

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 June 30, 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

(State or other jurisdiction of
incorporation or organization)

**433 Main Street
Green Bay, Wisconsin**

(Address of principal executive offices)

39-1098068

(I.R.S. Employer
Identification No.)

54301

(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

Smaller reporting company

(Do not check if a smaller reporting company)

Emerging growth company

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

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

Yes No

APPLICABLE ONLY TO CORPORATE ISSUERS:

The number of shares outstanding of registrant's common stock, par value \$0.01 per share, at July 25, 2018 was 172,093,888.

ASSOCIATED BANC-CORP
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PART I - FINANCIAL INFORMATION

ITEM 1. Financial Statements:

ASSOCIATED BANC-CORP
Consolidated Balance Sheets

	June 30, 2018	December 31, 2017
	(Unaudited)	(Audited)
	(In Thousands, except share and per share data)	
Assets		
Cash and due from banks	\$ 396,761	\$ 483,666
Interest-bearing deposits in other financial institutions	71,462	199,702
Federal funds sold and securities purchased under agreements to resell	3,150	32,650
Investment securities held to maturity, at amortized cost	2,602,247	2,282,853
Investment securities available for sale, at fair value	4,261,651	4,043,446
Federal Home Loan Bank and Federal Reserve Bank stocks, at cost	249,040	165,331
Residential loans held for sale	143,022	85,544
Loans	22,976,786	20,784,991
Allowance for loan losses	(252,601)	(265,880)
Loans, net	22,724,184	20,519,111
Bank and corporate owned life insurance	659,592	591,057
Tax credit and other investments	137,051	147,099
Trading assets	132,919	69,675
Premises and equipment, net	361,385	330,963
Goodwill	1,166,665	976,239
Mortgage servicing rights, net	66,980	58,384
Other intangible assets, net	80,346	15,580
Other assets	596,190	482,294
Total assets	\$ 33,652,647	\$ 30,483,594
Liabilities and Stockholders' Equity		
Noninterest-bearing demand deposits	\$ 5,341,361	\$ 5,478,416
Interest-bearing deposits	18,474,953	17,307,546
Total deposits	23,816,314	22,785,962
Federal funds purchased and securities sold under agreements to repurchase	203,733	324,815
Commercial paper	52,791	67,467
FHLB advances	4,797,857	3,184,168
Other long-term funding	497,619	497,282
Trading liabilities	131,612	67,660
Accrued expenses and other liabilities	382,476	318,797
Total liabilities	29,882,403	27,246,151
Stockholders' Equity		
Preferred equity	159,401	159,929
Common equity		
Common stock	1,751	1,618
Surplus	1,828,965	1,454,188
Retained earnings	1,920,579	1,819,230
Accumulated other comprehensive income (loss)	(119,888)	(62,758)
Treasury stock, at cost	(20,564)	(134,764)
Total common equity	3,610,843	3,077,514
Total stockholders' equity	3,770,244	3,237,443
Total liabilities and stockholders' equity	\$ 33,652,647	\$ 30,483,594
Preferred shares issued	164,570	165,000
Preferred shares authorized (par value \$1.00 per share)	750,000	750,000
Common shares issued	175,133,157	161,751,975
Common shares authorized (par value \$0.01 per share)	250,000,000	250,000,000
Treasury shares of common stock	1,606,672	8,908,448

Numbers may not sum 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 June 30,		Six Months Ended June 30,	
	2018	2017	2018	2017
(In Thousands, except per share data)				
Interest Income				
Interest and fees on loans	\$ 246,646	\$ 184,246	\$ 466,680	\$ 357,895
Interest and dividends on investment securities:				
Taxable	30,623	23,658	60,727	47,133
Tax-exempt	10,783	8,143	20,000	16,272
Other interest	3,153	1,553	5,330	3,089
Total interest income	291,205	217,600	552,737	424,389
Interest Expense				
Interest on deposits	38,431	21,180	71,843	38,104
Interest on Federal funds purchased and securities sold under agreements to repurchase	538	824	1,060	1,339
Interest on other short-term funding	51	84	111	169
Interest on FHLB advances	21,279	7,149	34,402	11,596
Interest on long-term funding	4,544	4,544	9,088	9,088
Total interest expense	64,843	33,781	116,504	60,296
Net Interest Income	226,362	183,819	436,233	364,093
Provision for credit losses	4,000	12,000	4,000	21,000
Net interest income after provision for credit losses	222,362	171,819	432,233	343,093
Noninterest Income				
Insurance commissions and fees	23,996	20,853	46,644	42,473
Service charges on deposit account fees	16,390	16,030	32,810	32,386
Card-based and loan fees	14,387	13,764	27,809	26,229
Trust and asset management fees	13,437	12,346	26,806	24,281
Brokerage commission and fees	6,896	4,346	14,169	8,679
Mortgage banking, net	6,258	5,027	12,628	9,606
Capital markets, net	4,783	4,042	10,089	7,925
Bank and corporate owned life insurance	3,978	3,899	7,165	6,514
Asset gains (losses), net	2,497	(466)	2,390	(700)
Investment securities gains (losses), net	(2,015)	356	(2,015)	356
Other	2,235	2,213	4,727	4,492
Total noninterest income	92,842	82,410	183,222	162,241
Noninterest Expense				
Personnel	123,980	107,066	241,665	213,848
Occupancy	15,071	12,832	30,428	28,051
Technology	19,452	15,473	37,167	29,893
Equipment	5,953	5,234	11,509	10,719
Business development and advertising	7,067	7,152	13,760	12,987
Legal and professional	6,284	5,711	11,697	9,877
Card issuance and loan costs	3,173	2,974	6,477	5,594
Foreclosure / OREO expense, net	1,021	1,182	1,744	2,687
FDIC assessment	8,250	8,000	16,500	16,000
Other intangible amortization	2,168	496	3,693	1,009
Acquisition related costs ^(a)	7,107	—	27,712	—
Other	11,732	10,196	21,873	19,342
Total noninterest expense	211,258	176,316	424,223	350,007
Income before income taxes	103,947	77,913	191,232	155,327
Income tax expense	14,754	19,930	32,583	41,074
Net Income	89,192	57,983	158,648	114,253
Preferred stock dividends	2,329	2,339	4,668	4,669
Net income available to common equity	\$ 86,863	\$ 55,644	\$ 153,980	\$ 109,584
Earnings per common share:				
Basic	\$ 0.51	\$ 0.36	\$ 0.92	\$ 0.72
Diluted	\$ 0.50	\$ 0.36	\$ 0.90	\$ 0.71
Average common shares outstanding:				
Basic	170,633	151,573	167,096	151,196
Diluted	173,409	154,302	169,920	154,147

Numbers may not sum due to rounding.

(a) 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 June 30,		Six Months Ended June 30,	
	2018	2017	2018	2017
(\$ in Thousands)				
Net income	\$ 89,192	\$ 57,983	\$ 158,648	\$ 114,253
Other comprehensive income, net of tax				
Investment securities available for sale				
Net unrealized gains (losses)	(18,919)	15,218	(60,754)	18,370
Net unrealized gain (loss) on available for sale securities transferred to held to maturity securities	—	(9,474)	—	(14,738)
Amortization of net unrealized gain (loss) on available for sale securities transferred to held to maturity securities	(335)	(1,548)	(632)	(2,575)
Reclassification adjustment for net losses (gains) realized in net income ⁽¹⁾	2,015	—	2,015	—
Reclassification from OCI due to change in accounting principle	—	—	(84)	—
Reclassification of certain tax effects from OCI	—	—	(8,419)	—
Income tax (expense) benefit	4,705	(1,601)	15,340	(406)
Other comprehensive income (loss) on investment securities available for sale	(12,533)	2,595	(52,533)	651
Defined benefit pension and postretirement obligations				
Amortization of prior service cost	(38)	(37)	(76)	(75)
Amortization of actuarial loss (gains)	465	487	929	975
Reclassification of certain tax effects from OCI	—	—	(5,235)	—
Income tax (expense) benefit	(109)	(171)	(216)	(342)
Other comprehensive income (loss) on pension and postretirement obligations	318	279	(4,597)	558
Total other comprehensive income (loss)	(12,215)	2,874	(57,130)	1,209
Comprehensive income	\$ 76,977	\$ 60,857	\$ 101,518	\$ 115,462

Numbers may not sum due to rounding.

(1) Includes only available for sale securities.

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	—	—	—	114,253	—	—	114,253
Other comprehensive income	—	—	—	—	1,209	—	1,209
Comprehensive income							115,462
Common stock issued							
Stock-based compensation plans, net	—	—	1,102	(20,912)	—	40,755	20,945
Purchase of treasury stock	—	—	—	—	—	(8,445)	(8,445)
Cash dividends							
Common stock, \$0.24 per share	—	—	—	(36,804)	—	—	(36,804)
Preferred stock	—	—	—	(4,669)	—	—	(4,669)
Stock-based compensation expense, net	—	—	12,667	—	—	—	12,667
Other	—	—	1,034	—	—	—	1,034
Balance, June 30, 2017	\$ 159,929	\$ 1,630	\$ 1,474,301	\$ 1,747,632	\$ (53,470)	\$ (138,520)	\$ 3,191,502
Balance, December 31, 2017							
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	—	—	—	158,648	—	—	158,648
Other comprehensive income	—	—	—	—	(43,392)	—	(43,392)
Adoption of new accounting standards	—	—	—	—	(13,738)	—	(13,738)
Comprehensive income							101,518
Common stock issued							
Stock-based compensation plans, net	—	—	2,702	(15,176)	—	28,621	16,147
Acquisitions	—	137	396,975	—	—	91,296	488,408
Purchase of common stock returned to authorized but unissued	—	(14)	(33,061)	—	—	—	(33,075)
Purchase of treasury stock	—	—	—	—	—	(5,717)	(5,717)
Cash dividends							
Common stock, \$0.30 per share	—	—	—	(51,817)	—	—	(51,817)
Preferred stock	—	—	—	(4,668)	—	—	(4,668)
Redemption of preferred stock	(528)	—	—	(118)	—	—	(646)
Common stock warrants exercised	—	10	(10)	—	—	—	—
Stock-based compensation expense, net	—	—	8,172	—	—	—	8,172
Tax Act reclassification	—	—	—	13,654	—	—	13,654
Change in accounting principle	—	—	—	84	—	—	84
Other	—	—	—	742	—	—	742
Balance, June 30, 2018	\$ 159,401	\$ 1,751	\$ 1,828,965	\$ 1,920,579	\$ (119,888)	\$ (20,564)	\$ 3,770,244

Numbers may not sum due to rounding.

See accompanying notes to consolidated financial statements.

Item 1. Financial Statements Continued:

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

	Six Months Ended June 30,	
	2018	2017
	(\$ in Thousands)	
Cash Flow From Operating Activities		
Net income	\$ 158,648	\$ 114,253
Adjustments to reconcile net income to net cash provided by operating activities		
Provision for credit losses	4,000	21,000
Depreciation and amortization	24,249	23,241
Addition to (recovery of) valuation allowance on mortgage servicing rights, net	(607)	275
Amortization of mortgage servicing rights	4,649	5,084
Amortization of other intangible assets	3,693	1,009
Amortization and accretion on earning assets, funding, and other, net	423	17,889
Net amortization of tax credit investments	9,770	5,165
Gain on sales of investment securities, net	2,015	(356)
Asset (gains) losses, net	(2,390)	700
(Gain) loss on mortgage banking activities, net	261	4,287
Mortgage loans originated and acquired for sale	(516,285)	(220,284)
Proceeds from sales of mortgage loans held for sale	482,080	364,128
Pension Contribution	(31,371)	—
(Increase) decrease in interest receivable	(14,569)	(757)
Increase (decrease) in interest payable	3,775	2,653
Net change in other assets and other liabilities	(11,807)	(18,849)
Net cash provided by operating activities	<u>116,534</u>	<u>319,438</u>
Cash Flow From Investing Activities		
Net increase in loans	(338,781)	(819,198)
Purchases of		
Available for sale securities	(655,949)	(417,397)
Held to maturity securities	(429,964)	(70,969)
Federal Home Loan Bank and Federal Reserve Bank stocks	(238,190)	(166,869)
Premises, equipment, and software, net of disposals	(23,932)	(19,289)
Proceeds from		
Sales of available for sale securities	493,060	—
Sales of held to maturity securities	—	16,059
Sale of Federal Home Loan Bank and Federal Reserve Bank stocks	174,506	125,690
Prepayments, calls, and maturities of available for sale investment securities	330,517	389,251
Prepayments, calls, and maturities of held to maturity investment securities	121,612	80,976
Sales, prepayments, calls, and maturities of other assets	9,640	5,840
Net change in tax credit investments	(18,842)	(30,833)
Net cash (paid) received in acquisition	59,472	(217)
Net cash used in investing activities	<u>(516,851)</u>	<u>(906,956)</u>
Cash Flow From Financing Activities		
Net increase (decrease) in deposits	(810,598)	(270,268)
Net increase (decrease) in short-term funding	(481,920)	95,447
Net increase (decrease) in FHLB advances	1,527,966	714,988
Proceeds from issuance of common stock for stock-based compensation plans	16,147	20,945
Redemption of preferred shares	(646)	—
Purchase of common stock returned to authorized but unissued	(33,075)	—
Purchase of treasury stock for tax withholding	(5,717)	(8,445)
Cash dividends on common stock	(51,817)	(36,804)
Cash dividends on preferred stock	(4,668)	(4,669)
Net cash provided by financing activities	<u>155,672</u>	<u>511,194</u>
Net increase (decrease) in cash, cash equivalents, and restricted cash	(244,645)	(76,324)
Cash, cash equivalents, and restricted cash at beginning of period	716,018	642,233
Cash, cash equivalents, and restricted cash at end of period	<u>\$ 471,373</u>	<u>\$ 565,909</u>
Supplemental disclosures of cash flow information		
Cash paid for interest	\$ 112,392	\$ 57,306
Cash paid for income taxes	12,674	27,461
Loans and bank premises transferred to other real estate owned	21,299	3,267
Capitalized mortgage servicing rights	4,502	3,278
Loans transferred into held for sale from portfolio, net	12,709	66,181
Unsettled trades to purchase securities	15,339	—
Acquisition		
Fair value of assets acquired, including cash and cash equivalents	2,569,700	—
Fair value ascribed to goodwill and intangible assets	258,885	217
Fair value of liabilities assumed	2,828,448	—
Common stock issued in acquisition	137	—

Numbers may not sum 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.

	Six Months Ended June 30,	
	2018	2017
	(\$ in Thousands)	
Cash and cash equivalents	\$ 385,957	\$ 466,996
Restricted cash	85,416	98,913
Total cash, cash equivalents, and restricted cash shown in the statement of cash flows	<u>\$ 471,373</u>	<u>\$ 565,909</u>

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.

Item 1. Financial Statements Continued:

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 Associated Banc-Corp'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 Agreement and Plan of Merger dated July 20, 2017 (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 common stock of the Corporation on January 31, 2018. The Corporation completed the conversion of Bank Mutual in the second quarter of 2018. The banking subsidiary of Bank Mutual merged with and into Associated Bank, N.A. on June 24, 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 will be material.

Goodwill related to the Bank Mutual acquisition increased \$6 million during the second quarter of 2018 to \$173 million. Upon review of information relating to events and circumstances existing at the acquisition date, and in accordance with applicable accounting guidance, the Corporation remeasured select previously reported fair value amounts. Based on updated appraisal information, the fair value of premises and equipment decreased by \$6 million and the fair value of other real estate owned increased by \$1 million. Additionally, the fair value of loans was increased by less than \$1 million due to an updated appraisal and other adjustments. Goodwill created by the acquisition of Bank Mutual is not tax deductible. 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 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		(48,043)	1,875,877
Premises and equipment, net		5,180	44,939
Bank owned life insurance		(24)	65,390
Goodwill			173,243
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 (included in other assets on the face of the Consolidated Balance Sheet)		989	5,638
Others assets	\$	6,153	\$ 46,257
Total assets			\$ 2,820,389
Liabilities			
Deposits	\$	2,498	\$ 1,840,950
Other borrowings		1,875	431,886
Other liabilities	\$	4,370	\$ 65,864
Total liabilities			\$ 2,338,701
Total consideration paid			\$ 481,688

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 second quarter of 2018, the Corporation completed the acquisition of Anderson Insurance & Investment Agency, Inc. ("Anderson"), an independent insurance agency based in Minneapolis, Minnesota. Anderson adds a range of complementary services and significant expertise in workers' compensation and executive risk management services. The transaction was valued at approximately \$10 million. As a result of the acquisition, the Corporation recorded goodwill of approximately \$7 million and added approximately \$3 million of other intangibles related to customer relationships associated with the Anderson acquisition. The other intangibles related to the acquisition are being amortized on a straight-line basis over 7 years. See Note 8 for more information on goodwill and other intangible assets.

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 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 when there is a reasonable expectation about the amount and timing of such cash flows. If a reasonable expectation on the amount or timing of such cash flows can't be determined, accretion of the fair value discount for nonperforming loans will be recognized using the cost recovery method of accounting.

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 an amendment to allow a reclassification from accumulated other comprehensive income to retained earnings for the stranded tax effects resulting from the Tax Cuts and Jobs Act of 2017. 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 Tax Cut and Jobs Act of 2017 is recognized.	1st Quarter 2018	The Corporation has elected to early adopt this amendment. 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 on results of operations, financial position, or liquidity. See Consolidated Statements of Comprehensive Income and the Statement of Changes in Stockholders' Equity.
ASU 2017-12 Derivatives and Hedging (Topic 815): Targeted Improvements to Accounting for Hedging Activities	The FASB issued an 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 amendment. No material impact on results of operations, financial position, or 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 an amendment 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 on results of operations, financial position, or 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, then 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 on results of operations, financial position, or liquidity. See Consolidated Statements of Cash Flows.

Standard	Description	Date of adoption	Effect on financial statements
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 from 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 bank owned life insurance) should be classified as cash inflows from investing, while the cash payments for the premiums may be classified as cash outflows from 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.
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.	1st Quarter 2018	The Corporation has adopted this amendment and is using the cumulative-effect adjustment as of the beginning of the fiscal year of adoption. No material impact on the result of operations, financial position or 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 June 30, 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 amendment 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 June 30,		For the Six Months Ended June 30,	
	2018	2017	2018	2017
(In Thousands, except per share data)				
Net income	\$ 89,192	\$ 57,983	\$ 158,648	\$ 114,253
Preferred stock dividends	(2,329)	(2,339)	(4,668)	(4,669)
Net income available to common equity	\$ 86,863	\$ 55,644	\$ 153,980	\$ 109,584
Common shareholder dividends	(25,977)	(18,326)	(51,549)	(36,577)
Unvested share-based payment awards	(130)	(110)	(269)	(227)
Undistributed earnings	\$ 60,756	\$ 37,208	\$ 102,162	\$ 72,780
Undistributed earnings allocated to common shareholders	60,446	36,980	101,677	72,273
Undistributed earnings allocated to unvested share-based payment awards	310	228	485	507
Undistributed earnings	\$ 60,756	\$ 37,208	\$ 102,162	\$ 72,780
Basic				
Distributed earnings to common shareholders	\$ 25,977	\$ 18,326	\$ 51,549	\$ 36,577
Undistributed earnings allocated to common shareholders	60,446	36,980	101,677	72,273
Total common shareholders earnings, basic	\$ 86,423	\$ 55,306	\$ 153,226	\$ 108,850
Diluted				
Distributed earnings to common shareholders	\$ 25,977	\$ 18,326	\$ 51,549	\$ 36,577
Undistributed earnings allocated to common shareholders	60,446	36,980	101,677	72,273
Total common shareholders earnings, diluted	\$ 86,423	\$ 55,306	\$ 153,226	\$ 108,850
Weighted average common shares outstanding	170,633	151,573	167,096	151,196
Effect of dilutive common stock awards	2,146	1,958	2,080	2,155
Effect of dilutive common stock warrants	630	771	744	796
Diluted weighted average common shares outstanding	173,409	154,302	169,920	154,147
Basic earnings per common share	\$ 0.51	\$ 0.36	\$ 0.92	\$ 0.72
Diluted earnings per common share	\$ 0.50	\$ 0.36	\$ 0.90	\$ 0.71

Anti-dilutive common stock options of approximately 1.5 million and 1 million for the three months ended June 30, 2018 and 2017, respectively, and 1.4 million and 900,000 for the six months ended June 30, 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.

Performance awards are based on performance goals of earnings per share and total shareholder return with vesting ranging from a minimum of 25% to a maximum of 150% of the target award. Performance awards are valued utilizing a Monte Carlo simulation model to estimate fair value of the awards at the grant date.

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 six 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 six months ended June 30, 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	(888,661)	16.69		
Forfeited or expired	(38,613)	24.21		
Outstanding at June 30, 2018	5,500,204	\$ 19.05	6.69	\$ 45,418
Options Exercisable at June 30, 2018	3,287,488	\$ 16.80	5.39	\$ 34,551

(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 six months ended June 30, 2018, the intrinsic value of stock options exercised was approximately \$9 million. For the six months ended June 30, 2017, the intrinsic value of the stock options exercised was \$11 million. The total fair value of stock options vested was \$4 million for the six months ended June 30, 2018 and June 30, 2017. The Corporation recognized compensation expense for the vesting of stock options of \$2 million for both the six months ended June 30, 2018 and June 30, 2017. Included in compensation expense for 2018 was less than \$1 million of expense for the accelerated vesting of stock options granted to retirement eligible colleagues. At June 30, 2018, the Corporation had approximately \$7 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 six months ended June 30, 2018.

Restricted Stock	Shares	Weighted Average Grant Date Fair Value
Outstanding at December 31, 2017	2,026,071	\$ 19.68
Granted	573,877	24.65
Vested	(537,881)	18.21
Forfeited	(30,480)	22.16
Outstanding at June 30, 2018	2,031,587	\$ 21.87

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. Service-based restricted stock awards granted during 2017 and 2018 will vest ratably over a four year period. Expense for restricted stock awards issued of approximately \$6 million was recorded for the six months ended June 30, 2018 and \$11 million was recorded for the six months ended June 30, 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 \$25 million of unrecognized compensation costs related to restricted stock awards at June 30, 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.

June 30, 2018	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
(\$ in Thousands)				
Investment securities available for sale				
U. S. Treasury securities	\$ 1,001	\$ —	\$ (6)	\$ 996
Residential mortgage-related securities				
FNMA / FHLMC	396,368	5,573	(5,232)	396,709
GNMA	2,275,481	23	(65,315)	2,210,189
Private-label	1,037	—	(5)	1,031
GNMA commercial mortgage-related securities	1,400,680	—	(52,399)	1,348,282
FFELP asset backed securities	298,263	1,679	(111)	299,831
Other debt securities	3,000	—	—	3,000
Other equity securities	1,613	—	—	1,613
Total investment securities available for sale	<u>\$ 4,377,443</u>	<u>\$ 7,275</u>	<u>\$ (123,068)</u>	<u>\$ 4,261,651</u>
Investment securities held to maturity				
Obligations of state and political subdivisions (municipal securities)	\$ 1,593,147	\$ 4,851	\$ (17,698)	\$ 1,580,300
Residential mortgage-related securities				
FNMA / FHLMC	97,822	191	(2,306)	95,707
GNMA	388,174	1,969	(13,020)	377,123
GNMA commercial mortgage-related securities	523,103	8,542	(23,832)	507,813
Total investment securities held to maturity	<u>\$ 2,602,247</u>	<u>\$ 15,553</u>	<u>\$ (56,856)</u>	<u>\$ 2,560,943</u>

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	<u>\$ 4,100,417</u>	<u>\$ 10,996</u>	<u>\$ (67,967)</u>	<u>\$ 4,043,446</u>
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	<u>\$ 2,282,853</u>	<u>\$ 26,543</u>	<u>\$ (25,822)</u>	<u>\$ 2,283,574</u>

The expected maturities of investment securities available for sale and held to maturity at June 30, 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	\$ 3,001	\$ 2,996	\$ 46,938	\$ 47,269
Due after one year through five years	1,000	1,000	200,725	199,266
Due after five years through ten years	—	—	366,997	361,260
Due after ten years	—	—	978,487	972,504
Total debt securities	4,001	3,996	1,593,147	1,580,300
Residential mortgage-related securities				
FNMA / FHLMC	396,368	396,709	97,822	95,707
GNMA	2,275,481	2,210,189	388,174	377,123
Private-label	1,037	1,031	—	—
GNMA commercial mortgage-related securities	1,400,680	1,348,282	523,103	507,813
FFELP asset backed securities	298,263	299,831	—	—
Equity securities	1,613	1,613	—	—
Total investment securities	\$ 4,377,443	\$ 4,261,651	\$ 2,602,247	\$ 2,560,943
Ratio of Fair Value to Amortized Cost		97.4%		98.4%

The proceeds from the sale of investment securities for the six months ended June 30, 2018 and 2017 are shown below.

	Six Months Ended June 30,	
	2018	2017
	(\$ in Thousands)	
Gross gains on available for sale securities	\$ —	\$ —
Gross gains on held to maturity securities	—	361
Total gains	—	361
Gross losses on available for sale securities	(2,015)	—
Gross losses on held to maturity securities	\$ —	\$ (5)
Total losses	\$ (2,015)	\$ (5)
Investment securities gains (losses), net	\$ (2,015)	\$ 356
Proceeds from sales of investment securities	\$ 493,060	\$ 16,059

During the first six months of 2018, the Corporation sold approximately \$40 million of lower yielding GNMA commercial mortgage-related securities. In addition, on the acquisition date, the Corporation sold Bank Mutual's entire \$453 million securities portfolio.

During the first six months of 2017, the Corporation sold approximately \$16 million of municipal securities classified as held to maturity due to credit concerns stemming from budgetary pressure and continued credit rating deterioration concerns in the State of Illinois.

Investment securities with a carrying value of approximately \$3.1 billion at both June 30, 2018 and December 31, 2017 were pledged to secure certain deposits or for other purposes as required or permitted by law.

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 June 30, 2018.

June 30, 2018	Less than 12 months			12 months or more			Total	
	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	\$ (6)	\$ 996	\$ (6)	\$ 996
Residential mortgage-related securities								
FNMA / FHLMC	19	(1,613)	100,946	9	(3,620)	128,509	(5,233)	229,455
GNMA	62	(31,430)	1,453,394	29	(33,885)	756,061	(65,315)	2,209,455
Private-label	—	—	—	1	(5)	1,031	(5)	1,031
GNMA commercial mortgage-related securities	22	(8,821)	284,733	80	(43,577)	1,063,701	(52,398)	1,348,434
FFELP asset backed securities	7	(111)	100,757	—	—	—	(111)	100,757
Total	110	\$ (41,975)	\$ 1,939,830	120	\$ (81,093)	\$ 1,950,298	\$ (123,068)	\$ 3,890,128
Investment securities held to maturity								
Obligations of state and political subdivisions (municipal securities)	890	\$ (10,814)	\$ 609,381	142	\$ (6,884)	\$ 128,244	\$ (17,698)	\$ 737,625
Residential mortgage-related securities								
FNMA / FHLMC	25	(1,518)	76,046	10	(788)	14,728	(2,306)	90,774
GNMA	61	(7,062)	236,008	20	(5,957)	137,093	(13,019)	373,101
GNMA commercial mortgage-related securities	1	(813)	29,243	24	(23,019)	478,570	(23,832)	507,813
Total	977	\$ (20,207)	\$ 950,678	196	\$ (36,648)	\$ 758,635	\$ (56,856)	\$ 1,709,313

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.

December 31, 2017	Less than 12 months			12 months or more			Total	
	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 June 30, 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 June 30, 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 65 bp and 53 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 in an unrealized loss position 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 June 30, 2018, and December 31, 2017, the Corporation had FHLB stock of \$173 million and \$89 million, respectively. The Corporation had Federal Reserve Bank stock of \$76 million at both June 30, 2018 and December 31, 2017.

Note 7 Loans

The period end loan composition was as follows.

	June 30, 2018 ^(a)	December 31, 2017
(\$ in Thousands)		
Commercial and industrial	\$ 7,109,796	\$ 6,399,693
Commercial real estate — owner occupied	888,330	802,209
Commercial and business lending	7,998,126	7,201,902
Commercial real estate — investor	3,996,415	3,315,254
Real estate construction	1,487,159	1,451,684
Commercial real estate lending	5,483,574	4,766,938
Total commercial	13,481,700	11,968,840
Residential mortgage	8,207,253	7,546,534
Home equity	911,363	883,804
Other consumer	376,470	385,813
Total consumer	9,495,086	8,816,151
Total loans	\$ 22,976,786	\$ 20,784,991

(a) Includes \$16 million of purchased credit-impaired loans

The following table presents commercial and consumer loans by credit quality indicator at June 30, 2018.

	Pass	Special Mention	Potential Problem	Nonaccrual	Total
(\$ in Thousands)					
Commercial and industrial	\$ 6,763,557	\$ 92,286	\$ 172,177	\$ 81,776	\$ 7,109,796
Commercial real estate - owner occupied	814,769	16,033	38,879	18,649	888,330
Commercial and business lending	7,578,326	108,319	211,056	100,425	7,998,126
Commercial real estate - investor	3,885,535	59,587	24,790	26,503	3,996,415
Real estate construction	1,452,888	29,559	3,168	1,544	1,487,159
Commercial real estate lending	5,338,423	89,146	27,958	28,047	5,483,574
Total commercial	12,916,749	197,465	239,014	128,472	13,481,700
Residential mortgage	8,141,803	199	2,355	62,896	8,207,253
Home equity	897,471	792	142	12,958	911,363
Other consumer	375,624	706	6	134	376,470
Total consumer	9,414,898	1,697	2,503	75,988	9,495,086
Total	\$ 22,331,647	\$ 199,162	\$ 241,517	\$ 204,460	\$ 22,976,786

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 June 30, 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	\$ 7,027,210	\$ 407	\$ 181	\$ 222	\$ 81,776	\$ 7,109,796
Commercial real estate - owner occupied	869,488	193	—	—	18,649	888,330
Commercial and business lending	7,896,698	600	181	222	100,425	7,998,126
Commercial real estate - investor	3,969,084	828	—	—	26,503	3,996,415
Real estate construction	1,465,850	19,765	—	—	1,544	1,487,159
Commercial real estate lending	5,434,934	20,593	—	—	28,047	5,483,574
Total commercial	13,331,632	21,193	181	222	128,472	13,481,700
Residential mortgage	8,135,016	9,158	183	—	62,896	8,207,253
Home equity	891,135	6,534	736	—	12,958	911,363
Other consumer	372,984	972	763	1,617	134	376,470
Total consumer	9,399,135	16,664	1,682	1,617	75,988	9,495,086
Total	\$ 22,730,767	\$ 37,857	\$ 1,863	\$ 1,839	\$ 204,460	\$ 22,976,786

(a) The recorded investment in loans past due 90 days or more and still accruing totaled \$2 million at June 30, 2018 (the same as the reported balances for the accruing loans noted above).

(b) Of the total nonaccrual loans, \$141 million or 69% were current with respect to payment at June 30, 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 \$16 million of purchased credit-impaired loans, at June 30, 2018.

	Recorded Investment	Unpaid Principal Balance	Related Allowance	Average Recorded Investment	Interest Income Recognized
(\$ in Thousands)					
Loans with a related allowance					
Commercial and industrial	\$ 75,928	\$ 77,873	\$ 17,628	\$ 70,082	\$ 725
Commercial real estate — owner occupied	15,386	15,853	829	15,649	95
Commercial and business lending	91,314	93,726	18,457	85,731	820
Commercial real estate — investor	15,397	15,469	4,132	15,485	901
Real estate construction	448	523	77	456	15
Commercial real estate lending	15,845	15,992	4,209	15,941	916
Total commercial	107,159	109,718	22,666	101,672	1,736
Residential mortgage	39,926	44,171	6,208	39,433	863
Home equity	9,817	10,809	3,514	9,917	282
Other consumer	1,049	1,051	109	1,051	1
Total consumer	50,792	56,031	9,831	50,401	1,146
Total loans ^(a)	\$ 157,951	\$ 165,749	\$ 32,497	\$ 152,073	\$ 2,882
Loans with no related allowance					
Commercial and industrial	\$ 35,065	\$ 47,914	\$ —	\$ 39,201	\$ (286)
Commercial real estate — owner occupied	4,869	5,920	—	4,179	24
Commercial and business lending	39,934	53,834	—	43,380	(262)
Commercial real estate — investor	984	1,031	—	1,006	—
Real estate construction	—	—	—	—	—
Commercial real estate lending	984	1,031	—	1,006	—
Total commercial	40,918	54,865	—	44,386	(262)
Residential mortgage	11,543	11,862	—	7,839	128
Home equity	1,275	1,289	—	785	12
Other consumer	—	—	—	—	—
Total consumer	12,818	13,151	—	8,624	140
Total loans ^(a)	\$ 53,736	\$ 68,016	\$ —	\$ 53,010	\$ (122)
Total					
Commercial and industrial	\$ 110,993	\$ 125,787	\$ 17,628	\$ 109,283	\$ 439
Commercial real estate — owner occupied	20,255	21,773	829	19,828	119
Commercial and business lending	131,248	147,560	18,457	129,111	558
Commercial real estate — investor	16,381	16,500	4,132	16,491	901
Real estate construction	448	523	77	456	15
Commercial real estate lending	16,829	17,023	4,209	16,947	916
Total commercial	148,077	164,583	22,666	146,058	1,474
Residential mortgage	51,469	56,033	6,208	47,272	991
Home equity	11,092	12,098	3,514	10,702	294
Other consumer	1,049	1,051	109	1,051	1
Total consumer	63,610	69,182	9,831	59,025	1,286
Total loans ^(a)	\$ 211,687	\$ 233,765	\$ 32,497	\$ 205,083	\$ 2,760

(a) The net recorded investment (defined as recorded investment, net of the related allowance) of the impaired loans represented 77% of the unpaid principal balance at June 30, 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 following table presents nonaccrual and performing restructured loans by loan portfolio.

	June 30, 2018		December 31, 2017	
	Performing Restructured Loans	Nonaccrual Restructured Loans ^(a)	Performing Restructured Loans	Nonaccrual Restructured Loans ^(a)
(\$ in Thousands)				
Commercial and industrial	\$ 32,438	\$ 155	\$ 30,047	\$ 1,776
Commercial real estate — owner occupied	3,820	—	3,989	—
Commercial real estate — investor	372	14,268	14,389	—
Real estate construction	222	226	310	157
Residential mortgage	17,934	20,372	17,068	18,991
Home equity	7,900	2,972	7,705	2,537
Other consumer	1,037	12	1,110	25
Total	\$ 63,723	\$ 38,005	\$ 74,618	\$ 23,486

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

The Corporation had a recorded investment of approximately \$4 million in loans modified in troubled debt restructurings during the six months ended June 30, 2018, of which less than \$1 million were in accrual status and approximately \$4 million were in nonaccrual pending a sustained period of repayment.

The following table provides the number of loans modified in a troubled debt restructuring by loan portfolio during the six months ended June 30, 2018 and 2017, respectively, and the recorded investment and unpaid principal balance as of June 30, 2018 and 2017, respectively.

	Six Months Ended June 30, 2018			Six Months Ended June 30, 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	1	\$ 47	\$ 47	24	\$ 30,935	\$ 52,260
Commercial real estate — owner occupied	—	—	—	2	716	716
Commercial real estate — investor	1	984	1,031	—	—	—
Residential mortgage	10	2,064	2,064	36	2,695	2,805
Home equity	10	935	949	26	674	919
Other consumer	1	5	8	—	—	—
Total	23	\$ 4,035	\$ 4,099	88	\$ 35,020	\$ 56,700

(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 six months ended June 30, 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 six months ended June 30, 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 six months ended June 30, 2018 and 2017, respectively, as well as the recorded investment in these restructured loans as of June 30, 2018 and 2017, respectively.

	Six Months Ended June 30, 2018		Six Months Ended June 30, 2017	
	Number of Loans	Recorded Investment	Number of Loans	Recorded Investment
(\$ in Thousands)				
Commercial and industrial	3	\$ —	—	\$ —
Residential mortgage	8	2,219	17	941
Home equity	21	1,409	9	271
Total	32	\$ 3,628	26	\$ 1,212

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 six months ended June 30, 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	(19,611)	(1,042)	(1,202)	(53)	(956)	(1,729)	(2,488)	(27,081)
Recoveries	6,406	287	21	290	690	1,192	416	9,302
Net Charge offs	(13,205)	(755)	(1,181)	237	(266)	(537)	(2,072)	(17,779)
Provision for loan losses	750	1,213	4,272	(5,455)	1,796	(301)	2,225	4,500
June 30, 2018	\$ 110,613	\$ 10,810	\$ 44,150	\$ 29,152	\$ 31,137	\$ 21,288	\$ 5,451	\$ 252,601
Allowance for loan losses								
Individually evaluated for impairment	\$ 17,628	\$ 829	\$ 4,132	\$ 77	\$ 6,208	\$ 3,514	\$ 109	\$ 32,497
Collectively evaluated for impairment	92,985	9,981	40,018	29,075	24,929	17,774	5,342	220,104
Acquired and accounted for under ASC 310-30 ^(a)	—	—	—	—	—	—	—	—
Total allowance for loan losses	\$ 110,613	\$ 10,810	\$ 44,150	\$ 29,152	\$ 31,137	\$ 21,288	\$ 5,451	\$ 252,601
Loans								
Individually evaluated for impairment	\$ 110,993	\$ 20,255	\$ 16,381	\$ 448	\$ 51,469	\$ 11,092	\$ 1,049	\$ 211,687
Collectively evaluated for impairment	6,996,038	866,356	3,969,829	1,486,464	8,154,904	900,187	375,421	22,749,199
Acquired and accounted for under ASC 310-30 ^(a)	2,765	1,719	10,205	247	880	84	—	15,900
Total loans	\$ 7,109,796	\$ 888,330	\$ 3,996,415	\$ 1,487,159	\$ 8,207,253	\$ 911,363	\$ 376,470	\$ 22,976,786

(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 \$17 million at June 30, 2018 and represented 2.5% of total oil and gas loans.

(\$ in Millions)	Six Months Ended June 30, 2018		Year Ended December 31, 2017	
Balance at beginning of period	\$ 27		\$ 38	
Charge offs	(14)		(25)	
Recoveries	3		—	
Net Charge offs	(11)		(25)	
Provision for loan losses	1		14	
Balance at end of period	\$ 17		\$ 27	
Allowance for loan losses				
Individually evaluated for impairment	\$ 9		\$ 5	
Collectively evaluated for impairment	8		22	
Total allowance for loan losses	\$ 17		\$ 27	
Loans				
Individually evaluated for impairment	\$ 45		\$ 77	
Collectively evaluated for impairment	637		523	
Total loans	\$ 682		\$ 600	

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

	Six Months Ended June 30, 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. If a reasonable expectation on the amount or timing of such cash flows cannot be determined, accretion of the fair value discount for nonperforming loans will be recognized using the cost recovery method of accounting.

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

	Six Months Ended June 30, 2018		Year Ended December 31, 2017	
	(\$ in Thousands)			
Changes in Accretable Yield				
Balance at beginning of period	\$	—	\$	—
Purchases		4,881		—
Accretion		(119)		—
Balance at end of period	\$	4,762	\$	—

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.

At June 30, 2018, the Corporation had a total of approximately \$32 million in net unaccreted purchase discount, of which approximately \$26 million was related to performing loans and approximately \$7 million was related to nonperforming loans.

Note 8 Goodwill and Other Intangible Assets

Goodwill

Goodwill is not amortized but is instead 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 2018, 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 2018 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 2018 impairment testing that have changed the Corporation's impairment assessment conclusion. There were no impairment charges recorded in 2017 or the first six months of 2018.

At June 30, 2018, the Corporation had goodwill of \$1.2 billion, compared to \$976 million at December 31, 2017. Goodwill increased \$173 million related to the Bank Mutual acquisition, \$10 million related to the acquisition of Diversified, and \$7 million related to the acquisition of Anderson. 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. During the second quarter of 2018, the Corporation added approximately \$3 million of other intangibles related to customer relationships associated with the Anderson 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.

	Six Months Ended June 30, 2018		Year Ended December 31, 2017	
	(\$ in Thousands)			
Core deposit intangibles				
Gross carrying amount	\$	58,100	\$	4,385
Accumulated amortization		(2,421)		(4,385)
Net book value	\$	55,679	\$	—
Additions during the periods	\$	58,100	\$	—
Amortization during the year	\$	2,421	\$	112
Other intangibles				
Gross carrying amount	\$	44,931	\$	34,572
Accumulated amortization		(20,262)		(18,992)
Net book value	\$	24,668	\$	15,580
Additions during the period	\$	10,359	\$	2,162
Amortization during the year	\$	1,270	\$	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.

	Six Months Ended June 30, 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		4,502		7,167
Amortization		(4,649)		(10,084)
Mortgage servicing rights at end of period	\$	67,157	\$	59,168
Valuation allowance at beginning of period		(784)		(609)
(Additions) recoveries, net		607		(175)
Valuation allowance at end of period		(177)		(784)
Mortgage servicing rights, net	\$	66,980	\$	58,384
Fair value of mortgage servicing rights	\$	84,585	\$	64,387
Portfolio of residential mortgage loans serviced for others (“servicing portfolio”)	\$	8,500,578	\$	7,646,846
Mortgage servicing rights, net to servicing portfolio		0.79%		0.76%
Mortgage servicing rights expense ^(a)	\$	4,042	\$	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 June 30, 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)					
Six Months Ending December 31, 2018	\$	2,905	\$	1,563	\$	4,725
2019		5,810		2,828		9,150
2020		5,810		2,711		7,963
2021		5,810		2,687		6,906
2022		5,810		2,663		6,000
2023		5,810		2,644		5,228
Beyond 2023		23,724		9,571		27,185
Total Estimated Amortization Expense	\$	55,679	\$	24,668	\$	67,157

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), long-term funding (funding with original contractual maturities greater than one year), and FHLB advances (funding based on original contractual maturities).

	June 30, 2018	December 31, 2017
	(\$ in Thousands)	
Short-Term Funding		
Federal funds purchased	\$ 20,720	\$ 141,950
Securities sold under agreements to repurchase	183,013	182,865
Federal funds purchased and securities sold under agreements to repurchase	203,733	324,815
Commercial paper	52,791	67,467
Total short-term funding	<u>\$ 256,525</u>	<u>\$ 392,282</u>
Long-Term Funding		
Senior notes, at par	\$ 250,000	\$ 250,000
Subordinated notes, at par	250,000	250,000
Other long-term funding and capitalized costs	(2,381)	(2,718)
Total long-term funding	<u>497,619</u>	<u>497,282</u>
Total short and long-term funding, excluding FHLB advances	<u>\$ 754,144</u>	<u>\$ 889,564</u>
FHLB Advances		
Short-term FHLB advances	\$ 370,000	\$ 284,000
Long-term FHLB advances	4,427,857	2,900,168
Total FHLB advances	<u>\$ 4,797,857</u>	<u>\$ 3,184,168</u>
Total short and long-term funding	<u>\$ 5,552,001</u>	<u>\$ 4,073,732</u>

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 June 30, 2018, the Corporation pledged agency mortgage-related securities with a fair value of \$279 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 June 30, 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
June 30, 2018	(\$ in Thousands)				
Repurchase agreements					
Agency mortgage-related securities	\$ 183,013	\$ —	\$ —	\$ —	\$ 183,013
Total	<u>\$ 183,013</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 183,013</u>
December 31, 2017					
Repurchase agreements					
Agency mortgage-related securities	\$ 182,865	\$ —	\$ —	\$ —	\$ 182,865
Total	<u>\$ 182,865</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 182,865</u>

Long-Term Funding

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.

FHLB Advances

At June 30, 2018, the Corporation had \$4.8 billion of FHLB advances, up \$1.6 billion from December 31, 2017. The increase in FHLB borrowing is primarily a result of reduced reliance on network transaction deposits over the year.

At June 30, 2018, FHLB advances had maturity or put dates (callable by the FHLB) primarily ranging from 2018 through 2020, and had a weighted average interest rate of 1.97%, compared to 1.26% at December 31, 2017. A portion of the FHLB advances are indexed to the FHLB discount note and re-price at varying intervals. The advances offer flexible, market rate, long-term funding that improves the Corporation's liquidity profile.

As of June 30, 2018, the Corporation had \$2.6 billion of puttable FHLB advances with a one-time option where the FHLB can call the advance prior to the contractual maturity. The contractual weighted average life to the put date of these advances was 1.4 years with a weighted average life to contractual maturity of 6.6 years. As of June 30, 2018, it is anticipated that all of these advances will be called by the FHLB on their put date.

The original contractual maturity or next put date of the Corporation's FHLB advances as of June 30, 2018 and December 31, 2017 are presented in the following table.

	June 30, 2018		December 31, 2017	
	Amount	Weighted Average Contractual Coupon Rate	Amount	Weighted Average Contractual Coupon Rate
	(\$ in Thousands)			
Maturity or put date within 1 year	\$ 2,632,613	1.70%	\$ 2,434,000	1.26%
After 1 but within 2	1,861,040	2.25%	750,013	1.23%
After 2 but within 3	291,606	2.60%	155	4.91%
After 3 years	12,598	4.55%	—	—%
FHLB advances and overall rate	\$ 4,797,857	1.97%	\$ 3,184,168	1.26%

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 \$35 million of investment securities as collateral at June 30, 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 June 30, 2018 the Corporation posted \$48 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 markets, 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. The Corporation's 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.

(\$ in Thousands)	June 30, 2018			December 31, 2017		
	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	\$ 2,668,542	\$ 62,708	Trading assets	\$ 2,183,687	\$ 28,494	Trading assets
Interest rate-related instruments — customer and mirror	2,668,542	(62,141)	Trading liabilities	2,183,687	(28,035)	Trading liabilities
Foreign currency exchange forwards	143,551	3,317	Trading assets	124,851	2,495	Trading assets
Foreign currency exchange forwards	136,177	(3,091)	Trading liabilities	118,094	(2,339)	Trading liabilities
Commodity contracts	419,459	66,894	Trading assets	457,868	38,686	Trading assets
Commodity contracts	419,458	(66,380)	Trading liabilities	457,108	(37,286)	Trading liabilities
Interest rate lock commitments (mortgage)	335,070	3,287	Other assets	222,736	1,538	Other assets
Forward commitments (mortgage)	312,003	(919)	Other liabilities	164,567	(313)	Other liabilities
Purchased options (time deposit)	25,511	1,027	Other assets	31,063	1,175	Other assets
Written options (time deposit)	25,511	(1,027)	Other liabilities	31,063	(1,175)	Other liabilities
Derivatives designated as hedging instruments						
Interest Rate Products	500,000	2,396	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.

(\$ in Thousands)	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)
	June 30, 2018	
Loans and investment securities receivables ^(a)	497,591	(2,409)
Total	\$ 497,591	\$ (2,409)

(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 June 30, 2018, the amortized cost basis of the closed portfolios used in these hedging relationships was \$1.2 billion; the negative cumulative basis adjustments associated with these hedging relationships was \$2.4 million; and the amounts of the designated hedged items were \$500 million.

The table below identifies the effect of fair value hedge accounting on the Corporation's statement of performance during the six months ended June 30, 2018.

(\$ in Thousands)	Location and Amount of Gain or (Loss) Recognized in Income on Fair Value and Cash Flow Hedging Relationships			
	Six Months Ended June 30, 2018		Year Ended December 31, 2017	
	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	(13)	—	—	—
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	(2,409)	—	—	—
Derivatives designated as hedging instruments	2,396	—	—	—

The table below identifies the effect of derivatives not designated as hedging instruments on the Corporation's statement of performance during the six months ended June 30, 2018.

(\$ in Thousands)	Income Statement Category of Gain / (Loss) Recognized in Income	For the Six Months Ended June 30,	
		2018	2017
Derivative Instruments			
Interest rate-related instruments — customer and mirror, net	Capital markets, net	\$ 108	\$ (69)
Interest rate lock commitments (mortgage)	Mortgage banking, net	1,749	2,474
Forward commitments (mortgage)	Mortgage banking, net	(606)	(2,749)
Foreign currency exchange forwards	Capital markets, net	70	9
Commodity contracts	Capital markets, net	(886)	198

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 the Corporation has with its commercial customers are not subject to an enforceable master netting arrangement, and therefore, are excluded from this table.

(\$ in Thousands)	Gross amounts of recognized assets	Gross amounts offset in the balance sheet	Net amounts presented in the balance sheet	Gross amounts not offset in the balance sheet		Net amount
				Derivative liability available for offset	Collateral received	
Derivative assets: ^(a)						
June 30, 2018	\$ 68,065	\$ —	\$ 68,065	\$ (27,040)	\$ (38,601)	\$ 2,424
December 31, 2017	29,503	—	29,503	(16,140)	(13,234)	129

(\$ in Thousands)	Gross amounts of recognized liabilities	Gross amounts offset in the balance sheet	Net amounts presented in the balance sheet	Gross amounts not offset in the balance sheet		Net amount
				Derivative asset available for offset	Collateral pledged	
Derivative liabilities ^(b)						
June 30, 2018	\$ 63,363	\$ —	\$ 63,363	\$ (27,040)	\$ (35,513)	\$ 810
December 31, 2017	37,164	—	37,164	(16,140)	(20,662)	362

(a) Includes interest and commodity instrument assets.

(b) Includes interest and commodity instrument liabilities.

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.

	June 30, 2018	December 31, 2017
	(\$ in Thousands)	
Commitments to extend credit, excluding commitments to originate residential mortgage loans held for sale ^{(a)(b)}	\$ 8,552,601	\$ 8,027,187
Commercial letters of credit ^(a)	13,167	11,886
Standby letters of credit ^(c)	255,858	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 June 30, 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 \$3 million at June 30, 2018 and \$2 million at 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 June 30, 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 June 30, 2018 was \$137 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 principal investment 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 Corporation also invests in loan pools that support CRA loans. The timing of future cash requirements to fund these pools is dependent upon loan demand, which can vary over time. The aggregate carrying value of these investments at June 30, 2018 was \$25 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 \$99 million at June 30, 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.

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 the Corporation's 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 \$1 million during both the six months ended June 30, 2018 and the year ended December 31, 2017. The loss reimbursement and settlement claims paid for the six months ended June 30, 2018 were zero and negligible for the year ended December 31, 2017. Make whole requests during 2017 and the first six months of 2018 generally arose from loans sold during the period of January 1, 2012 to December 31, 2017. Since January 1, 2012, loans sold totaled \$10.5 billion at the time of sale, and consisted primarily of loans sold to GSEs. As of June 30, 2018, approximately \$6.2 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.

	Six Months Ended June 30, 2018		Year Ended December 31, 2017	
	(\$ in Thousands)			
Balance at beginning of period	\$	987	\$	900
Repurchase provision expense		150		246
Charge offs, net		(90)		(159)
Amount recorded at acquisition		88		—
Balance at end of period	\$	1,135	\$	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 June 30, 2018, and December 31, 2017, there were approximately \$39 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 June 30, 2018 and December 31, 2017, there were \$64 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 related 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 its 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 June 30, 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 its 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 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.

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 June 30, 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.

The table below presents the Corporation's financial instruments measured at fair value on a recurring basis as of June 30, 2018 and December 31, 2017, aggregated by the level in the fair value hierarchy within which those measurements fall.

	Fair Value Hierarchy	June 30, 2018	December 31, 2017
(\$ in Thousands)			
Assets			
Investment securities available for sale			
U.S. Treasury securities	Level 1	\$ 996	\$ 996
Residential mortgage-related securities			
FNMA / FHLMC	Level 2	396,709	464,768
GNMA	Level 2	2,210,189	1,913,350
Private-label	Level 2	1,031	1,059
GNMA commercial mortgage-related securities	Level 2	1,348,282	1,513,277
FFELP asset backed securities	Level 2	299,831	145,176
Other equity securities	Level 1	1,613	1,632
Other debt securities	Level 2	3,000	3,188
Total investment securities available for sale	Level 1	2,609	2,628
Total investment securities available for sale	Level 2	4,259,042	4,040,818
Residential loans held for sale	Level 2	143,022	85,544
Interest rate-related instruments	Level 2	62,708	28,494
Foreign currency exchange forwards	Level 2	3,317	2,495
Interest rate products (designated as hedging instruments)	Level 2	2,396	—
Interest rate lock commitments to originate residential mortgage loans held for sale	Level 3	3,287	1,538
Commodity contracts	Level 2	66,894	38,686
Purchased options (time deposit)	Level 2	1,027	1,175
Liabilities			
Interest rate-related instruments	Level 2	\$ 62,141	\$ 28,035
Foreign currency exchange forwards	Level 2	3,091	2,339
Forward commitments to sell residential mortgage loans	Level 3	919	313
Commodity contracts	Level 2	66,380	37,286
Written options (time deposit)	Level 2	1,027	1,175

The table below presents a rollforward of the balance sheet amounts for the six months ended June 30, 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	<u>\$ —</u>	<u>\$ 1,225</u>
Total net gains (losses) included in income		
Mortgage derivative gain (loss)	—	1,147
Balance June 30, 2018	<u>\$ —</u>	<u>\$ 2,372</u>

(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 June 30, 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 June 30, 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 June 30, 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
June 30, 2018				
Assets				
Impaired loans ^(a)	Level 3	\$ 52,972	Provision for credit losses ^(b)	\$ (12,431)
Other real estate owned ^(c)	Level 2	1,954	Foreclosure / OREO expense, net	(808)
Mortgage servicing rights	Level 3	84,585	Mortgage banking, net	607
December 31, 2017				
Assets				
Impaired loans ^(a)	Level 3	\$ 92,534	Provision for credit losses ^(b)	\$ (32,159)
Other real estate owned ^(c)	Level 2	2,604	Foreclosure / OREO expense, net	(939)
Mortgage servicing rights	Level 3	64,387	Mortgage banking, net	(175)

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

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

(c) If the fair value of the collateral exceeds the carrying amount of the asset, no charge-off or adjustment is necessary, the asset is not considered to be carried at fair value, and is therefore not included in the table.

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.

June 30, 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	24%

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.

	Fair Value Hierarchy Level	June 30, 2018		December 31, 2017	
		Carrying Amount	Fair Value	Carrying Amount	Fair Value
(\$ in Thousands)					
Financial assets					
Cash and due from banks	Level 1	\$ 396,761	\$ 396,761	\$ 483,666	\$ 483,666
Interest-bearing deposits in other financial institutions	Level 1	71,462	71,462	199,702	199,702
Federal funds sold and securities purchased under agreements to resell	Level 1	3,150	3,150	32,650	32,650
Investment securities held to maturity	Level 2	2,602,247	2,560,943	2,282,853	2,283,574
Investment securities available for sale	Level 1	2,609	2,609	2,628	2,628
Investment securities available for sale	Level 2	4,259,042	4,259,042	4,040,818	4,040,818
FHLB and Federal Reserve Bank stocks	Level 2	249,040	249,040	165,331	165,331
Residential loans held for sale	Level 2	143,022	143,022	85,544	85,544
Loans, net	Level 3	22,724,184	22,282,282	20,519,111	20,314,984
Bank and corporate owned life insurance	Level 2	659,592	659,592	591,057	591,057
Derivatives (trading and other assets)	Level 2	136,342	136,342	70,850	70,850
Derivatives (trading and other assets)	Level 3	3,287	3,287	1,538	1,538
Financial liabilities					
Noninterest-bearing demand, savings, interest-bearing demand, and money market accounts	Level 3	\$ 21,088,538	\$ 21,088,538	\$ 20,436,893	\$ 20,436,893
Brokered CDs and other time deposits	Level 2	2,727,776	2,727,776	2,349,069	2,349,069
Short-term funding	Level 2	626,525	626,525	676,282	676,282
Long-term funding	Level 2	4,925,476	4,921,348	3,397,450	3,411,368
Standby letters of credit ^(a)	Level 2	2,549	2,549	2,402	2,402
Derivatives (trading and other liabilities)	Level 2	132,639	132,639	68,835	68,835
Derivatives (trading and other liabilities)	Level 3	919	919	313	313

(a) The commitment on standby letters of credit was \$256 million and \$235 million at June 30, 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 and six months ended June 30, 2018 and 2017 were as follows.

	Three Months Ended June 30,		Six Months Ended June 30,	
	2018	2017	2018	2017
(\$ in Thousands)				
Components of Net Periodic Benefit Cost				
RAP				
Service cost	\$ 1,893	\$ 1,782	\$ 3,785	\$ 3,563
Interest cost	1,660	1,756	3,320	3,512
Expected return on plan assets	(4,755)	(4,882)	(9,510)	(9,763)
Amortization of prior service cost	(19)	(18)	(38)	(37)
Amortization of actuarial loss	463	487	925	975
Total net pension cost	\$ (759)	\$ (875)	\$ (1,518)	\$ (1,750)
Bank Mutual Pension Plan^(a)				
Interest cost	\$ 650	N/A	\$ 1,083	N/A
Expected return on plan assets	(1,060)	N/A	(1,592)	N/A
Total net pension cost	\$ (410)	N/A	\$ (509)	N/A
Postretirement Plan^(b)				
Interest cost	\$ 27	\$ 24	\$ 53	\$ 48
Amortization of prior service cost	(19)	(19)	(38)	(38)
Amortization of actuarial loss	2	—	4	—
Total net periodic benefit cost	\$ 10	\$ 5	\$ 19	\$ 10

(a) The reported figures only include five 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 five 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.

The Corporation’s funding policy is to pay at least the minimum amount required by federal law and regulations, with consideration given to the maximum funding amounts allowed. The Corporation regularly reviews the funding of its pension plans. The Corporation made a \$31 million contribution to the Bank Mutual Pension Plan during the second quarter of 2018.

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
Six Months Ended June 30, 2018				
Net interest income	\$ 203,287	\$ 218,163	\$ 14,783	\$ 436,233
Noninterest income	26,876	150,286	6,059	183,222
Total revenue	230,163	368,449	20,842	619,455
Credit provision ^(a)	21,723	9,846	(27,569)	4,000
Noninterest expense	81,025	265,700	77,498	424,223
Income (loss) before income taxes	127,415	92,904	(29,087)	191,232
Income tax expense (benefit)	24,880	19,510	(11,806)	32,583
Net income	\$ 102,535	\$ 73,394	\$ (17,280)	\$ 158,648
Return on average allocated capital (ROCET1) ^(b)	17.2%	22.8%	(7.5)%	12.7%
Six Months Ended June 30, 2017				
Net interest income	\$ 179,259	\$ 179,059	\$ 5,775	\$ 364,093
Noninterest income	24,490	130,679	7,072	162,241
Total revenue	203,749	309,738	12,847	526,334
Credit provision ^(a)	23,050	10,271	(12,321)	21,000
Noninterest expense	76,897	241,339	31,771	350,007
Income (loss) before income taxes	103,802	58,128	(6,603)	155,327
Income tax expense (benefit)	34,012	20,345	(13,283)	41,074
Net income	\$ 69,790	\$ 37,783	\$ 6,680	\$ 114,253
Return on average allocated capital (ROCET1) ^(b)	12.6%	13.1%	1.1 %	10.6%

Segment Balance Sheet Data				
(\$ in Thousands)	Corporate and Commercial Specialty	Community, Consumer, and Business	Risk Management and Shared Services	Consolidated Total
Average balances for YTD June 2018				
Average earning assets	\$ 11,729,745	\$ 10,271,021	\$ 7,849,775	\$ 29,850,541
Average loans	11,718,236	10,267,066	559,238	22,544,539
Average deposits	7,838,409	13,418,283	2,391,868	23,648,560
Average allocated capital (CET1) ^(b)	\$ 1,204,160	\$ 648,032	\$ 587,297	\$ 2,439,489
Average balances for YTD June 2017				
Average earning assets	\$ 10,807,106	\$ 9,321,564	\$ 6,414,384	\$ 26,543,054
Average loans	10,797,831	9,319,719	181,049	20,298,599
Average deposits	6,433,870	11,456,200	3,604,524	21,494,594
Average allocated capital (CET1) ^(b)	\$ 1,120,082	\$ 582,706	\$ 378,104	\$ 2,080,892

(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 return on common equity Tier 1 ("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.

Segment Income Statement Data				
(\$ in Thousands)	Corporate and Commercial Specialty	Community, Consumer, and Business	Risk Management and Shared Services	Consolidated Total
Three Months Ended June 30, 2018				
Net interest income	\$ 107,330	\$ 114,620	\$ 4,413	\$ 226,362
Noninterest income	14,194	76,250	2,399	92,842
Total revenue	121,524	190,870	6,812	319,204
Credit provision ^(a)	11,126	4,880	(12,006)	4,000
Noninterest expense	41,775	138,553	30,929	211,258
Income (loss) before income taxes	68,623	47,437	(12,111)	103,947
Income tax expense (benefit)	13,454	9,962	(8,661)	14,754
Net income (loss)	\$ 55,169	\$ 37,475	\$ (3,450)	\$ 89,192
Return on average allocated capital (ROCET1) ^(b)	17.9%	22.7%	(3.9)%	14.0%
Three Months Ended June 30, 2017				
Net interest income	\$ 89,871	\$ 90,131	\$ 3,817	\$ 183,819
Noninterest income	12,497	65,809	4,104	82,410
Total revenue	102,368	155,940	7,921	266,229
Credit provision ^(a)	11,470	5,764	(5,234)	12,000
Noninterest expense	39,418	125,242	11,656	176,316
Income (loss) before income taxes	51,480	24,934	1,499	77,913
Income tax expense (benefit)	16,363	8,727	(5,160)	19,930
Net income	\$ 35,117	\$ 16,207	\$ 6,659	\$ 57,983
Return on average allocated capital (ROCET1) ^(b)	12.5%	11.0%	4.5 %	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 June 30, 2018				
Average earning assets	\$ 12,066,538	\$ 10,402,680	\$ 7,943,487	\$ 30,412,705
Average loans	12,054,347	10,399,458	551,624	23,005,428
Average deposits	7,621,977	13,736,251	2,288,021	23,646,250
Average allocated capital (CET1) ^(b)	\$ 1,236,918	\$ 663,172	\$ 588,411	\$ 2,488,501
Three Months Ended June 30, 2017				
Average earning assets	\$ 10,853,881	\$ 9,510,571	\$ 6,380,103	\$ 26,744,555
Average loans	10,841,858	9,508,683	171,449	20,521,990
Average deposits	6,447,190	11,574,028	3,501,931	21,523,149
Average allocated capital (CET1) ^(b)	\$ 1,125,494	\$ 588,880	\$ 385,451	\$ 2,099,825

(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 June 30, 2018 and 2017 respectively, including changes during the preceding six and three month periods as well as any reclassifications out of accumulated other comprehensive income (loss).

(\$ 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	(60,754)	—	(60,754)
Amounts reclassified from accumulated other comprehensive income (loss)			
Investment securities losses (gains), net	2,015	—	2,015
Personnel expense	—	(76)	(76)
Other expense	—	929	929
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)	(632)	—	(632)
Income tax (expense) benefit	15,340	(216)	15,124
Net other comprehensive income (loss) during period	(52,533)	(4,597)	(57,130)
Balance June 30, 2018	<u>\$ (90,986)</u>	<u>\$ (28,902)</u>	<u>\$ (119,888)</u>
Balance January 1, 2017	\$ (20,079)	\$ (34,600)	\$ (54,679)
Other comprehensive income (loss) before reclassifications	3,632	—	3,632
Amounts reclassified from accumulated other comprehensive income (loss)			
Personnel expense	—	(75)	(75)
Other expense	—	975	975
Interest income (amortization of net unrealized losses (gains) on available for sale securities transferred to held to maturity securities)	(2,575)	—	(2,575)
Income tax (expense) benefit	(406)	(342)	(748)
Net other comprehensive income (loss) during period	651	558	1,209
Balance June 30, 2017	<u>\$ (19,428)</u>	<u>\$ (34,042)</u>	<u>\$ (53,470)</u>

	Investments Securities Available For Sale	Defined Benefit Pension and Post Retirement Obligations	Accumulated Other Comprehensive Income (Loss)
Balance April 1, 2018	\$ (78,453)	\$ (29,220)	\$ (107,673)
Other comprehensive income (loss) before reclassifications	(18,919)	—	(18,919)
Amounts reclassified from accumulated other comprehensive income (loss)			
Investment securities losses (gains), net	2,015	—	2,015
Personnel expense	—	(38)	(38)
Other expense	—	465	465
Interest income (amortization of net unrealized losses (gains) on available for sale securities transferred to held to maturity securities)	(335)	—	(335)
Income tax (expense) benefit	4,705	(109)	4,596
Net other comprehensive income (loss) during period	(12,533)	318	(12,215)
Balance June 30, 2018	\$ (90,986)	\$ (28,902)	\$ (119,888)
Balance April 1, 2017	\$ (22,023)	\$ (34,321)	\$ (56,344)
Other comprehensive income (loss) before reclassifications	5,744	—	5,744
Amounts reclassified from accumulated other comprehensive income (loss)			
Personnel expense	—	(37)	(37)
Other expense	—	487	487
Interest income (Amortization of net unrealized losses (gains) on available for sale securities transferred to held to maturity securities)	(1,548)	—	(1,548)
Income tax (expense) benefit	(1,601)	(171)	(1,772)
Net other comprehensive income (loss) during period	2,595	279	2,874
Balance June 30, 2017	\$ (19,428)	\$ (34,042)	\$ (53,470)

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 the Corporation's 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 the Corporation's revenue by major source for the three and six months ended June 30, 2018 and June 30, 2017.

Six Months Ended June 30, 2018				
(\$ in Thousands)	Corporate and Commercial Specialty	Community, Consumer, and Business	Risk Management and Shared Services	Consolidated Total
Insurance commissions and fees	\$ —	\$ 46,612	\$ 32	46,644
Service charges and deposit account fees	8,011	24,773	25	32,810
Card-based and loan fees ^(a)	674	19,691	67	20,432
Trust and asset management fees	—	26,806	—	26,806
Brokerage commissions and fees	—	13,902	267	14,169
Other revenue	(170)	4,763	98	4,692
Noninterest Income (in-scope of Topic 606)	8,515	136,547	490	145,553
Noninterest Income (out-of-scope of Topic 606)	18,361	13,739	5,570	37,670
Total Noninterest Income	26,876	150,286	6,059	183,222

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

Six Months Ended June 30, 2017				
(\$ in Thousands)	Corporate and Commercial Specialty	Community, Consumer, and Business	Risk Management and Shared Services	Consolidated Total
Insurance commissions and fees	\$ —	\$ 42,473	\$ —	\$ 42,473
Service charges and deposit account fees	8,511	23,826	49	32,386
Card-based and loan fees ^(a)	592	16,973	11	17,575
Trust and asset management fees	—	24,281	—	24,281
Brokerage commissions and fees	—	8,679	—	8,679
Other revenue	82	4,315	105	4,502
Noninterest Income (in-scope of Topic 606)	9,184	120,547	165	129,896
Noninterest Income (out-of-scope of Topic 606)	15,306	10,132	6,906	32,344
Total Noninterest Income	24,490	130,679	7,072	162,241

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

Three Months Ended June 30, 2018					
(\$ in Thousands)	Corporate and Commercial Specialty	Community, Consumer, and Business	Risk Management and Shared Services	Consolidated Total	
Insurance commissions and fees	\$ —	\$ 23,988	\$ 7	\$ 23,996	
Service charges and deposit account fees	3,786	12,590	13	16,390	
Card-based and loan fees ^(a)	358	10,162	42	10,562	
Trust and asset management fees	—	13,437	—	13,437	
Brokerage commissions and fees	—	6,870	26	6,896	
Other revenue	(825)	2,302	68	1,545	
Noninterest Income (in-scope of Topic 606)	3,320	69,349	156	72,825	
Noninterest Income (out-of-scope of Topic 606)	10,874	6,901	2,242	20,017	
Total Noninterest Income	14,194	76,250	2,399	92,842	

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

Three Months Ended June 30, 2017					
(\$ in Thousands)	Corporate and Commercial Specialty	Community, Consumer, and Business	Risk Management and Shared Services	Consolidated Total	
Insurance commissions and fees	\$ —	\$ 20,853	\$ —	\$ 20,853	
Service charges and deposit account fees	4,070	11,938	23	16,030	
Card-based and loan fees ^(a)	320	8,829	5	9,154	
Trust and asset management fees	—	12,346	—	12,346	
Brokerage commissions and fees	—	4,346	—	4,346	
Other revenue	37	2,196	53	2,286	
Noninterest Income (in-scope of Topic 606)	4,426	60,507	81	65,014	
Noninterest Income (out-of-scope of Topic 606)	8,071	5,302	4,022	17,395	
Total Noninterest Income	12,497	65,809	4,104	82,410	

(a) 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 Whitnell & Co., Diversified, and Anderson since the second quarter of 2017 which resulted in increased insurance commissions and fees, trust and asset management fees, and brokerage commissions.

Below is a listing of performance obligations for the Corporation's 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 ^(a)	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.

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

Arrangements with Multiple Performance Obligations

The Corporation's 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.

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, in the Corporation's Quarterly Report on Form 10-Q for the quarter ended March 31, 2018, 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.

Recent Legislative Developments

On May 24, 2018, the President signed into law the Economic Growth, Regulatory Relief, and Consumer Protection Act ("Economic Growth Act"), which repealed or modified several important provisions of the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 ("Dodd-Frank Act") that have impacted us. Key aspects of the Economic Growth Act that have the potential to affect our business and the results of our operations include:

- Raising the total asset threshold from \$10 billion to \$250 billion at which bank holding companies are required to conduct annual company-run stress tests mandated by the Dodd-Frank Act;
- Raising the total asset threshold from \$10 billion to \$50 billion at which publicly traded bank holding companies are required to establish risk committees for the oversight of the enterprise-wide risk management practices of the institution;
- Raising the total asset threshold from \$50 billion to \$250 billion at which bank holding companies would be subject to annual supervisory stress tests;
- Raising the total asset threshold for enhanced prudential supervision by the Board of Governors of the Federal Reserve System ("Federal Reserve Board") from \$50 billion to \$250 billion, which had resulted in enhanced prudential standards in the areas of risk-based capital and leverage limits, liquidity requirements, and resolution planning (preparation of so-called "living wills"). Under the amended provisions, the Federal Reserve Board retains discretion to subject bank holding companies with more than \$100 billion in assets to enhanced supervision.

To the extent we grow our balance sheet organically or through strategic opportunities, the Corporation expects to benefit significantly from the amendments which raised the above asset thresholds. In addition, although the Corporation will continue to monitor and stress test its capital consistent with the safety and soundness expectations of the federal regulators, the Corporation will no longer conduct company-run stress testing as a result of the legislative amendments.

The Economic Growth Act also enacted several important changes in some technical compliance areas that we believe will help reduce our regulatory burden, including:

- Prohibiting federal banking regulators from imposing higher capital standards on High Volatility Commercial Real Estate (“HVCRE”) exposures unless they are for acquisition, development or construction (“ADC”), and clarifying ADC status;
- Requiring the federal banking agencies to amend the Liquidity Coverage Ratio Rule such that all qualifying investment-grade, liquid and readily-marketable municipal securities are treated as level 2B liquid assets, making them more attractive investment alternatives;
- Exempting from appraisal requirements certain transactions involving real property in rural areas and valued at less than \$400,000; and
- Directing the Bureau of Consumer Financial Protection to provide guidance on the applicability of the TILA-RESPA Integrated Disclosure rule to mortgage assumption transactions and construction-to-permanent home loans, as well the extent to which lenders can rely on model disclosures that do not reflect recent regulatory changes.

Despite the improvements for mid-size financial institutions such as the Corporation that has resulted from the Economic Growth Act, many provisions of the Dodd-Frank Act and its implementing regulations remain in place and will continue to result in additional operating and compliance costs that could have a material adverse effect on our business, financial condition, results of operation. In addition, the Economic Growth Act requires the enactment of a number of implementing regulations, the details of which may have a material effect on the ultimate impact of the law.

Performance Summary

- Average loans of \$22.5 billion increased \$2.2 billion, or 11%, from the first six months of 2017. Average deposits of \$23.6 billion increased \$2.2 billion, or 10%, from the first six 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 \$436 million increased \$72 million, or 20%, from the first six months of 2017. Net interest margin was 2.97%, compared to 2.83% for the first six months of 2017. For the remainder of 2018, the Corporation expects an improving year over year net interest margin.
- Provision for credit losses was \$4 million, down from \$21 million the first six months of 2017. For the remainder of 2018, the Corporation expects the provision for credit losses will change based on changes in risk grade or other indicators of credit quality, and loan volume.
- Noninterest income of \$183 million was up \$21 million, or 13% from the first six months of 2017. For 2018, the Corporation expects noninterest income of approximately \$365 million to \$370 million.
- Noninterest expense of \$424 million including \$28 million of acquisition related costs pertaining to Bank Mutual, was up \$74 million, or 21% compared to the first six months 2017. For 2018, the Corporation expects noninterest expense to be approximately \$825 million, which includes the Diversified and Anderson acquisitions and all costs related to Bank Mutual.
- The effective tax rate for the first six months of 2018 was 17.04%, compared to 26.44% for the first six months of 2017. The Corporation expects the effective tax rate to be approximately 22% for the remainder of the year, and approximately 20% for the full year 2018.

Table 1 Summary Results of Operations: Trends

	YTD Jun 2018	YTD Jun 2017	2Q18	1Q18	4Q17	3Q17	2Q17
(\$ in Thousands, except per share data)							
Net income	\$ 158,648	\$ 114,253	\$ 89,192	\$ 69,456	\$ 50,010	\$ 65,001	\$ 57,983
Net income available to common equity	153,980	109,584	86,863	67,117	47,671	62,662	55,644
Earnings per common share - basic	0.92	0.72	0.51	0.41	0.31	0.41	0.36
Earnings per common share - diluted	0.90	0.71	0.50	0.40	0.31	0.41	0.36
Effective tax rate	17.04%	26.44%	14.19%	20.43%	44.34%	30.55%	25.58%

Income Statement Analysis

Net Interest Income

Table 2 Net Interest Income Analysis

	Six Months Ended June 30,					
	2018			2017		
	Average Balance	Interest Income / Expense	Average Yield / Rate	Average Balance	Interest Income / Expense	Average Yield / Rate
(\$ in Thousands)						
Assets						
Earning assets						
Loans ^{(a)(b)(c)}						
Commercial and business lending	\$ 7,506,399	\$ 161,476	4.34%	\$ 7,260,839	\$ 126,187	3.50%
Commercial real estate lending	5,553,469	133,554	4.85%	4,982,027	92,697	3.75%
Total commercial	13,059,868	295,030	4.55%	12,242,866	218,884	3.60%
Residential mortgage	8,124,546	135,432	3.34%	6,762,319	109,404	3.24%
Retail	1,360,125	37,061	5.46%	1,293,414	31,497	4.88%
Total loans	22,544,539	467,523	4.17%	20,298,599	359,785	3.56%
Investment securities						
Taxable	5,547,289	60,727	2.19%	4,805,819	47,133	1.96%
Tax-exempt ^(a)	1,405,561	25,200	3.59%	1,140,889	24,897	4.36%
Other short-term investments	353,152	5,330	3.04%	297,747	3,089	2.09%
Investments and other	7,306,003	91,257	2.50%	6,244,455	75,119	2.41%
Total earning assets	29,850,541	\$ 558,780	3.76%	26,543,054	\$ 434,904	3.29%
Other assets, net	2,953,835			2,447,719		
Total assets	\$ 32,804,377			\$ 28,990,773		
Liabilities and Stockholders' Equity						
Interest-bearing liabilities						
Interest-bearing deposits						
Savings	\$ 1,808,207	\$ 412	0.05%	\$ 1,503,678	\$ 389	0.05%
Interest-bearing demand	4,620,383	17,736	0.77%	3,822,996	8,001	0.42%
Money market	7,202,684	21,830	0.61%	6,070,492	8,748	0.29%
Network transaction deposits	2,269,000	18,281	1.62%	3,485,279	14,119	0.82%
Time	2,639,731	13,585	1.04%	1,683,177	6,849	0.82%
Total interest-bearing deposits	18,540,005	71,843	0.78%	16,565,621	38,104	0.46%
Federal funds purchased and securities sold under agreements to repurchase	267,602	1,060	0.80%	492,425	1,339	0.55%
Other short-term funding	69,654	111	0.32%	107,035	169	0.32%
FHLB advances	4,275,753	34,402	1.62%	3,007,025	11,596	0.78%
Long-term funding	497,433	9,088	3.65%	496,755	9,088	3.66%
Total short and long-term funding	5,110,442	44,661	1.76%	4,103,240	22,192	1.09%
Total interest-bearing liabilities	23,650,448	\$ 116,504	0.99%	20,668,861	\$ 60,296	0.59%
Noninterest-bearing demand deposits	5,108,554			4,928,973		
Other liabilities	415,683			248,559		
Stockholders' equity	3,629,692			3,144,380		
Total liabilities and stockholders' equity	\$ 32,804,377			\$ 28,990,773		
Interest rate spread			2.77%			2.70%
Net free funds			0.20%			0.13%
Fully tax-equivalent net interest income and net interest margin	\$ 442,277		2.97%	\$ 374,608		2.83%
Fully tax-equivalent adjustment		6,043			10,515	
Net interest income	\$ 436,233			\$ 364,093		

(a) 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.

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

(c) Interest income includes net deferred loan origination costs and net accreted purchase loan discount.

Table 2 Net Interest Income Analysis (continued)

	Quarter ended								
	June 30, 2018			March 31, 2018			June 30, 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 ^{(a)(b)(c)}									
Commercial and business lending	\$ 7,697,057	\$ 86,771	4.52%	\$ 7,313,621	\$ 74,706	4.14%	\$ 7,321,523	\$ 65,507	3.59%
Commercial real estate lending	5,705,817	72,049	5.06%	5,399,429	61,504	4.62%	4,964,257	47,562	3.84%
Total commercial	13,402,874	158,820	4.75%	12,713,050	136,210	4.34%	12,285,780	113,069	3.69%
Residential mortgage	8,237,457	69,030	3.35%	8,010,381	66,402	3.32%	6,957,865	56,097	3.23%
Retail	1,365,097	19,210	5.63%	1,355,098	17,852	5.29%	1,278,345	16,048	5.03%
Total loans	23,005,428	247,060	4.30%	22,078,529	220,464	4.03%	20,521,990	185,214	3.62%
Investment securities									
Taxable	5,518,077	30,623	2.22%	5,576,826	30,104	2.16%	4,781,488	23,658	1.98%
Tax-exempt ^(a)	1,497,192	13,587	3.63%	1,312,913	11,613	3.54%	1,143,736	12,459	4.36%
Other short-term investments	392,009	3,153	3.22%	313,864	2,177	2.80%	297,341	1,553	2.09%
Investments and other	7,407,277	47,363	2.56%	7,203,603	43,894	2.44%	6,222,565	37,670	2.42%
Total earning assets	30,412,705	\$ 294,423	3.88%	29,282,132	\$ 264,358	3.64%	26,744,555	\$ 222,884	3.34%
Other assets, net	3,022,659			2,884,248			2,454,351		
Total assets	<u>\$ 33,435,364</u>			<u>\$ 32,166,380</u>			<u>\$ 29,198,906</u>		
Liabilities and Stockholders' equity									
Interest-bearing liabilities									
Interest-bearing deposits									
Savings	\$ 1,892,808	\$ 210	0.04%	\$ 1,722,665	\$ 202	0.05%	\$ 1,541,129	\$ 201	0.05%
Interest-bearing demand	4,735,514	9,918	0.84%	4,503,974	7,818	0.70%	3,824,759	4,401	0.46%
Money market	7,190,178	12,045	0.67%	7,215,329	9,785	0.55%	6,135,222	4,851	0.32%
Network transaction deposits	2,130,854	9,503	1.79%	2,408,681	8,778	1.48%	3,377,513	8,017	0.95%
Time deposits	2,565,001	6,755	1.06%	2,715,292	6,830	1.02%	1,752,255	3,710	0.85%
Total interest-bearing deposits	18,514,355	38,431	0.83%	18,565,941	33,412	0.73%	16,630,878	21,180	0.51%
Federal funds purchased and securities sold under agreements to repurchase	259,713	538	0.83%	275,578	522	0.77%	489,571	824	0.67%
Other short-term funding	65,631	51	0.31%	73,722	60	0.33%	105,558	84	0.32%
FHLB advances	4,809,071	21,279	1.77%	3,736,510	13,123	1.42%	3,172,254	7,149	0.90%
Long-term funding	497,517	4,544	3.65%	497,348	4,544	3.66%	496,841	4,544	3.66%
Total short and long-term funding	5,631,932	26,412	1.88%	4,583,158	18,249	1.61%	4,264,224	12,601	1.18%
Total interest-bearing liabilities	24,146,287	\$ 64,843	1.08%	23,149,099	\$ 51,661	0.90%	20,895,102	\$ 33,781	0.65%
Noninterest-bearing demand deposits	5,131,894			5,084,957			4,892,271		
Other liabilities	436,130			395,008			246,395		
Stockholders' equity	<u>3,721,053</u>			<u>3,537,316</u>			<u>3,165,138</u>		
Total liabilities and stockholders' equity	<u>\$ 33,435,364</u>			<u>\$ 32,166,380</u>			<u>\$ 29,198,906</u>		
Interest rate spread			2.80%			2.74%			2.69%
Net free funds			0.22%			0.18%			0.14%
Fully tax-equivalent net interest income and net interest margin		<u>\$ 229,580</u>	<u>3.02%</u>		<u>\$ 212,697</u>	<u>2.92%</u>		<u>\$ 189,103</u>	<u>2.83%</u>
Fully tax-equivalent adjustment		3,217			2,826			5,284	
Net interest income		<u>\$ 226,362</u>			<u>\$ 209,871</u>			<u>\$ 183,819</u>	

(a) 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.

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

(c) 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 \$436 million for the first six months of 2018 compared to \$364 million for the first six 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 \$442 million for the first six months of 2018 was \$68 million higher than the first six months of 2017.
- Accreted income from the acquisition of the Bank Mutual loan portfolio contributed \$15 million to net interest income for the first six months of 2018. Approximately \$7 million of the accreted income was from prepayments.
- Average earning assets of \$29.9 billion for the first six months of 2018 were \$3.3 billion, or 12%, higher than the first six months of 2017. Average loans of \$22.5 billion for the first six months of 2018 increased \$2.2 billion, or 11% primarily due to an increase of \$1.4 billion, or 20% in residential mortgage loans.
- Average interest-bearing liabilities of \$23.7 billion for the first six months of 2018 were up \$3.0 billion, or 14% versus the first six months of 2017. On average, interest-bearing deposits increased \$2.0 billion and FHLB advances increased \$1.3 billion from the first six months of 2017.
- The net interest margin for the first six months of 2018 was 2.97%, compared to 2.83% for the first six months of 2017.
- The cost of interest-bearing liabilities was 0.99% for the first six months of 2018, which was 40 bps higher than the first six months of 2017. The increase was primarily due to a 32 bp increase in the cost of average interest-bearing deposits (to 0.78%) and a 84 bp increase in the cost of FHLB advances (to 1.62%), both primarily due to increases in the Federal Reserve interest rate.
- The Federal Reserve increased the targeted federal funds rate on June 13, 2018, to a range of 1.75% to 2.00% which compares to a range of 1.00% to 1.25% at the end of the second 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

The provision for credit losses (which includes the provision for loan losses and the provision for unfunded commitments) for the six months ended June 30, 2018 was \$4 million, compared to \$21 million for the six months ended June 30, 2017. Net charge offs were \$18 million (representing 0.16% of average loans) for the six months ended June 30, 2018, compared to \$18 million (representing 0.18% of average loans) for the six months ended June 30, 2017. The ratio of the allowance for loan losses to total loans was 1.10% for June 30, 2018 and 1.35% for June 30, 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)	YTD 2018	YTD 2017	% Change	2Q18	1Q18	4Q17	3Q17	2Q17	2Q18 Change vs	
									1Q18	2Q17
Insurance commissions and fees	\$ 46,644	\$ 42,473	10 %	\$ 23,996	\$ 22,648	\$ 19,186	\$ 19,815	\$ 20,853	6 %	15 %
Service charges and deposit account fees	32,810	32,386	1 %	16,390	16,420	15,773	16,268	16,030	— %	2 %
Card-based and loan fees	27,809	26,229	6 %	14,387	13,422	13,840	12,619	13,764	7 %	5 %
Trust and asset management fees	26,806	24,281	10 %	13,437	13,369	13,125	12,785	12,346	1 %	9 %
Brokerage commissions and fees	14,169	8,679	63 %	6,896	7,273	6,864	4,392	4,346	(5)%	59 %
Total core fee-based revenue	148,238	134,048	11 %	75,106	73,132	68,788	65,879	67,339	3 %	12 %
Mortgage banking income	16,670	14,965	11 %	8,451	8,219	5,507	9,147	7,692	3 %	10 %
Mortgage servicing rights expense	4,042	5,359	(25)%	2,193	1,849	2,337	2,563	2,665	19 %	(18)%
Mortgage banking, net	12,628	9,606	31 %	6,258	6,370	3,169	6,585	5,027	(2)%	24 %
Capital markets, net	10,089	7,925	27 %	4,783	5,306	7,107	4,610	4,042	(10)%	18 %
Bank and corporate owned life insurance	7,165	6,514	10 %	3,978	3,187	3,156	6,580	3,899	25 %	2 %
Other	4,727	4,492	5 %	2,235	2,492	2,777	2,254	2,213	(10)%	1 %
Subtotal	182,847	162,585	12 %	92,360	90,487	84,997	85,908	82,520	2 %	12 %
Asset gains(losses), net	2,390	(700)	N/M	2,497	(107)	(528)	(16)	(466)	N/M	N/M
Investment securities gains(losses), net	(2,015)	356	N/M	(2,015)	—	75	3	356	N/M	N/M
Total noninterest income	183,222	162,241	13 %	\$ 92,842	\$ 90,380	\$ 84,544	\$ 85,895	\$ 82,410	3 %	13 %
Mortgage loans originated for sale during period	\$516,285	\$220,284	134 %	\$ 318,682	\$ 197,603	\$ 249,222	\$ 245,851	\$ 119,004	61 %	168 %
Mortgage loan settlements during period	\$482,080	\$364,128	32 %	\$ 294,456	\$ 187,624	\$ 268,254	\$ 187,568	\$ 167,550	57 %	76 %
Assets under management, at market value ^(a)	\$ 10,776	\$ 8,997	20 %	\$ 10,776	\$ 10,540	\$ 10,555	\$ 9,243	\$ 8,997	2%	20 %

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 \$148 million, an increase of \$14 million (11%) compared to the first six months of 2017. Within fee based revenue, brokerage commissions and fees increased \$5 million (63%), primarily due to the acquisition of Whinnell & Co. in the fourth quarter of 2017. In addition, trust and asset management fees increased \$3 million (10%), primarily due to an increase in assets under management, and insurance commissions and fees increased \$4 million (10%), primarily due to the acquisition of Diversified and Anderson in the first and second quarters of 2018, respectively.
- Net mortgage banking income for the first six months of 2018 was \$13 million, up \$3 million (31%) from the first six months of 2017, primarily due to the Corporation's strategy to hold mortgages on balance sheet during 2017.
- Capital markets, net increased \$2 million (27%) compared to the first six months of 2017, primarily driven by higher customer hedging transactions and increased syndication activity.
- During the second quarter of 2018, the Corporation had \$2 million of asset gains primarily driven by a distribution from an alternative equity investment.
- During the second quarter of 2018, the Corporation recorded a \$2 million loss on the sale of investment securities related to the sale of two lower yielding GNMA commercial mortgage-related securities.

Noninterest Expense

Table 4 Noninterest Expense

(\$ in Thousands)	YTD 2018	YTD 2017	YTD % Change	2Q18 Change vs						
				2Q18	1Q18	4Q17	3Q17	2Q17	1Q18	2Q17
Personnel	\$ 241,665	\$ 213,848	13 %	\$ 123,980	\$ 117,685	\$ 107,031	\$ 108,098	\$ 107,066	5 %	16 %
Occupancy	30,428	28,051	8 %	15,071	15,357	13,497	12,294	12,832	(2)%	17 %
Technology	37,167	29,893	24 %	19,452	17,715	17,878	15,233	15,473	10 %	26 %
Equipment	11,509	10,719	7 %	5,953	5,556	5,250	5,232	5,234	7 %	14 %
Business development and advertising	13,760	12,987	6 %	7,067	6,693	8,195	7,764	7,152	6 %	(1)%
Legal and professional	11,697	9,877	18 %	6,284	5,413	6,384	6,248	5,711	16 %	10 %
Card Issuance and loan costs	6,477	5,594	16 %	3,173	3,304	2,836	3,330	2,974	(4)%	7 %
Foreclosure / OREO expense, net	1,744	2,687	(35)%	1,021	723	1,285	906	1,182	41 %	(14)%
FDIC assessment	16,500	16,000	3 %	8,250	8,250	7,500	7,800	8,000	— %	3 %
Other intangible amortization	3,693	1,009	N/M	2,168	1,525	500	450	496	42 %	N/M
Acquisition related costs ^(a)	27,712	—	N/M	7,107	20,605	—	—	—	(66)%	N/M
Other	21,873	19,342	13 %	11,732	10,140	11,343	10,072	10,196	16 %	15 %
Total noninterest expense	\$ 424,223	\$ 350,007	21 %	\$ 211,258	\$ 212,965	\$ 181,699	\$ 177,427	\$ 176,316	(1)%	20 %

N/M = Not Meaningful

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

Notable Contributions to the Change in Noninterest Expense

- Personnel expense (which includes salary-related expenses and fringe benefit expenses) was \$242 million for the first six months of 2018, up \$28 million (13%) from the first six months of 2017, primarily driven by the additional cost of Bank Mutual staff and an increase in the management incentive plan.
- All other nonpersonnel noninterest expense on a combined basis was \$183 million, up \$46 million compared to the first six months of 2017. The increase was primarily driven by \$28 million of acquisition related costs pertaining to Bank Mutual. In addition, technology expense increased \$7 million (24%) from the first six months of 2017, driven by the additional cost of Bank Mutual operations.

Income Taxes

The Corporation recognized income tax expense of \$33 million for the six months ended June 30, 2018, compared to income tax expense of \$41 million for the six months ended June 30, 2017. The decrease is primarily due to the Tax Cut and Jobs Act ("TCJA") signed into law on December 22, 2017. In the second quarter, the Corporation received one-time tax benefits from implementing tax planning strategies to maximize the positive impact of the TCJA. The effective tax rate was 17.04% for the first six months of 2018, compared to an effective tax rate of 26.44% for the first six 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 June 30, 2018, total assets were \$33.7 billion, up \$3.2 billion (10%) from December 31, 2017 and up \$3.9 billion (13%) from June 30, 2017. On February 1, 2018, the Corporation added \$2.8 billion of assets as a result of the Bank Mutual acquisition.
- Loans of \$23.0 billion at June 30, 2018 were up \$2.2 billion (11%) from December 31, 2017 and were up \$2.2 billion (11%) from June 30, 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 June 30, 2018, total deposits of \$23.8 billion were up \$1.0 billion (5%) from December 31, 2017 and were up \$2.2 billion (10%) from June 30, 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.
- FHLB advances of \$4.8 billion increased \$1.6 billion (51%) from December 31, 2017 and increased \$1.3 billion (39%) from June 30, 2017. The increase in FHLB advances replaced seasonal deposit outflows and provided funding for incremental asset growth. Other short and long-term funding, excluding FHLB advances, of \$754 million decreased \$135 million (15%) from December 31, 2017 and decreased \$448 million (37%) from June 30, 2017.

Loans

Table 5 Period End Loan Composition

	June 30, 2018		March 31, 2018		December 31, 2017		September 30, 2017		June 30, 2017	
	Amount	% of Total	Amount	% of Total	Amount	% of Total	Amount	% of Total	Amount	% of Total
(\$ in Thousands)										
Commercial and industrial	\$ 7,109,796	31%	\$ 6,756,983	30%	\$ 6,399,693	31%	\$ 6,534,660	31%	\$ 6,571,000	32%
Commercial real estate — owner occupied	888,330	4%	900,913	4%	802,209	4%	827,064	4%	845,336	4%
Commercial and business lending	7,998,126	35%	7,657,896	34%	7,201,902	35%	7,361,724	35%	7,416,336	36%
Commercial real estate — investor	3,996,415	17%	4,077,671	18%	3,315,254	16%	3,345,536	16%	3,329,585	16%
Real estate construction	1,487,159	6%	1,579,778	7%	1,451,684	7%	1,552,135	8%	1,651,805	8%
Commercial real estate lending	5,483,574	24%	5,657,449	25%	4,766,938	23%	4,897,671	24%	4,981,390	24%
Total commercial	13,481,700	59%	13,315,345	58%	11,968,840	58%	12,259,395	59%	12,397,726	60%
Residential mortgage	8,207,253	36%	8,197,223	36%	7,546,534	36%	7,408,471	35%	7,115,457	34%
Home equity	911,363	4%	923,470	4%	883,804	4%	890,130	4%	897,111	4%
Other consumer	376,470	2%	374,453	2%	385,813	2%	373,464	2%	372,775	2%
Total consumer	9,495,086	41%	9,495,146	42%	8,816,151	42%	8,672,065	41%	8,385,343	40%
Total loans	\$ 22,976,786	100%	\$ 22,810,491	100%	\$ 20,784,991	100%	\$ 20,931,460	100%	\$ 20,783,069	100%

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 six 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 the Corporation's 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 June 30, 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, small businesses and lease financing. At June 30, 2018, the largest industry group within the commercial and business lending category was manufacturing and wholesale trade, which represented 9% 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 15% of the total commercial and business lending portfolio at June 30, 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 June 30, 2018, the oil and gas portfolio was comprised of 57 credits, totaling \$682 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 57% in oil and 43% in gas at June 30, 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

	June 30, 2018	March 31, 2018	December 31, 2017	September 30, 2017	June 30, 2017
	(\$ in Millions)				
Pass	\$ 603	\$ 548	\$ 483	\$ 446	\$ 411
Special mention	—	—	—	—	39
Potential problem	34	40	40	39	37
Nonaccrual	45	69	77	92	114
Total oil and gas related loans	\$ 682	\$ 657	\$ 600	\$ 577	\$ 601
Quarter net charge offs	\$ 7	\$ 4	\$ —	\$ 8	\$ 12
Oil and gas related allowance	\$ 17	\$ 19	\$ 27	\$ 30	\$ 33
Oil and gas related allowance ratio	2.5%	2.9%	4.5%	5.2%	5.4%

During 2017, the market stabilized leading to improvements across the oil and gas portfolio. At June 30, 2018, nonaccrual oil and gas related loans totaled approximately \$45 million, representing 7% of the oil and gas loan portfolio, a decrease of \$32 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 June 30, 2018, the two largest property type exposures within the commercial real estate-investor portfolio were loans secured by multi-family properties, which represented 6% of total loans and 35% 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

June 30, 2018	Within 1 Year ^(a)	1-5 Years	After 5 Years	Total	% of Total
(\$ in Thousands)					
Commercial and industrial	\$ 6,409,615	\$ 507,868	\$ 192,314	\$ 7,109,796	53%
Commercial real estate — investor	3,251,035	640,802	104,578	3,996,415	30%
Commercial real estate — owner occupied	451,573	287,350	149,406	888,330	7%
Real estate construction	1,370,679	110,071	6,409	1,487,159	11%
Total	\$ 11,482,902	\$ 1,546,091	\$ 452,707	\$ 13,481,700	100%
Fixed rate	\$ 4,630,936	\$ 972,613	\$ 354,526	\$ 5,958,075	44%
Floating or adjustable rate	6,851,966	573,478	98,181	7,523,625	56%
Total	\$ 11,482,902	\$ 1,546,091	\$ 452,707	\$ 13,481,700	100%
Percent repricing distribution	85%	12%	3%	100%	

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

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 June 30, 2018, the residential mortgage portfolio was comprised of \$2.7 billion of fixed-rate residential real estate mortgages and \$5.4 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 the Corporation's three-state branch footprint, with approximately 88% of the outstanding loan balances in the Corporation's branch footprint at June 30, 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 June 30, 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	\$ 187,044	4%
2019	669,301	13%
2020	610,417	12%
2021	723,320	14%
2022	773,414	15%
Thereafter	2,293,420	44%
Total adjustable rate mortgages	\$ 5,256,916	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, the Corporation's 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 June 30, 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	\$ 68,185	8%
5 to 10 years	206,893	25%
Over 10 years	567,236	67%
Total home equity revolving lines of credit	<u>\$ 842,314</u>	<u>100%</u>

Other consumer: Other consumer consists of student loans, short-term and other personal installment loans and credit cards. The Corporation had \$175 million and \$183 million of student loans at June 30, 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

	June 30, 2018	March 31, 2018	December 31, 2017	September 30, 2017	June 30, 2017
(\$ in Thousands)					
Nonperforming assets					
Commercial and industrial	\$ 81,776	\$ 102,667	\$ 112,786	\$ 122,284	\$ 141,475
Commercial real estate — owner occupied	18,649	20,636	22,740	15,598	15,800
Commercial and business lending	100,425	123,303	135,526	137,882	157,275
Commercial real estate — investor	26,503	15,574	4,729	3,543	7,206
Real estate construction	1,544	1,219	974	1,540	1,717
Commercial real estate lending	28,047	16,793	5,703	5,083	8,923
Total commercial	128,472	140,096	141,229	142,965	166,198
Residential mortgage	62,896	55,100	53,632	54,654	51,975
Home equity	12,958	13,218	13,514	12,639	13,482
Other consumer	134	139	171	259	233
Total consumer	75,988	68,456	67,317	67,552	65,690
Total nonaccrual loans	204,460	208,553	208,546	210,517	231,888
Commercial real estate owned	4,848	7,511	6,735	5,098	4,825
Residential real estate owned	3,715	5,806	5,873	3,385	2,957
Bank properties real estate owned	18,645	3,601	—	—	—
Other real estate owned (“OREO”)	27,207	16,919	12,608	8,483	7,782
Other nonperforming assets	7,059	7,117	7,418	7,418	7,418
Total nonperforming assets (“NPAs”)	\$ 238,726	\$ 232,589	\$ 228,572	\$ 226,418	\$ 247,088
Accruing loans past due 90 days or more					
Commercial	\$ 222	\$ 505	\$ 418	\$ 308	\$ 248
Consumer	1,617	2,888	1,449	1,303	1,287
Total accruing loans past due 90 days or more	\$ 1,839	\$ 3,393	\$ 1,867	\$ 1,611	\$ 1,535
Restructured loans (accruing)					
Commercial	\$ 36,852	\$ 47,460	\$ 48,735	\$ 51,259	\$ 50,634
Consumer	26,871	29,041	25,883	25,919	26,691
Total restructured loans (accruing)	\$ 63,723	\$ 76,501	\$ 74,618	\$ 77,178	\$ 77,325
Nonaccrual restructured loans (included in nonaccrual loans)	\$ 38,005	\$ 23,827	\$ 23,486	\$ 33,520	\$ 51,715
Ratios					
Nonaccrual loans to total loans	0.89%	0.91%	1.00%	1.01%	1.12%
NPAs to total loans plus OREO	1.04%	1.02%	1.10%	1.08%	1.19%
NPAs to total assets	0.71%	0.70%	0.75%	0.75%	0.83%
Allowance for loan losses to nonaccrual loans	123.55%	123.26%	127.49%	131.37%	121.22%

Table 11 Nonperforming Assets (continued)

	June 30, 2018	March 31, 2018	December 31, 2017	September 30, 2017	June 30, 2017
(\$ in Thousands)					
Accruing loans 30-89 days past due					
Commercial and industrial	\$ 588	\$ 880	\$ 271	\$ 1,378	\$ 1,255
Commercial real estate — owner occupied	193	511	48	1,522	1,284
Commercial and business lending	781	1,391	319	2,900	2,539
Commercial real estate — investor	828	240	374	1,109	899
Real estate construction	19,765	490	251	700	135
Commercial real estate lending	20,593	730	625	1,809	1,034
Total commercial	21,374	2,121	944	4,709	3,573
Residential mortgage	9,341	15,133	9,552	8,870	9,165
Home equity	7,270	5,868	6,825	7,191	5,924
Other consumer	1,735	1,811	2,007	1,686	1,746
Total consumer	18,346	22,812	18,384	17,747	16,835
Total accruing loans 30-89 days past due	\$ 39,720	\$ 24,934	\$ 19,328	\$ 22,456	\$ 20,408
Potential problem loans					
Commercial and industrial	\$ 172,177	\$ 196,766	\$ 113,778	\$ 153,779	\$ 142,607
Commercial real estate — owner occupied	38,879	34,410	41,997	57,468	60,724
Commercial and business lending	211,056	231,176	155,775	211,247	203,331
Commercial real estate — investor	24,790	46,970	19,291	46,770	48,569
Real estate construction	3,168	1,695	—	118	8,901
Commercial real estate lending	27,958	48,665	19,291	46,888	57,470
Total commercial	239,014	279,841	175,066	258,135	260,801
Residential mortgage	2,355	2,155	1,616	650	1,576
Home equity	142	188	195	124	208
Other consumer	6	—	—	—	—
Total consumer	2,503	2,343	1,811	774	1,784
Total potential problem loans	\$ 241,517	\$ 282,184	\$ 176,877	\$ 258,909	\$ 262,585

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 June 30, 2018 was 0.89%, as compared to 1.00% at December 31, 2017 and 1.12% at June 30, 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 June 30, 2018 were relatively unchanged from both December 31, 2017 and June 30, 2017.

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. The increase in OREO during the second quarter of 2018 was primarily driven by the closure of Bank Mutual properties.

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 June 30, 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. Criticized loans 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

	YTD		June 30, 2018	March 31, 2018	December 31, 2017	September 30, 2017	June 30, 2017
	2018	2017					
(\$ in Thousands)							
Allowance for Loan Losses							
Balance at beginning of period	\$ 265,880	\$ 278,335	\$ 257,058	\$ 265,880	\$ 276,551	\$ 281,101	\$ 282,672
Provision for loan losses	4,500	21,000	4,000	500	—	6,000	11,000
Charge offs	(27,081)	(27,230)	(14,926)	(12,155)	(14,289)	(14,727)	(15,376)
Recoveries	9,302	8,996	6,470	2,832	3,618	4,177	2,805
Net charge offs	(17,779)	(18,234)	(8,456)	(9,323)	(10,671)	(10,550)	(12,571)
Balance at end of period	\$ 252,601	\$ 281,101	\$ 252,601	\$ 257,058	\$ 265,880	\$ 276,551	\$ 281,101
Allowance for Unfunded Commitments							
Balance at beginning of period	\$ 24,400	\$ 25,400	\$ 26,336	\$ 24,400	\$ 24,400	\$ 25,400	\$ 24,400
Provision for unfunded commitments	(500)	—	—	(500)	—	(1,000)	1,000
Amount recorded at acquisition	2,436	—	—	2,436	—	—	—
Balance at end of period	\$ 26,336	\$ 25,400	\$ 26,336	\$ 26,336	\$ 24,400	\$ 24,400	\$ 25,400
Allowance for credit losses ^(a)	\$ 278,937	\$ 306,501	\$ 278,937	\$ 283,394	\$ 290,280	\$ 300,951	\$ 306,501
Provision for credit losses ^(b)	\$ 4,000	\$ 21,000	4,000	—	—	5,000	12,000
Net loan (charge offs) recoveries							
Commercial and industrial	\$ (13,205)	\$ (15,414)	\$ (6,606)	\$ (6,599)	\$ (8,212)	\$ (9,442)	\$ (11,046)
Commercial real estate — owner occupied	(755)	62	270	(1,025)	(246)	13	43
Commercial and business lending	(13,960)	(15,352)	(6,336)	(7,624)	(8,458)	(9,429)	(11,003)
Commercial real estate — investor	(1,181)	(640)	(1,189)	8	(164)	55	(126)
Real estate construction	237	(15)	48	189	(365)	(150)	(26)
Commercial real estate lending	(944)	(655)	(1,141)	197	(529)	(95)	(152)
Total commercial	(14,904)	(16,007)	(7,477)	(7,427)	(8,987)	(9,524)	(11,155)
Residential mortgage	(266)	(692)	(135)	(131)	(966)	(26)	(564)
Home equity	(537)	227	140	(677)	330	(87)	54
Other consumer	(2,072)	(1,762)	(984)	(1,088)	(1,048)	(913)	(906)
Total consumer	(2,875)	(2,227)	(979)	(1,896)	(1,684)	(1,026)	(1,416)
Total net charge offs	\$ (17,779)	\$ (18,234)	\$ (8,456)	\$ (9,323)	\$ (10,671)	\$ (10,550)	\$ (12,571)
Ratios							
Allowance for loan losses to total loans	1.10%	1.35%	1.10%	1.13%	1.28%	1.32%	1.35%
Allowance for loan losses to net charge offs (annualized)	7.0x	7.6x	7.4x	6.8x	6.3x	6.6x	5.6x

(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)	YTD		June 30, 2018	March 31, 2018	December 31, 2017	September 30, 2017	June 30, 2017
	2018	2017					
Net loan (charge offs) recoveries							
Commercial and industrial	(40)	(49)	(39)	(41)	(51)	(58)	(69)
Commercial real estate — owner occupied	(19)	1	12	(48)	(12)	1	2
Commercial and business lending	(38)	(43)	(33)	(42)	(47)	(51)	(60)
Commercial real estate — investor	(6)	(4)	(12)	N/M	(2)	1	(2)
Real estate construction	3	N/M	1	5	(10)	(4)	(1)
Commercial real estate lending	(3)	(3)	(8)	1	(4)	(1)	(1)
Total commercial	(23)	(26)	(22)	(24)	(30)	(31)	(36)
Residential mortgage	(1)	(2)	(1)	(1)	(5)	N/M	(3)
Home equity	(11)	5	6	(28)	15	(4)	2
Other consumer	(110)	(94)	(105)	(115)	(109)	(97)	(98)
Total consumer	(6)	(6)	(4)	(8)	(8)	(5)	(7)
Total net charge offs	(16)	(18)	(15)	(17)	(20)	(20)	(25)

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

At June 30, 2018, the allowance for credit losses was \$279 million, compared to \$290 million at December 31, 2017 and \$307 million at June 30, 2017. At June 30, 2018, the allowance for loan losses to total loans was 1.10% and covered 123.55% of nonaccrual loans, compared to 1.28% and 127.49%, respectively, at December 31, 2017 and 1.35% and 121.22%, respectively, at June 30, 2017. Management believes the level of allowance for loan losses to be appropriate at June 30, 2018.

Notable Contributions to the Change in Allowance for Credit Losses

- Total loans increased \$2.2 billion (11%) for the first six months of 2018, including a \$1.5 billion (13%) increase in total commercial loans primarily attributable to the Bank Mutual acquisition. Compared to June 30, 2017, total loans increased \$2.2 billion (11%), including a \$1.1 billion (15%) increase in total residential mortgage loans, a \$502 million (10%) increase in commercial real estate lending, and a \$582 million (8%) 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 decrease \$4 million (2%) for the first six months of 2018, and decreased \$27 million from June 30, 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 \$65 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 \$21 million from June 30, 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 \$2 million from December 31, 2017 and decreased \$4 million from June 30, 2017. 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 \$17 million at June 30, 2018, compared to \$27 million at December 31, 2017 and \$33 million at June 30, 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)	June 30, 2018		March 31, 2018		December 31, 2017		September 30, 2017		June 30, 2017	
	Amount	% of Total	Amount	% of Total	Amount	% of Total	Amount	% of Total	Amount	% of Total
Noninterest-bearing demand	\$ 5,341,361	22%	\$ 5,458,473	23%	\$ 5,478,416	24%	\$ 5,177,734	23%	\$ 5,038,162	23%
Savings	1,887,777	8%	1,883,638	8%	1,524,992	7%	1,544,037	7%	1,552,820	7%
Interest-bearing demand	4,650,407	20%	4,719,566	20%	4,603,157	20%	4,990,891	22%	3,858,739	18%
Money market	9,208,993	39%	9,086,553	38%	8,830,328	39%	8,299,512	37%	9,228,129	43%
Brokered CDs	228,029	1%	44,503	—%	18,609	—%	3,554	—%	131,184	1%
Other time	2,499,747	10%	2,632,869	11%	2,330,460	10%	2,317,723	11%	1,809,146	8%
Total deposits	\$23,816,314	100%	\$23,825,602	100%	\$22,785,962	100%	\$22,333,451	100%	\$21,618,180	100%
Customer funding ^(a)	235,804		297,289		250,332		324,042		360,131	
Total deposits and customer funding	\$24,052,118		\$24,122,891		\$23,036,294		\$22,657,493		\$21,978,311	
Network transaction deposits ^(b)	\$ 2,094,670		\$ 2,244,739		\$ 2,520,968		\$ 2,622,787		\$ 3,220,956	
Net deposits and customer funding (total deposits and customer funding, excluding Brokered CDs and network transaction deposits)	\$21,729,419		\$21,833,649		\$20,496,717		\$20,031,152		\$18,626,171	
Time deposits of more than \$250,000	\$ 804,210		\$ 906,727		\$ 1,056,172		\$ 1,009,097		\$ 477,043	

(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 \$2.2 billion (10%) from June 30, 2017.
- Non-maturity deposit accounts, comprised of savings, money market, and demand (both interest and noninterest-bearing) accounts accounted for 89% of the Corporation's total deposits at June 30, 2018.
- Included in the above amounts were \$2.1 billion of network deposits, primarily sourced from other financial institutions and intermediaries. These represented 9% of the Corporation's total deposits at June 30, 2018. Network transaction deposits have declined approximately \$1.1 billion from June 30, 2017, and have primarily been replaced by FHLB advances.

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 June 30, 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 June 30, 2018, the Bank had \$1.2 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 June 30, 2018, the Bank had \$2.1 billion available for discount window borrowings.
- The Parent Company has a \$200 million commercial paper program, of which, \$53 million was outstanding as of June 30, 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 June 30, 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 six months ended June 30, 2018, net cash provided by operating activities and financing activities were \$117 million and \$156 million, respectively, while investing activities used net cash of \$517 million, for a net decrease in cash and cash equivalents of \$245 million since year-end 2017. At June 30, 2018, assets of \$33.7 billion increased \$3.2 billion from year-end 2017. On the funding side, deposits of \$23.8 billion increased \$1.0 billion from year-end 2017.

For the six months ended June 30, 2017, net cash provided by operating activities and financing activities were \$319 million and \$511 million, respectively, while investing activities used net cash of \$907 million, for a net decrease in cash and cash equivalents of \$76 million since year-end 2016. At June 30, 2017, assets of \$29.8 billion increased \$630 million from year-end 2016. On the funding side, deposits of \$21.6 billion decreased by \$270 million from 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 the Corporation's risk appetite for interest rate risk over both short-term and long-term horizons. No limit breaches occurred during the first six months of 2018.

The major sources of the Corporation's 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, the Corporation's earnings at risk profile is slightly asset sensitive at June 30, 2018. While the modeled outcome of instantaneous and sustained parallel rate shocks of 100 bps or more indicate increased 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 June 30, 2018	Static Forecast June 30, 2018	Dynamic Forecast December 31, 2017	Static Forecast December 31, 2017
Instantaneous Rate Change				
100 bp increase in interest rates	4.5%	3.4%	2.5%	2.7%
200 bp increase in interest rates	8.9%	6.7%	4.6%	4.9%

At June 30, 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

	June 30, 2018	December 31, 2017
Instantaneous Rate Change		
100 bp increase in interest rates	(2.6)%	(3.1)%
200 bp increase in interest rates	(5.5)%	(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

June 30, 2018	One Year or Less	One to Three Years	Three to Five Years	Over Five Years	Total
	(\$ in Thousands)				
Time deposits	\$ 1,950,673	\$ 646,062	\$ 128,296	\$ 2,745	\$ 2,727,776
Short-term funding	256,525	—	—	—	256,525
FHLB advances	1,882,613	352,646	208,876	2,353,722	4,797,857
Long-term funding	—	249,490	—	248,129	497,619
Operating leases	9,815	18,572	13,881	22,447	64,715
Commitments to extend credit	4,450,407	2,706,972	1,565,756	164,536	8,887,671
Total	<u>\$ 8,550,033</u>	<u>\$ 3,973,742</u>	<u>\$ 1,916,809</u>	<u>\$ 2,791,579</u>	<u>\$ 17,232,163</u>

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 June 30, 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 funding, FHLB advances, and long-term funding.

Table 18 summarizes significant contractual obligations and other commitments at June 30, 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 June 30, 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

	2Q18	1Q18	4Q17	3Q17	2Q17
	(\$ in Thousands)				
Risk-based Capital^(a)					
Common equity Tier 1	\$ 2,528,002	\$ 2,473,677	\$ 2,171,508	\$ 2,144,325	\$ 2,130,238
Tier 1 capital	2,686,658	2,632,912	2,331,245	2,304,037	2,289,831
Total capital	3,213,726	3,164,362	2,848,851	2,823,097	2,808,049
Total risk-weighted assets	24,059,029	23,535,483	21,544,463	21,657,286	21,590,134
Common equity Tier 1 capital ratio	10.51%	10.51%	10.08%	9.90%	9.87%
Tier 1 capital ratio	11.17%	11.19%	10.82%	10.64%	10.61%
Total capital ratio	13.36%	13.45%	13.22%	13.04%	13.01%
Tier 1 leverage ratio	8.32%	8.48%	8.02%	7.93%	8.09%
Selected Equity and Performance Ratios					
Total stockholders' equity / assets	11.20%	11.13%	10.62%	10.66%	10.72%
Dividend payout ratio ^(b)	29.41%	36.59%	45.16%	29.27%	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 the Corporation's 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.

As part of the regulatory relief provided by the Economic Growth Act, the asset threshold requiring insured depository institutions to conduct and report to their primary federal bank regulators annual company-run stress tests was raised from \$10 billion to \$250 billion in total consolidated assets and makes the requirement "periodic" rather than annual. The amendments also provide the Federal Reserve Board with discretion to subject bank holding companies with more than \$100 billion in total assets to enhanced supervision. Notwithstanding these amendments, the federal banking agencies indicated through interagency guidance that the capital planning and risk management practices of institutions with total assets less than \$100 billion would continue to be reviewed through the regular supervisory process. In addition, the federal banking agencies are now prohibited from requiring the Bank to assign a heightened risk weight to certain HVCRE ADC loans as previously required under the Basel III Capital Rules. Although the Corporation will continue to monitor its capital consistent with the safety and soundness expectations of the federal regulators, the Corporation will no longer conduct company-run stress testing as a result of the legislative and regulatory amendments.

Non-GAAP Measures

Table 20 Non-GAAP Measures

	YTD			Quarter Ended			
	June 30, 2018	June 30, 2017	June 30, 2018	March 31, 2018	December 31, 2017	September 30, 2017	June 30, 2017
(\$ in Thousands)							
Selected Equity and Performance Ratios^{(a)(b)}							
Tangible common equity / tangible assets			7.29%	7.22%	7.07%	7.08%	7.11%
Return on average equity	8.81%	7.33%	9.61%	7.96%	6.17%	8.10%	7.35%
Return on average tangible common equity	13.51%	11.06%	14.98%	11.99%	9.16%	12.20%	11.06%
Return on average Common equity Tier 1	12.73%	10.62%	14.00%	11.39%	8.77%	11.73%	10.63%
Return on average assets	0.98%	0.79%	1.07%	0.88%	0.66%	0.86%	0.80%
Average stockholders' equity / average assets	11.06%	10.85%	11.13%	11.00%	10.73%	10.63%	10.84%
Tangible Common Equity and Common Equity Tier 1 Reconciliation^{(a)(b)}							
Common equity			\$ 3,610,843	\$ 3,552,846	\$ 3,077,514	\$ 3,043,672	\$ 3,031,573
Goodwill and other intangible assets, net			(1,247,011)	(1,232,870)	(991,819)	(986,086)	(986,536)
Tangible common equity			2,363,832	2,319,977	2,085,695	2,057,586	2,045,037
Less: Accumulated other comprehensive income / loss			119,888	107,673	62,758	54,288	53,470
Less: Deferred tax assets/deferred tax liabilities, net			44,282	46,027	23,055	32,451	31,731
Common equity Tier 1			\$ 2,528,002	\$ 2,473,677	\$ 2,171,508	\$ 2,144,325	\$ 2,130,238
Tangible Assets Reconciliation^(a)							
Total assets			\$ 33,652,647	\$ 33,366,505	\$ 30,483,594	\$ 30,064,547	\$ 29,769,025
Goodwill and other intangible assets, net			(1,247,011)	(1,232,870)	(991,819)	(986,086)	(986,536)
Tangible assets			\$ 32,405,635	\$ 32,133,636	\$ 29,491,775	\$ 29,078,461	\$ 28,782,489
Average Tangible Common Equity and Average Common Equity Tier 1 Reconciliation^{(a)(b)}							
Common equity	\$ 3,469,861	\$ 2,984,451	\$ 3,561,319	\$ 3,377,388	\$ 3,056,077	\$ 3,024,918	\$ 3,005,209
Goodwill and other intangible assets, net	(1,171,917)	(986,980)	(1,235,623)	(1,107,503)	(991,955)	(986,342)	(986,826)
Tangible common equity	2,297,945	1,997,471	2,325,696	2,269,885	2,064,121	2,038,576	2,018,383
Less: Accumulated other comprehensive income / loss	103,379	52,179	117,497	89,105	61,937	49,164	50,148
Less: Deferred tax assets/deferred tax liabilities, net	38,165	31,242	45,308	30,943	29,386	31,935	31,294
Average common equity Tier 1	\$ 2,439,489	\$ 2,080,892	\$ 2,488,501	\$ 2,389,933	\$ 2,155,444	\$ 2,119,675	\$ 2,099,825
Efficiency Ratio Reconciliation^(c)							
Federal Reserve efficiency ratio	68.18 %	66.54 %	65.77 %	70.76 %	66.93 %	63.92 %	66.69 %
Fully tax-equivalent adjustment	(0.66)%	(1.30)%	(0.65)%	(0.66)%	(1.30)%	(1.21)%	(1.30)%
Other intangible amortization	(0.59)%	(0.19)%	(0.68)%	(0.51)%	(0.18)%	(0.16)%	(0.18)%
Fully tax-equivalent efficiency ratio	66.94 %	65.05 %	64.45 %	69.60 %	65.45 %	62.55 %	65.21 %

- (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 the Corporation's 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 second quarter of 2018.

During the second quarter of 2018, approximately 3.6 million TARP warrants ("warrants") were exercised at an exercise price of \$19.77. The warrants were converted to approximately 1.0 million shares of common stock. Approximately 358,000 warrants remain outstanding. Any unexercised warrants will expire on November 21, 2018.

Sequential Quarter Results

The Corporation reported net income of \$89 million for the second quarter of 2018, compared to net income of \$69 million for the first quarter of 2018. Net income available to common equity was \$87 million for the second quarter of 2018 or \$0.51 for basic and \$0.50 diluted earnings per common share. Comparatively, net income available to common equity for the first quarter of 2018 was \$67 million, or net income of \$0.41 for basic and \$0.40 diluted earnings per common share, respectively (see Table 1).

Fully tax-equivalent net interest income for the second quarter of 2018 was \$230 million, \$17 million higher from the first quarter of 2018. The net interest margin in the second quarter of 2018 was up 10 bp to 3.02%. Average earning assets increased \$1.1 billion to \$30.4 billion in the second quarter of 2018, with average loans up \$927 million, while average investments and other short-term investments were up \$204 million. On the funding side, average interest-bearing deposits were down \$52 million, while noninterest-bearing demand deposits were up \$47 million. Average short and long-term funding increased \$1.0 billion (see Table 2).

The provision for credit losses was \$4 million for the second quarter of 2018 compared to zero for the first quarter of 2018 (see Table 12). See discussion under sections: Provision for Credit Losses, Nonperforming Assets, and Allowance for Credit Losses.

Noninterest income for the second quarter of 2018 increased \$2 million (3%) to \$93 million versus the first quarter of 2018. Fee-based revenue increased \$2 million (3%) from the first quarter of 2018, primarily due to higher insurance commissions and fees. Bank and corporate owned life insurance was up \$1 million (25%) from the first quarter of 2018. Asset gains increased \$3 million from the first quarter of 2018, but the gains were partially offset by a \$2 million loss on sale of investment securities.

Noninterest expense decreased \$2 million (1%) to \$211 million. Personnel expense was \$124 million for the second quarter of 2018, up \$6 million (5%) from the first quarter of 2018 primarily driven by an increase in performance-based payouts under the management incentive plan. Technology expense increased \$2 million (10%) from the first quarter of 2018. Bank Mutual acquisition related costs were \$7 million for the second quarter of 2018, down \$13 million from the first quarter of 2018.

For the second quarter of 2018, the Corporation recognized income tax expense of \$15 million, compared to income tax expense of \$18 million for the first quarter of 2018. The effective tax rate was 14.19% and 20.43% for the second quarter of 2018 and the first quarter of 2018, respectively. See Income Taxes section for a detailed discussion on income taxes.

Comparable Quarter Results

The Corporation reported net income of \$89 million for the second quarter of 2018, compared to \$58 million for the second quarter of 2017. Net income available to common equity was \$87 million for the second quarter of 2018, or \$0.51 for basic earnings per common share and \$0.50 for diluted earnings per common share. Comparatively, net income available to common equity for the second quarter of 2017 was \$56 million, or \$0.36 for both basic and diluted earnings per common share (see Table 1).

Fully tax-equivalent net interest income for the second quarter of 2018 was \$230 million, \$40 million higher than the second quarter of 2017. The net interest margin between the comparable quarters was up 19 bp, to 3.02%, in the second quarter of 2018. Average earning assets increased \$3.7 billion to \$30.4 billion in the second quarter of 2018, with average loans increasing \$2.5 billion (predominantly due to the Bank Mutual acquisition). On the funding side, average interest-bearing deposits increased \$1.9 billion, while noninterest-bearing demand deposits increased \$240 million from the second quarter of 2017. Average short and long-term funding increased \$1.4 billion (see Table 2).

The provision for credit losses was \$4 million for the second quarter of 2018, down \$8 million from the second quarter of 2017. See discussion under sections: Provision for Credit Losses, Nonperforming Assets, and Allowance for Credit Losses.

Noninterest income for the second quarter of 2018 of \$93 million was up \$10 million (13%) compared to second quarter of 2017. Brokerage commissions and fees was up \$3 million (59%), primarily driven by increased investment advisory fees compared to the second quarter of 2017 driven by the Whitnell acquisition. Insurance and commission fees for the second quarter of 2018 was up \$3 million (15%) from the second quarter of 2017 driven by the Diversified and Anderson acquisitions.

On a comparable quarter basis, noninterest expense increased \$35 million (20%) to \$211 million for the second quarter of 2018. Bank Mutual acquisition related costs were \$7 million for the second quarter of 2018. Personnel expense was \$124 million for the second quarter of 2018, up \$17 million (16%) from the second quarter of 2017, primarily driven by the additional cost of Bank Mutual staff and an increase in the management incentive plan. Technology expense increased \$4 million (26%) to \$19 million in the second quarter of 2018, driven by investments in technology solutions that meet evolving customer needs and improve operational efficiency as well as the additional cost of Bank Mutual operations. Occupancy expense increased \$2 million (17%) for the second quarter of 2018, primarily due to the additional expense of acquired Bank Mutual facilities.

The Corporation recognized income tax expense of \$15 million for the second quarter of 2018, compared to income tax expense of \$20 million for second quarter of 2017. The effective tax rate was 14.19% and 25.58% for the second 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.

Year to Date Segment Review

The Corporate and Commercial Specialty segment consists of lending and deposit solutions to larger businesses, developers, not-for-profits, municipalities, and financial institutions, and the support to deliver, fund, and manage such banking solutions. The Corporate and Commercial Specialty segment had net income of \$103 million for the first six months of 2018, up \$33 million, compared to \$70 million for the first six months of 2017. Segment revenue increased \$26 million to \$230 million for the first six months of 2018, compared to \$204 million for the first six months 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 \$22 million during the first six months of 2018. Average loan balances were \$11.7 billion for the first six months of 2018, up \$920 million from the first six months of 2017. Average deposit balances were \$7.8 billion for the first six months of 2018, up \$1.4 billion from the first six months of 2017. Average allocated capital increased \$84 million to \$1.2 billion for the first six months of 2018, reflecting the increase in the segment's loan balances.

The Community, Consumer, and Business segment consists of lending and deposit solutions to individuals and small to mid-sized businesses and also provides a variety of investment and fiduciary products and services. The Community, Consumer, and Business segment had net income of \$73 million for the first six months of 2018, up \$36 million from the first six months of 2017. Segment revenue increased \$59 million to \$368 million for the first six months of 2018, primarily due to growth in average loan balances, increases in the Federal Reserve interest rate, higher brokerage commissions and fees, and increased mortgage banking income. Total expense increased \$24 million to \$266 million for the first six months of 2018, primarily due to the additional cost of Bank Mutual staff. Average loan balances were \$10.3 billion for the first six months of 2018, up \$947 million from the first six months of 2017. Average deposits were \$13.4 billion for the first six months of 2018, up \$2.0 billion from the first six months of 2017. Average allocated capital increased \$65 million to \$648 million for the first six months of 2018.

The Risk Management and Shared Services segment had a net loss of \$17 million for the first six months of 2018, down \$24 million compared to the first six months of 2017. Net interest income increased \$9 million, primarily due to increases in the Federal Reserve interest rate, as well as an adjustment of FTP rate assumptions that increased the interest income allocated to the lines of business with an offsetting decrease in the interest income allocated to the Risk Management and Shared Services segment. The credit provision improved \$15 million. Noninterest expense increased \$46 million from the first six months of 2017 primarily driven by \$28 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 earning asset balances were \$7.8 billion for the first six months of 2018, up \$1.4 billion from the first six months of 2017. Average deposits were \$2.4 billion for the first six months of 2018, down \$1.2 billion from the first six months of 2017 primarily driven by a decrease in network transaction deposits. Average allocated capital increased to \$587 million for the first six months of 2018.

Comparable Quarter Segment Review

The Corporate and Commercial Specialty segment had net income of \$55 million for the second quarter of 2018, up \$20 million from the comparable quarter in 2017. Segment revenue increased \$19 million compared to second quarter of 2017, primarily due to growth in average loan balances and increases in the Federal Reserve interest rate. Average loan balances were \$12.1 billion for the second quarter of 2018, up \$1.2 billion from an average balance of \$10.8 billion for second quarter of 2017. Average deposit balances were \$7.6 billion for the second quarter of 2018, up \$1.2 billion from the comparable quarter of 2017. Average allocated capital increased \$111 million to \$1.2 billion for second quarter of 2018.

The Community, Consumer, and Business segment had net income of \$37 million for the second quarter of 2018, up \$21 million compared to second quarter of 2017. Segment revenue increased \$35 million to \$191 million for the second quarter of 2018, primarily due to a \$24 million increase in net interest income and \$10 million increase in noninterest income. The growth in net interest income was primarily due to growth in average loan balances and increases in the Federal Reserve interest rate while the growth in noninterest income was primarily driven by the acquisitions of Whitnell & Co., Diversified, and Anderson since June 30, 2017 which resulted in increased insurance and brokerage commissions. Total noninterest expense for the second quarter of 2018 was \$139 million, up \$13 million from the comparable quarter of 2017, primarily due to the additional cost of Bank Mutual staff. Average loan balances were \$10.4 billion for the second quarter of 2018, up \$891 million from the comparable quarter of 2017. Average deposits were \$13.7 billion for the second quarter of 2018, up \$2.2 billion from average deposits of \$11.6 billion for the comparable quarter of 2017. Average allocated capital increased \$74 million compared to the second quarter of 2017.

The Risk Management and Shared Services segment had a net loss of \$3 million for the first quarter of 2018. Segment revenue was \$7 million in the second quarter of 2018, a decrease of \$1 million from the comparable quarter of 2017. The credit provision improved \$7 million. Total noninterest expense for the second quarter of 2018 was \$31 million, up \$19 million from the comparable quarter of 2017, primarily driven by \$7 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 earning asset balances were \$7.9 billion for the first six months of 2018, up \$1.6 billion from the first six months of 2017. Average deposits were \$2.3 billion for second quarter of 2018, down \$1.2 billion versus the comparable quarter of 2017 primarily driven by a decrease in network transaction deposits. Average allocated capital increased \$203 million to \$588 million for second 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 anticipated adoption	Effect on financial statements
ASU 2018-07 Compensation - Stock Compensation (Topic 718) Improvements to Nonemployee Share-Based Payment Accounting	The FASB issued an amendment as part of its simplification initiative. As part of this amendment, several aspects of the accounting for nonemployee share-based payment transactions for acquiring goods and services from nonemployees are changing. The amendment expands the scope of Topic 718 to apply to nonemployee awards with the exception for specific guidance on inputs to an option pricing model and the attribution of cost.	1st Quarter 2019	The Corporation is currently evaluating the impact on its results of operations, financial position and liquidity.
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. ASU 2018-10 was issued as improvements and clarifications of ASU 2016-02 were identified. This update provides clarification on narrow aspects of the previously issued updates.	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

The Corporation received a favorable Minnesota tax court ruling during the second quarter of 2017, at which time, a percentage of the reserve which had been accrued for the state tax issue being litigated was reversed. On July 5, 2018, the Minnesota tax court ruling was reversed by the Minnesota Supreme Court and as a result, the Corporation expects to record additional income tax expense of \$6 million in the third quarter of 2018. As discussed in the Performance Summary at the beginning of Part I, Item 2., Management's Discussion and Analysis of Financial Condition and Results of Operations, after taking this impact into consideration, the Corporation expects the effective tax rate to be approximately 22% for the remainder of the year, and approximately 20% for the full year 2018.

On July 24, 2018, the Corporation's Board of Directors declared a regular quarterly cash dividend of \$0.15 per common share, payable on September 17, 2018 to shareholders of record at the close of business on September 4, 2018. The Board of Directors also declared a regular quarterly cash dividend of \$0.3828125 per depositary share on the Corporation's 6.125% Series C Perpetual Preferred Stock, payable on September 17, 2018 to shareholders of record at the close of business on September 4, 2018. The Board of Directors also declared a regular quarterly cash dividend of \$0.3359375 per depositary share on the Corporation's 5.375% Series D Perpetual Preferred Stock, payable on September 17, 2018 to shareholders of record at the close of business on September 4, 2018.

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 the Corporation's 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 June 30, 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 June 30, 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 recently enacted Economic Growth, Regulatory Relief, and Consumer Protection Act did not eliminate many of the aspects of the Dodd Frank Act that have increased our compliance costs, and remains subject to further rulemaking.

The Economic Growth Act represents modest reform to the regulation of the financial services industry primarily through certain amendments of the Dodd-Frank Act. However, many provisions of the Dodd-Frank Act that have increased our compliance costs, such as the Volcker Rule, the Durbin amendment restricting interchange fees, and the additional supervisory authority of the CFPB, remain in place.

Certain of the provisions amended by the Economic Growth Act took effect immediately, while others require that the agencies jointly amend their rulemakings. It is not possible to predict when any final rules would ultimately be issued through any such rulemakings, and what the specific content of such rules will be. Although we expect to benefit from many aspects of this legislative reform, the legislation and any implementing rules that are ultimately issued could have adverse implications on the financial industry, the competitive environment, and our ability to conduct business. In addition, the federal banking agencies indicated through interagency guidance that the capital planning and risk management practices of institutions with total assets less than \$100 billion would continue to be reviewed through the regular supervisory process, which may offset the impact of the Economic Growth Acts changes regarding stress testing and risk management.

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

During the second quarter of 2018, the Corporation repurchased \$6.6 million, or approximately 249,000 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)
April 1, 2018 - April 30, 2018	50,000	\$ 24.02	50,000	—
May 1, 2018 - May 31, 2018	198,700	27.14	198,700	—
June 1, 2018 - June 30, 2018	—	—	—	—
Total	248,700	\$ 26.52	248,700	4,314,634

(a) During the second quarter of 2018, the Corporation repurchased 17,613 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 \$18 million remained available to repurchase as of June 30, 2018. On April 24, 2018, the Board of Directors authorized the repurchase of up to \$100 million of the Corporation's common stock, of which all remains available for repurchase. Using the closing stock price on June 30, 2018 of \$27.30, a total of approximately 4.3 million shares of common stock remained available to be repurchased under these previously approved Board authorizations as of June 30, 2018.

During the second quarter of 2018, the Corporation repurchased approximately \$459,000, or 18,540 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)
April 1, 2018 - April 30, 2018	—	\$ —	—	—
May 1, 2018 - May 31, 2018	18,540	24.75	18,540	—
June 1, 2018 - June 30, 2018	—	—	—	—
Total	18,540	\$ 24.75	18,540	578,541

(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 \$14.5 million remained available to repurchase as of June 30, 2018. Using the closing stock price on June 30, 2018 of \$24.99, a total of approximately 579,000 shares of Series D Preferred stock remained available to be repurchased under the previously approved Board authorizations as of June 30, 2018.

On August 28, 2015, the Board of Directors authorized the repurchase of up to \$10 million of depository shares of the Series C Preferred Stock, of which all of such depository shares remained available to repurchase as of June 30, 2018.

The repurchase of depository 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 \(10.1\), Form of Associated Banc-Corp 2017 Incentive Compensation Plan Restricted Stock Agreement.](#)

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: July 26, 2018

/s/ Philip B. Flynn

Philip B. Flynn

President and Chief Executive Officer

Date: July 26, 2018

/s/ Christopher J. Del Moral-Niles

Christopher J. Del Moral-Niles

Chief Financial Officer

Date: July 26, 2018

/s/ Tammy C. Stadler

Tammy C. Stadler

Principal Accounting Officer