deposits)	$21,833,649		$20,496,717		$20,031,152		$18,626,171		$18,804,164	
Time deposits of more than $250,000	$ 906,727		$ 1,056,172		$ 1,009,097		$ 477,043		$ 244,641	

(a) Securities sold under agreement to repurchase and commercial paper.
(b) Included above in interest-bearing demand and money market.

- Deposits are the Corporation's largest source of funds.
- Total deposits increased $1.0 billion (5%) from December 31, 2017 primarily due to the acquisition of Bank Mutual partially offset by seasonal deposit outflows and increased $2.0 billion (9%) from March 31, 2017.
- Non-maturity deposit accounts, comprised of savings, money market, and demand (both interest and noninterest-bearing demand) accounts accounted for 89% of our total deposits at March 31, 2018.
- Included in the above amounts were $2.2 billion of network deposits, primarily sourced from other financial institutions and intermediaries. These represented 9% of our total deposits at March 31, 2018.

Liquidity

The objective of liquidity risk management is to ensure that the Corporation has the ability to generate sufficient cash or cash equivalents in a timely and cost effective manner to satisfy the cash flow requirements of depositors and borrowers and to meet its other commitments as they become due. The Corporation's liquidity risk management process is designed to identify, measure, and manage the Corporation's funding and liquidity risk to meet its daily funding needs in the ordinary course of business, as well as to address expected and unexpected changes in its funding requirements. The Corporation engages in various activities to manage its liquidity risk, including diversifying its funding sources, stress testing, and holding readily-marketable assets which can be used as a source of liquidity, if needed.

The Corporation performs dynamic scenario analysis in accordance with industry best practices. Measures have been established to ensure the Corporation has sufficient high quality short-term liquidity to meet cash flow requirements under stressed scenarios. In addition, the Corporation also reviews static measures such as deposit funding as a percent of total assets and liquid asset levels. Strong capital ratios, credit quality, and core earnings are also essential to maintaining cost effective access to wholesale funding markets. At March 31, 2018, the Corporation was in compliance with its internal liquidity objectives and has sufficient asset-based liquidity to meet its obligations under a stressed scenario.

The Corporation maintains diverse and readily available liquidity sources, including:

- Investment securities are an important tool to the Corporation's liquidity objective, and can be pledged or sold to enhance liquidity, if necessary. See Note 6 Investment Securities of the notes to consolidated financial statements for additional information on the Corporation's investment securities portfolio, including investment securities pledged.
- The Bank pledges eligible loans to both the Federal Reserve Bank and the FHLB as collateral to establish lines of credit and borrow from these entities. Based on the amount of collateral pledged, the FHLB established a collateral value from which the Bank may draw advances against the collateral. Also, the collateral is used to enable the FHLB to issue letters of credit in favor of public fund depositors of the Bank. As of March 31, 2018, the Bank had $2.4 billion available for future advances. The Federal Reserve Bank also establishes a collateral value of assets to support borrowings from the discount window. As of March 31, 2018, the Bank had $2.2 billion available for discount window borrowings.
- The Parent Company has a $200 million commercial paper program, of which, $82 million was outstanding as of March 31, 2018.
- Dividends and service fees from subsidiaries, as well as the proceeds from issuance of capital, are funding sources for the Parent Company.
- The Parent Company has filed a shelf registration statement with the SEC under which the Parent Company may, from time to time, offer shares of the Corporation's common stock in connection with acquisitions of businesses, assets or securities of other companies.
- The Parent Company also has filed a universal shelf registration statement with the SEC, under which the Parent Company may offer the following securities, either separately or in units: debt securities, preferred stock, depositary shares, common stock, and warrants.
- The Bank may also issue institutional certificates of deposit, network transaction deposits, and brokered certificates of deposit.

Credit ratings relate to the Corporation's ability to issue debt securities and the cost to borrow money, and should not be viewed as an indication of future stock performance or a recommendation to buy, sell, or hold securities. Adverse changes in these factors could result in a negative change in credit ratings and impact not only the ability to raise funds in the capital markets but also the cost of these funds. The credit ratings of the Parent Company and Associated Bank at March 31, 2018 are displayed below.

Table 15 Credit Ratings

	Moody's	S&P[(a)]
Associated Bank short-term deposits	P-1	-
Associated Bank long-term	A1	BBB+
Corporation short-term	P-2	-
Corporation long-term	Baa1	BBB
Outlook	Stable	Stable

(a) Standard and Poor's.

For the three months ended March 31, 2018, net cash provided by operating activities and financing activities was $43 million and $24 million, respectively, while investing activities used net cash of $350 million, for a net decrease in cash and cash equivalents of $283 million since year-end 2017. At March 31, 2018, assets of $33.4 billion increased $2.9 billion compared to year-end 2017. On the funding side, deposits of $23.8 billion increased by $1.0 billion when compared to year-end 2017.

For the three months ended March 31, 2017, net cash provided by operating activities was $162 million, while financing and investing activities used net cash of $82 million and $32 million, respectively, for a net increase in cash and cash equivalents of $47 million since year-end 2016. During the first three months of 2017, assets of $29.1 billion were relatively unchanged compared to year-end 2016. On the funding side, deposits of $21.8 billion were also relatively unchanged compared to year-end 2016.

Quantitative and Qualitative Disclosures about Market Risk

Market risk and interest rate risk are managed centrally. Market risk is the potential for loss arising from adverse changes in the fair value of fixed income securities, equity securities, other earning assets and derivative financial instruments as a result of changes in interest rates or other factors. Interest rate risk is the potential for reduced net interest income resulting from adverse changes in the level of interest rates. As a financial institution that engages in transactions involving an array of financial products, the Corporation is exposed to both market risk and interest rate risk. In addition to market risk, interest rate risk is measured and managed through a number of methods. The Corporation uses financial modeling simulation techniques that measure the sensitivity of future earnings due to changing rate environments to measure interest rate risk.

Policies established by the Corporation's Asset / Liability Committee ("ALCO") and approved by the Board of Directors are intended to limit these risks. The Board has delegated day-to-day responsibility for managing market and interest rate risk to ALCO. The primary objectives of market risk management is to minimize any adverse effect that changes in market risk factors may have on net interest income and to offset the risk of price changes for certain assets recorded at fair value.

Interest Rate Risk

The primary goal of interest rate risk management is to control exposure to interest rate risk within policy limits approved by the Board of Directors. These limits and guidelines reflect our risk appetite for interest rate risk over both short-term and long-term horizons. No limit breaches occurred during the first three months of 2018.

The major sources of our non-trading interest rate risk are timing differences in the maturity and re-pricing characteristics of assets and liabilities, changes in the shape of the yield curve, and the potential exercise of explicit or embedded options. We measure these risks and their impact by identifying and quantifying exposures through the use of sophisticated simulation and valuation models which are employed by management to understand net interest income (NII) at risk, interest rate sensitive earnings at risk (EAR), and market value of equity (MVE) at risk. The Corporation's interest rate risk profile is such that a higher or steeper yield curve adds to income while a flatter yield curve is relatively neutral, and a lower or inverted yield curve generally has a negative impact on earnings. Based on current rate expectations for a flattening yield curve, our earnings at risk profile is neutral at March 31, 2018. While the modeled outcome of instantaneous and sustained parallel rate shocks of 100 bps or more indicate asset sensitivity, which would provide increased earnings, we see a low probability of a sustained parallel shift occurring in the near term.

For further discussion of the Corporation's interest rate risk and corresponding key assumptions, see the Interest Rate Risk section of Management's Discussion and Analysis of Financial Condition and Results of Operations included in the Corporation's 2017 Annual Report on Form 10-K.

The sensitivity analysis included below is measured as a percentage change in NII and EAR due to instantaneous moves in benchmark interest rates from a baseline scenario. We evaluate the sensitivity using: 1) a dynamic forecast incorporating expected growth in the balance sheet, and 2) a static forecast where the current balance sheet is held constant.

Table 16 Estimated % Change in Net Interest Income Over 12 Months

	Estimated % Change in Rate Sensitive Earnings at Risk (EAR) Over 12 Months			
	Dynamic Forecast March 31, 2018	Static Forecast March 31, 2018	Dynamic Forecast December 31, 2017	Static Forecast December 31, 2017
Instantaneous Rate Change				
100 bp increase in interest rates	2.6%	1.7%	2.5%	2.7%
200 bp increase in interest rates	5.0%	3.3%	4.6%	4.9%

At March 31, 2018, the MVE profile indicates a decline in net balance sheet value due to instantaneous upward changes in rates.

Table 17 Market Value of Equity Sensitivity

	March 31, 2018	December 31, 2017
Instantaneous Rate Change		
100 bp increase in interest rates	(3.4)%	(3.1)%
200 bp increase in interest rates	(6.9)%	(6.7)%

While an instantaneous and severe shift in interest rates was used in this analysis to provide an estimate of exposure under an extremely adverse scenario, the Corporation believes that a gradual shift in interest rates would have a much more modest impact. Since MVE measures the discounted present value of cash flows over the estimated lives of instruments, the change in MVE does not directly correlate to the degree that earnings would be impacted over a shorter time horizon (i.e., the current year). Further, MVE does not take into account factors such as future balance sheet growth, changes in product mix, changes in yield curve relationships, and changing product spreads that could mitigate the adverse impact of changes in interest rates.

The above NII, EAR, and MVE measures do not include all actions that management may undertake to manage this risk in response to anticipated changes in interest rates.

Contractual Obligations, Commitments, Off-Balance Sheet Arrangements, and Contingent Liabilities

Table 18 Contractual Obligations and Other Commitments

March 31, 2018	One Year or Less	One to Three Years	Three to Five Years	Over Five Years	Total
			($ in Thousands)		
Time deposits	$ 1,893,417	$ 643,818	$ 138,198	$ 1,939	$ 2,677,372
Short-term funding	2,146,374	—	—	—	2,146,374
Long-term funding	1,500,010	499,987	150,451	1,082,890	3,233,338
Operating leases	9,815	18,572	13,881	22,447	64,715
Commitments to extend credit	4,589,376	2,654,980	1,381,952	167,822	8,794,130
Total	$ 10,138,992	$ 3,817,357	$ 1,684,482	$ 1,275,098	$ 16,915,929

The Corporation utilizes a variety of financial instruments in the normal course of business to meet the financial needs of its customers and to manage its own exposure to fluctuations in interest rates. These financial instruments include lending-related commitments and derivative instruments. A discussion of the Corporation's derivative instruments at March 31, 2018, is included in Note 10, Derivative and Hedging Activities, of the notes to consolidated financial statements. A discussion of the Corporation's lending-related commitments is included in Note 12, Commitments, Off-Balance Sheet Arrangements, Legal Proceedings and Regulatory Matters, of the notes to consolidated financial statements. See also Note 9, Short and Long-Term Funding, of the notes to consolidated financial statements for additional information on the Corporation's short-term and long-term funding.

Table 18 summarizes significant contractual obligations and other commitments at March 31, 2018, at those amounts contractually due to the recipient, including any premiums or discounts, hedge basis adjustments, or other similar carrying value adjustments.

Capital

Management actively reviews capital strategies for the Corporation and each of its subsidiaries in light of perceived business risks, future growth opportunities, industry standards, and compliance with regulatory requirements. The assessment of overall capital adequacy depends on a variety of factors, including asset quality, liquidity, stability of earnings, changing competitive forces, economic condition in markets served, and strength of management. At March 31, 2018, the capital ratios of the Corporation and its banking subsidiaries were in excess of regulatory minimum requirements. The Corporation's capital ratios are summarized in Table 19.

Table 19 Capital Ratios

	1Q18	4Q17	3Q17	2Q17	1Q17
			($ in Thousands)		
Risk-based Capital [a]					
Common equity Tier 1	$ 2,473,677	$ 2,171,508	$ 2,144,325	$ 2,130,238	$ 2,085,309
Tier 1 capital	2,632,912	2,331,245	2,304,037	2,289,831	2,244,863
Total capital	3,164,362	2,848,851	2,823,097	2,808,049	2,757,310
Total risk-weighted assets	23,535,483	21,544,463	21,657,286	21,590,134	21,128,672
Common equity Tier 1 capital ratio	10.51%	10.08%	9.90%	9.87%	9.87%
Tier 1 capital ratio	11.19%	10.82%	10.64%	10.61%	10.62%
Total capital ratio	13.45%	13.22%	13.04%	13.01%	13.05%
Tier 1 leverage ratio	8.48%	8.02%	7.93%	8.09%	8.05%
Selected Equity and Performance Ratios					
Total stockholders' equity / assets	11.13%	10.62%	10.66%	10.72%	10.80%
Dividend payout ratio [b]	36.59%	45.16%	29.27%	33.33%	33.33%

(a) The Federal Reserve establishes regulatory capital requirements, including well-capitalized standards for the Corporation. The Corporation follows Basel III, subject to certain transition provisions. These regulatory capital measurements are used by management, regulators, investors, and analysts to assess, monitor and compare the quality and composition of our capital with the capital of other financial services companies. See Table 20 for a reconciliation of common equity Tier 1 and average common equity Tier 1.

(b) Ratio is based upon basic earnings per common share.

Non-GAAP Measures

Table 20 Non-GAAP Measures

	Quarter Ended				
	March 31, 2018	December 31, 2017	September 30, 2017	June 30, 2017	March 31, 2017
	($ in Thousands)				
Selected Equity and Performance Ratios [a] [b]					
Tangible common equity / tangible assets	7.22%	7.07%	7.08%	7.11%	7.10%
Return on average equity	7.96%	6.17%	8.10%	7.35%	7.31%
Return on average tangible common equity	11.99%	9.16%	12.20%	11.06%	11.07%
Return on average Common equity Tier 1	11.39%	8.77%	11.73%	10.63%	10.61%
Return on average assets	0.88%	0.66%	0.86%	0.80%	0.79%
Average stockholders' equity / average assets	11.00%	10.73%	10.63%	10.84%	10.85%
Tangible Common Equity and Common Equity Tier 1 Reconciliation [a] [b]					
Common equity	$ 3,552,846	$ 3,077,514	$ 3,043,672	$ 3,031,573	$ 2,984,865
Goodwill and other intangible assets, net	(1,232,870)	(991,819)	(986,086)	(986,536)	(987,032)
Tangible common equity	2,319,977	2,085,695	2,057,586	2,045,037	1,997,833
Less: Accumulated other comprehensive income / loss	107,673	62,758	54,288	53,470	56,344
Less: Deferred tax assets/deferred tax liabilities, net	46,027	23,055	32,451	31,731	31,132
Common equity Tier 1	$ 2,473,677	$ 2,171,508	$ 2,144,325	$ 2,130,238	$ 2,085,309
Tangible Assets Reconciliation [a]					
Total assets	$ 33,366,505	$ 30,483,594	$ 30,064,547	$ 29,769,025	$ 29,109,857
Goodwill and other intangible assets, net	(1,232,870)	(991,819)	(986,086)	(986,536)	(987,032)
Tangible assets	$ 32,133,636	$ 29,491,775	$ 29,078,461	$ 28,782,489	$ 28,122,825
Average Tangible Common Equity and Average Common Equity Tier 1 Reconciliation [a] [b]					
Common equity	$ 3,377,388	$ 3,056,077	$ 3,024,918	$ 3,005,209	$ 2,963,462
Goodwill and other intangible assets, net	(1,107,503)	(991,955)	(986,342)	(986,826)	(987,135)
Tangible common equity	2,269,885	2,064,121	2,038,576	2,018,383	1,976,327
Less: Accumulated other comprehensive income / loss	89,105	61,937	49,164	50,148	54,234
Less: Deferred tax assets/deferred tax liabilities, net	30,943	29,386	31,935	31,294	31,188
Average common equity Tier 1	$ 2,389,933	$ 2,155,444	$ 2,119,675	$ 2,099,825	$ 2,061,749
Efficiency Ratio Reconciliation [c]					
Federal Reserve efficiency ratio	70.76 %	66.93 %	63.92 %	66.69 %	66.39 %
Fully tax-equivalent adjustment	(0.66)%	(1.30)%	(1.21)%	(1.30)%	(1.30)%
Other intangible amortization	(0.51)%	(0.18)%	(0.16)%	(0.18)%	(0.20)%
Fully tax-equivalent efficiency ratio	69.60 %	65.45 %	62.55 %	65.21 %	64.89 %

(a) The ratio tangible common equity to tangible assets excludes goodwill and other intangible assets, net, which is a non-GAAP financial measure. This financial measure has been included as it is considered to be a critical metric with which to analyze and evaluate financial condition and capital strength.

(b) The Federal Reserve establishes regulatory capital requirements, including well-capitalized standards for the Corporation. The Corporation follows Basel III, subject to certain transition provisions. These regulatory capital measurements are used by management, regulators, investors, and analysts to assess, monitor and compare the quality and composition of our capital with the capital of other financial services companies.

(c) The efficiency ratio as defined by the Federal Reserve guidance is noninterest expense (which includes the provision for unfunded commitments) divided by the sum of net interest income plus noninterest income, excluding investment securities gains / losses, net. The fully tax-equivalent efficiency ratio is noninterest expense (which includes the provision for unfunded commitments), excluding other intangible amortization, divided by the sum of fully tax-equivalent net interest income plus noninterest income, excluding investment securities gains / losses, net. Management believes the fully tax-equivalent efficiency ratio, which adjusts net interest income for the tax-favored status of certain loans and investment securities, to be the preferred industry measurement as it enhances the comparability of net interest income arising from taxable and tax-exempt sources.

See Part II, Item 2, Unregistered Sales of Equity Securities and Use of Proceeds, for additional information on the shares repurchased during the first quarter of 2018.

Sequential Quarter Results

The Corporation reported net income of $69 million for the first quarter of 2018, compared to net income of $50 million for the fourth quarter of 2017. Net income available to common equity was $67 million for the first quarter of 2018 or $0.41 for basic and $0.40 diluted earnings per common share. Comparatively, net income available to common equity for the fourth quarter of 2017 was $48 million, or net income of $0.31 for both basic and diluted earnings per common share, respectively (see Table 1).

Fully tax-equivalent net interest income for the first quarter of 2018 was $213 million, $20 million higher from the fourth quarter of 2017. The net interest margin in the first quarter of 2018 was up 13 bp, to 2.92%. Average earning assets increased $1.8 billion to $29.3 billion in the first quarter of 2018, with average loans up $1.2 billion, while average investments and other short-term investments were up $622 million. On the funding side, average interest-bearing deposits were up $1.5 billion, while noninterest-bearing demand deposits were down $56 million. Average short and long-term funding increased $371 million (see Table 2).

The provision for credit losses was zero for the first quarter of 2018, and the fourth quarter of 2017 (see Table 12). See discussion under sections: Provision for Credit Losses, Nonperforming Assets, and Allowance for Credit Losses.

Noninterest income for the first quarter of 2018 increased $6 million (7%) to $90 million versus the fourth quarter of 2017. Fee-based revenue increased $4 million (6%) from the fourth quarter of 2017, primarily due to insurance commissions and fees. Mortgage banking, net, was up $3 million (101%) from the fourth quarter of 2017 as the Corporation resumed its historical practice of originating loans for sale in the secondary market.

Noninterest expense increased $31 million (17%) to $213 million. Personnel expense was $118 million for the first quarter of 2018, up $11 million (10%) from the fourth quarter of 2017. Occupancy expense increased $2 million (14%) from the fourth quarter of 2017. Legal and professional fees were $5 million, down $2 million (25%) from the fourth quarter of 2017. Bank Mutual acquisition related costs were $21 million for the first quarter of 2018.

For the first quarter of 2018, the Corporation recognized income tax expense of $18 million, compared to income tax expense of $40 million for the fourth quarter of 2017, primarily driven by the Tax Cut and Jobs Act signed into law on December 22, 2017. The effective tax rate was 20.43% and 44.34% for the first quarter of 2018 and the fourth quarter of 2017, respectively. See Income Taxes section for a detailed discussion on income taxes.

Comparable Quarter Results

The Corporation reported net income of $69 million for the first quarter of 2018, compared to $56 million for the first quarter of 2017. Net income available to common equity was $67 million for the first quarter of 2018, or $0.41 for basic earnings per common share. Comparatively, net income available to common equity for the first quarter of 2017 was $54 million, or $0.36 for basic earnings per common share (see Table 1).

Fully tax-equivalent net interest income for the first quarter of 2018 was $213 million, $27 million higher than the first quarter of 2017. The net interest margin between the comparable quarters was up 8 bp, to 2.92%, in the first quarter of 2018. Average earning assets increased $2.9 billion to $29.3 billion in the first quarter of 2018, with average loans increased $2.0 billion (predominantly due to the Bank Mutual acquisition). On the funding side, average interest-bearing deposits increased $2.1 billion, while noninterest-bearing demand deposits increased $112 million from the first quarter of 2017. Average short and long-term funding increased $643 million (see Table 2).

The provision for credit losses was zero for the first quarter of 2018, down $9 million from the first quarter of 2017. See discussion under sections: Provision for Credit Losses, Nonperforming Assets, and Allowance for Credit Losses.

Noninterest income for the first quarter of 2018 of $90 million was up $11 million (13%) compared to first quarter of 2017. Net mortgage banking income for the first quarter of 2018 was up $2 million (39%) compared to the first quarter of 2017. Brokerage commissions and fees was up $3 million (68%), primarily driven by increased investment advisory fees compared to the first quarter of 2017.

On a comparable quarter basis, noninterest expense increased $39 million (23%) to $213 million for the first quarter of 2018. Bank Mutual acquisition related costs were $21 million for the first quarter of 2018. Personnel expense was $118 million for the first quarter of 2018, up $11 million (10%) from the first quarter of 2017, primarily driven by the additional cost of Bank Mutual staff. Technology expense increased $3 million (24%) to $18 million in the first quarter of 2018, driven by investments in technology solutions that meet evolving customer needs and improve operational efficiency.

The Corporation recognized income tax expense of $18 million for the first quarter of 2018, compared to income tax expense of $21 million for first quarter of 2017. The effective tax rate was 20.43% and 27.31% for the first quarter of 2018 and 2017, respectively. See Income Taxes section for a detailed discussion on income taxes.

Segment Review

As discussed in Note 15 Segment Reporting of the notes to consolidated financial statements, the Corporation's reportable segments have been determined based upon its internal profitability reporting system, which is organized by strategic business unit. Certain strategic business units have been combined for segment information reporting purposes where the nature of the products and services, the type of customer, and the distribution of those products and services are similar. The reportable segments are Corporate and Commercial Specialty; Community, Consumer and Business; and Risk Management and Shared Services.

FTP is an important tool for managing the Corporation's balance sheet structure and measuring risk-adjusted profitability. By appropriately allocating the cost of funding and contingent liquidity to business units, the FTP process improves product pricing, which influences the volume and terms of new business and helps to optimize the risk / reward profile of the balance sheet. This process helps align the Corporation's funding and contingent liquidity risk with its risk appetite and complements broader liquidity and interest rate risk management programs. FTP methodologies are designed to promote more resilient, sustainable business models and centralize the management of funding and contingent liquidity risks. Through FTP, the Corporation transfers these risks to a central management function that can take advantage of natural off-sets, centralized hedging activities, and a broader view of these risks across business units.

Comparable Quarter Segment Review

The Corporate and Commercial Specialty segment had net income of $47 million for the first quarter of 2018, up $13 million from the comparable quarter in 2017. Segment revenue increased $7 million compared to first quarter of 2017, primarily due to growth in average loan balances and increases in the Federal Reserve interest rate. The credit provision decreased $1 million to $11 million for the first quarter of 2018. Average loan balances were $11.4 billion for the first quarter of 2018, up $625 million from an average balance of $10.8 billion for first quarter of 2017. Average deposit balances were $8.1 billion for the first quarter of 2018, up $1.6 billion from the comparable quarter of 2017. Average allocated capital increased $56 million to $1.2 billion for first quarter of 2018.

The Community, Consumer, and Business segment had net income of $36 million for the first quarter of 2018, up $14 million compared to first quarter of 2017. Segment revenue increased $24 million to $178 million for the first quarter of 2018, primarily due to a $15 million increase in net interest income and $9 million increase in noninterest income. Total noninterest expense for the first quarter of 2018 was $127 million, up $11 million from the comparable quarter of 2017, primarily due to an increase in personnel expense. Average loan balances were $10.1 billion for the first quarter of 2018, up $1.0 billion from the comparable quarter of 2017. Average deposits were $13.1 billion for the first quarter of 2018, up $1.8 billion from average deposits of $11.3 billion for the comparable quarter of 2017. Average allocated capital increased $56 million compared to the first quarter of 2017.

The Risk Management and Shared Services segment had a net loss of $14 million for the first quarter of 2018. Segment revenue was $14 million in the first quarter of 2018, an increase of $9 million from the comparable quarter of 2017, primarily due to an increase in net interest income. The credit provision decreased $8 million. Total noninterest expense for the first quarter of 2018 was $47 million, up $26 million from the comparable quarter of 2017, primarily driven by $21 million of acquisition related costs and certain unallocated expenses related to Bank Mutual shared services and operations prior to system conversion in late June 2018. Average deposits were $2.5 billion for first quarter of 2018, down $1.2 billion versus the comparable quarter of 2017 primarily driven by a $1.2 billion decrease in network transaction deposits. Average allocated capital increased $215 million to $586 million for first quarter of 2018.

Critical Accounting Policies

In preparing the consolidated financial statements, management is required to make estimates and assumptions that affect the reported amounts of assets and liabilities as of the date of the balance sheet and revenues and expenses for the period. Actual results could differ significantly from those estimates. Estimates that are particularly susceptible to significant change include the determination of the allowance for loan losses, goodwill impairment assessment, mortgage servicing rights valuation, and income taxes. A discussion of these policies can be found in the Critical Accounting Policies section in Management's Discussion and Analysis of Financial Condition and Results of Operations included in the Corporation's 2017 Annual Report on Form 10-K. There have been no changes in the Corporation's application of critical accounting policies since December 31, 2017.

Future Accounting Pronouncements

New accounting policies adopted by the Corporation are discussed in Note 3 Summary of Significant Accounting Policies, of the notes to consolidated financial statements. The expected impact of accounting pronouncements recently issued or proposed but not yet required to be adopted are displayed in the table below.

Standard	Description	Date of adoption	Effect on financial statements
ASU 2017-04 Intangibles - Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment	The FASB issued an amendment to simplify the subsequent quantitative measurement of goodwill by eliminating step two from the goodwill impairment test. Instead, an entity will perform only step one of its quantitative goodwill impairment test by comparing the fair value of a reporting unit with its carrying amount, and then recognizing an impairment charge for the amount by which the carrying amount exceeds the reporting unit's fair value; however, the loss recognized should not exceed the total amount of goodwill allocated to that reporting unit. An entity will still have the option to perform a qualitative assessment for a reporting unit to determine if the quantitative step one impairment test is necessary. This amendment is effective for annual or interim goodwill impairment tests in fiscal years beginning after December 15, 2019. Entities should apply the amendment prospectively. Early adoption is permitted, including in an interim period, for impairment tests performed after January 1, 2017. The Corporation has not had to perform a step one quantitative analysis since 2012, which concluded no impairment was necessary.	2nd Quarter 2020, consistent with the Corporation's annual impairment test in May of each year.	The Corporation is currently evaluating the impact on its results of operations, financial position, and liquidity.
ASU 2016-13 Financial Instruments - Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments	The FASB issued an amendment to replace the current incurred loss impairment methodology. Under the new guidance, entities will be required to measure expected credit losses by utilizing forward-looking information to assess an entity's allowance for credit losses. The guidance also requires consideration of a broader range of reasonable and supportable information to inform credit loss estimates. The measurement of expected credit losses is based on relevant information about past events, including historical experience, current conditions, and reasonable and supportable forecasts that affect the collectability of the reported amount. An entity must use judgment in determining the relevant information and estimation methods that are appropriate in its circumstances. This amendment is effective for fiscal years beginning after December 15, 2019, including interim periods within those fiscal years. Entities should apply the amendment by means of a cumulative-effect adjustment to retained earnings as of the beginning of the fiscal year of adoption. Early adoption is permitted.	1st Quarter 2020	The Corporation is currently evaluating the impact on its results of operations, financial position, and liquidity. A cross-functional team has been established to assess and implement the standard.
ASU 2016-02 Leases (Topic 842)	The FASB issued an amendment to provide transparency and comparability among organizations by recognizing lease assets and lease liabilities on the balance sheet and disclosing key information about leasing arrangements. This amendment will require lessees to recognize the following for all leases (with the exception of short-term leases) at the commencement date: 1) a lease liability, which is a lessee's obligation to make lease payments arising from a lease, measured on a discounted basis; and 2) a right-of-use asset, which is an asset that represents the lessee's right to use, or control the use of, a specified asset for the lease term. Under the new guidance, lessor accounting is largely unchanged. This amendment is effective for annual periods, and interim periods within those annual periods, beginning after December 15, 2018. Entities are required to recognize and measure leases at the beginning of the earliest period presented using a modified retrospective approach. The modified retrospective approach includes a number of optional practical expedients that entities may elect to apply. These practical expedients relate to the identification and classification of leases that commenced before the effective date, initial direct costs for leases that commenced before the effective date, and the ability to use hindsight in evaluating lessee options to extend or terminate a lease or to purchase the underlying asset. Early adoption is permitted. ASU 2018-01 amendment permits an entity to elect an optional transition practical expedient to not evaluate under Topic 842 land easements that exist or expired before the entity's adoption of Topic 842.	1st Quarter 2019	The Corporation is currently evaluating the impact on its results of operations, financial position, and liquidity. A cross-functional team has been established to assess and implement the standard.

Recent Developments

On April 24, 2018, the Corporation's Board of Directors declared a regular quarterly cash dividend of $0.15 per common share, payable on June 15, 2018, to shareholders of record at the close of business on June 1, 2018. The Board of Directors also declared a regular quarterly cash dividend of $0.3828125 per depositary share on Associated's 6.125% Series C Perpetual Preferred Stock, payable on June 15, 2018, to shareholders of record at the close of business on June 1, 2018. The Board of Directors also declared a regular quarterly cash dividend of $0.3359375 per depositary share on Associated's 5.375% Series D Perpetual Preferred Stock, payable on June 15, 2018, to shareholders of record at the close of business on June 1, 2018.

In addition, the Board of Directors authorized the repurchase of up to $100 million of the Corporation's common stock. This repurchase authorization is in addition to the authority remaining under the previous program. Repurchases under such programs are subject to regulatory limitations and may occur from time to time in open market purchases, block transactions, accelerated share repurchase programs or similar facilities.

In April 2018, the Corporation entered into two pay fix and receive floating rate interest rate swaps totaling $250 million notional amount. Combining these swaps with the $250 million notional amount of swaps entered into in the first quarter of 2018, the Corporation as of April 2018 has a total of $500 million notional amount pay fix and receive floating rate interest rate swaps with the objective of synthetically converting fixed rate assets to floating rate assets that will benefit the Corporation in a rising rate environment.

ITEM 3. Quantitative and Qualitative Disclosures About Market Risk

Information required by this item is set forth in Item 2 under the captions Quantitative and Qualitative Disclosures about Market Risk and Interest Rate Risk.

ITEM 4. Controls and Procedures

The Corporation maintains disclosure controls and procedures as required under Rule 13a-15 promulgated under the Securities Exchange Act of 1934, as amended (the “Exchange Act”), that are designed to ensure that information required to be disclosed in our Exchange Act reports is recorded, processed, summarized and reported within the time periods specified in the SEC’s rules and forms, and that such information is accumulated and communicated to the Corporation’s management, including its Chief Executive Officer and Chief Financial Officer, as appropriate, to allow timely decisions regarding required disclosure.

As of March 31, 2018 the Corporation’s management carried out an evaluation, under the supervision and with the participation of the Corporation’s Chief Executive Officer and Chief Financial Officer, of the effectiveness of its disclosure controls and procedures. Based on the foregoing, its Chief Executive Officer and Chief Financial Officer concluded that the Corporation’s disclosure controls and procedures were effective as of March 31, 2018.

No changes were made to the Corporation’s internal control over financial reporting (as defined in Rule 13a-15(f) of the Exchange Act of 1934) during the last fiscal quarter that have materially affected, or are reasonably likely to materially affect, the Corporation’s internal control over financial reporting.

PART II - OTHER INFORMATION

ITEM 1. Legal Proceedings

The information required by this item is set forth in Part I, Item 1 under Note 12 Commitments, Off-Balance Sheet Arrangements, Legal Proceedings and Regulatory Matters.

ITEM 1A. Risk Factors

The following risk factor supplements the Risk Factors described in the Corporation's 2017 Annual Report on Form 10-K and should be read in conjunction therewith.

Unauthorized disclosure of sensitive or confidential client or customer information, whether through a cyber-attack, other breach of our computer systems or otherwise, could severely harm our business. In the normal course of our business, we collect, process and retain sensitive and confidential client and customer information on our behalf and on behalf of other third parties. Despite the security measures we have in place, our facilities and systems may be vulnerable to cyber-attacks, security breaches, acts of vandalism, computer viruses, malware, misplaced or lost data, programming and / or human errors, or other similar events.

Information security risks for financial institutions like us have increased recently in part because of new technologies, the increased use of the internet and telecommunications technologies (including mobile devices and cloud computing) to conduct financial and other business transactions, political activism, and the increased sophistication and activities of organized crime, perpetrators of fraud, hackers, terrorists and others. In addition to cyber-attacks or other security breaches involving the theft of sensitive and confidential information, hackers have engaged in attacks against large financial institutions, particularly denial of service attacks, designed to disrupt key business services, such as customer-facing web sites. Because the methods of cyber-attacks change frequently or, in some cases, are not recognized until launched, we are not able to anticipate or implement effective preventive measures against all possible security breaches and the probability of a successful attack cannot be predicted. Although we employ detection and response mechanisms designed to contain and mitigate security incidents, early detection may be thwarted by persistent sophisticated attacks and malware designed to avoid detection.

We also face risks related to cyber-attacks and other security breaches in connection with card transactions that typically involve the transmission of sensitive information regarding our customers through various third parties. Some of these parties have in the past been the target of security breaches and cyber-attacks, and because the transactions involve third parties and environments that we do not control or secure, future security breaches or cyber-attacks affecting any of these third parties could impact us through no fault of our own, and in some cases we may have exposure and suffer losses for breaches or attacks relating to them. We also rely on numerous other third party service providers to conduct other aspects of our business operations and face similar risks relating to them. While we conduct security assessments on our higher risk third party service providers, we cannot be sure that their information security protocols are sufficient to withstand a cyber-attack or other security breach.

The Corporation regularly evaluates its systems and controls and implements upgrades as necessary. The additional cost to the Corporation of our cyber security monitoring and protection systems and controls includes the cost of hardware and software, third party technology providers, consulting and forensic testing firms, insurance premium costs and legal fees, in addition to the incremental cost of our personnel who focus a substantial portion of their responsibilities on cyber security.

Any successful cyber-attack or other security breach involving the misappropriation, loss or other unauthorized disclosure of confidential customer information or that compromises our ability to function could severely damage our reputation, erode confidence in the security of our systems, products and services, expose us to the risk of litigation and liability, disrupt our operations and have a material adverse effect on our business. Any successful cyber-attack may also subject the Corporation to regulatory investigations, litigation or enforcement, or require the payment of regulatory fines or penalties or undertaking costly remediation efforts with respect to third parties affected by a cyber security incident, all or any of which could adversely affect the Corporation's business, financial condition or results of operations and damage its reputation.

From time to time, the Corporation engages in acquisitions, including acquisitions of depository institutions such as our recent acquisition of Bank Mutual. The integration of core systems and processes for such transactions often occurs well after the closing, which may create elevated risk of cyber incidents. The Corporation may be subject to the data risks and cyber security vulnerabilities of the acquired company until the Corporation has sufficient time to fully integrate the acquired company's customers and operations. Although the Corporation conducts comprehensive due diligence of cyber-security policies, procedures and controls of our acquisition counterparties, and the Corporation maintains adequate policies, procedures, controls and information security protocols to facilitate an successful integration, there can be no assurance that such measures, controls and protocols are sufficient to withstand a cyber-attack or other security breach with respect to the companies we acquire, particularly during the period of time between closing and final integration.

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

During the first quarter of 2018, the Corporation repurchased $26 million, or approximately 1.1 million shares, of common stock. The repurchase details are presented in the table below.

Common Stock Purchases

Period	Total Number of Shares Purchased[(a)]	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Maximum Number of Shares that May Yet Be Purchased Under the Plans or Programs[(b)]
January 1, 2018 - January 31, 2018	—	$ —	—	—
February 1, 2018 - February 28, 2018	1,108,000	23.90	1,108,000	—
March 1, 2018 - March 31, 2018	—	—	—	—
Total	**1,108,000**	**$ 23.90**	**1,108,000**	**977,867**

(a) During the first quarter of 2018, the Corporation repurchased approximately 214,000 common shares for minimum tax withholding settlements on equity compensation. These purchases do not count against the maximum number of shares that may yet be purchased under the Board of Directors' authorization.

(b) On April 21, 2015, the Board of Directors authorized the repurchase of up to $125 million of the Corporation's common stock, of which approximately $24 million remained available to repurchase as of March 31, 2018. Using the closing stock price on March 31, 2018 of $24.85, a total of approximately 1 million shares of common stock remained available to be repurchased under the previously approved Board authorizations as of March 31, 2018.

During the first quarter of 2018, the Corporation repurchased $78 thousand, or 3,140 shares of preferred stock. The repurchase details are presented in the table below.

Series D Preferred Stock Depository Share Purchases

Period	Total Number of Shares Purchased	Average Price Paid per Share	Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs	Maximum Number of Shares that May Yet Be Purchased Under the Plans or Programs[(a)]
January 1, 2018 - January 31, 2018	—	$ —	—	—
February 1, 2018 - February 28, 2018	—	—	—	—
March 1, 2018 - March 31, 2018	3,140	24.89	3,140	—
Total	**3,140**	**$ 24.89**	**3,140**	**597,591**

(a) On July 25, 2017, the Board of Directors authorized the repurchase of up to $15 million of the depository shares of the Series D Preferred Stock, of which approximately $14.9 million remained available to repurchase as of March 31, 2018. Using the closing stock price on March 31, 2018 of $24.97, a total of approximately 598,000 shares of Series D Preferred stock remained available to be repurchased under the previously approved Board authorizations as of March 31, 2018.

On August 28, 2015, the Board of Directors authorized the repurchase of up to $10 million of depositary shares of the Series C Preferred Stock, of which all remained available to repurchase as of March 31, 2018. The repurchase of shares is based on market and investment opportunities, capital levels, growth prospects, and regulatory constraints. Such repurchases may occur from time to time in open market purchases, block transactions, private transactions, accelerated share repurchase programs, or similar facilities.

ITEM 6. Exhibits

(a) Exhibits:

Exhibit (11), Statement regarding computation of per share earnings. The information required by this item is set forth in Part I, Item 1 under Note 4 Earnings Per Common Share.

Exhibit (31.1), Certification Under Section 302 of Sarbanes-Oxley by Philip B. Flynn, Chief Executive Officer.

Exhibit (31.2), Certification Under Section 302 of Sarbanes-Oxley by Christopher J. Del Moral-Niles, Chief Financial Officer.

Exhibit (32), Certification by the Chief Executive Officer and Chief Financial Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of Sarbanes-Oxley.

Exhibit (101), Interactive data files pursuant to Rule 405 of Regulation S-T: (i) Unaudited Consolidated Balance Sheets, (ii) Unaudited Consolidated Statements of Income, (iii) Unaudited Consolidated Statements of Comprehensive Income, (iv) Unaudited Consolidated Statements of Changes in Stockholders' Equity, (v) Unaudited Consolidated Statements of Cash Flows, and (vi) Notes to Consolidated Financial Statements.

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 hereunto duly authorized.

	ASSOCIATED BANC-CORP
	(Registrant)
Date: April 30, 2018	/s/ Philip B. Flynn
	Philip B. Flynn President and Chief Executive Officer
Date: April 30, 2018	/s/ Christopher J. Del Moral-Niles
	Christopher J. Del Moral-Niles Chief Financial Officer
Date: April 30, 2018	/s/ Tammy C. Stadler
	Tammy C. Stadler Principal Accounting Officer