

CULLEN/FROST BANKERS, INC.

Form 10-Q

April 26, 2018

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United States

Securities and Exchange Commission

Washington, D.C. 20549

Form 10-Q

ý Quarterly Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

For the quarterly period ended: March 31, 2018

Or

¨ Transition Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

For the transition period from to

Commission file number: 001-13221

Cullen/Frost Bankers, Inc.

(Exact name of registrant as specified in its charter)

Texas 74-1751768

(I.R.S.

(State or other jurisdiction of Employer
incorporation or organization) Identification
No.)

100 W. Houston Street, San Antonio, Texas 78205
(Address of principal executive offices) (Zip code)

(210) 220-4011

(Registrant's telephone number, including area code)

N/A

(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 ý No ¨

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, 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 ý No ¨

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

Large accelerated filer ý Accelerated filer ¨

Non-accelerated filer ¨ (Do not check if a smaller reporting company) 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 Act). Yes ¨ No ý

As of April 19, 2018 there were 63,797,196 shares of the registrant's Common Stock, \$.01 par value, outstanding.

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Cullen/Frost Bankers, Inc.

Quarterly Report on Form 10-Q

March 31, 2018

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Part I. Financial Information

Item 1. Financial Statements (Unaudited)

Cullen/Frost Bankers, Inc.

Consolidated Balance Sheets

(Dollars in thousands, except per share amounts)

	March 31, 2018	December 31, 2017
Assets:		
Cash and due from banks	\$434,155	\$545,542
Interest-bearing deposits	3,907,051	4,347,538
Federal funds sold and resell agreements	339,742	159,967
Total cash and cash equivalents	4,680,948	5,053,047
Securities held to maturity, at amortized cost	1,247,154	1,432,098
Securities available for sale, at estimated fair value	10,536,532	10,489,009
Trading account securities	19,772	21,098
Loans, net of unearned discounts	13,364,029	13,145,665
Less: Allowance for loan losses	(149,885)	(155,364)
Net loans	13,214,144	12,990,301
Premises and equipment, net	521,202	520,958
Goodwill	654,952	654,952
Other intangible assets, net	4,685	5,073
Cash surrender value of life insurance policies	181,297	180,477
Accrued interest receivable and other assets	398,546	400,867
Total assets	\$31,459,232	\$31,747,880
Liabilities:		
Deposits:		
Non-interest-bearing demand deposits	\$10,934,162	\$11,197,093
Interest-bearing deposits	15,743,616	15,675,296
Total deposits	26,677,778	26,872,389
Federal funds purchased and repurchase agreements	1,032,221	1,147,824
Junior subordinated deferrable interest debentures, net of unamortized issuance costs	136,198	136,184
Subordinated notes, net of unamortized issuance costs	98,591	98,552
Accrued interest payable and other liabilities	271,014	195,068
Total liabilities	28,215,802	28,450,017
Shareholders' Equity:		
Preferred stock, par value \$0.01 per share; 10,000,000 shares authorized; 6,000,000 Series A shares (\$25 liquidation preference) issued at March 31, 2018 and December 31, 2017	144,486	144,486
Common stock, par value \$0.01 per share; 210,000,000 shares authorized; 64,236,306 shares issued at both March 31, 2018 and December 31, 2017	642	642
Additional paid-in capital	956,536	953,361
Retained earnings	2,234,301	2,187,069
Accumulated other comprehensive income, net of tax	(53,354)	79,512
Treasury stock, at cost; 442,610 shares at March 31, 2018 and 760,720 shares at December 31, 2017	(39,181)	(67,207)
Total shareholders' equity	3,243,430	3,297,863
Total liabilities and shareholders' equity	\$31,459,232	\$31,747,880

See Notes to Consolidated Financial Statements.

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Cullen/Frost Bankers, Inc.

Consolidated Statements of Income

(Dollars in thousands, except per share amounts)

	Three Months Ended March 31,	
	2018	2017
Interest income:		
Loans, including fees	\$ 151,202	\$ 122,600
Securities:		
Taxable	20,558	25,302
Tax-exempt	56,711	56,947
Interest-bearing deposits	14,094	6,836
Federal funds sold and resell agreements	761	107
Total interest income	243,326	211,792
Interest expense:		
Deposits	10,638	1,868
Federal funds purchased and repurchase agreements	634	139
Junior subordinated deferrable interest debentures	1,142	908
Other long-term borrowings	1,164	368
Total interest expense	13,578	3,283
Net interest income	229,748	208,509
Provision for loan losses	6,945	7,952
Net interest income after provision for loan losses	222,803	200,557
Non-interest income:		
Trust and investment management fees	29,587	26,470
Service charges on deposit accounts	20,843	20,769
Insurance commissions and fees	15,980	13,821
Interchange and debit card transaction fees	3,158	5,574
Other charges, commissions and fees	9,007	9,592
Net gain (loss) on securities transactions	(19)	—
Other	12,889	7,474
Total non-interest income	91,445	83,700
Non-interest expense:		
Salaries and wages	86,683	82,512
Employee benefits	21,995	21,625
Net occupancy	19,740	19,237
Technology, furniture and equipment	19,679	17,990
Deposit insurance	4,879	4,915
Intangible amortization	388	458
Other	43,247	41,178
Total non-interest expense	196,611	187,915
Income before income taxes	117,637	96,342
Income taxes	11,157	11,401
Net income	106,480	84,941
Preferred stock dividends	2,016	2,016
Net income available to common shareholders	\$ 104,464	\$ 82,925

Earnings per common share:

Basic	\$1.63	\$1.29
Diluted	1.61	1.28

See Notes to Consolidated Financial Statements.

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Cullen/Frost Bankers, Inc.

Consolidated Statements of Comprehensive Income (Loss)

(Dollars in thousands)

	Three Months Ended March 31,	
	2018	2017
Net income	\$106,480	\$84,941
Other comprehensive income (loss), before tax:		
Securities available for sale and transferred securities:		
Change in net unrealized gain/loss during the period	(178,904)	33,811
Change in net unrealized gain on securities transferred to held to maturity	(2,619)	(6,286)
Reclassification adjustment for net (gains) losses included in net income	19	—
Total securities available for sale and transferred securities	(181,504)	27,525
Defined-benefit post-retirement benefit plans:		
Change in the net actuarial gain/loss	—	—
Reclassification adjustment for net amortization of actuarial gain/loss included in net income as a component of net periodic cost (benefit)	1,250	1,357
Total defined-benefit post-retirement benefit plans	1,250	1,357
Other comprehensive income (loss), before tax	(180,254)	28,882
Deferred tax expense (benefit)	(37,853)	10,109
Other comprehensive income (loss), net of tax	(142,401)	18,773
Comprehensive income (loss)	\$(35,921)	\$103,714
See Notes to Consolidated Financial Statements.		

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Cullen/Frost Bankers, Inc.

Consolidated Statements of Changes in Shareholders' Equity

(Dollars in thousands, except per share amounts)

	Three Months Ended March 31,	
	2018	2017
Total shareholders' equity at beginning of period	\$3,297,863	\$3,002,528
Cumulative effect of accounting change	(2,285)	—
Total shareholders' equity at beginning of period, as adjusted	3,295,578	3,002,528
Net income	106,480	84,941
Other comprehensive income (loss)	(142,401)	18,773
Stock option exercises/stock unit conversions (318,110 shares in 2018 and 442,054 shares in 2017)	19,165	24,747
Stock compensation expense recognized in earnings	3,175	3,103
Purchase of treasury stock (469 shares in 2017)	—	(42)
Cash dividends – preferred stock (approximately \$0.34 per share in both 2018 and in 2017)	(2,016)	(2,016)
Cash dividends – common stock (\$0.57 per share in 2018 and \$0.54 per share in 2017)	(36,551)	(34,656)
Total shareholders' equity at end of period	\$3,243,430	\$3,097,378
See Notes to Consolidated Financial Statements.		

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Cullen/Frost Bankers, Inc.
Consolidated Statements of Cash Flows
(Dollars in thousands)

	Three Months Ended March 31,	
	2018	2017
Operating Activities:		
Net income	\$ 106,480	\$ 84,941
Adjustments to reconcile net income to net cash from operating activities:		
Provision for loan losses	6,945	7,952
Deferred tax expense (benefit)	10,411	(4,301)
Accretion of loan discounts	(3,378)	(3,913)
Securities premium amortization (discount accretion), net	24,260	21,638
Net (gain) loss on securities transactions	19	—
Depreciation and amortization	12,130	12,121
Net (gain) loss on sale/write-down of assets/foreclosed assets	(3,982)	(533)
Stock-based compensation	3,175	3,103
Net tax benefit from stock-based compensation	2,211	3,515
Earnings on life insurance policies	(820)	(783)
Net change in:		
Trading account securities	1,326	(1,088)
Accrued interest receivable and other assets	23,555	55,705
Accrued interest payable and other liabilities	28,376	(48,702)
Net cash from operating activities	210,708	129,655
Investing Activities:		
Securities held to maturity:		
Purchases	(1,500)	—
Sales	—	—
Maturities, calls and principal repayments	179,149	599,457
Securities available for sale:		
Purchases	(3,245,923)	(466,004)
Sales	2,984,867	—
Maturities, calls and principal repayments	62,768	107,586
Proceeds from sale of loans	—	—
Net change in loans	(227,417)	(214,281)
Benefits received on life insurance policies	—	461
Proceeds from sales of premises and equipment	11,317	1,544
Purchases of premises and equipment	(16,759)	(6,311)
Proceeds from sales of repossessed properties	307	345
Net cash from investing activities	(253,191)	22,797
Financing Activities:		
Net change in deposits	(194,611)	330,589
Net change in short-term borrowings	(115,603)	(81,792)
Proceeds from issuance of subordinated notes	—	98,446
Principal payments on subordinated notes	—	(100,000)
Proceeds from stock option exercises	19,165	24,747
Purchase of treasury stock	—	(42)

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Cash dividends paid on preferred stock	(2,016	) (2,016	)
Cash dividends paid on common stock	(36,551	) (34,656	)
Net cash from financing activities	(329,616	) 235,276	
Net change in cash and cash equivalents	(372,099	) 387,728	
Cash and cash equivalents at beginning of period	5,053,047	4,141,445	
Cash and cash equivalents at end of period	\$4,680,948	\$4,529,173	

See Notes to Consolidated Financial Statements.

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Notes to Consolidated Financial Statements

(Table amounts in thousands, except for share and per share amounts)

Note 1 - Significant Accounting Policies

Nature of Operations. Cullen/Frost Bankers, Inc. ("Cullen/Frost") is a financial holding company and a bank holding company headquartered in San Antonio, Texas that provides, through its subsidiaries, a broad array of products and services throughout numerous Texas markets. The terms "Cullen/Frost," "the Corporation," "we," "us" and "our" mean Cullen/Frost Bankers, Inc. and its subsidiaries, when appropriate. In addition to general commercial and consumer banking, other products and services offered include trust and investment management, insurance, brokerage, mutual funds, leasing, treasury management, capital markets advisory and item processing.

Basis of Presentation. The consolidated financial statements in this Quarterly Report on Form 10-Q include the accounts of Cullen/Frost and all other entities in which Cullen/Frost has a controlling financial interest. All significant intercompany balances and transactions have been eliminated in consolidation. The accounting and financial reporting policies we follow conform, in all material respects, to accounting principles generally accepted in the United States and to general practices within the financial services industry.

The consolidated financial statements in this Quarterly Report on Form 10-Q have not been audited by an independent registered public accounting firm, but in the opinion of management, reflect all adjustments necessary for a fair presentation of our financial position and results of operations. All such adjustments were of a normal and recurring nature. The consolidated financial statements have been prepared in accordance with accounting principles generally accepted in the United States for interim financial information and with the instructions to Form 10-Q adopted by the Securities and Exchange Commission ("SEC"). Accordingly, the financial statements do not include all of the information and footnotes required by accounting principles generally accepted in the United States for complete financial statements and should be read in conjunction with our consolidated financial statements, and notes thereto, for the year ended December 31, 2017, included in our Annual Report on Form 10-K filed with the SEC on February 7, 2018 (the "2017 Form 10-K"). Operating results for the interim periods disclosed herein are not necessarily indicative of the results that may be expected for a full year or any future period.

Use of Estimates. The preparation of financial statements in conformity with accounting principles generally accepted in the United States requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements. Actual results could differ from those estimates. The allowance for loan losses and the fair values of financial instruments and the status of contingencies are particularly subject to change.

Cash Flow Reporting. Additional cash flow information was as follows:

	Three Months Ended March 31,	
	2018	2017
Cash paid for interest	\$ 13,740	\$ 3,257
Cash paid for income taxes	—	—
Significant non-cash transactions:		
Unsettled purchases/sales of securities	47,723	33,466
Loans foreclosed and transferred to other real estate owned and foreclosed assets	7	—

Accounting Changes, Reclassifications and Restatements. Certain items in prior financial statements have been reclassified to conform to the current presentation. In addition, we adopted ASU 2018-02, "Income Statement - Reporting Comprehensive Income (Topic 220) - Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income" as of January 1, 2018. In accordance with ASU 2018-02, we elected to reclassify certain income tax effects related to the change in the U.S. statutory federal income tax rate under the Tax Cuts and Jobs Act, which was enacted on December 22, 2017, from accumulated other comprehensive income to retained earnings. Such amounts, which totaled \$9.5 million, related to a net actuarial loss on defined benefit post-retirement plans and unrealized gains on securities available for sale and securities transferred to held to maturity. See Note 14 - Other Comprehensive Income. The effects of the Tax Cuts and Jobs Act on deferred taxes related to amounts initially

recorded in accumulated other comprehensive income are provisional. As we finalize the accounting for the tax effects of the Tax Cuts and Jobs Act, additional reclassification adjustments may be recorded in future periods. See Note 13 - Income Taxes. Notwithstanding this election made in accordance with ASU 2018-02, our policy is to release such income tax effects only when the entire portfolio to which the underlying transactions relate is liquidated, sold or extinguished.

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We also adopted ASU 2014-09, "Revenue from Contracts with Customers (Topic 606)" as of January 1, 2018. Using a modified retrospective transition approach for contracts that were not complete as of our adoption, we recognized a cumulative effect reduction to beginning retained earnings totaling \$2.3 million. The amount was related to certain revenue streams within trust and investment management fees. Additionally, based on our underlying contracts, ASU 2014-09 requires us to report network costs associated with debit card and ATM transactions netted against the related fees from such transactions. Previously, such network costs were reported as a component of other non-interest expense. For the three months ended March 31, 2018, gross interchange and debit card transaction fees totaled \$6.1 million while related network costs totaled \$2.9 million. On a net basis, we reported \$3.2 million as interchange and debit card transaction fees in the accompanying Consolidated Statement of Income for the three months ended March 31, 2018. For the three months ended March 31, 2017, we reported interchange and debit card transaction fees totaling \$5.6 million on a gross basis in the accompanying Consolidated Statement of Income while related network costs totaling \$3.2 million were reported as a component of other non-interest expense. ASU 2014-09 also required us to change the way we recognize certain recurring revenue streams reported as components of trust and investment management fees, insurance commissions and fees and other categories of non-interest income, however, such changes were not significant to our financial statements for the three months ended March 31, 2018.

Under ASU 2014-09, we adopted new policies related to revenue recognition. In general, for revenue not associated with financial instruments, guarantees and lease contracts, we apply the following steps when recognizing revenue from contracts with customers: (i) identify the contract, (ii) identify the performance obligations, (iii) determine the transaction price, (iv) allocate the transaction price to the performance obligations and (v) recognize revenue when performance obligation is satisfied. Our contracts with customers are generally short term in nature, typically due within one year or less or cancellable by us or our customer upon a short notice period. Performance obligations for our customer contracts are generally satisfied at a single point in time, typically when the transaction is complete, or over time. For performance obligations satisfied over time, we primarily use the output method, directly measuring the value of the products/services transferred to the customer, to determine when performance obligations have been satisfied. We typically receive payment from customers and recognize revenue concurrent with the satisfaction of our performance obligations. In most cases, this occurs within a single financial reporting period. For payments received in advance of the satisfaction of performance obligations, revenue recognition is deferred until such time the performance obligations have been satisfied. In cases where we have not received payment despite satisfaction of our performance obligations, we accrue an estimate of the amount due in the period our performance obligations have been satisfied. For contracts with variable components, only amounts for which collection is probable are accrued. We generally act in a principal capacity, on our own behalf, in most of our contracts with customers. In such transactions, we recognize revenue and the related costs to provide our services on a gross basis in our financial statements. In some cases, we act in an agent capacity, deriving revenue through assisting other entities in transactions with our customers. In such transactions, we recognized revenue and the related costs to provide our services on a net basis in our financial statements. These transactions primarily relate to insurance and brokerage commissions and fees derived from our customers' use of various interchange and ATM/debit card networks.

Note 2 - Securities

Securities. A summary of the amortized cost and estimated fair value of securities, excluding trading securities, is presented below.

	March 31, 2018				December 31, 2017			
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value
Held to Maturity								
Residential mortgage-backed securities	\$3,503	\$ 12	\$57	\$3,458	\$3,610	\$ 15	\$ 38	\$3,587
States and political subdivisions	1,242,151	13,910	3,126	1,252,935	1,428,488	26,462	2,746	1,452,204

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Other	1,500	—	7	1,493	—	—	—	—
Total	\$1,247,154	\$ 13,922	\$3,190	\$1,257,886	\$1,432,098	\$ 26,477	\$ 2,784	\$1,455,791
Available for Sale								
U.S. Treasury	\$3,453,887	\$ 373	\$36,113	\$3,418,147	\$3,453,391	\$ 7,494	\$ 15,732	\$3,445,153
Residential								
mortgage-backed	636,498	16,012	6,815	645,695	648,288	19,048	2,250	665,086
securities								
States and political								
subdivisions	6,423,389	71,360	64,644	6,430,105	6,185,711	167,293	16,795	6,336,209
Other	42,585	—	—	42,585	42,561	—	—	42,561
Total	\$10,556,359	\$ 87,745	\$ 107,572	\$10,536,532	\$10,329,951	\$ 193,835	\$ 34,777	\$10,489,009

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All mortgage-backed securities included in the above table were issued by U.S. government agencies and corporations. At March 31, 2018, approximately 98.2% of the securities in our municipal bond portfolio were issued by political subdivisions or agencies within the State of Texas, of which approximately 67.7% are either guaranteed by the Texas Permanent School Fund, which has a “triple A” insurer financial strength rating, or are secured by U.S. Treasury securities via defeasance of the debt by the issuers. Securities with limited marketability and that do not have readily determinable fair values are carried at cost minus impairment, if any, plus or minus changes resulting from observable price changes in orderly transactions for identical or similar securities of the same issuer. These securities include stock in the Federal Reserve Bank and the Federal Home Loan Bank and are reported as other available for sale securities in the table above. The carrying value of securities pledged to secure public funds, trust deposits, repurchase agreements and for other purposes, as required or permitted by law was \$3.5 billion at March 31, 2018 and \$3.8 billion at December 31, 2017.

During the fourth quarter of 2012, we reclassified certain securities from available for sale to held to maturity. The securities had an aggregate fair value of \$2.3 billion with an aggregate net unrealized gain of \$165.7 million (\$107.7 million, net of tax) on the date of the transfer. The net unamortized, unrealized gain on the remaining transferred securities included in accumulated other comprehensive income in the accompanying balance sheet as of March 31, 2018 totaled \$8.9 million (\$7.1 million, net of tax). This amount will be amortized out of accumulated other comprehensive income over the remaining life of the underlying securities as an adjustment of the yield on those securities.

Unrealized Losses. As of March 31, 2018, securities with unrealized losses, segregated by length of impairment, were as follows:

	Less than 12 Months		More than 12 Months		Total	
	Estimated Fair Value	Unrealized Losses	Estimated Fair Value	Unrealized Losses	Estimated Fair Value	Unrealized Losses
Held to Maturity						
Residential mortgage-backed securities	\$ 1,120	\$ 23	\$ 1,516	\$ 34	\$ 2,636	\$ 57
States and political subdivisions	231,906	900	44,869	2,226	276,775	3,126
Other	1,493	7	—	—	1,493	7
Total	\$ 234,519	\$ 930	\$ 46,385	\$ 2,260	\$ 280,904	\$ 3,190
Available for Sale						
U.S. Treasury	\$ 2,616,630	\$ 27,797	\$ 514,691	\$ 8,316	\$ 3,131,321	\$ 36,113
Residential mortgage-backed securities	219,091	4,508	45,424	2,307	264,515	6,815
States and political subdivisions	2,004,045	26,466	815,756	38,178	2,819,801	64,644
Total	\$ 4,839,766	\$ 58,771	\$ 1,375,871	\$ 48,801	\$ 6,215,637	\$ 107,572

Declines in the fair value of held-to-maturity and available-for-sale securities below their cost that are deemed to be other than temporary are reflected in earnings as realized losses to the extent the impairment is related to credit losses. The amount of the impairment related to other factors is recognized in other comprehensive income. In estimating other-than-temporary impairment losses, management considers, among other things, (i) the length of time and the extent to which the fair value has been less than cost, (ii) the financial condition and near-term prospects of the issuer, and (iii) the intent and our ability to retain our investment in the issuer for a period of time sufficient to allow for any anticipated recovery in cost.

Management has the ability and intent to hold the securities classified as held to maturity in the table above until they mature, at which time we expect to receive full value for the securities. Furthermore, as of March 31, 2018, management does not have the intent to sell any of the securities classified as available for sale in the table above and believes that it is more likely than not that we will not have to sell any such securities before a recovery of cost. Any unrealized losses are due to increases in market interest rates over the yields available at the time the underlying securities were purchased. The fair value is expected to recover as the securities approach their maturity date or repricing date or if market yields for such investments decline. Management does not believe any of the securities are impaired due to reasons of credit quality. Accordingly, as of March 31, 2018, management believes the impairments detailed in the table above are temporary and no impairment loss has been realized in our consolidated income.

statement.

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Contractual Maturities. The amortized cost and estimated fair value of securities, excluding trading securities, at March 31, 2018 are presented below by contractual maturity. Expected maturities may differ from contractual maturities because issuers may have the right to call or prepay obligations. Residential mortgage-backed securities and equity securities are shown separately since they are not due at a single maturity date.

	Held to Maturity		Available for Sale	
	Amortized Cost	Estimated Fair Value	Amortized Cost	Estimated Fair Value
Due in one year or less	\$105,054	\$106,904	\$118,442	\$119,061
Due after one year through five years	165,355	168,916	4,010,195	3,980,391
Due after five years through ten years	432,654	433,756	486,543	491,153
Due after ten years	540,588	544,852	5,262,096	5,257,647
Residential mortgage-backed securities	3,503	3,458	636,498	645,695
Equity securities	—	—	42,585	42,585
Total	\$1,247,154	\$1,257,886	\$10,556,359	\$10,536,532

Sales of Securities. Sales of securities available for sale were as follows:

	Three Months Ended March 31,	
	2018	2017
Proceeds from sales	\$2,984,867	\$ —
Gross realized gains	—	—
Gross realized losses	(19)	—
Tax (expense) benefit of securities gains/losses	4	—

Premiums and Discounts. Premium amortization and discount accretion included in interest income on securities was as follows:

	Three Months Ended March 31,	
	2018	2017
Premium amortization	\$(26,036)	\$(24,028)
Discount accretion	1,776	2,390
Net (premium amortization) discount accretion	\$(24,260)	\$(21,638)

Trading Account Securities. Trading account securities, at estimated fair value, were as follows:

	March 31, December 31,	
	2018	2017
U.S. Treasury	\$ 19,772	\$ 19,210
States and political subdivisions	—	1,888
Total	\$ 19,772	\$ 21,098

Net gains and losses on trading account securities were as follows:

	Three Months Ended March 31,	
	2018	2017
Net gain on sales transactions	\$505	\$311
Net mark-to-market gains (losses)	(36)	13
Net gain (loss) on trading account securities	\$469	\$324

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Note 3 - Loans

Loans were as follows:

	March 31, 2018	Percentage of Total		December 31, 2017	Percentage of Total	
Commercial and industrial	\$4,876,523	36.5	%	\$4,792,388	36.4	%
Energy:						
Production	1,125,321	8.4		1,182,326	9.0	
Service	192,115	1.4		171,795	1.3	
Other	129,552	0.9		144,972	1.1	
Total energy	1,446,988	10.7		1,499,093	11.4	
Commercial real estate:						
Commercial mortgages	4,060,946	30.4		3,887,742	29.6	
Construction	1,076,785	8.1		1,066,696	8.1	
Land	317,189	2.4		331,986	2.5	
Total commercial real estate	5,454,920	40.9		5,286,424	40.2	
Consumer real estate:						
Home equity loans	355,715	2.7		355,342	2.7	
Home equity lines of credit	295,677	2.2		291,950	2.2	
Other	388,271	2.9		376,002	2.9	
Total consumer real estate	1,039,663	7.8		1,023,294	7.8	
Total real estate	6,494,583	48.7		6,309,718	48.0	
Consumer and other	545,935	4.1		544,466	4.2	
Total loans	\$13,364,029	100.0	%	\$13,145,665	100.0	%

Concentrations of Credit. Most of our lending activity occurs within the State of Texas, including the four largest metropolitan areas of Austin, Dallas/Ft. Worth, Houston and San Antonio, as well as other markets. The majority of our loan portfolio consists of commercial and industrial and commercial real estate loans. As of March 31, 2018, there were no concentrations of loans related to any single industry in excess of 10% of total loans other than energy loans, which totaled 10.7% of total loans. Unfunded commitments to extend credit and standby letters of credit issued to customers in the energy industry totaled \$1.2 billion and \$44.8 million, respectively, as of March 31, 2018.

Foreign Loans. We have U.S. dollar denominated loans and commitments to borrowers in Mexico. The outstanding balance of these loans and the unfunded amounts available under these commitments were not significant at March 31, 2018 or December 31, 2017.

Related Party Loans. In the ordinary course of business, we have granted loans to certain directors, executive officers and their affiliates (collectively referred to as "related parties"). Such loans totaled \$180.7 million at March 31, 2018 and \$166.4 million at December 31, 2017.

Non-Accrual and Past Due Loans. Non-accrual loans, segregated by class of loans, were as follows:

	March 31, 2018	December 31, 2017
Commercial and industrial	\$17,314	\$46,186
Energy	93,097	94,302
Commercial real estate:		
Buildings, land and other	10,858	7,589
Construction	—	—
Consumer real estate	1,878	2,109
Consumer and other	5	128
Total	\$123,152	\$150,314

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As of March 31, 2018, non-accrual loans reported in the table above included \$2.2 million related to loans that were restructured as “troubled debt restructurings” during 2018. See the section captioned “Troubled Debt Restructurings” elsewhere in this note.

Had non-accrual loans performed in accordance with their original contract terms, we would have recognized additional interest income, net of tax, of approximately \$1.5 million for the three months ended March 31, 2018, compared to \$851 thousand for three months ended March 31, 2017.

An age analysis of past due loans (including both accruing and non-accruing loans), segregated by class of loans, as of March 31, 2018 was as follows:

	Loans 30-89 Days Past Due	Loans 90 or More Days Past Due	Total Past Due Loans	Current Loans	Total Loans	Accruing Loans 90 or More Days Past Due
Commercial and industrial	\$ 25,701	\$ 23,946	\$ 49,647	\$ 4,826,876	\$ 4,876,523	\$ 10,357
Energy	24,404	4,207	28,611	1,418,377	1,446,988	3,137
Commercial real estate:						
Buildings, land and other	36,130	5,470	41,600	4,336,535	4,378,135	3,889
Construction	9,497	—	9,497	1,067,288	1,076,785	—
Consumer real estate	8,225	3,164	11,389	1,028,274	1,039,663	1,680
Consumer and other	7,486	218	7,704	538,231	545,935	213
Total	\$ 111,443	\$ 37,005	\$ 148,448	\$ 13,215,581	\$ 13,364,029	\$ 19,276

Impaired Loans. Impaired loans are set forth in the following table. No interest income was recognized on impaired loans subsequent to their classification as impaired.

	Unpaid Contractual Principal Balance	Recorded Investment With No Allowance	Recorded Investment With Allowance	Total Recorded Investment	Related Allowance
March 31, 2018					
Commercial and industrial	\$ 38,136	\$ 1,802	\$ 13,430	\$ 15,232	\$ 7,930
Energy	123,351	41,569	63,502	105,071	14,772
Commercial real estate:					
Buildings, land and other	13,078	7,577	2,047	9,624	708
Construction	—	—	—	—	—
Consumer real estate	1,427	1,427	—	1,427	—
Consumer and other	—	—	—	—	—
Total	\$ 175,992	\$ 52,375	\$ 78,979	\$ 131,354	\$ 23,410
December 31, 2017					
Commercial and industrial	\$ 60,781	\$ 28,038	\$ 15,722	\$ 43,760	\$ 7,553
Energy	99,606	33,080	61,162	94,242	13,267
Commercial real estate:					
Buildings, land and other	10,795	6,394	—	6,394	—
Construction	—	—	—	—	—
Consumer real estate	1,214	1,214	—	1,214	—
Consumer and other	—	—	—	—	—
Total	\$ 172,396	\$ 68,726	\$ 76,884	\$ 145,610	\$ 20,820

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The average recorded investment in impaired loans was as follows:

	Three Months Ended March 31,	
	2018	2017
Commercial and industrial	\$29,496	\$26,393
Energy	99,657	68,101
Commercial real estate:		
Buildings, land and other	8,009	6,660
Construction	—	—
Consumer real estate	1,321	1,102
Consumer and other	—	27
Total	\$138,483	\$102,283

Troubled Debt Restructurings. Troubled debt restructurings during the three months ended March 31, 2018 and March 31, 2017 are set forth in the following table.

	Three Months Ended March 31, 2018		Three Months Ended March 31, 2017	
	Balance at Restructure	Balance at Period-End	Balance at Restructure	Balance at Period-End
Commercial and industrial	\$2,203	\$ 2,171	\$—	\$ —
Energy	13,708	12,058	11,262	11,212
	\$15,911	\$ 14,229	\$11,262	\$ 11,212

Loan modifications are typically related to extending amortization periods, converting loans to interest only for a limited period of time, deferral of interest payments, waiver of certain covenants, consolidating notes and/or reducing collateral or interest rates. The modifications during the reported periods did not significantly impact our determination of the allowance for loan losses. Additional information related to restructured loans was as follows:

	March 31, 2018	March 31, 2017
Restructured loans past due in excess of 90 days at period-end:		
Number of loans	—	1
Dollar amount of loans	\$ —	\$ 747
Restructured loans on non-accrual status at period end	2,171	11,212
Charge-offs of restructured loans:		
Recognized in connection with restructuring	—	—
Recognized on previously restructured loans	1,650	2,000

Credit Quality Indicators. As part of the on-going monitoring of the credit quality of our loan portfolio, management tracks certain credit quality indicators including trends related to (i) the weighted-average risk grade of commercial loans, (ii) the level of classified commercial loans, (iii) the delinquency status of consumer loans (see details above), (iv) net charge-offs, (v) non-performing loans (see details above) and (vi) the general economic conditions in the State of Texas.

We utilize a risk grading matrix to assign a risk grade to each of our commercial loans. Loans are graded on a scale of 1 to 14. A description of the general characteristics of the 14 risk grades is set forth in our 2017 Form 10-K. In monitoring credit quality trends in the context of assessing the appropriate level of the allowance for loan losses, we monitor portfolio credit quality by the weighted-average risk grade of each class of commercial loan. Individual relationship managers review updated financial information for all pass grade loans to reassess the risk grade on at least an annual basis. When a loan has a risk grade of 9, it is still considered a pass grade loan; however, it is

considered to be on management's "watch list," where a significant risk-modifying action is anticipated in the near term. When a loan has a risk grade of 10 or higher, a special assets officer monitors the loan on an on-going basis.

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The following tables present weighted-average risk grades for all commercial loans by class.

	March 31, 2018		December 31, 2017	
	Weighted Average Loans Risk Grade		Weighted Average Loans Risk Grade	
Commercial and industrial:				
Risk grades 1-8	6.05	\$4,505,491	6.06	\$4,378,839
Risk grade 9	9.00	151,084	9.00	170,285
Risk grade 10	10.00	121,457	10.00	99,260
Risk grade 11	11.00	81,148	11.00	97,818
Risk grade 12	12.00	9,412	12.00	38,633
Risk grade 13	13.00	7,931	13.00	7,553
Total	6.35	\$4,876,523	6.41	\$4,792,388
Energy				
Risk grades 1-8	6.12	\$1,173,702	6.01	\$1,199,207
Risk grade 9	9.00	50,364	9.00	50,427
Risk grade 10	10.00	37,670	10.00	64,282
Risk grade 11	11.00	92,155	11.00	90,875
Risk grade 12	12.00	78,325	12.00	81,035
Risk grade 13	13.00	14,772	13.00	13,267
Total	7.02	\$1,446,988	6.97	\$1,499,093
Commercial real estate:				
Buildings, land and other				
Risk grades 1-8	6.77	\$4,051,952	6.75	\$3,868,659
Risk grade 9	9.00	124,048	9.00	151,487
Risk grade 10	10.00	120,399	10.00	129,391
Risk grade 11	11.00	70,878	11.00	62,602
Risk grade 12	12.00	10,150	12.00	7,589
Risk grade 13	13.00	708	13.00	—
Total	7.00	\$4,378,135	7.00	\$4,219,728
Construction				
Risk grades 1-8	7.16	\$1,040,071	7.11	\$1,019,635
Risk grade 9	9.00	15,541	9.00	18,042
Risk grade 10	10.00	17,361	10.00	23,393
Risk grade 11	11.00	3,812	11.00	5,626
Risk grade 12	12.00	—	12.00	—
Risk grade 13	13.00	—	13.00	—
Total	7.25	\$1,076,785	7.23	\$1,066,696

Net (charge-offs)/recoveries, segregated by class of loans, were as follows:

	Three Months Ended March 31,	
	2018	2017
Commercial and industrial	\$(7,675)	\$(2,729)
Energy	(2,849)	(4,225)
Commercial real estate:		
Buildings, land and other	81	42
Construction	2	3

Consumer real estate	(526)	96
Consumer and other	(1,457)	(1,128)
Total	\$(12,424)	\$(7,941)

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In assessing the general economic conditions in the State of Texas, management monitors and tracks the Texas Leading Index (“TLI”), which is produced by the Federal Reserve Bank of Dallas. The TLI, the components of which are more fully described in our 2017 Form 10-K, totaled 131.5 at February 28, 2018 (most recent date available) and 129.6 at December 31, 2017. A higher TLI value implies more favorable economic conditions.

Allowance for Loan Losses. The allowance for loan losses is a reserve established through a provision for loan losses charged to expense, which represents management’s best estimate of inherent losses that have been incurred within the existing portfolio of loans. The allowance, in the judgment of management, is necessary to reserve for estimated loan losses and risks inherent in the loan portfolio. Our allowance for loan loss methodology, which is more fully described in our 2017 Form 10-K, follows the accounting guidance set forth in U.S. generally accepted accounting principles and the Interagency Policy Statement on the Allowance for Loan and Lease Losses, which was jointly issued by U.S. bank regulatory agencies. The level of the allowance reflects management’s continuing evaluation of industry concentrations, specific credit risks, loan loss and recovery experience, current loan portfolio quality, present economic, political and regulatory conditions and unidentified losses inherent in the current loan portfolio. Portions of the allowance may be allocated for specific credits; however, the entire allowance is available for any credit that, in management’s judgment, should be charged off.

The following table presents details of the allowance for loan losses allocated to each portfolio segment as of March 31, 2018 and December 31, 2017 and detailed on the basis of the impairment evaluation methodology we used:

	Commercial and Industrial	Energy	Commercial Real Estate	Consumer Real Estate	Consumer and Other	Total
March 31, 2018						
Historical valuation allowances	\$ 26,658	\$12,266	\$ 19,870	\$ 2,470	\$ 6,729	\$67,993
Specific valuation allowances	7,930	14,772	708	—	—	23,410
General valuation allowances	8,053	8,015	4,025	1,601	(95)	21,599
Macroeconomic valuation allowances	15,092	3,986	13,871	2,278	1,656	36,883
Total	\$ 57,733	\$39,039	\$ 38,474	\$ 6,349	\$ 8,290	\$149,885
Allocated to loans:						
Individually evaluated	\$ 7,930	\$14,772	\$ 708	\$ —	\$ —	\$23,410
Collectively evaluated	49,803	24,267	37,766	6,349	8,290	126,475
Total	\$ 57,733	\$39,039	\$ 38,474	\$ 6,349	\$ 8,290	\$149,885
December 31, 2017						
Historical valuation allowances	\$ 26,401	\$22,073	\$ 18,931	\$ 2,473	\$ 5,603	\$75,481
Specific valuation allowances	7,553	13,267	—	—	—	20,820
General valuation allowances	9,112	7,964	4,165	2,133	(91)	23,283
Macroeconomic valuation allowances	16,548	8,224	7,852	1,051	2,105	35,780
Total	\$ 59,614	\$51,528	\$ 30,948	\$ 5,657	\$ 7,617	\$155,364
Allocated to loans:						
Individually evaluated	\$ 7,553	\$13,267	\$ —	\$ —	\$ —	\$20,820
Collectively evaluated	52,061	38,261	30,948	5,657	7,617	134,544
Total	\$ 59,614	\$51,528	\$ 30,948	\$ 5,657	\$ 7,617	\$155,364

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Our recorded investment in loans as of March 31, 2018 and December 31, 2017 related to each balance in the allowance for loan losses by portfolio segment and detailed on the basis of the impairment methodology we used was as follows:

	Commercial and Industrial	Energy	Commercial Real Estate	Consumer Real Estate	Consumer and Other	Total
March 31, 2018						
Individually evaluated	\$ 15,232	\$ 105,071	\$ 9,624	\$ 1,427	\$ —	\$ 131,354
Collectively evaluated	4,861,291	1,341,917	5,445,296	1,038,236	545,935	13,232,675
Total	\$ 4,876,523	\$ 1,446,988	\$ 5,454,920	\$ 1,039,663	\$ 545,935	\$ 13,364,029
December 31, 2017						
Individually evaluated	\$ 43,760	\$ 94,242	\$ 6,394	\$ 1,214	\$ —	\$ 145,610
Collectively evaluated	4,748,628	1,404,851	5,280,030	1,022,080	544,466	13,000,055
Total	\$ 4,792,388	\$ 1,499,093	\$ 5,286,424	\$ 1,023,294	\$ 544,466	\$ 13,145,665

The following table details activity in the allowance for loan losses by portfolio segment for the three months ended March 31, 2018 and 2017. Allocation of a portion of the allowance to one category of loans does not preclude its availability to absorb losses in other categories.

	Commercial and Industrial	Energy	Commercial Real Estate	Consumer Real Estate	Consumer and Other	Total
Three months ended:						
March 31, 2018						
Beginning balance	\$ 59,614	\$ 51,528	\$ 30,948	\$ 5,657	\$ 7,617	\$ 155,364
Provision for loan losses	5,794	(9,640)	7,443	1,218	2,130	6,945
Charge-offs	(9,252)	(2,850)	(5)	(719)	(3,972)	(16,798)
Recoveries	1,577	1	88	193	2,515	4,374
Net charge-offs	(7,675)	(2,849)	83	(526)	(1,457)	(12,424)
Ending balance	\$ 57,733	\$ 39,039	\$ 38,474	\$ 6,349	\$ 8,290	\$ 149,885
March 31, 2017						
Beginning balance	\$ 52,915	\$ 60,653	\$ 30,213	\$ 4,238	\$ 5,026	\$ 153,045
Provision for loan losses	(4,603)	5,365	3,751	489	2,950	7,952
Charge-offs	(3,527)	(4,278)	—	(11)	(3,548)	(11,364)
Recoveries	798	53	45	107	2,420	3,423
Net charge-offs	(2,729)	(4,225)	45	96	(1,128)	(7,941)
Ending balance	\$ 45,583	\$ 61,793	\$ 34,009	\$ 4,823	\$ 6,848	\$ 153,056

Note 4 - Goodwill and Other Intangible Assets

Goodwill and other intangible assets are presented in the table below.

	March 31, 2018	December 31, 2017
Goodwill	\$ 654,952	\$ 654,952
Other intangible assets:		
Core deposits	\$ 3,748	\$ 4,044
Customer relationships	900	986
Non-compete agreements	37	43
	\$ 4,685	\$ 5,073

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The estimated aggregate future amortization expense for intangible assets remaining as of March 31, 2018 is as follows:

Remainder of 2018	\$1,036
2019	1,167
2020	918
2021	697
2022	481
Thereafter	386
	\$4,685

Note 5 - Deposits

Deposits were as follows:

	March 31, 2018	Percentage of Total		December 31, 2017	Percentage of Total	
Non-interest-bearing demand deposits:						
Commercial and individual	\$10,294,977	38.6	%	\$10,412,882	38.8	%
Correspondent banks	212,199	0.8		222,648	0.8	
Public funds	426,986	1.6		561,563	2.1	
Total non-interest-bearing demand deposits	10,934,162	41.0		11,197,093	41.7	
Interest-bearing deposits:						
Private accounts:						
Savings and interest checking	6,869,783	25.8		6,788,766	25.2	
Money market accounts	7,706,531	28.9		7,624,471	28.4	
Time accounts of \$100,000 or more	458,103	1.7		453,668	1.7	
Time accounts under \$100,000	322,105	1.2		324,636	1.2	
Total private accounts	15,356,522	57.6		15,191,541	56.5	
Public funds:						
Savings and interest checking	308,609	1.1		410,140	1.5	
Money market accounts	63,155	0.2		59,008	0.2	
Time accounts of \$100,000 or more	14,892	0.1		14,301	0.1	
Time accounts under \$100,000	438	—		306	—	
Total public funds	387,094	1.4		483,755	1.8	
Total interest-bearing deposits	15,743,616	59.0		15,675,296	58.3	
Total deposits	\$26,677,778	100.0	%	\$26,872,389	100.0	%

The following table presents additional information about our deposits:

	March 31, 2018	December 31, 2017
Deposits from foreign sources (primarily Mexico)	\$ 736,786	\$ 716,339
Deposits not covered by deposit insurance	13,104,781	13,281,040

Note 6 - Commitments and Contingencies

Financial Instruments with Off-Balance-Sheet Risk. In the normal course of business, we enter into various transactions, which, in accordance with generally accepted accounting principles are not included in our consolidated balance sheets. We enter into these transactions to meet the financing needs of our customers. As more fully discussed in our 2017 Form 10-K, these transactions include commitments to extend credit and standby letters of credit, which involve, to varying degrees, elements of credit risk and interest rate risk in excess of the amounts recognized in the consolidated balance sheets. We minimize our exposure to loss under these commitments by subjecting them to credit approval and monitoring procedures.

Financial instruments with off-balance-sheet risk were as follows:

	March 31, 2018	December 31, 2017
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Commitments to extend credit	\$7,939,929	\$ 7,949,400
Standby letters of credit	220,294	236,595
Deferred standby letter of credit fees	1,586	1,843

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Lease Commitments. We lease certain office facilities and office equipment under operating leases. Rent expense for all operating leases totaled \$8.2 million and \$7.7 million during the three months ended March 31, 2018 and 2017. There has been no significant change in our expected future minimum lease payments since December 31, 2017. See the 2017 Form 10-K for information regarding these commitments.

Litigation. We are subject to various claims and legal actions that have arisen in the course of conducting business. Management does not expect the ultimate disposition of these matters to have a material adverse impact on our financial statements.

Note 7 - Capital and Regulatory Matters

Banks and bank holding companies are subject to various regulatory capital requirements administered by state and federal banking agencies. Capital adequacy guidelines and, additionally for banks, prompt corrective action regulations, involve quantitative measures of assets, liabilities, and certain off-balance-sheet items calculated under regulatory accounting practices. Capital amounts and classifications are also subject to qualitative judgments by regulators about components, risk weighting and other factors.

Cullen/Frost's and Frost Bank's Common Equity Tier 1 capital includes common stock and related paid-in capital, net of treasury stock, and retained earnings. In connection with the adoption of the Basel III Capital Rules, we elected to opt-out of the requirement to include most components of accumulated other comprehensive income in Common Equity Tier 1. Common Equity Tier 1 for both Cullen/Frost and Frost Bank is reduced by, goodwill and other intangible assets, net of associated deferred tax liabilities, and subject to transition provisions. Frost Bank's Common Equity Tier 1 is also reduced by its equity investment in its financial subsidiary, Frost Insurance Agency ("FIA"). Tier 1 capital includes Common Equity Tier 1 capital and additional Tier 1 capital. For Cullen/Frost, additional Tier 1 capital at March 31, 2018 and December 31, 2017 includes \$144.5 million of 5.375% non-cumulative perpetual preferred stock. Frost Bank did not have any additional Tier 1 capital beyond Common Equity Tier 1 at March 31, 2018 or December 31, 2017.

Total capital includes Tier 1 capital and Tier 2 capital. Tier 2 capital for both Cullen/Frost and Frost Bank includes a permissible portion of the allowance for loan losses. Tier 2 capital for Cullen/Frost also includes \$100.0 million of qualified subordinated debt and \$133.0 million of trust preferred securities at both March 31, 2018 and December 31, 2017.

The following tables present actual and required capital ratios as of March 31, 2018 and December 31, 2017 for Cullen/Frost and Frost Bank under the Basel III Capital Rules. The minimum required capital amounts presented include the minimum required capital levels as of March 31, 2018 and December 31, 2017 based on the phase-in provisions of the Basel III Capital Rules and the minimum required capital levels as of January 1, 2019 when the Basel III Capital Rules have been fully phased-in. Capital levels required to be considered well capitalized are based upon prompt corrective action regulations, as amended to reflect the changes under the Basel III Capital Rules. See the 2017 Form 10-K for a more detailed discussion of the Basel III Capital Rules.

	Actual		Minimum Capital Required - Basel III Phase-In Schedule		Minimum Capital Required - Basel III Fully Phased-In		Required to be Considered Well Capitalized	
	Capital Amount	Ratio	Capital Amount	Ratio	Capital Amount	Ratio	Capital Amount	Ratio
March 31, 2018								
Common Equity Tier 1 to Risk-Weighted Assets								
Cullen/Frost	\$2,504,319	12.69 %	\$1,258,491	6.375 %	\$1,381,873	7.00 %	\$1,283,167	6.50 %
Frost Bank	2,560,828	13.00	1,255,352	6.375	1,378,426	7.00	1,279,967	6.50
Tier 1 Capital to Risk-Weighted Assets								
Cullen/Frost	2,648,805	13.42	1,554,607	7.875	1,677,988	8.50	1,579,283	8.00
Frost Bank	2,560,828	13.00	1,550,729	7.875	1,673,803	8.50	1,575,344	8.00

Total Capital to Risk-Weighted

Assets

Cullen/Frost	3,032,190	15.36	1,949,427	9.875	2,072,809	10.50	1,974,104	10.00
Frost Bank	2,711,213	13.77	1,944,565	9.875	2,067,639	10.50	1,969,180	10.00
Leverage Ratio								
Cullen/Frost	2,648,805	8.62	1,228,567	4.00	1,228,567	4.00	1,535,709	5.00
Frost Bank	2,560,828	8.34	1,227,539	4.00	1,227,539	4.00	1,534,424	5.00

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	Actual		Minimum Capital Required - Basel III Phase-In Schedule		Minimum Capital Required - Basel III Fully Phased-In		Required to be Considered Well Capitalized	
	Capital Amount	Ratio	Capital Amount	Ratio	Capital Amount	Ratio	Capital Amount	Ratio
December 31, 2017								
Common Equity Tier 1 to Risk-Weighted Assets								
Cullen/Frost	\$2,426,048	12.42 %	\$1,123,430	5.75 %	\$1,367,583	7.00 %	\$1,269,965	6.50 %
Frost Bank	2,518,999	12.92	1,120,663	5.75	1,364,214	7.00	1,266,836	6.50
Tier 1 Capital to Risk-Weighted Assets								
Cullen/Frost	2,570,534	13.16	1,416,499	7.25	1,660,637	8.50	1,563,033	8.00
Frost Bank	2,518,999	12.92	1,413,010	7.25	1,656,546	8.50	1,559,183	8.00
Total Capital to Risk-Weighted Assets								
Cullen/Frost	2,959,326	15.15	1,807,257	9.25	2,051,375	10.50	1,953,792	10.00
Frost Bank	2,674,791	13.72	1,802,805	9.25	2,046,321	10.50	1,948,979	10.00
Leverage Ratio								
Cullen/Frost	2,570,534	8.46	1,215,227	4.00	1,215,186	4.00	1,519,034	5.00
Frost Bank	2,518,999	8.30	1,214,295	4.00	1,214,254	4.00	1,517,869	5.00

As of March 31, 2018, capital levels at Cullen/Frost and Frost Bank exceed all capital adequacy requirements under the Basel III Capital Rules on a fully phased-in basis. Based on the ratios presented above, capital levels as of March 31, 2018 at Cullen/Frost and Frost Bank exceed the minimum levels necessary to be considered “well capitalized.”

Cullen/Frost and Frost Bank are subject to the regulatory capital requirements administered by the Federal Reserve Board and, for Frost Bank, the Federal Deposit Insurance Corporation (“FDIC”). Regulatory authorities can initiate certain mandatory actions if Cullen/Frost or Frost Bank fail to meet the minimum capital requirements, which could have a direct material effect on our financial statements. Management believes, as of March 31, 2018, that Cullen/Frost and Frost Bank meet all capital adequacy requirements to which they are subject.

Stock Repurchase Plans. From time to time, our board of directors has authorized stock repurchase plans. In general, stock repurchase plans allow us to proactively manage our capital position and return excess capital to shareholders. Shares purchased under such plans also provide us with shares of common stock necessary to satisfy obligations related to stock compensation awards. On October 24, 2017, our board of directors authorized a \$150.0 million stock repurchase program, allowing us to repurchase shares of our common stock over a two-year period from time to time at various prices in the open market or through private transactions. No shares were repurchased under this plan during 2018 or 2017. Under a prior plan, we repurchased 1,134,966 shares under the plan at a total cost of \$100.0 million during the third quarter of 2017.

Dividend Restrictions. In the ordinary course of business, Cullen/Frost is dependent upon dividends from Frost Bank to provide funds for the payment of dividends to shareholders and to provide for other cash requirements. Banking regulations may limit the amount of dividends that may be paid. Approval by regulatory authorities is required if the effect of dividends declared would cause the regulatory capital of Frost Bank to fall below specified minimum levels. Approval is also required if dividends declared exceed the net profits for that year combined with the retained net profits for the preceding two years. Under the foregoing dividend restrictions and while maintaining its “well capitalized” status, at March 31, 2018, Frost Bank could pay aggregate dividends of up to \$446.7 million to Cullen/Frost without prior regulatory approval.

Under the terms of the junior subordinated deferrable interest debentures that Cullen/Frost has issued to Cullen/Frost Capital Trust II and WNB Capital Trust I, Cullen/Frost has the right at any time during the term of the debentures to

defer the payment of interest at any time or from time to time for an extension period not exceeding 20 consecutive quarterly periods with respect to each extension period. In the event that we have elected to defer interest on the debentures, we may not, with certain exceptions, declare or pay any dividends or distributions on our capital stock or purchase or acquire any of our capital stock.

Under the terms of our Series A Preferred Stock, in the event that we do not declare and pay dividends on our Series A Preferred Stock for the most recent dividend period, we may not, with certain exceptions, declare or pay dividends on, or purchase, redeem or otherwise acquire, shares of our common stock or any of our securities that rank junior to our Series A Preferred Stock.

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Note 8 - Derivative Financial Instruments

The fair value of derivative positions outstanding is included in accrued interest receivable and other assets and accrued interest payable and other liabilities in the accompanying consolidated balance sheets and in the net change in each of these financial statement line items in the accompanying consolidated statements of cash flows.

Interest Rate Derivatives. We utilize interest rate swaps, caps and floors to mitigate exposure to interest rate risk and to facilitate the needs of our customers. Our objectives for utilizing these derivative instruments are described in our 2017 Form 10-K.

The notional amounts and estimated fair values of interest rate derivative contracts are presented in the following table. The fair values of interest rate derivative contracts are estimated utilizing internal valuation models with observable market data inputs, or as determined by the Chicago Mercantile Exchange ("CME") for centrally cleared derivative contracts. CME rules legally characterize variation margin payments for centrally cleared derivatives as settlements of the derivatives' exposure rather than collateral. As a result, the variation margin payment and the related derivative instruments are considered a single unit of account for accounting and financial reporting purposes.

Variation margin, as determined by the CME, is settled daily. As a result, derivative contracts that clear through the CME have an estimated fair value of zero as of March 31, 2018 and December 31, 2017.

	March 31, 2018		December 31, 2017	
	Notional Amount	Estimated Fair Value	Notional Amount	Estimated Fair Value
Derivatives designated as hedges of fair value:				
Financial institution counterparties:				
Loan/lease interest rate swaps – assets	\$11,904	\$ 286	\$13,679	\$ 242
Loan/lease interest rate swaps – liabilities	10,141	(445)	11,147	(593)
Non-hedging interest rate derivatives:				
Financial institution counterparties:				
Loan/lease interest rate swaps – assets	615,433	3,416	430,449	1,418
Loan/lease interest rate swaps – liabilities	520,466	(8,461)	541,496	(12,820)
Loan/lease interest rate caps – assets	121,976	906	114,619	480
Customer counterparties:				
Loan/lease interest rate swaps – assets	491,786	12,204	541,496	17,882
Loan/lease interest rate swaps – liabilities	596,473	(12,846)	430,449	(4,861)
Loan/lease interest rate caps – liabilities	121,976	(906)	114,619	(480)

The weighted-average rates paid and received for interest rate swaps outstanding at March 31, 2018 were as follows:

	Weighted-Average	
	Interest Rate Paid	Interest Rate Received
Interest rate swaps:		
Fair value hedge loan/lease interest rate swaps	3.27 %	1.77 %
Non-hedging interest rate swaps – financial institution counterparties	3.96 %	3.28 %
Non-hedging interest rate swaps – customer counterparties	3.35 %	4.06 %

The weighted-average strike rate for outstanding interest rate caps was 3.47% at March 31, 2018.

Commodity Derivatives. We enter into commodity swaps and option contracts that are not designated as hedging instruments primarily to accommodate the business needs of our customers. Upon the origination of a commodity swap or option contract with a customer, we simultaneously enter into an offsetting contract with a third party financial institution to mitigate the exposure to fluctuations in commodity prices.

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The notional amounts and estimated fair values of non-hedging commodity swap and option derivative positions outstanding are presented in the following table. We obtain dealer quotations and use internal valuation models with observable market data inputs to value our commodity derivative positions.

		March 31, 2018		December 31, 2017	
	Notional Units	Notional Amount	Estimated Fair Value	Notional Amount	Estimated Fair Value
Financial institution counterparties:					
Oil – assets	Barrels	462	\$ 1,676	253	\$ 193
Oil – liabilities	Barrels	2,663	(19,122)	2,731	(13,448)
Natural gas – assets	MMBTUs	6,963	984	5,927	1,399
Natural gas – liabilities	MMBTUs	6,230	(591)	3,917	(326)
Customer counterparties:					
Oil – assets	Barrels	2,699	19,301	2,731	13,709
Oil – liabilities	Barrels	426	(1,668)	253	(187)
Natural gas – assets	MMBTUs	6,133	602	3,917	340
Natural gas – liabilities	MMBTUs	7,060	(975)	5,927	(1,366)

Foreign Currency Derivatives. We enter into foreign currency forward contracts that are not designated as hedging instruments primarily to accommodate the business needs of our customers. Upon the origination of a foreign currency denominated transaction with a customer, we simultaneously enter into an offsetting contract with a third party financial institution to negate the exposure to fluctuations in foreign currency exchange rates. We also utilize foreign currency forward contracts that are not designated as hedging instruments to mitigate the economic effect of fluctuations in foreign currency exchange rates on foreign currency holdings and certain short-term, non-U.S. dollar denominated loans. The notional amounts and fair values of open foreign currency forward contracts were as follows:

		March 31, 2018		December 31, 2017	
	Notional Currency	Notional Amount	Estimated Fair Value	Notional Amount	Estimated Fair Value
Financial institution counterparties:					
Forward contracts – assets	EUR	5,110	\$ 167	4,014	\$ 77
Forward contracts – assets	GBP	832	8	127	1
Forward contracts – assets	AUD	59	1	—	—
Forward contracts – liabilities	EUR	—	—	4,846	(37)
Forward contracts – liabilities	CAD	23,228	(68)	25,413	(142)
Forward contracts – liabilities	GBP	453	(5)	1,178	(9)
Forward contracts – liabilities	AUD	58	—	—	—
Customer counterparties:					
Forward contracts – assets	EUR	—	—	3,867	58
Forward contracts – assets	CAD	23,170	136	25,282	279
Forward contracts – assets	GBP	88	1	—	—
Forward contracts – liabilities	EUR	4,041	(135)	4,041	(51)
Forward contracts – liabilities	GBP	—	—	127	—

Gains, Losses and Derivative Cash Flows. For fair value hedges, the changes in the fair value of both the derivative hedging instrument and the hedged item are included in other non-interest income or other non-interest expense. The extent that such changes in fair value do not offset represents hedge ineffectiveness. Net cash flows from interest rate swaps on commercial loans/leases designated as hedging instruments in effective hedges of fair value are included in interest income on loans. For non-hedging derivative instruments, gains and losses due to changes in fair value and all cash flows are included in other non-interest income and other non-interest expense.

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Amounts included in the consolidated statements of income related to interest rate derivatives designated as hedges of fair value were as follows:

	Three Months Ended March 31, 2018 2017	
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Commercial loan/lease interest rate swaps:

Amount of gain (loss) included in interest income on loans	\$ (42)	\$ (245)
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Amount of (gain) loss included in other non-interest expense	—	(1)
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As stated above, we enter into non-hedge related derivative positions primarily to accommodate the business needs of our customers. Upon the origination of a derivative contract with a customer, we simultaneously enter into an offsetting derivative contract with a third party financial institution. We recognize immediate income based upon the difference in the bid/ask spread of the underlying transactions with our customers and the third party. Because we act only as an intermediary for our customer, subsequent changes in the fair value of the underlying derivative contracts for the most part offset each other and do not significantly impact our results of operations.

Amounts included in the consolidated statements of income related to non-hedging interest rate, commodity and foreign currency derivative instruments are presented in the table below.

	Three Months Ended March 31, 2018 2017	
Non-hedging interest rate derivatives:		
Other non-interest income	\$ 1,488	\$ 370
Other non-interest expense	(21)	(1)
Non-hedging commodity derivatives:		
Other non-interest income	90	52
Non-hedging foreign currency derivatives:		
Other non-interest income	59	9

Counterparty Credit Risk. Our credit exposure relating to interest rate swaps, commodity swaps/options and foreign currency forward contracts with bank customers was approximately \$29.3 million at March 31, 2018. This credit exposure is partly mitigated as transactions with customers are generally secured by the collateral, if any, securing the underlying transaction being hedged. Our credit exposure, net of collateral pledged, relating to interest rate swaps, commodity swaps/options and foreign currency forward contracts with upstream financial institution counterparties was approximately \$9.2 million at March 31, 2018. This amount was primarily related to excess collateral we posted to counterparties. Collateral levels for upstream financial institution counterparties are monitored and adjusted as necessary. See Note 9 – Balance Sheet Offsetting and Repurchase Agreements for additional information regarding our credit exposure with upstream financial institution counterparties.

The aggregate fair value of securities we posted as collateral related to derivative contracts totaled \$6.6 million at March 31, 2018. At such date, we also had \$25.8 million in cash collateral on deposit with other financial institution counterparties.

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Note 9 - Balance Sheet Offsetting and Repurchase Agreements

Balance Sheet Offsetting. Certain financial instruments, including resell and repurchase agreements and derivatives, may be eligible for offset in the consolidated balance sheet and/or subject to master netting arrangements or similar agreements. Our derivative transactions with upstream financial institution counterparties are generally executed under International Swaps and Derivative Association (“ISDA”) master agreements which include “right of set-off” provisions. In such cases there is generally a legally enforceable right to offset recognized amounts and there may be an intention to settle such amounts on a net basis. Nonetheless, we do not generally offset such financial instruments for financial reporting purposes.

Information about financial instruments that are eligible for offset in the consolidated balance sheet as of March 31, 2018 is presented in the following tables.

	Gross Amount Recognized	Gross Amount Offset	Net Amount Recognized
March 31, 2018			
Financial assets:			
Derivatives:			
Loan/lease interest rate swaps and caps	\$ 4,608	\$	—\$4,608
Commodity swaps and options	2,660	—	2,660
Foreign currency forward contracts	176	—	176
Total derivatives	7,444	—	7,444
Resell agreements	9,642	—	9,642
Total	\$ 17,086	\$	—\$17,086
Financial liabilities:			
Derivatives:			
Loan/lease interest rate swaps	\$ 8,906	\$	—\$8,906
Commodity swaps and options	19,713	—	19,713
Foreign currency forward contracts	73	—	73
Total derivatives	28,692	—	28,692
Repurchase agreements	1,015,021	—	1,015,021
Total	\$ 1,043,713	\$	—\$1,043,713

	Net Amount Recognized	Gross Amounts Not Offset	Financial Instruments	Collateral	Net Amount
March 31, 2018					
Financial assets:					
Derivatives:					
Counterparty A	\$ 1,012	\$(1,012)	\$—		\$ —
Counterparty B	2,152	(2,152)	) —		—
Counterparty C	84	(84)	) —		—
Other counterparties	4,196	(1,217)	) (2,751)	) 228	
Total derivatives	7,444	(4,465)	) (2,751)	) 228	
Resell agreements	9,642	—	(9,642)	) —	
Total	\$ 17,086	\$(4,465)	\$(12,393)	) \$ 228	
Financial liabilities:					
Derivatives:					
Counterparty A	\$ 5,706	\$(1,012)	\$(4,694)	) \$ —	
Counterparty B	4,103	(2,152)	) (1,258)	) 693	
Counterparty C	1,467	(84)	) (1,383)	) —	
Other counterparties	17,416	(1,217)	) (16,099)	) 100	

Total derivatives	28,692	(4,465)	(23,434)	793
Repurchase agreements	1,015,021	—	(1,015,021)	—
Total	\$ 1,043,713	\$(4,465)	\$(1,038,455)	\$ 793

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Information about financial instruments that are eligible for offset in the consolidated balance sheet as of December 31, 2017 is presented in the following tables.

	Gross Amount Recognized	Gross Amount Offset	Net Amount Recognized
December 31, 2017			
Financial assets:			
Derivatives:			
Loan/lease interest rate swaps and caps	\$ 2,140	\$	—\$ 2,140
Commodity swaps and options	1,592	—	1,592
Foreign currency forward contracts	78	—	78
Total derivatives	3,810	—	3,810
Resell agreements	9,642	—	9,642
Total	\$ 13,452	\$	—\$ 13,452
Financial liabilities:			
Derivatives:			
Loan/lease interest rate swaps	\$ 13,413	\$	—\$ 13,413
Commodity swaps and options	13,774	—	13,774
Foreign currency forward contracts	188	—	188
Total derivatives	27,375	—	27,375
Repurchase agreements	1,117,199	—	1,117,199
Total	\$ 1,144,574	\$	—\$ 1,144,574

	Net Amount Recognized	Gross Amounts Not Offset	Financial Instruments	Collateral	Net Amount
December 31, 2017					
Financial assets:					
Derivatives:					
Counterparty A	\$ 395	\$(395)	\$—		\$—
Counterparty B	1,028	(1,028)	—		—
Counterparty C	55	(55)	—		—
Other counterparties	2,332	(1,830)	(387)		115
Total derivatives	3,810	(3,308)	(387)		115
Resell agreements	9,642	—	(9,642)		—
Total	\$ 13,452	\$(3,308)	\$(10,029)		\$ 115
Financial liabilities:					
Derivatives:					
Counterparty A	\$ 7,397	\$(395)	\$(7,002)		\$—
Counterparty B	4,466	(1,028)	(3,101)		337
Counterparty C	1,520	(55)	(1,450)		15
Other counterparties	13,992	(1,830)	(11,215)		947
Total derivatives	27,375	(3,308)	(22,768)		1,299
Repurchase agreements	1,117,199	—	(1,117,199)		—
Total	\$ 1,144,574	\$(3,308)	\$(1,139,967)		\$ 1,299

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Repurchase Agreements. We utilize securities sold under agreements to repurchase to facilitate the needs of our customers and to facilitate secured short-term funding needs. Securities sold under agreements to repurchase are stated at the amount of cash received in connection with the transaction. We monitor collateral levels on a continuous basis. We may be required to provide additional collateral based on the fair value of the underlying securities. Securities pledged as collateral under repurchase agreements are maintained with our safekeeping agents.

The remaining contractual maturity of repurchase agreements in the consolidated balance sheets as of March 31, 2018 and December 31, 2017 is presented in the following tables.

Remaining Contractual Maturity of the
Agreements

Overnight and Continuous	Up to 30 Days	30-90 Days	Greater than 90 Days	Total
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March 31, 2018

Repurchase agreements:

U.S. Treasury	\$999,320	\$	—\$	—\$	—\$999,320
Residential mortgage-backed securities	15,701	—	—	—	15,701
Total borrowings	\$1,015,021	\$	—\$	—\$	—\$1,015,021
Gross amount of recognized liabilities for repurchase agreements					\$1,015,021
Amounts related to agreements not included in offsetting disclosures above					\$—

December 31, 2017

Repurchase agreements:

U.S. Treasury	\$1,036,891	\$	—\$	—\$	—\$1,036,891
Residential mortgage-backed securities	80,308	—	—	—	80,308
Total borrowings	\$1,117,199	\$	—\$	—\$	—\$1,117,199
Gross amount of recognized liabilities for repurchase agreements					\$1,117,199
Amounts related to agreements not included in offsetting disclosures above					\$—

Note 10 - Stock-Based Compensation

A combined summary of activity in our active stock plans is presented in the table. Performance stock units outstanding are presented assuming attainment of the maximum payout rate as set forth by the performance criteria. As of March 31, 2018, there were 1,400,402 shares remaining available for grant for future stock-based compensation awards.

	Director Deferred Stock Units		Non-Vested Stock Awards/Stock Units		Performance Stock Units		Stock Options Outstanding	
	Outstanding		Outstanding		Outstanding		Outstanding	
	Number of Units	Weighted- Average Fair Value at Grant	Number of Shares/Units	Weighted- Average Fair Value at Grant	Number of Units	Weighted- Average Fair Value at Grant	Number of Shares	Weighted- Average Exercise Price
Balance, January 1, 2018	53,008	\$ 64.87	312,656	\$ 81.71	80,103	\$ 79.91	2,917,142	\$ 63.34
Authorized	—	—	—	—	—	—	—	—
Granted	—	—	—	—	—	—	—	—
Exercised/vested	—	—	—	—	—	—	(318,110)	60.25
Forfeited/expired	—	—	(3,527)	86.54	—	—	(29,125)	69.67
Balance, March 31, 2018	53,008	\$ 64.87	309,129	\$ 81.66	80,103	\$ 79.91	2,569,907	\$ 63.65

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Shares issued in connection with stock compensation awards are issued from available treasury shares. If no treasury shares are available, new shares are issued from available authorized shares. Shares issued in connection with stock compensation awards along with other related information were as follows:

	Three Months Ended March 31,	
	2018	2017
New shares issued from available authorized shares	—	283,342
Issued from available treasury stock	318,110	158,712
Total	318,110	442,054

Proceeds from stock option exercises	\$19,165	\$24,747
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Stock-based compensation expense is recognized ratably over the requisite service period for all awards. For most stock option awards, the service period generally matches the vesting period. For stock options granted to certain executive officers and for non-vested stock units granted to all participants, the service period does not extend past the date the participant reaches 65 years of age. Deferred stock units granted to non-employee directors generally have immediate vesting and the related expense is fully recognized on the date of grant. For performance stock units, the service period generally matches the three-year performance period specified by the award, however, the service period does not extend past the date the participant reaches 65 years of age. Expense recognized each period is dependent upon our estimate of the number of shares that will ultimately be issued.

Stock-based compensation expense and the related income tax benefit is presented in the following table.

	Three Months Ended March 31,	
	2018	2017
Stock options	\$1,085	\$1,787
Non-vested stock awards/stock units	1,468	1,033
Director deferred stock units	—	—
Performance stock units	622	283
Total	\$3,175	\$3,103
Income tax benefit	\$667	\$1,086

Unrecognized stock-based compensation expense at March 31, 2018 is presented in the table below. Unrecognized stock-based compensation expense related to performance stock units is presented assuming attainment of the maximum payout rate as set forth by the performance criteria.

Stock options	\$4,148
Non-vested stock awards/stock units	13,218
Performance stock units	4,507
Total	\$21,873

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Note 11 - Earnings Per Common Share

Earnings per common share is computed using the two-class method as more fully described in our 2017 Form 10-K. The following table presents a reconciliation of net income available to common shareholders, net earnings allocated to common stock and the number of shares used in the calculation of basic and diluted earnings per common share.

	Three Months Ended March 31,	
	2018	2017
Net income	\$106,480	\$ 84,941
Less: Preferred stock dividends	2,016	2,016
Net income available to common shareholders	104,464	82,925
Less: Earnings allocated to participating securities	702	435
Net earnings allocated to common stock	\$103,762	\$ 82,490
Distributed earnings allocated to common stock	\$36,306	\$ 34,475
Undistributed earnings allocated to common stock	67,456	48,015
Net earnings allocated to common stock	\$103,762	\$ 82,490
Weighted-average shares outstanding for basic earnings per common share	63,649,198	63,738,191
Dilutive effect of stock compensation	1,012,997	999,194
Weighted-average shares outstanding for diluted earnings per common share	64,662,195	64,737,385

Note 12 - Defined Benefit Plans

The components of the combined net periodic expense (benefit) for our defined benefit pension plans are presented in the table below.

	Three Months Ended March 31,	
	2018	2017
Expected return on plan assets, net of expenses	\$(2,979)	\$(2,779)
Interest cost on projected benefit obligation	1,475	1,547
Net amortization and deferral	1,250	1,357
Net periodic expense (benefit)	\$(254)	\$ 125

Our non-qualified defined benefit pension plan is not funded. No contributions to the qualified defined benefit pension plan were made during the three months ended March 31, 2018. We do not expect to make any contributions to the qualified defined benefit plan during the remainder of 2018.

Note 13 - Income Taxes

Income tax expense was as follows:

	Three Months Ended March 31,	
	2018	2017
Current income tax expense	\$746	\$15,702
Deferred income tax expense (benefit)	10,411	(4,301)
Income tax expense, as reported	\$11,157	\$11,401

Effective tax rate 9.5 % 11.8 %

Net deferred tax assets totaled \$59.6 million at March 31, 2018 and \$31.7 million at December 31, 2017. No valuation allowance for deferred tax assets was recorded at March 31, 2018 as management believes it is more likely than not that all of the deferred tax assets will be realized against deferred tax liabilities and projected future taxable income. The effective income tax rates differed from the U.S. statutory federal income tax rates of 21% during 2018 and 35% during 2017 primarily due to the effect of tax-exempt income from loans, securities and life insurance policies and the

income tax effects associated with stock-based compensation. There were no unrecognized tax benefits during any of the reported periods. Interest

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and/or penalties related to income taxes are reported as a component of income tax expense. Such amounts were not significant during the reported periods.

We file income tax returns in the U.S. federal jurisdiction. We are no longer subject to U.S. federal income tax examinations by tax authorities for years before 2014.

Tax Cuts and Jobs Act. The Tax Cuts and Jobs Act was enacted on December 22, 2017 as more fully discussed in the 2017 Form 10-K. Among other things, the new law established a new, flat corporate federal statutory income tax rate of 21%. As a result, we remeasured our deferred tax assets and liabilities based on the new tax rate and recognized a provisional net tax benefit related to the remeasurement totaling \$4.0 million. Notwithstanding the foregoing, we are still analyzing certain aspects of the new law and refining our calculations, which could affect the measurement of these assets and liabilities or give rise to new deferred tax amounts. Nonetheless, there has been no change to the provisional net tax benefit we recorded during the fourth quarter of 2017.

Note 14 - Other Comprehensive Income (Loss)

The before and after tax amounts allocated to each component of other comprehensive income (loss) are presented in the following table. Reclassification adjustments related to securities available for sale are included in net gain (loss) on securities transactions in the accompanying consolidated statements of income. Reclassification adjustments related to defined-benefit post-retirement benefit plans are included in the computation of net periodic pension expense (see Note 12 – Defined Benefit Plans).

	Three Months Ended March 31, 2018			Three Months Ended March 31, 2017		
	Before Tax Amount	Tax Expense, (Benefit)	Net of Tax Amount	Before Tax Amount	Tax Expense, (Benefit)	Net of Tax Amount
Securities available for sale and transferred securities:						
Change in net unrealized gain/loss during the period	\$(178,904)	\$(37,570)	\$(141,334)	\$33,811	\$11,834	\$21,977
Change in net unrealized gain on securities transferred to held to maturity	(2,619)	(550)	(2,069)	(6,286)	(2,200)	(4,086)
Reclassification adjustment for net (gains) losses included in net income	19	4	15	—	—	—
Total securities available for sale and transferred securities	(181,504)	(38,116)	(143,388)	27,525	9,634	17,891
Defined-benefit post-retirement benefit plans:						
Change in the net actuarial gain/loss	—	—	—	—	—	—
Reclassification adjustment for net amortization of actuarial gain/loss included in net income as a component of net periodic cost (benefit)	1,250	263	987	1,357	475	882
Total defined-benefit post-retirement benefit plans	1,250	263	987	1,357	475	882
Total other comprehensive income (loss)	\$(180,254)	\$(37,853)	\$(142,401)	\$28,882	\$10,109	\$18,773

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Activity in accumulated other comprehensive income (loss), net of tax, was as follows:

	Securities Available For Sale	Defined Benefit Plans	Accumulated Other Comprehensive Income
Balance January 1, 2018	\$117,230	\$(37,718)	\$ 79,512
Other comprehensive income (loss) before reclassifications	(143,403)	—	(143,403)
Reclassification of amounts included in net income	15	987	1,002
Net other comprehensive income (loss) during period	(143,388)	987	(142,401)
Reclassification of certain income tax effects related to the change in the U.S. statutory federal income tax rate under the Tax Cuts and Jobs Act to retained earnings	17,557	(8,022)	9,535
Balance at March 31, 2018	\$(8,601)	\$(44,753)	\$ (53,354)
Balance January 1, 2017	\$16,153	\$(40,776)	\$ (24,623)
Other comprehensive income (loss) before reclassifications	17,891	—	17,891
Reclassification of amounts included in net income	—	882	882
Net other comprehensive income (loss) during period	17,891	882	18,773
Balance at March 31, 2017	\$34,044	\$(39,894)	\$ (5,850)

Note 15 – Operating Segments

We are managed under a matrix organizational structure whereby our two primary operating segments, Banking and Frost Wealth Advisors, overlap a regional reporting structure. See our 2017 Form 10-K for additional information regarding our operating segments. Summarized operating results by segment were as follows:

	Banking	Frost Wealth Advisors	Non-Banks	Consolidated
Revenues from (expenses to) external customers:				
Three months ended:				
March 31, 2018	\$288,561	\$35,081	\$(2,449)	\$ 321,193
March 31, 2017	258,911	34,588	(1,290)	292,209
Net income (loss):				
Three months ended:				
March 31, 2018	\$103,641	\$5,634	\$(2,795)	\$ 106,480
March 31, 2017	80,869	5,294	(1,222)	84,941

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Note 16 – Fair Value Measurements

The fair value of an asset or liability is the price that would be received to sell that asset or paid to transfer that liability in an orderly transaction occurring in the principal market (or most advantageous market in the absence of a principal market) for such asset or liability. In estimating fair value, we utilize valuation techniques that are consistent with the market approach, the income approach and/or the cost approach. Such valuation techniques are consistently applied. Inputs to valuation techniques include the assumptions that market participants would use in pricing an asset or liability. ASC Topic 820 establishes a three-level fair value hierarchy for valuation inputs that gives the highest priority to quoted prices in active markets for identical assets or liabilities and the lowest priority to unobservable inputs. See our 2017 Form 10-K for additional information regarding the fair value hierarchy and a description of our valuation techniques.

Financial Assets and Financial Liabilities. The table below summarizes financial assets and financial liabilities measured at fair value on a recurring basis as of March 31, 2018 and December 31, 2017, segregated by the level of the valuation inputs within the fair value hierarchy of ASC Topic 820 utilized to measure fair value.

	Level 1 Inputs	Level 2 Inputs	Level 3 Inputs	Total Fair Value
March 31, 2018				
Securities available for sale:				
U.S. Treasury	\$3,418,147	\$ —	—	—\$3,418,147
Residential mortgage-backed securities	—	645,695	—	645,695
States and political subdivisions	—	6,430,105	—	6,430,105
Other	—	42,585	—	42,585
Trading account securities:				
U.S. Treasury	19,772	—	—	19,772
Derivative assets:				
Interest rate swaps, caps and floors	—	16,812	—	16,812
Commodity swaps and options	—	20,844	1,719	22,563
Foreign currency forward contracts	313	—	—	313
Derivative liabilities:				
Interest rate swaps, caps and floors	—	22,658	—	22,658
Commodity swaps and options	—	22,356	—	22,356
Foreign currency forward contracts	208	—	—	208
December 31, 2017				
Securities available for sale:				
U.S. Treasury	\$3,445,153	\$ —	—	—\$3,445,153
Residential mortgage-backed securities	—	665,086	—	665,086
States and political subdivisions	—	6,336,209	—	6,336,209
Other	—	42,561	—	42,561
Trading account securities:				
U.S. Treasury	19,210	—	—	19,210
States and political subdivisions	—	1,888	—	1,888
Derivative assets:				
Interest rate swaps, caps and floors	—	20,022	—	20,022
Commodity swaps and options	—	14,408	1,233	15,641
Foreign currency forward contracts	415	—	—	415
Derivative liabilities:				
Interest rate swaps, caps and floors	—	18,754	—	18,754
Commodity swaps and options	—	15,327	—	15,327
Foreign currency forward contracts	239	—	—	239

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Derivative assets, measured at fair value on a recurring basis using significant unobservable (Level 3) inputs during the reported periods consist of commodity swaps sold to loan customers. The significant unobservable (Level 3) inputs used in the fair value measurement of these commodity swaps sold to loan customers primarily relate to the probability of default and loss severity in the event of default. The probability of default is determined by the underlying risk grade of the loan (see Note 3 - Loans) underlying the commodity swap in that the probability of default increases as a loan's risk grade deteriorates, while the loss severity is estimated through an analysis of the collateral supporting both the underlying loan and commodity swap. Generally, a change in the assumption used for the probability of default is accompanied by a directionally similar change in the assumption used for the loss severity. The weighted-average risk grade of loans underlying commodity swaps measured at fair value using significant unobservable (Level 3) inputs was 12.0 for both periods ended March 31, 2018 and December 31, 2017. The weighted-average loss severity in the event of default on the commodity swaps was 15.4% for both periods ended March 31, 2018 and December 31, 2017. A reconciliation of the beginning and ending balances of derivative assets measured at fair value on a recurring basis using significant unobservable (Level 3) inputs is not presented as such amounts were not significant during the reported periods.

Certain financial assets and financial liabilities are measured at fair value on a nonrecurring basis; that is, the instruments are not measured at fair value on an ongoing basis but are subject to fair value adjustments in certain circumstances (for example, when there is evidence of impairment). Financial assets measured at fair value on a non-recurring basis during the reported periods include certain impaired loans reported at the fair value of the underlying collateral if repayment is expected solely from the collateral. The following table presents impaired loans that were remeasured and reported at fair value through a specific valuation allowance allocation of the allowance for loan losses based upon the fair value of the underlying collateral during the reported periods.

	Three Months Ended March 31, 2018	Three Months Ended March 31, 2017
	Level 2	Level 3
Carrying value of impaired loans before allocations	\$365	\$56,788
Specific valuation allowance (allocations) reversals of prior allocations	(64)	(1,520)
Fair value	\$301	\$55,268

Non-Financial Assets and Non-Financial Liabilities. We do not have any non-financial assets or non-financial liabilities measured at fair value on a recurring basis. Non-financial assets measured at fair value on a non-recurring basis during the reported periods include certain foreclosed assets which, upon initial recognition, were remeasured and reported at fair value through a charge-off to the allowance for loan losses and certain foreclosed assets which, subsequent to their initial recognition, were remeasured at fair value through a write-down included in other non-interest expense. The following table presents foreclosed assets that were remeasured and reported at fair value during the reported periods:

	Three Months Ended March 31, 2018	Three Months Ended March 31, 2017
Foreclosed assets remeasured at initial recognition:		
Carrying value of foreclosed assets prior to remeasurement	\$7	\$—
Charge-offs recognized in the allowance for loan losses	—	—
Fair value	\$7	\$—
Foreclosed assets remeasured subsequent to initial recognition:		
Carrying value of foreclosed assets prior to remeasurement	\$1,823	\$89
Write-downs included in other non-interest expense	(473)	(16)

Fair value	\$1,350	\$73
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Financial Instruments Reported at Amortized Cost. The estimated fair values of financial instruments that are reported at amortized cost in our consolidated balance sheets, segregated by the level of the valuation inputs within the fair value hierarchy utilized to measure fair value, were as follows:

	March 31, 2018		December 31, 2017	
	Carrying Amount	Estimated Fair Value	Carrying Amount	Estimated Fair Value
Financial assets:				
Level 2 inputs:				
Cash and cash equivalents	\$4,680,948	\$4,680,948	\$5,053,047	\$5,053,047
Securities held to maturity	1,247,154	1,257,886	1,432,098	1,455,791
Cash surrender value of life insurance policies	181,297	181,297	180,477	180,477
Accrued interest receivable	125,485	125,485	167,508	167,508
Level 3 inputs:				
Loans, net	13,214,144	13,184,663	12,990,301	12,981,165
Financial liabilities:				
Level 2 inputs:				
Deposits	26,677,778	26,671,005	26,872,389	26,866,676
Federal funds purchased and repurchase agreements	1,032,221	1,032,221	1,147,824	1,147,824
Junior subordinated deferrable interest debentures	136,198	137,115	136,184	137,115
Subordinated notes payable and other borrowings	98,591	103,409	98,552	105,311
Accrued interest payable	3,196	3,196	3,358	3,358

Under ASC Topic 825, entities may choose to measure eligible financial instruments at fair value at specified election dates. The fair value measurement option (i) may be applied instrument by instrument, with certain exceptions, (ii) is generally irrevocable and (iii) is applied only to entire instruments and not to portions of instruments. Unrealized gains and losses on items for which the fair value measurement option has been elected must be reported in earnings at each subsequent reporting date. During the reported periods, we had no financial instruments measured at fair value under the fair value measurement option.

Note 17 - Accounting Standards Updates

Information about certain recently issued accounting standards updates is presented below. Also refer to Note 21 - Accounting Standards Updates in our 2017 Form 10-K for additional information related to previously issued accounting standards updates.

Accounting Standards Update (“ASU”) 2014-09, “Revenue from Contracts with Customers (Topic 606).” ASU 2014-09 implements a common revenue standard that clarifies the principles for recognizing revenue. The core principle of ASU 2014-09 is that an entity should recognize 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. To achieve that core principle, an entity should apply the following steps: (i) identify the contract(s) with a customer, (ii) identify the performance obligations in the contract, (iii) determine the transaction price, (iv) allocate the transaction price to the performance obligations in the contract and (v) recognize revenue when (or as) the entity satisfies a performance obligation. We adopted ASU 2014-09 effective January 1, 2018. See Note 1 - Significant Accounting Policies for additional information.

ASU 2016-02, “Leases (Topic 842).” ASU 2016-02 will, among other things, require lessees to recognize a lease liability, which is a lessee's obligation to make lease payments arising from a lease, measured on a discounted basis; and 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. ASU 2016-02 does not significantly change lease accounting requirements applicable to lessors; however, certain changes were made to align, where necessary, lessor accounting with the lessee accounting model and ASC Topic 606, “Revenue from Contracts with Customers.” ASU 2016-02 will be effective for us on January 1, 2019 and will require transition using a modified retrospective approach for leases existing at, or entered into after, the beginning of the earliest comparative period presented in the financial statements. Notwithstanding the foregoing, in January 2018, the Financial Accounting Standards Board issued a proposal to provide an additional transition method

that would allow entities to not apply the guidance in ASU 2016-02 in the comparative periods presented in the financial statements and instead recognize a cumulative-effect adjustment to the opening balance of retained earnings in the period of adoption. We are currently evaluating the potential impact of ASU 2016-02 on our financial statements. In that regard, we are currently implementing a third-party vendor solution to assist us in the application of ASU 2016-02.

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ASU 2016-13, "Financial Instruments - Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments." ASU 2016-13 requires the measurement of all expected credit losses for financial assets held at the reporting date based on historical experience, current conditions, and reasonable and supportable forecasts and requires enhanced disclosures related to the significant estimates and judgments used in estimating credit losses, as well as the credit quality and underwriting standards of an organization's portfolio. In addition, ASU 2016-13 amends the accounting for credit losses on available-for-sale debt securities and purchased financial assets with credit deterioration. ASU 2016-13 will be effective on January 1, 2020. We are currently evaluating the potential impact of ASU 2016-13 on our financial statements. In that regard, we have formed a cross-functional working group, under the direction of our Chief Financial Officer and our Chief Risk Officer. The working group is comprised of individuals from various functional areas including credit, risk management, finance and information technology, among others. We are currently developing an implementation plan to include assessment of processes, portfolio segmentation, model development, system requirements and the identification of data and resource needs, among other things. We have recently begun to implement a third-party vendor solution to assist us in the application of the ASU 2016-13. The adoption of the ASU 2016-13 could result in an increase in the allowance for loan losses as a result of changing from an "incurred loss" model, which encompasses allowances for current known and inherent losses within the portfolio, to an "expected loss" model, which encompasses allowances for losses expected to be incurred over the life of the portfolio. Furthermore, ASU 2016-13 will necessitate that we establish an allowance for expected credit losses for certain debt securities and other financial assets. While we are currently unable to reasonably estimate the impact of adopting ASU 2016-13, we expect that the impact of adoption will be significantly influenced by the composition, characteristics and quality of our loan and securities portfolios as well as the prevailing economic conditions and forecasts as of the adoption date.

ASU 2017-08, "Receivables - Nonrefundable Fees and Other Costs (Subtopic 310-20) - Premium Amortization on Purchased Callable Debt Securities." ASU 2017-08 shortens the amortization period for certain callable debt securities held at a premium to require such premiums to be amortized to the earliest call date unless applicable guidance related to certain pools of securities is applied to consider estimated prepayments. Under prior guidance, entities were generally required to amortize premiums on individual, non-pooled callable debt securities as a yield adjustment over the contractual life of the security. ASU 2017-08 does not change the accounting for callable debt securities held at a discount. ASU 2017-08 will be effective for us on January 1, 2019, with early adoption permitted. While we are currently evaluating the potential impact of ASU 2017-08 on our financial statements, we expect that the impact of adoption will be significantly influenced by the composition of our securities portfolio as of the adoption date.

ASU 2018-02, "Income Statement - Reporting Comprehensive Income (Topic 220) - Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income." Under ASU 2018-02, entities may elect to reclassify certain income tax effects related to the change in the U.S. statutory federal income tax rate under the Tax Cuts and Jobs Act, which was enacted on December 22, 2017, from accumulated other comprehensive income to retained earnings. ASU 2018-02 also requires certain accounting policy disclosures. We elected to adopt the provisions of ASU 2018-02 as of January 1, 2018 in advance of the required application date of January 1, 2019. See Note 1 - Significant Accounting Policies.

ASU 2018-05, "Income Taxes (Topic 740) - Amendments to SEC Paragraphs Pursuant to SEC Staff Accounting Bulletin (SAB) No. 118" ASU 2018-05 amends the Accounting Standards Codification to incorporate various SEC paragraphs pursuant to the issuance of SAB 118. SAB 118 addresses the application of generally accepted accounting principles in situations when a registrant does not have the necessary information available, prepared, or analyzed (including computations) in reasonable detail to complete the accounting for certain income tax effects of the Tax Cuts and Jobs Act. See Note 13 - Income Taxes.

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

Financial Review

Cullen/Frost Bankers, Inc.

The following discussion should be read in conjunction with our consolidated financial statements, and notes thereto, for the year ended December 31, 2017, and the other information included in the 2017 Form 10-K. Operating results for the three months ended March 31, 2018 are not necessarily indicative of the results for the year ending December 31, 2018 or any future period.

Dollar amounts in tables are stated in thousands, except for per share amounts.

Forward-Looking Statements and Factors that Could Affect Future Results

Certain statements contained in this Quarterly Report on Form 10-Q that are not statements of historical fact constitute forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995 (the "Act"), notwithstanding that such statements are not specifically identified as such. In addition, certain statements may be contained in our future filings with the SEC, in press releases, and in oral and written statements made by us or with our approval that are not statements of historical fact and constitute forward-looking statements within the meaning of the Act. Examples of forward-looking statements include, but are not limited to: (i) projections of revenues, expenses, income or loss, earnings or loss per share, the payment or nonpayment of dividends, capital structure and other financial items; (ii) statements of plans, objectives and expectations of Cullen/Frost or its management or Board of Directors, including those relating to products, services or operations; (iii) statements of future economic performance; and (iv) statements of assumptions underlying such statements. Words such as "believes", "anticipates", "expects", "intends", "targeted", "continue", "remain", "will", "should", "may" and other similar expressions are intended to identify forward-looking statements but are not the exclusive means of identifying such statements.

Forward-looking statements involve risks and uncertainties that may cause actual results to differ materially from those in such statements. Factors that could cause actual results to differ from those discussed in the forward-looking statements include, but are not limited to:

- Local, regional, national and international economic conditions and the impact they may have on us and our customers and our assessment of that impact.

- Volatility and disruption in national and international financial and commodity markets.

- Government intervention in the U.S. financial system.

- Changes in the mix of loan geographies, sectors and types or the level of non-performing assets and charge-offs.

- Changes in estimates of future reserve requirements based upon the periodic review thereof under relevant regulatory and accounting requirements.

- The effects of and changes in trade and monetary and fiscal policies and laws, including the interest rate policies of the Federal Reserve Board.

- Inflation, interest rate, securities market and monetary fluctuations.

- The effect of changes in laws and regulations (including laws and regulations concerning taxes, banking, securities and insurance) with which we and our subsidiaries must comply.

- The soundness of other financial institutions.

- Political instability.

- Impairment of our goodwill or other intangible assets.

- Acts of God or of war or terrorism.

- The timely development and acceptance of new products and services and perceived overall value of these products and services by users.

- Changes in consumer spending, borrowings and savings habits.

- Changes in the financial performance and/or condition of our borrowers.

- Technological changes.

- The cost and effects of failure, interruption, or breach of security of our systems.

- Acquisitions and integration of acquired businesses.

- Our ability to increase market share and control expenses.

Our ability to attract and retain qualified employees.

Changes in the competitive environment in our markets and among banking organizations and other financial service providers.

The effect of changes in accounting policies and practices, as may be adopted by the regulatory agencies, as well as the Public Company Accounting Oversight Board, the Financial Accounting Standards Board and other accounting standard setters.

- Changes in the reliability of our vendors, internal control systems or information systems.

Changes in our liquidity position.

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• Changes in our organization, compensation and benefit plans.

The costs and effects of legal and regulatory developments, the resolution of legal proceedings or regulatory or other governmental inquiries, the results of regulatory examinations or reviews and the ability to obtain required regulatory approvals.

• Greater than expected costs or difficulties related to the integration of new products and lines of business.

• Our success at managing the risks involved in the foregoing items.

Forward-looking statements speak only as of the date on which such statements are made. We do not undertake any obligation to update any forward-looking statement to reflect events or circumstances after the date on which such statement is made, or to reflect the occurrence of unanticipated events.

Application of Critical Accounting Policies and Accounting Estimates

We follow accounting and reporting policies that conform, in all material respects, to accounting principles generally accepted in the United States and to general practices within the financial services industry. The preparation of financial statements in conformity with accounting principles generally accepted in the United States requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. While we base estimates on historical experience, current information and other factors deemed to be relevant, actual results could differ from those estimates.

We consider accounting estimates to be critical to reported financial results if (i) the accounting estimate requires management to make assumptions about matters that are highly uncertain and (ii) different estimates that management reasonably could have used for the accounting estimate in the current period, or changes in the accounting estimate that are reasonably likely to occur from period to period, could have a material impact on our financial statements. Accounting policies related to the allowance for loan losses are considered to be critical as these policies involve considerable subjective judgment and estimation by management.

For additional information regarding critical accounting policies, refer to Note 1 - Summary of Significant Accounting Policies and Note 3 - Loans in the notes to consolidated financial statements and the sections captioned “Application of Critical Accounting Policies and Accounting Estimates” and “Allowance for Loan Losses” in Management’s Discussion and Analysis of Financial Condition and Results of Operations included in the 2017 Form 10-K. There have been no significant changes in our application of critical accounting policies related to the allowance for loan losses since December 31, 2017.

Overview

A discussion of our results of operations is presented below. Certain reclassifications have been made to make prior periods comparable. Taxable-equivalent adjustments are the result of increasing income from tax-free loans and investments by an amount equal to the taxes that would be paid if the income were fully taxable based on the applicable 21% federal tax rate in 2018 and 35% federal tax rate in 2017, thus making tax-exempt yields comparable to taxable asset yields.

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Results of Operations

Net income available to common shareholders totaled \$104.5 million, or \$1.61 per diluted common share, for the three months ended March 31, 2018 compared to \$82.9 million, or \$1.28 per diluted common share, for the three months ended March 31, 2017.

Selected data for the comparable periods was as follows:

	Three Months Ended March 31,	
	2018	2017
Taxable-equivalent net interest income	\$252,536	\$252,393
Taxable-equivalent adjustment	22,788	43,884
Net interest income	229,748	208,509
Provision for loan losses	6,945	7,952
Net interest income after provision for loan losses	222,803	200,557
Non-interest income	91,445	83,700
Non-interest expense	196,611	187,915
Income before income taxes	117,637	96,342
Income taxes	11,157	11,401
Net income	106,480	84,941
Preferred stock dividends	2,016	2,016
Net income available to common shareholders	\$104,464	\$82,925
Earnings per common share – basic	\$1.63	\$1.29
Earnings per common share – diluted	1.61	1.28
Dividends per common share	0.57	0.54
Return on average assets	1.36	% 1.12 %
Return on average common equity	13.62	11.55
Average shareholders' equity to average assets	10.46	10.14

Net income available to common shareholders increased \$21.5 million, or 26.0%, for the three months ended March 31, 2018 compared to the same period in 2017. The increase was primarily the result of a \$21.2 million increase in net interest income, a \$7.7 million increase in non-interest income, a \$1.0 million decrease in the provision for loan losses and a \$244 thousand decrease in income tax expense partly offset by an \$8.7 million increase in non-interest expense.

Details of the changes in the various components of net income are further discussed below.

Net Interest Income

Net interest income is the difference between interest income on earning assets, such as loans and securities, and interest expense on liabilities, such as deposits and borrowings, which are used to fund those assets. Net interest income is our largest source of revenue, representing 71.5% of total revenue during the first three months of 2018. Net interest margin is the ratio of taxable-equivalent net interest income to average earning assets for the period. The level of interest rates and the volume and mix of earning assets and interest-bearing liabilities impact net interest income and net interest margin.

The Federal Reserve influences the general market rates of interest, including the deposit and loan rates offered by many financial institutions. Our loan portfolio is significantly affected by changes in the prime interest rate. The prime rate began 2017 at 3.75% and remained at that level until March 2017, when it increased 25 basis points to 4.00%. During the remainder of 2017, the prime rate increased an additional 50 basis points (25 basis points in each of June and December) to end 2017 at 4.50%. In March 2018, the prime rate increased 25 basis points to end the first quarter at 4.75%. Our loan portfolio is also impacted by changes in the London Interbank Offered Rate (LIBOR). At March 31, 2018, the one-month and three-month U.S. dollar LIBOR interest rates were 1.89% and 2.31%, respectively, while at March 31, 2017, the one-month and three-month U.S. dollar LIBOR interest rates were 0.98% and 1.15%, respectively. The effective federal funds rate, which is the cost of immediately available overnight funds, began 2017 at 0.75% and remained at that level until March 2017, when it increased 25 basis points to 1.00%. During

the remainder of 2017, the effective federal funds rate increased an additional 50 basis points (25 basis points in each of June and December) to end 2017 at 1.50%. In March 2018, the effective federal funds rate increased 25 basis points to end the first quarter at 1.75%.

We are primarily funded by core deposits, with non-interest-bearing demand deposits historically being a significant source of funds. This lower-cost funding base is expected to have a positive impact on our net interest income and net interest margin in a rising interest rate environment. The Dodd-Frank Wall Street Reform and Consumer Protection Act (the “Dodd-Frank Act”)

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repealed the federal prohibitions on the payment of interest on demand deposits, thereby permitting depository institutions to pay interest on business transaction and other accounts beginning July 21, 2011. To date, we have not experienced any significant additional interest costs as a result of the repeal. However, as market interest rates have increased, we have increased the interest rates we pay on most of our interest-bearing deposit products. See Item 3. Quantitative and Qualitative Disclosures About Market Risk elsewhere in this report for information about the expected impact of this legislation on our sensitivity to interest rates. Further analysis of the components of our net interest margin is presented below.

The following table presents the changes in taxable-equivalent net interest income and identifies the changes due to differences in the average volume of earning assets and interest-bearing liabilities and the changes due to changes in the average interest rate on those assets and liabilities. The changes in net interest income due to changes in both average volume and average interest rate have been allocated to the average volume change or the average interest rate change in proportion to the absolute amounts of the change in each. The comparison between the periods includes an additional change factor detailing the effect of the reduction in the U.S. statutory federal income tax rate under the Tax Cuts and Jobs Act, which was enacted on December 22, 2017, as further discussed in our 2017 Form 10-K.

Three Months Ended March 31, 2018 vs. March 31, 2017				
Increase (Decrease) Due to Change in				
	Rate	Volume	Tax Rate	Total
Interest-bearing deposits	\$6,453	\$805	\$—	\$7,258
Federal funds sold and resell agreements	148	506	—	654
Securities:				
Taxable	386	(5,130)	—	(4,744)
Tax-exempt	(2,852)	3,788	(22,177)	(21,241)
Loans, net of unearned discounts	16,798	12,908	(1,195)	28,511
Total earning assets	20,933	12,877	(23,372)	10,438
Savings and interest checking	847	17	—	864
Money market deposit accounts	6,545	17	—	6,562
Time accounts	680	(3)	—	677
Public funds	687	(20)	—	667
Federal funds purchased and repurchase agreements	470	25	—	495
Junior subordinated deferrable interest debentures	234	—	—	234
Subordinated notes payable and other notes	529	267	—	796
Total interest-bearing liabilities	9,992	303	—	10,295
Net change	\$10,941	\$12,574	\$(23,372)	\$143

Taxable-equivalent net interest income for the three months ended March 31, 2018 increased \$143 thousand, or 0.1%, compared to the same period in 2017. Taxable-equivalent net interest income for the three months ended March 31, 2018 was impacted by the reduction in the U.S. federal statutory income tax rate from 35% to 21% under the Tax Cuts and Jobs Act enacted on December 22, 2017. As a result of the tax rate reduction, taxable-equivalent net interest income for the three months ended March 31, 2018 based on a 21% tax rate was approximately \$23.4 million lower than would have been the case based on a 35% tax rate. Excluding the effect of the tax rate reduction, taxable-equivalent net interest income effectively increased approximately \$23.5 million during the three months ended March 31, 2018 compared to the same period in 2017. This effective increase was primarily related to increases in the average yields on loans and interest-bearing deposits combined with increases in the average volumes of loans and tax-exempt securities. The impact of these items was partly offset by an increase in the average rates paid on interest-bearing deposits and other borrowed funds, a decrease in the average volume of taxable securities and a decrease in the average yield on tax-exempt securities, notwithstanding the effect of the tax rate reduction.

The average volume of interest-earning assets for the three months ended March 31, 2018 increased \$995.0 million compared to the same period in 2017. The increase included a \$1.2 billion increase in average loans, a \$388.2 million

increase in average tax-exempt securities, a \$497.9 million increase in average interest-bearing deposits, federal funds sold and resell agreements partly offset by a \$1.1 billion decrease in average taxable securities.

The taxable-equivalent net interest margin decreased 12 basis points from 3.64% during the three months ended March 31, 2017 to 3.52% during the three months ended March 31, 2018. The taxable-equivalent net interest margin for the three months ended March 31, 2018 was impacted by the aforementioned reduction in the U.S. federal statutory income tax rate. As a result of the tax rate reduction, the taxable-equivalent net interest margin for the three months ended March 31, 2018 based on a 21% tax

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rate was approximately 32 basis points lower than would have been the case based on a 35% tax rate. Excluding the effect of the tax rate reduction, the taxable-equivalent net interest margin effectively increased 20 basis points during the three months ended March 31, 2018 compared to the same period in 2017. This effective increase was primarily related to increases in the average yields on loans, interest-bearing deposits and federal funds sold and resell agreements partly offset by an increase in the average cost of interest-bearing deposits and other borrowed funds and a decrease in the average yield on tax-exempt securities, notwithstanding the effect of the tax rate reduction.

The average taxable-equivalent yield on interest-earning assets increased 3 basis points from 3.68% during the three months ended March 31, 2017 to 3.71% during the three months ended March 31, 2018. The increase in the average yield on interest earning assets during the three months ended March 31, 2018 was primarily due to increases in the average yields on loans, interest-bearing deposits and federal funds sold and resell agreements mostly offset by a decrease in the average taxable-equivalent yield on tax exempt securities, primarily because of the tax rate reduction, as further discussed below. The average taxable-equivalent yield on interest-earning assets is primarily impacted by changes in market interest rates, changes in the volume and relative mix of interest-earning assets and statutory tax rates.

The average taxable-equivalent yield on loans increased 50 basis points from 4.15% during the three months ended March 31, 2017 to 4.65% during the three months ended March 31, 2018. The average taxable-equivalent yield on loans was positively impacted by the increases in market interest rates discussed above. Due to the relative proportion of our tax-exempt loan portfolio to total loans, the reduction in the U.S. federal statutory income tax rate did not significantly impact the overall average taxable-equivalent yield on loans during the three months ended March 31, 2018. The average volume of loans for the three months ended March 31, 2018 increased \$1.2 billion, or 10.0%, compared to the same period in 2017. Loans made up approximately 45.8% of average interest-earning assets during the three months ended March 31, 2018 compared to 43.2% during the same period in 2017.

The average taxable-equivalent yield on securities was 3.36% during the three months ended March 31, 2018, decreasing 63 basis points from 3.99% during the three months ended March 31, 2017. The decrease in the average taxable-equivalent yield on securities was primarily related to a decrease in the average taxable-equivalent yield on tax exempt securities partly offset by an increase in the relative proportion of higher-yielding tax exempt securities to total securities and, to a lesser extent, an increase in the average yield on taxable securities. The average taxable-equivalent yield on tax-exempt securities decreased 132 basis points from 5.44% during the three months ended March 31, 2017 to 4.12% during the three months ended March 31, 2018. This decrease was primarily related to the aforementioned reduction in the U.S. federal statutory income tax rate. As a result of the tax rate reduction, the taxable-equivalent yield on tax exempt securities for the three months ended March 31, 2018 based on a 21% tax rate was approximately 116 basis points lower than would have been the case based on a 35% tax rate. Excluding the effect of the tax rate reduction, the taxable-equivalent yield on tax exempt securities effectively decreased 16 basis points during the three months ended March 31, 2018 compared to the same period in 2017. The overall average yield on total securities was positively impacted by a higher proportion of average securities invested in higher-yielding tax exempt securities during the three months ended March 31, 2018 compared to the same period in 2017. Tax exempt securities made up approximately 64.8% of total average securities during the three months ended March 31, 2018, compared to 58.0% during the same period in 2017. The average yield on taxable securities increased 3 basis points from 1.96% during the three months ended March 31, 2017 to 1.99% during the three months ended March 31, 2018. The average volume of total securities during the three months ended March 31, 2018 decreased \$707.9 million, or 5.6%, compared to the same period in 2017. Securities made up approximately 40.8% of average interest-earning assets during the three months ended March 31, 2018 compared to 44.8% during the same period in 2017.

Average interest-bearing deposits, federal funds sold and resell agreements for the three months ended March 31, 2018 increased \$497.9 million, or 14.8%, compared to the same period in 2017. The increase in average interest-bearing deposits, federal funds sold and resell agreements was primarily related to growth in average deposits. Interest-bearing deposits, federal funds sold and resell agreements made up approximately 13.4% of average interest-earning assets during the three months ended March 31, 2018 compared to 12.0% during the same period in 2017. The combined average yield on interest-bearing deposits, federal funds sold and resell agreements was 1.56% during the three months ended March 31, 2018 compared to 0.84% during the same period in 2017. As discussed

above, the effective federal funds rate began 2017 at 0.75% and remained at that level until March 2017, when it increased 25 basis points to 1.00%. During the remainder of 2017, the effective federal funds rate increased an additional 50 basis points (25 basis points in each of June and December) to end 2017 at 1.50%. In March 2018, the effective federal funds rate increased 25 basis points to end the first quarter at 1.75%.

The average rate paid on interest-bearing liabilities was 0.33% during the three months ended March 31, 2018, increasing 25 basis points from 0.08% during the same period in 2017. Average deposits increased \$608.2 million (\$246.0 million non-interest bearing and \$362.2 million interest-bearing) during the three months ended March 31, 2018 compared to the same period in 2017. The ratio of average interest-bearing deposits to total average deposits remained unchanged during the comparable periods, totaling 58.5% during both the three months ended March 31, 2018 and 2017. The average cost of deposits is primarily impacted by changes in market interest rates as well as changes in the volume and relative mix of interest-bearing deposits. The average cost of interest-bearing deposits and total deposits was 0.28% and 0.16%, respectively, during the three months ended March 31, 2018 compared

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to 0.05% and 0.03%, respectively, during the three months ended March 31, 2017. The average cost of deposits during 2018 was impacted by increases in the interest rates we pay on most of our interest-bearing deposit products as a result of the aforementioned increases in market interest rates.

Our net interest spread, which represents the difference between the average rate earned on earning assets and the average rate paid on interest-bearing liabilities, was 3.38% during the first three months of 2018 compared to 3.60% during the same period in 2017. Our net interest spread during the three months ended March 31, 2018 was negatively impacted by the aforementioned reduction in the U.S. federal statutory income tax rate, which limited growth in the average taxable-equivalent yield on interest earning assets despite increases in market interest rates. The net interest spread during the three months ended March 31, 2018 was further negatively impacted by the increases in the average cost of interest-bearing deposits and other borrowed funds. The net interest spread, as well as the net interest margin, will be impacted by future changes in short-term and long-term interest rate levels, as well as the impact from the competitive environment. A discussion of the effects of changing interest rates on net interest income is set forth in Item 3. Quantitative and Qualitative Disclosures About Market Risk included elsewhere in this report.

Our hedging policies permit the use of various derivative financial instruments, including interest rate swaps, swaptions, caps and floors, to manage exposure to changes in interest rates. Details of our derivatives and hedging activities are set forth in Note 8 - Derivative Financial Instruments in the accompanying notes to consolidated financial statements included elsewhere in this report. Information regarding the impact of fluctuations in interest rates on our derivative financial instruments is set forth in Item 3. Quantitative and Qualitative Disclosures About Market Risk included elsewhere in this report.

Provision for Loan Losses

The provision for loan losses is determined by management as the amount to be added to the allowance for loan losses after net charge-offs have been deducted to bring the allowance to a level which, in management's best estimate, is necessary to absorb inherent losses within the existing loan portfolio. The provision for loan losses totaled \$6.9 million for the three months ended March 31, 2018 compared to \$8.0 million for the three months ended March 31, 2017. See the section captioned "Allowance for Loan Losses" elsewhere in this discussion for further analysis of the provision for loan losses.

Non-Interest Income

The components of non-interest income were as follows:

	Three Months Ended March 31,	
	2018	2017
Trust and investment management fees	\$29,587	\$26,470
Service charges on deposit accounts	20,843	20,769
Insurance commissions and fees	15,980	13,821
Interchange and debit card transaction fees	3,158	5,574
Other charges, commissions and fees	9,007	9,592
Net gain (loss) on securities transactions	(19)	—
Other	12,889	7,474
Total	\$91,445	\$83,700

Total non-interest income for the three months ended March 31, 2018 increased \$7.7 million, or 9.3%, compared to the same period in 2017. Changes in the various components of non-interest income are discussed in more detail below.

Trust and Investment Management Fees. Trust and investment management fees for the three months ended March 31, 2018 increased \$3.1 million, or 11.8%, compared to the same period in 2017. Investment fees are the most significant component of trust and investment management fees, making up approximately 84.0% and 84.2% of total trust and investment management fees for the first three months of 2018 and 2017, respectively. Investment and other custodial account fees are generally based on the market value of assets within a trust account. Volatility in the equity and bond markets impacts the market value of trust assets and the related investment fees.

The increase in trust and investment management fees during the three months ended March 31, 2018 compared to the same period in 2017 was primarily the result of increases in trust investment fees (up \$2.6 million) and, to a lesser extent, an increase in oil and gas fees (up \$345 thousand). The increase in trust investment fees during 2018 was due to higher average equity valuations. The increase in oil and gas fees was related to an increase in energy prices. At March 31, 2018, trust assets, including both managed assets and custody assets, were primarily composed of equity securities (49.8% of assets), fixed income securities (38.6% of assets) and cash equivalents (7.0% of assets). The estimated fair value of

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these assets was \$32.9 billion (including managed assets of \$14.2 billion and custody assets of \$18.7 billion) at March 31, 2018, compared to \$32.8 billion (including managed assets of \$14.1 billion and custody assets of \$18.7 billion) at December 31, 2017 and \$30.1 billion (including managed assets of \$13.6 billion and custody assets of \$16.5 billion) at March 31, 2017.

Service Charges on Deposit Accounts. Service charges on deposit accounts for the three months ended March 31, 2018 increased \$74 thousand, or 0.4%, compared to the same period in 2017. The increase was primarily due to increases in consumer service charges (up \$421 thousand) and overdraft/insufficient funds charges on consumer and commercial accounts (up \$190 thousand and \$94 thousand, respectively) mostly offset by a decrease in commercial service charges (down \$630 thousand). Overdraft/insufficient funds charges totaled \$8.8 million (\$6.8 million consumer and \$2.1 million commercial) during the three months ended March 31, 2018 compared to \$8.5 million (\$6.6 million consumer and \$2.0 million commercial) during the same period in 2017.

Insurance Commissions and Fees. Insurance commissions and fees for the three months ended March 31, 2018 increased \$2.2 million, or 15.6%, compared to the same period in 2017. The increase was related to increases in commission income (up \$1.1 million) and contingent income (up \$1.1 million). The increase in commission income was primarily related to increases in benefit plan commissions and commissions on property and casualty policies due to increased business volumes. Insurance commissions and fees include contingent income totaling \$3.4 million during the three months ended March 31, 2018 and \$2.4 million during the same period in 2017. Contingent income primarily consists of amounts received from various property and casualty insurance carriers related to the loss performance of insurance policies previously placed. These performance related contingent payments are seasonal in nature and are mostly received during the first quarter of each year. This performance related contingent income totaled \$2.9 million and \$1.7 million during the three months ended March 31, 2018 and 2017, respectively. The increase in performance related contingent income during 2018 was related to growth within the portfolio and improvement in the loss performance of insurance policies previously placed. Contingent income also includes amounts received from various benefit plan insurance companies related to the volume of business generated and/or the subsequent retention of such business. This benefit plan related contingent income totaled \$552 thousand and \$634 thousand during the three months ended March 31, 2018 and 2017, respectively.

Interchange and Debit Card Transaction Fees. Interchange fees, or “swipe” fees, are charges that merchants pay to us and other card-issuing banks for processing electronic payment transactions. Interchange and debit card transaction fees consist of income from check card usage, point of sale income from PIN-based debit card transactions and ATM service fees. Beginning in 2018, in connection with the adoption of Accounting Standards Update (“ASU”) No. 2014-09, “Revenue from Contracts with Customers (Topic 606),” interchange and debit card transaction fees are reported net of related network costs. See Note 1 - Significant Accounting Policies. Previously, such network costs were reported as a component of other non-interest expense. Interchange and debit card transaction fees for the three months ended March 31, 2018 reported on a net basis totaled \$3.2 million while interchange and debit card transaction fees for the three months ended March 31, 2017 reported on a gross basis totaled \$5.6 million. A comparison of gross interchange and debit card transaction fees and interchange and debit card transaction fees net of associated network costs for the reported periods is presented in the table below:

	Three Months Ended March 31,	
	2018	2017
Income from debit card transactions	\$5,124	\$4,694
ATM service fees	947	880
Gross interchange and debit card transaction fees	6,071	5,574
Network costs	2,913	3,223
Net interchange and debit card transaction fees	\$3,158	\$2,351

The increase net interchange and debit card transaction fees, on a net basis, was primarily related to increased transaction volumes combined with a decrease in network costs.

Federal Reserve rules applicable to financial institutions that have assets of \$10 billion or more provide that the maximum permissible interchange fee for an electronic debit transaction is the sum of 21 cents per transaction and 5 basis points multiplied by the value of the transaction. An upward adjustment of no more than 1 cent to an issuer's debit card interchange fee is allowed if the card issuer develops and implements policies and procedures reasonably designed to achieve certain fraud-prevention standards. The Federal Reserve also has rules governing routing and exclusivity that require issuers to offer two unaffiliated networks for routing transactions on each debit or prepaid product.

Other Charges, Commissions and Fees. Other charges, commissions and fees for the three months ended March 31, 2018 decreased \$585 thousand, or 6.1%, compared to the same period in 2017. The decrease was primarily related to decreases in loan

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processing fees (down \$610 thousand) and income from capital market advisory services (down \$305 thousand). These decreases were primarily due to fluctuations in business volumes.

Net Gain/Loss on Securities Transactions. During the three months ended March 31, 2018, we sold certain available-for-sale U.S Treasury securities with an amortized cost totaling \$3.0 billion and realized a net loss of \$19 thousand on those sales. The sales were primarily related to securities purchased during 2018 and subsequently sold in connection with our tax planning strategies related to the Texas franchise tax. The gross proceeds from the sales of these securities outside of Texas are included in total revenues/receipts from all sources reported for Texas franchise tax purposes, which results in a reduction in the overall percentage of revenues/receipts apportioned to Texas and subjected to taxation under the Texas franchise tax. We did not realize any gains or losses on securities transactions during the three months ended March 31, 2017.

Other Non-Interest Income. Other non-interest income for the three months ended March 31, 2018 increased \$5.4 million, or 72.5%, compared to the same period in 2017. The increase was primarily related to increases in gains on the sale of foreclosed and other assets (up \$3.8 million), income from customer derivative and trading activities (up \$1.4 million) and income from customer foreign currency transactions (up \$295 thousand), among other things. During the first quarter of 2018, gains on the sale of foreclosed and other assets included \$3.7 million related to gains on the sale of various branch and operational facilities. The fluctuations in income from customer foreign currency transactions and income from customer derivative and trading activities were primarily related to changes in business volumes.

Non-Interest Expense

The components of non-interest expense were as follows:

	Three Months Ended March 31,	
	2018	2017
Salaries and wages	\$86,683	\$82,512
Employee benefits	21,995	21,625
Net occupancy	19,740	19,237
Technology, furniture and equipment	19,679	17,990
Deposit insurance	4,879	4,915
Intangible amortization	388	458
Other	43,247	41,178
Total	\$196,611	\$187,915

Total non-interest expense for the three months ended March 31, 2018 increased \$8.7 million, or 4.6%, compared to the same period in 2017. Changes in the various components of non-interest expense are discussed below.

Salaries and Wages. Salaries and wages for the three months ended March 31, 2018 increased \$4.2 million, or 5.1%, compared to the same period in 2017. The increase was primarily related to an increase in salaries, due to an increase in the number of employees and normal annual merit and market increases, as well as an increase in incentive compensation.

Employee Benefits. Employee benefits expense for the three months ended March 31, 2018 increased \$370 thousand, or 1.7%, compared to the same period in 2017. The increase was primarily due to increases in payroll taxes (up \$482 thousand) and expenses related to our 401(k) and profit sharing plans (up \$358 thousand) partly offset by a decrease in expenses related to our defined benefit retirement plans, as further discussed below.

During the three months ended March 31, 2018, we recognized a combined net periodic pension benefit of \$254 thousand related to our defined benefit retirement plans compared to a combined net periodic pension expense of \$125 thousand during the same period in 2017. Our defined benefit retirement and restoration plans were frozen effective as of December 31, 2001 and were replaced by a profit sharing plan. Management believes these actions helped to reduce the volatility in retirement plan expense. However, we still have funding obligations related to the defined benefit and restoration plans and could recognize retirement expense related to these plans in future years, which would be dependent on the return earned on plan assets, the level of interest rates and employee turnover. See Note 12 - Defined

Benefit Plans for additional information related to our net periodic pension benefit/cost.

Net Occupancy. Net occupancy expense for the three months ended March 31, 2018 increased \$503 thousand, or 2.6%, compared to the same period in 2017. The increase was primarily related to increases in lease expense (up \$503 thousand) and repairs and maintenance/service contracts expense (up \$192 thousand) partly offset by a decrease in property taxes (down \$188 thousand), among other things.

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Technology, Furniture and Equipment. Technology, furniture and equipment expense for the three months ended March 31, 2018 increased \$1.7 million, or 9.4%, compared to the same period in 2017. The increase was primarily related to increases in software maintenance (up \$1.3 million), software amortization (up \$412 thousand) and service contracts expense (up \$311 thousand) partly offset by a decrease in depreciation on furniture and equipment (down \$368 thousand).

Deposit Insurance. Deposit insurance expense totaled \$4.9 million for both the three months ended March 31, 2018 and 2017. The level of deposit insurance expense during the comparable periods was impacted by a surcharge that became applicable during the third quarter of 2016. In August 2016, the Federal Deposit Insurance Corporation (“FDIC”) announced that the Deposit Insurance Fund (“DIF”) reserve ratio had surpassed 1.15% as of June 30, 2016. As a result, beginning in the third quarter of 2016, the range of initial assessment rates for all institutions was adjusted downward and institutions with \$10 billion or more in assets were assessed a quarterly surcharge. The quarterly surcharge will continue to be assessed until such time as the reserve ratio reaches the statutory minimum of 1.35% required by the Dodd-Frank Wall Street Reform and Consumer Protection Act.

Other Non-Interest Expense. Other non-interest expense for the three months ended March 31, 2018 increased \$2.1 million, or 5.0%, compared to the same period in 2017. As discussed above in the section captioned “Interchange and Debit Card Transaction Fees,” in connection with the adoption of ASU 2014-09 in 2018, network costs associated with debit card and ATM transactions are now reported netted against the related fees from such transactions and included in Interchange and Debit Card Transaction Fees in the accompanying Consolidated Statement of Income for the three months ended March 31, 2018. Previously, such network costs were reported as a component of other non-interest expense. Network costs associated with debit card and ATM transactions totaled \$2.9 million and \$3.2 million during the three months ended March 31, 2018 and 2017, respectively. Excluding network costs from the three months ended March 31, 2017, other non-interest expense effectively increased \$5.3 million. This increase included increases in donations expense related to a contribution to our charitable foundation (up \$3.7 million); professional services expense (up \$2.0 million); and outside computer services expense (up \$317 thousand), among other things. These items were partly offset by decreases in advertising/promotions expense (down \$512 thousand), data communications expense (down \$436 thousand) and travel/meals and entertainment expense (down \$204 thousand), among other things. The increase in professional services expense during the first quarter of 2018 was partly related to an information systems breach which resulted in unauthorized access to a third-party lockbox software program used by certain of our commercial lockbox customers to store digital images. We have stopped the identified unauthorized access and are working with a leading cybersecurity firm. We have reported the incident to, and are cooperating with, law-enforcement authorities and our investigation is ongoing. We have contacted each of the affected commercial customers and are working with them to support them in taking appropriate actions. The identified incident did not impact other Frost systems.

Results of Segment Operations

Our operations are managed along two primary operating segments: Banking and Frost Wealth Advisors. A description of each business and the methodologies used to measure financial performance is described in Note 15 - Operating Segments in the accompanying notes to consolidated financial statements included elsewhere in this report. Net income (loss) by operating segment is presented below:

	Three Months Ended March 31,	
	2018	2017
Banking	\$ 103,641	\$ 80,869
Frost Wealth Advisors	5,634	5,294
Non-Banks	(2,795)	(1,222)
Consolidated net income	\$ 106,480	\$ 84,941

Banking

Net income for the three months ended March 31, 2018 increased \$22.8 million, or 28.2%, compared to the same period in 2017. The increase was primarily the result of a \$25.1 million increase in net interest income, a \$4.6 million

increase in non-interest income and a \$1.0 million decrease in the provision for loan losses partly offset by a \$7.2 million increase in non-interest expense and a \$676 thousand increase in income tax expense. Net interest income for the three months ended March 31, 2018 increased \$25.1 million, or 12.2%, compared to the same period in 2017. The increase was primarily related to increases in the average yields on loans and interest-bearing deposits combined with increases in the average volumes of loans and tax-exempt securities. The impact of these items was partly offset by an increase in the average rates paid on interest-bearing deposits and other borrowed funds, a decrease in the average volume of taxable securities and a decrease in the average yield on tax-exempt securities. See the analysis of net interest income included in the section captioned “Net Interest Income” included elsewhere in this discussion.

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The provision for loan losses for the three months ended March 31, 2018 totaled \$6.9 million compared to \$8.0 million for the same period in 2017. See the analysis of the provision for loan losses included in the section captioned “Allowance for Loan Losses” included elsewhere in this discussion.

Non-interest income for the three months ended March 31, 2018 increased \$4.6 million, or 8.7%, compared to the same period in 2017. The increase was primarily due to increases in other non-interest income and insurance commissions and fees partly offset by decreases in interchange and debit card transactions fees and other charges, commissions and fees. The increase in other non-interest income was primarily related to increases in gains on the sale of foreclosed and other assets, income from customer derivative and trading activities and income from customer foreign currency transactions, among other things. Gains on the sale of foreclosed and other assets during 2018 included \$3.7 million related to gains on the sale of various branch and operational facilities. The fluctuations in income from customer foreign currency transactions and income from customer derivative and trading activities were primarily related to changes in business volumes. The increase in insurance commissions and fees was related to an increase in commission income, primarily related to an increase in benefit plan commissions and commissions on property and casualty policies due to increased business volumes, and an increase in contingent income, primarily related to growth within the portfolio and improvement in the loss performance of insurance policies previously placed. In connection with the adoption of a new accounting standard in 2018, network costs associated with debit card and ATM transactions are now reported netted against the related fees from such transactions. Previously, such network costs were reported as a component of other non-interest expense. If such network costs had been netted against interchange and debit card transaction fees in 2017, interchange and debit card transaction fees would have reflected an increase in 2018 as a result of increased transaction volumes combined with a decrease in network costs. The decrease in other charges, commissions and fees was primarily due to decreases in loan processing fees and income from capital market advisory services due to fluctuations in business volumes. See the analysis of these categories of non-interest income included in the section captioned “Non-Interest Income” included elsewhere in this discussion.

Non-interest expense for the three months ended March 31, 2018 increased \$7.2 million, or 4.5%, compared to the same period in 2017. The increase was primarily related to increases in salaries and wages, technology furniture and equipment expense, and other non-interest expense. The increase in salaries was primarily related to an increase in salaries, due to an increase in the number of employees and normal annual merit and market increases, as well as an increase in incentive compensation. The increase in technology, furniture and equipment expense was primarily related to increases in software maintenance, software amortization and service contracts expense partly offset by a decrease in depreciation on furniture and equipment. The increase in other non-interest expense included increases in donations expense, related to a contribution to our charitable foundation; professional services expense; and outside computer services expense, among other things. These items were partly offset by decreases in advertising/promotions expense, data communications expense and travel/meals and entertainment expense, among other things. As discussed above, network costs associated with debit card and ATM transactions are now reported netted against the related fees from such transactions, rather than as a component of other non-interest expense as was previously the case. See the analysis of these categories of non-interest expense included in the section captioned “Non-Interest Expense” included elsewhere in this discussion.

Frost Insurance Agency, which is included in the Banking operating segment, had gross commission revenues of \$16.1 million during the three months ended March 31, 2018 and \$14.0 million during the three months ended March 31, 2017. The increase was primarily related to increases in benefit plan commissions and commissions on property and casualty policies due to increased business volumes, and an increase in contingent income, primarily related to growth within the portfolio and improvement in the loss performance of insurance policies previously placed. See the analysis of insurance commissions and fees included in the section captioned “Non-Interest Income” included elsewhere in this discussion.

Frost Wealth Advisors

Net income for the three months ended March 31, 2018 increased \$340 thousand, or 6.4%, compared to the same period in 2017. The increase was primarily due to a \$3.3 million increase in non-interest income and a \$1.4 million decrease in income tax expense partly offset by a \$2.8 million decrease in net interest income and a \$1.5 million

increase in non-interest expense.

Net interest income for the three months ended March 31, 2018 decreased \$2.8 million, or 75.1%, compared to the same period in 2017. Beginning in 2018, certain repurchase agreements that were previously allocated to the Frost Wealth Advisors segment are now allocated to the Banking segment, which resulted in the decrease in net interest income.

Non-interest income for the three months ended March 31, 2018 increased \$3.3 million, or 10.7%, compared to the same period in 2017. The increase in non-interest income was primarily related to an increase in trust and investment management fees. Trust and investment management fee income is the most significant income component for Frost Wealth Advisors. Investment fees are the most significant component of trust and investment management fees, making up approximately 84.0% of total trust and investment management fees for the first three months of 2018. Investment and other custodial account fees are generally based on the market value of assets within a trust account. Volatility in the equity and bond markets impacts the market value of trust

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assets and the related investment fees. The increase in trust and investment management fees during the three months ended March 31, 2018 compared to the same period in 2017 was primarily the result of increases in trust investment fees and, to a lesser extent, an increase in oil and gas fees. The increase in trust investment fees during 2018 was due to higher average equity valuations. The increase in oil and gas fees was related to an increase in energy prices. See the analysis of trust and investment management fees included in the section captioned “Non-Interest Income” included elsewhere in this discussion.

Non-interest expense for the three months ended March 31, 2018 increased \$1.5 million, or 5.7%, compared to the same periods in 2017. The increase was primarily related to increases in other non-interest expense, salaries and wages and employee benefits. The increase in other non-interest expense was primarily related to increases in professional services expense and outside computer services expense, among other things. The increases in salaries and wages was primarily related to an increases in the number of employees, normal annual merit and market increases and an increase in incentive compensation partly offset by a decrease in stock-based compensation. The increases in employee benefits expense was primarily related to increases in payroll taxes and expenses related to our 401k plan.

Non-Banks

The Non-Banks operating segment had a net loss of \$2.8 million for the three months ended March 31, 2018 compared to a net loss of \$1.2 million for the same period in 2017. The increase in net loss during 2018 was primarily due to an increase in net interest expense due to an increase in the interest rates paid on our long-term borrowings.

Income Taxes

We recognized income tax expense of \$11.2 million, for an effective tax rate of 9.5% for the three months ended March 31, 2018 compared to \$11.4 million, for an effective tax rate of 11.8% for the three months ended March 31, 2017. The effective income tax rates differed from the U.S. statutory federal income tax rates of 21% during 2018 and 35% during 2017 primarily due to the effect of tax-exempt income from loans, securities and life insurance policies and the income tax effects associated with stock-based compensation. The decrease in income tax expense and the effective tax rate during the three months ended March 31, 2018 was primarily related to a decrease in the U.S. statutory federal income tax rate under the Tax Cuts and Jobs Act which is more fully discussed in our 2017 Form 10-K. The effect of this decrease was partly offset by an increase in total income with a higher proportion of taxable income relative to tax-exempt income and the impact of certain expenses related to meals and entertainment, executive compensation and deposit insurance, among other things, that are no longer deductible as a result of the Tax Cuts and Jobs Act.

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Average Balance Sheet

Average assets totaled \$31.1 billion for the three months ended March 31, 2018 representing an increase of \$987.1 million, or 3.3%, compared to average assets for the same period in 2017. The growth in average assets was primarily funded by deposit growth, an increase in average federal funds purchased and repurchase agreements and earnings retention. The increase was primarily reflected in earning assets, which increased \$995.0 million, or 3.6%, during the first three months of 2018 compared to the same period in 2017. The increase in earning assets included a \$1.2 billion increase in average loans, a \$388.2 million increase in average tax-exempt securities, a \$497.9 million increase in average interest-bearing deposits, federal funds sold and resell agreements partly offset by a \$1.1 billion decrease in average taxable securities. Average deposit growth included a \$246.0 million increase in non-interest bearing deposits and a \$362.2 million increase in interest-bearing deposit accounts. Average non-interest bearing deposits made up 41.5% of average total deposits during the first three months of 2018 and 2017, respectively.

Loans

Loans were as follows as of the dates indicated:

	March 31, 2018	Percentage of Total	December 31, 2017	Percentage of Total
Commercial and industrial	\$4,876,523	36.5 %	\$4,792,388	36.4 %
Energy:				
Production	1,125,321	8.4	1,182,326	9.0
Service	192,115	1.4	171,795	1.3
Other	129,552	0.9	144,972	1.1
Total energy	1,446,988	10.7	1,499,093	11.4
Commercial real estate:				
Commercial mortgages	4,060,946	30.4	3,887,742	29.6
Construction	1,076,785	8.1	1,066,696	8.1
Land	317,189	2.4	331,986	2.5
Total commercial real estate	5,454,920	40.9	5,286,424	40.2
Consumer real estate:				
Home equity loans	355,715	2.7	355,342	2.7
Home equity lines of credit	295,677	2.2	291,950	2.2
Other	388,271	2.9	376,002	2.9
Total consumer real estate	1,039,663	7.8	1,023,294	7.8
Total real estate	6,494,583	48.7	6,309,718	48.0
Consumer and other	545,935	4.1	544,466	4.2
Total loans	\$13,364,029	100.0 %	\$13,145,665	100.0 %

Loans increased \$218.4 million, or 1.7%, compared to December 31, 2017. The majority of our loan portfolio is comprised of commercial and industrial loans, energy loans and real estate loans. Commercial and industrial loans made up 36.5% and 36.4% of total loans at March 31, 2018 and December 31, 2017, respectively, while energy loans made up 10.7% and 11.4% of total loans, respectively, and real estate loans made up 48.7% and 48.0% of total loans, respectively, at those dates. Real estate loans include both commercial and consumer balances. Selected details related to our loan portfolio segments are presented below. Refer to our 2017 Form 10-K for a more detailed discussion of our loan origination and risk management processes.

Commercial and industrial. Commercial and industrial loans increased \$84.1 million, or 1.8%, during the first three months of 2018. Our commercial and industrial loans are a diverse group of loans to small, medium and large businesses. The purpose of these loans varies from supporting seasonal working capital needs to term financing of equipment. While some short-term loans may be made on an unsecured basis, most are secured by the assets being financed with collateral margins that are consistent with our loan policy guidelines. The commercial and industrial loan portfolio also includes commercial leases and purchased shared national credits ("SNC"s).

Energy. Energy loans include loans to entities and individuals that are engaged in various energy-related activities including (i) the development and production of oil or natural gas, (ii) providing oil and gas field servicing,

(iii) providing energy-related transportation services (iv) providing equipment to support oil and gas drilling (v) refining petrochemicals, or (vi) trading oil, gas and related commodities. Energy loans decreased \$52.1 million, or 3.5%, during the first three months of 2018 compared to December 31, 2017. The decrease was related to a decrease in production and other loans mostly offset by an increase in service loans. The average loan size, the significance of the portfolio and the specialized nature of the energy industry requires a highly

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prescriptive underwriting policy. Exceptions to this policy are rarely granted. Due to the large borrowing requirements of this customer base, the energy loan portfolio includes participations and SNCs.

Purchased Shared National Credits. Purchased shared national credits are participations purchased from upstream financial organizations and tend to be larger in size than our originated portfolio. Our purchased SNC portfolio totaled \$778.5 million at March 31, 2018, decreasing \$56.5 million, or 6.8%, from \$835.0 million at December 31, 2017. At March 31, 2018, 53.8% of outstanding purchased SNCs were related to the energy industry, while 12.0% related to the construction industry and 10.4% related to the investment management industry. The remaining purchased SNCs were diversified throughout various other industries, with no other single industry exceeding 10% of the total purchased SNC portfolio. Additionally, almost all of the outstanding balance of purchased SNCs was included in the energy and commercial and industrial portfolio, with the remainder included in the real estate categories. SNC participations are originated in the normal course of business to meet the needs of our customers. As a matter of policy, we generally only participate in SNCs for companies headquartered in or which have significant operations within our market areas. In addition, we must have direct access to the company's management, an existing banking relationship or the expectation of broadening the relationship with other banking products and services within the following 12 to 24 months. SNCs are reviewed at least quarterly for credit quality and business development successes.

Commercial Real Estate. Commercial real estate loans totaled \$5.5 billion at March 31, 2018, increasing \$168.5 million compared to \$5.3 billion at December 31, 2017. At such dates, commercial real estate loans represented 84.0% and 83.8% of total real estate loans, respectively. The majority of this portfolio consists of commercial real estate mortgages, which includes both permanent and intermediate term loans. These loans are viewed primarily as cash flow loans and secondarily as loans secured by real estate. Consequently, these loans must undergo the analysis and underwriting process of a commercial and industrial loan, as well as that of a real estate loan. At March 31, 2018, approximately 51% of the outstanding principal balance of our commercial real estate loans were secured by owner-occupied properties.

Consumer Real Estate and Other Consumer Loans. The consumer loan portfolio, including all consumer real estate and consumer installment loans, totaled \$1.6 billion at both March 31, 2018 and December 31, 2017. Consumer real estate loans, increased \$16.4 million, or 1.6%, from December 31, 2017. Combined, home equity loans and lines of credit made up 62.7% and 63.3% of the consumer real estate loan total at March 31, 2018 and December 31, 2017, respectively. We offer home equity loans up to 80% of the estimated value of the personal residence of the borrower, less the value of existing mortgages and home improvement loans. In general, we do not originate 1-4 family mortgage loans; however, from time to time, we may invest in such loans to meet the needs of our customers or for other regulatory compliance purposes. Consumer and other loans, increased \$1.5 million, or 0.3%, from December 31, 2017. The consumer and other loan portfolio primarily consists of automobile loans, overdrafts, unsecured revolving credit products, personal loans secured by cash and cash equivalents and other similar types of credit facilities.

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Non-Performing Assets

Non-performing assets and accruing past due loans are presented in the table below. Troubled debt restructurings on non-accrual status are reported as non-accrual loans. Troubled debt restructurings on accrual status are reported separately.

	March 31, 2018	December 31, 2017
Non-accrual loans:		
Commercial and industrial	\$17,314	\$46,186
Energy	93,097	94,302
Commercial real estate:		
Buildings, land and other	10,858	7,589
Construction	—	—
Consumer real estate	1,878	2,109
Consumer and other	5	128
Total non-accrual loans	123,152	150,314
Restructured loans	12,058	4,862
Foreclosed assets:		
Real estate	1,371	2,116
Other	—	—
Total foreclosed assets	1,371	2,116
Total non-performing assets	\$136,581	\$157,292

Ratio of non-performing assets to:

Total loans and foreclosed assets	1.02	%	1.20	%
Total assets	0.43		0.50	

Accruing past due loans:

30 to 89 days past due	\$98,484	\$93,428
90 or more days past due	19,276	14,432
Total accruing past due loans	\$117,760	\$107,860

Ratio of accruing past due loans to total loans:

30 to 89 days past due	0.74	%	0.71	%
90 or more days past due	0.14		0.11	
Total accruing past due loans	0.88	%	0.82	%

Non-performing assets include non-accrual loans, troubled debt restructurings and foreclosed assets. Non-performing assets at March 31, 2018 decreased \$20.7 million from December 31, 2017 primarily due to a decrease in non-accrual commercial and industrial loans partly offset by an increase in non-accrual commercial real estate loans. There were no non-accrual commercial industrial loans in excess of \$5.0 million at March 31, 2018. Non-accrual commercial and industrial loans at December 31, 2017 included two credit relationships in excess of \$5 million totaling \$34.2 million. We charged-off \$8.2 million related to these two credit relationships during the first quarter of 2018. Subsequent to the charge-offs, one credit relationship paid off and the other had a remaining outstanding balance totaling \$4.3 million at March 31, 2018. Non-accrual energy loans included five credit relationships in excess of \$5 million totaling \$87.2 million at March 31, 2018. Each of these credit relationships was previously reported as non-accrual at December 31, 2017 with an aggregate balance totaling \$83.5 million. We charged-off \$1.2 million related to one of these credit relationships during the first quarter of 2018. Non-accrual real estate loans primarily consist of land development, 1-4 family residential construction credit relationships and loans secured by office buildings and religious facilities. There were no non-accrual commercial real estate loans in excess of \$5.0 million at March 31, 2018 or December 31, 2017.

Generally, loans are placed on non-accrual status if principal or interest payments become 90 days past due and/or management deems the collectibility of the principal and/or interest to be in question, as well as when required by

regulatory requirements. Once interest accruals are discontinued, accrued but uncollected interest is charged to current year operations. Subsequent receipts on non-accrual loans are recorded as a reduction of principal, and interest income is recorded only after principal recovery is reasonably assured. Classification of a loan as non-accrual does not preclude the ultimate collection of loan principal or interest.

Restructured loans totaled \$12.1 million at March 31, 2018 and consisted of one energy loan relationship restructured during the first quarter of 2018. This loan was subsequently sold in April 2018. Restructured loans totaled \$4.9 million at December 31, 2017 and consisted of one energy loan relationship restructured during the second quarter of 2017 totaling \$1.3 million, one

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commercial and industrial credit relationship restructured during the third quarter of 2017 totaling \$3.1 million and one construction loan relationship restructured during the fourth quarter of 2017 totaling \$388 thousand.

Foreclosed assets represent property acquired as the result of borrower defaults on loans. Foreclosed assets are recorded at estimated fair value, less estimated selling costs, at the time of foreclosure. Write-downs occurring at foreclosure are charged against the allowance for loan losses. Regulatory guidelines require us to reevaluate the fair value of foreclosed assets on at least an annual basis. Our policy is to comply with the regulatory guidelines.

Write-downs are provided for subsequent declines in value and are included in other non-interest expense along with other expenses related to maintaining the properties. Write-downs of foreclosed assets totaled \$473 thousand and \$16 thousand during the three months ended March 31, 2018 and 2017, respectively.

Potential problem loans consist of loans that are performing in accordance with contractual terms but for which management has concerns about the ability of an obligor to continue to comply with repayment terms because of the obligor's potential operating or financial difficulties. Management monitors these loans closely and reviews their performance on a regular basis. At March 31, 2018 and December 31, 2017, we had \$55.3 million and \$61.4 million in loans of this type which are not included in any one of the non-accrual, restructured or 90 days past due loan categories. At March 31, 2018, potential problem loans consisted of five credit relationships. Of the total outstanding balance at March 31, 2018, 59.2% was related to the energy industry, 25.4% was related to the nursing/assisted living industry and 15.4% was related to the restaurant industry. Weakness in these organizations' operating performance and financial condition, among other factors, have caused us to heighten the attention given to these credits.

Allowance for Loan Losses

The allowance for loan losses is a reserve established through a provision for loan losses charged to expense, which represents management's best estimate of inherent losses that have been incurred within the existing portfolio of loans. The allowance, in the judgment of management, is necessary to reserve for estimated loan losses and risks inherent in the loan portfolio. Our allowance for loan loss methodology, which is more fully described in our 2017 Form 10-K, follows the accounting guidance set forth in U.S. generally accepted accounting principles and the Interagency Policy Statement on the Allowance for Loan and Lease Losses, which was jointly issued by U.S. bank regulatory agencies. The level of the allowance reflects management's continuing evaluation of industry concentrations, specific credit risks, loan loss and recovery experience, current loan portfolio quality, present economic, political and regulatory conditions and unidentified losses inherent in the current loan portfolio. Portions of the allowance may be allocated for specific credits; however, the entire allowance is available for any credit that, in management's judgment, should be charged off.

The table below provides, as of the dates indicated, an allocation of the allowance for loan losses by loan type; however, allocation of a portion of the allowance to one category of loans does not preclude its availability to absorb losses in other categories:

	March 31, 2018	December 31, 2017
Commercial and industrial	\$57,733	\$ 59,614
Energy	39,039	51,528
Commercial real estate	38,474	30,948
Consumer real estate	6,349	5,657
Consumer and other	8,290	7,617
Total	\$149,885	\$ 155,364

The reserve allocated to commercial and industrial loans at March 31, 2018 decreased \$1.9 million compared to December 31, 2017. The decrease was due to decreases in macroeconomic valuation allowances and general valuation allowances partly offset by increases in specific valuation allowances and historical valuation allowances.

Macroeconomic valuation allowances for commercial and industrial loans decreased \$1.5 million from \$16.5 million at December 31, 2017 to \$15.1 million at March 31, 2018. The decrease was primarily related to a decrease in the general macroeconomic risk allocation (down \$1.7 million), which was partly related to improvements in the weighted-average risk grade of the portfolio and the level of classified loans, as further discussed below. General valuation allowances for commercial and industrial loans decreased \$1.1 million from \$9.1 million at December 31,

2017 to \$8.1 million at March 31, 2018. The decrease was primarily related to an increase in the adjustment for recoveries combined with decreases in the allocations for loans not reviewed by concurrence and large credit relationships partly offset by an increase in the allocation for excessive industry concentrations. Historical valuation allowances increased \$257 thousand from \$26.4 million at December 31, 2017 to \$26.7 million at March 31, 2018. The increase was primarily related to an increase in the volume of pass grade loans and loans graded "special mention" (risk grade 10) partly offset by the impact of decreases in the volume of classified loans and loans graded "watch" (risk grade 9). Classified loans consist of loans having a risk grade of 11, 12 or 13. Classified commercial and industrial loans totaled \$98.5 million at March 31, 2018 compared to \$144.0 million at December 31, 2017. The weighted-average risk grade of commercial and industrial loans was 6.35 at March 31, 2018 compared to 6.41 at December 31, 2017. Commercial loan net charge-offs totaled \$7.7 million during the first three months of

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2018 compared to \$2.7 million during the first three months of 2017. Charge-offs in 2018 included \$8.2 million related to two credit relationships that, as of December 31, 2017, had associated specific valuation allowances totaling \$5.9 million. Specific valuation allowances increased \$377 thousand from \$7.6 million at December 31, 2017 to \$7.9 million at March 31, 2018.

The reserve allocated to energy loans at March 31, 2018 decreased \$12.5 million compared to December 31, 2017. As a result, reserves allocated to energy loans as a percentage of total energy loans totaled 2.70% at March 31, 2018 compared to 3.44% at December 31, 2017. This decrease was primarily related to decreases in historical valuation allowances and macroeconomic valuation allowances and partly offset by an increase in specific valuation allowances. Historical valuation allowances decreased \$9.8 million from \$22.1 million at December 31, 2017 to \$12.3 million at March 31, 2018. The decrease was primarily related to decreases in the historical loss allocation factors for non-classified energy loans and classified energy loans graded “substandard - accrual” (risk grade 11). The decrease was also partly related to a decrease in the volume of non-classified energy loans. Non-classified energy loans graded as “watch” and “special mention” totaled \$88.0 million at March 31, 2018 compared to \$114.7 million at December 31, 2017, decreasing \$26.7 million, while “pass” grade energy loans decreased \$25.5 million from December 31, 2017. Classified energy loans did not significantly change totaling \$185.3 million at March 31, 2018 compared to \$185.2 million at December 31, 2017. The weighted-average risk grade of energy loans increased slightly to 7.02 at March 31, 2018 from 6.97 at December 31, 2017 as the proportion of lower risk grade non-classified energy loans to total energy loans decreased relative to higher risk grade classified energy loans. Macroeconomic valuation allowances related to energy loans decreased \$4.2 million from \$8.2 million at December 31, 2017 to \$4.0 million at March 31, 2018, primarily due to a decrease in the general macroeconomic risk allocation (down \$2.7 million); in part due to stabilization within the energy loan portfolio, decreased oil price volatility and the overall decline in portfolio volume; and a decrease in the environmental risk adjustment (down \$1.6 million) due to decreases in the historical loss valuation allowances to which the environmental risk adjustment factor is applied. Specific valuation allowances for energy loans increased \$1.5 million from \$13.3 million at December 31, 2017 to \$14.8 million at March 31, 2018. Specific valuation allowances at March 31, 2018 and December 31, 2017 primarily related to two credit relationships totaling \$61.1 million and \$61.2 million at such dates, respectively. We recognized a \$1.2 million charge-off related to one of these credit relationships during the first quarter of 2018. Total energy loan net charge-offs were \$2.8 million during the three months ended March 31, 2018 compared to net charge-offs of \$4.2 million during the same period in 2017.

The reserve allocated to commercial real estate loans at March 31, 2018 increased \$7.5 million compared to December 31, 2017. The increase was primarily related to increases in macroeconomic valuation allowances, historical valuation allowances and specific valuation allowances. Macroeconomic valuation allowances increased \$6.0 million from \$7.9 million at December 31, 2017 to \$13.9 million at March 31, 2018. The increase was primarily related to an increase in the general macroeconomic risk allocation (up \$5.8 million), which reflects growth in the portfolio and increased inherent risk due to rising interest rates and the related impact on capitalization rates and real estate valuations. Historical valuation allowances increased \$939 thousand primarily due to an increase in the volume of “pass” grade commercial real estate loans, which increased \$203.7 million during the first three months of 2018. Classified commercial real estate loans increased \$9.7 million from \$75.8 million at December 31, 2017 to \$85.5 million at March 31, 2018. The weighted-average risk grade of commercial real estate loans did not change totaling 7.05 at both March 31, 2018 and December 31, 2017. Specific valuation allowances totaled \$708 thousand at March 31, 2018 and related to three credit relationships totaling \$2.0 million. There were no specific valuation allowances related to commercial real estate loans at December 31, 2017.

The reserve allocated to consumer real estate loans at March 31, 2018 increased \$692 thousand compared to December 31, 2017. This increase was primarily due to a \$1.2 million increase in macroeconomic valuation allowances, which reflects growth in the portfolio and increased inherent risk due to rising interest rates, partly offset by a \$532 thousand decrease in general valuation allowances, which was primarily related to a decrease in allowances allocated for loans not reviewed by concurrence and an increase in the reduction for recoveries.

The reserve allocated to consumer and other loans at March 31, 2018 increased \$673 thousand compared to December 31, 2017. The increase was primarily related to a \$1.1 million increase in historical valuation allowances

due to an increase in the historical loss allocation factor partly offset by a \$449 thousand decrease in macroeconomic valuation allowances.

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Activity in the allowance for loan losses is presented in the following table.

	Three Months Ended March 31,	
	2018	2017
Balance at beginning of period	\$155,364	\$153,045
Provision for loan losses	6,945	7,952
Charge-offs:		
Commercial and industrial	(9,252)	(3,527)
Energy	(2,850)	(4,278)
Commercial real estate	(5)	—
Consumer real estate	(719)	(11)
Consumer and other	(3,972)	(3,548)
Total charge-offs	(16,798)	(11,364)
Recoveries:		
Commercial and industrial	1,577	798
Energy	1	53
Commercial real estate	88	45
Consumer real estate	193	107
Consumer and other	2,515	2,420
Total recoveries	4,374	3,423
Net charge-offs	(12,424)	(7,941)
Balance at end of period	\$149,885	\$153,056

Ratio of allowance for loan losses to:

Total loans	1.12	%	1.26	%
Non-accrual loans	121.71		131.74	
Ratio of annualized net charge-offs to average total loans	0.38		0.27	

The provision for loan losses decreased \$1.0 million, or 12.7%, during the three months ended March 31, 2018 compared to the same period in 2017. Despite increases in net charge-offs and specific valuation allowances during the three months ended March 31, 2018 compared to the same period in 2017, the provision for loan losses decreased due to a decrease in the calculated reserves necessary as a result of the aforementioned decreases in our historical loss allocation factors for energy loans, decreases in the level of classified loans and positive trends in the overall weighted-average risk grade of our energy, commercial and industrial and commercial real estate loan portfolios. Classified energy, commercial and industrial and commercial real estate loans totaled \$369.3 million at March 31, 2018 compared to \$405.0 million at December 31, 2017 and \$502.3 million at March 31, 2017. The overall weighted-average risk grade of our energy, commercial and industrial and commercial real estate loan portfolios was 6.76 at March 31, 2018 compared to 6.77 at December 31, 2017 and 6.85 at March 31, 2017. Net charge-offs totaled \$12.4 million for three months ended March 31, 2018 compared to \$7.9 million for the same period in 2017. Specific valuation allowances related to energy, commercial and industrial and commercial real estate loans totaled \$23.4 million at March 31, 2018 compared to \$20.8 million at December 31, 2017 and \$3.6 million at March 31, 2017. The level of the provision for loan losses during the three months ended March 31, 2017 was mostly reflective of the level of net charge-offs during that period.

The ratio of the allowance for loan losses to total loans was 1.12% at March 31, 2018 compared to 1.18% at December 31, 2017. Management believes the recorded amount of the allowance for loan losses is appropriate based upon management's best estimate of probable losses that have been incurred within the existing portfolio of loans. Should any of the factors considered by management in evaluating the appropriate level of the allowance for loan losses change, our estimate of probable loan losses could also change, which could affect the level of future provisions for loan losses.

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Capital and Liquidity

Capital. Shareholders' equity totaled \$3.2 billion at March 31, 2018 and \$3.3 billion December 31, 2017. In addition to net income of \$106.5 million, other sources of capital during the three months ended March 31, 2018 included \$19.2 million in proceeds from stock option exercises and \$3.2 million related to stock-based compensation. Uses of capital during the three months ended March 31, 2018 included an other comprehensive loss, net of tax, of \$142.4 million, \$38.6 million of dividends paid on preferred and common stock and \$2.3 million related to the cumulative effect of a new accounting principle adopted during the first quarter of 2018. See Note 1 - Significant Accounting Policies. The accumulated other comprehensive income/loss component of shareholders' equity totaled a net, after-tax, unrealized loss of \$53.4 million at March 31, 2018 compared to a net, after-tax, unrealized gain of \$79.5 million at December 31, 2017. The change was primarily due to a \$141.3 million net, after-tax, decrease in the net unrealized gain/loss on securities available for sale. Accumulated other comprehensive income at December 31, 2017 included \$9.5 million related to certain income tax effects from the remeasurement of deferred tax assets and liabilities in connection with the change in the U.S. statutory federal income tax rate under the Tax Cuts and Jobs Act enacted on December 22, 2017. This amount was reclassified to retained earnings as of January 1, 2018 in accordance with an accounting standard update issued during the first quarter of 2018. See Note 1 - Significant Accounting Policies and Note 18 - Accounting Standards Updates.

Under the Basel III Capital Rules, we have elected to opt-out of the requirement to include most components of accumulated other comprehensive income in regulatory capital. Accordingly, amounts reported as accumulated other comprehensive income/loss do not increase or reduce regulatory capital and are not included in the calculation of risk-based capital and leverage ratios. Regulatory agencies for banks and bank holding companies utilize capital guidelines designed to measure capital and take into consideration the risk inherent in both on-balance sheet and off-balance sheet items. See Note 7 - Capital and Regulatory Matters in the accompanying notes to consolidated financial statements included elsewhere in this report.

We paid a quarterly dividend of \$0.57 and \$0.54 per common share during the first quarters of 2018 and 2017, respectively. This equates to a common stock dividend payout ratio of 35.0% and 41.8% during the first three months of 2018 and 2017, respectively. Our ability to declare or pay dividends on, or purchase, redeem or otherwise acquire, shares of our capital stock may be impacted by certain restrictions under the terms of our junior subordinated deferrable interest debentures and our Series A Preferred Stock as described in Note 8 - Capital and Regulatory Matters in the accompanying notes to consolidated financial statements included elsewhere in this report.

Stock Repurchase Plans. From time to time, our board of directors has authorized stock repurchase plans. In general, stock repurchase plans allow us to proactively manage our capital position and return excess capital to shareholders. Shares purchased under such plans also provide us with shares of common stock necessary to satisfy obligations related to stock compensation awards. On October 24, 2017, our board of directors authorized a \$150.0 million stock repurchase program, allowing us to repurchase shares of our common stock over a two-year period from time to time at various prices in the open market or through private transactions. No shares were repurchased under this plan during 2018 or 2017. Under a prior plan, we repurchased 1,134,966 shares under the plan at a total cost of \$100.0 million during third quarter of 2017. See Part II, Item 2 - Unregistered Sales of Equity Securities and Use of Proceeds, included elsewhere in this report.

Liquidity. As more fully discussed in our 2017 Form 10-K, our liquidity position is continuously monitored and adjustments are made to the balance between sources and uses of funds as deemed appropriate. Liquidity risk management is an important element in our asset/liability management process. We regularly model liquidity stress scenarios to assess potential liquidity outflows or funding problems resulting from economic disruptions, volatility in the financial markets, unexpected credit events or other significant occurrences deemed problematic by management. These scenarios are incorporated into our contingency funding plan, which provides the basis for the identification of our liquidity needs. As of March 31, 2018, management is not aware of any events that are reasonably likely to have a material adverse effect on our liquidity, capital resources or operations. In addition, management is not aware of any regulatory recommendations regarding liquidity that would have a material adverse effect on us.

Since Cullen/Frost is a holding company and does not conduct operations, its primary sources of liquidity are dividends upstreamed from Frost Bank and borrowings from outside sources. Banking regulations may limit the

amount of dividends that may be paid by Frost Bank. See Note 7 - Capital and Regulatory Matters in the accompanying notes to consolidated financial statements included elsewhere in this report regarding such dividends. At March 31, 2018, Cullen/Frost had liquid assets, including cash and resell agreements, totaling \$295.2 million.

Accounting Standards Updates

See Note 17 - Accounting Standards Updates in the accompanying notes to consolidated financial statements included elsewhere in this report for details of recently issued accounting pronouncements and their expected impact on our financial statements.

Table of ContentsConsolidated Average Balance Sheets and Interest Income Analysis - Year To Date
(Dollars in thousands - taxable-equivalent basis)

	March 31, 2018			March 31, 2017		
	Average Balance	Interest Income/ Expense	Yield/ Cost	Average Balance	Interest Income/ Expense	Yield/ Cost
Assets:						
Interest-bearing deposits	\$3,682,909	\$14,094	1.55 %	\$3,323,244	\$6,836	0.83 %
Federal funds sold and resell agreements	186,278	761	1.66	48,005	107	0.90
Securities:						
Taxable	4,167,397	20,558	1.99	5,263,538	25,302	1.96
Tax-exempt	7,671,186	78,334	4.12	7,282,991	99,575	5.44
Total securities	11,838,583	98,892	3.36	12,546,529	124,877	3.99
Loans, net of unearned discounts	13,294,638	152,367	4.65	12,089,586	123,856	4.15
Total Earning Assets and Average Rate Earned	29,002,408	266,114	3.71	28,007,364	255,676	3.68
Cash and due from banks	511,948			532,541		
Allowance for loan losses	(156,517)			(153,810)		
Premises and equipment, net	523,576			524,640		
Accrued interest and other assets	1,249,881			1,233,469		
Total Assets	\$31,131,296			\$30,144,204		
Liabilities:						
Non-interest-bearing demand deposits:						
Commercial and individual	\$10,282,274			\$9,958,059		
Correspondent banks	224,935			284,592		
Public funds	464,850			483,382		
Total non-interest-bearing demand deposits	10,972,059			10,726,033		
Interest-bearing deposits:						
Private accounts						
Savings and interest checking	6,635,495	1,137	0.07	6,315,152	273	0.02
Money market deposit accounts	7,590,194	7,698	0.41	7,478,330	1,136	0.06
Time accounts	778,309	984	0.51	786,763	307	0.16
Public funds	452,767	819	0.73	514,354	152	0.12
Total interest-bearing deposits	15,456,765	10,638	0.28	15,094,599	1,868	0.05
Total deposits	26,428,824			25,820,632		
Federal funds purchased and repurchase agreements	1,050,410	634	0.24	905,002	139	0.06
Junior subordinated deferrable interest debentures	136,193	1,142	3.35	136,136	908	2.67
Subordinated notes payable and other notes	98,576	1,164	4.72	64,184	368	2.29
Total Interest-Bearing Funds and Average Rate Paid	16,741,944	13,578	0.33	16,199,921	3,283	0.08
Accrued interest and other liabilities	161,855			163,079		
Total Liabilities	27,875,858			27,089,033		
Shareholders' Equity	3,255,438			3,055,171		
Total Liabilities and Shareholders' Equity	\$31,131,296			\$30,144,204		
Net interest income		\$252,536			\$252,393	
Net interest spread			3.38 %			3.60 %
Net interest income to total average earning assets			3.52 %			3.64 %

For these computations: (i) average balances are presented on a daily average basis, (ii) information is shown on a taxable-equivalent basis assuming a 21% tax rate in 2018 and a 35% tax rate in 2017, (iii) average loans include loans

on non-accrual status, and (iv) average securities include unrealized gains and losses on securities available for sale while yields are based on average amortized cost.

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Item 3. Quantitative and Qualitative Disclosures About Market Risk

The disclosures set forth in this item are qualified by the section captioned “Forward-Looking Statements and Factors that Could Affect Future Results” included in Item 2. Management’s Discussion and Analysis of Financial Condition and Results of Operations of this report and other cautionary statements set forth elsewhere in this report.

Refer to the discussion of market risks included in Item 7A. Quantitative and Qualitative Disclosures About Market Risk in the 2017 Form 10-K. There has been no significant change in the types of market risks we face since December 31, 2017.

We utilize an earnings simulation model as the primary quantitative tool in measuring the amount of interest rate risk associated with changing market rates. The model quantifies the effects of various interest rate scenarios on projected net interest income and net income over the next 12 months. The model measures the impact on net interest income relative to a flat-rate case scenario of hypothetical fluctuations in interest rates over the next 12 months. These simulations incorporate assumptions regarding balance sheet growth and mix, pricing and the repricing and maturity characteristics of the existing and projected balance sheet. The impact of interest rate derivatives, such as interest rate swaps, caps and floors, is also included in the model. Other interest rate-related risks such as prepayment, basis and option risk are also considered.

For modeling purposes, as of March 31, 2018, the model simulations projected that 100 and 200 basis point ratable increases in interest rates would result in positive variances in net interest income of 0.9% and 2.8%, respectively, relative to the flat-rate case over the next 12 months, while 100 and 175 basis point ratable decreases in interest rates would result in a negative variances in net interest income of 3.7% and 9.7%, respectively, relative to the flat-rate case over the next 12 months. The March 31, 2018 model simulations for increased interest rates were impacted by the assumption, for modeling purposes, that we will begin to pay interest on commercial demand deposits (those not already receiving an earnings credit rate) in the second quarter of 2018, as further discussed below. For modeling purposes, as of March 31, 2017, the model simulations projected that 100 and 200 basis point ratable increases in interest rates would result in positive variances in net interest income of 1.0% and 2.2%, respectively, relative to the flat-rate case over the next 12 months, while a decrease in interest rates of 100 basis points would result in a negative variance in net interest income of 9.9% relative to the flat-rate case over the next 12 months. The March 31, 2017 model simulations for increased interest rates were impacted by the assumption, for modeling purposes, that we would begin to pay interest on commercial demand deposits (those not already receiving an earnings credit rate) in the second quarter of 2017, as further discussed below. The likelihood of a decrease in interest rates beyond 175 basis points as of March 31, 2018 and 100 basis points as of March 31, 2017 was considered to be remote given prevailing interest rate levels.

The model simulations as of March 31, 2018 indicate that the sensitivity of our balance sheet to changes in interest rates is not significantly different from March 31, 2017 as we had a similar mix of earning assets and interest-bearing liabilities at such dates.

We do not currently pay interest on a significant portion of our commercial demand deposits. If we began to pay interest on commercial demand deposits (those not already receiving an earnings credit rate), our balance sheet would likely become less asset sensitive. Any interest rate that would ultimately be paid on these commercial demand deposits would likely depend upon a variety of factors, some of which are beyond our control. For modeling purposes, we have assumed an aggressive pricing structure with interest payments for commercial demand deposits (those not already receiving an earnings credit) beginning in the second quarters of 2017 and 2018, respectively, for each simulation. Should the actual interest rate paid on commercial demand deposits be less than the rate assumed in the model simulations, or should the interest rate paid for commercial demand deposits become an administered rate with less direct correlation to movements in general market interest rates, our balance sheet could be more asset sensitive than the model simulations might otherwise indicate.

As of March 31, 2018, the effects of a 200 basis point increase and a 175 basis point decrease in interest rates on our derivative holdings would not result in a significant variance in our net interest income.

The effects of hypothetical fluctuations in interest rates on our securities classified as “trading” under ASC Topic 320, “Investments—Debt and Equity Securities,” are not significant, and, as such, separate quantitative disclosure is not presented.

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Item 4. Controls and Procedures

As of the end of the period covered by this Quarterly Report on Form 10-Q, an evaluation was carried out by management, with the participation of its Chief Executive Officer and Chief Financial Officer, of the effectiveness of our disclosure controls and procedures (as defined in Rule 13a-15(e) under the Securities Exchange Act of 1934). Based upon that evaluation, the Chief Executive Officer and Chief Financial Officer concluded that the disclosure controls and procedures were effective as of the end of the period covered by this report. No change in our internal control over financial reporting (as defined in Rule 13a-15(f) under the Securities Exchange Act of 1934) occurred during the last fiscal quarter that materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

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Part II. Other Information

Item 1. Legal Proceedings

We are subject to various claims and legal actions that have arisen in the course of conducting business. Management does not expect the ultimate disposition of these matters to have a material adverse impact on our financial statements.

Item 1A. Risk Factors

There has been no material change in the risk factors disclosed under Item 1A. of our 2017 Form 10-K.

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

The following table provides information with respect to purchases we made or were made on our behalf or any “affiliated purchaser” (as defined in Rule 10b-18(a)(3) under the Securities Exchange Act of 1934), of our common stock during the three months ended March 31, 2018. Dollar amounts in thousands.

Period	Total Number of Shares Purchased	Average Price Paid Per Share	Total Number of Shares Purchased as Part of Publicly Announced Plan	Maximum Number of Shares (or Approximate Dollar Value) That May Yet Be Purchased Under the Plan at the End of the Period
January 1, 2018 to January 31, 2018	—	\$	—	\$ 150,000
February 1, 2018 to February 28, 2018	—	—	—	150,000
March 1, 2018 to March 31, 2018	—	—	—	150,000
Total	—	\$	—	

Item 3. Defaults Upon Senior Securities

None.

Item 4. Mine Safety Disclosures

None.

Item 5. Other Information

None.

Item 6. Exhibits

(a) Exhibits

Exhibit
Number Description

31.1 Rule 13a-14(a) Certification of the Corporation's Chief Executive Officer

31.2 Rule 13a-14(a) Certification of the Corporation's Chief Financial Officer

32.1+ Section 1350 Certification of the Corporation's Chief Executive Officer

32.2+ Section 1350 Certification of the Corporation's Chief Financial Officer

101 Interactive Data File

This exhibit shall not be deemed “filed” for purposes of Section 18 of the Securities Exchange Act of 1934, or otherwise subject to the liability of that section, and shall not be deemed to be incorporated by reference into any filing under the Securities Act of 1933 or the Securities Exchange Act of 1934.

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Signatures

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

Cullen/Frost Bankers, Inc.
(Registrant)

Date: April 26, 2018 By: /s/ Jerry Salinas
Jerry Salinas
Group Executive Vice President
and Chief Financial Officer
(Duly Authorized Officer, Principal Financial
Officer and Principal Accounting Officer)