

Section 1: 10-Q (10-Q)

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United States

Securities and Exchange Commission

Washington, D.C. 20549

Form 10-Q

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

For the quarterly period ended: September 30, 2019

Or

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

For the transition period from _____ to _____

Commission file number: 001-13221

Cullen/Frost Bankers, Inc.

(Exact name of registrant as specified in its charter)

Texas	74-1751768
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer Identification No.)
111 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)

Securities registered pursuant to Section 12(b) of the Act:

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock, \$.01 Par Value	CFR	New York Stock Exchange
5.375% Non-Cumulative Perpetual Preferred Stock, Series A	CFR.PRA	New York Stock Exchange

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

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

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

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

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

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

As of October 24, 2019 there were 62,565,469 shares of the registrant’s Common Stock, \$.01 par value, outstanding.

Cullen/Frost Bankers, Inc.
Quarterly Report on Form 10-Q
September 30, 2019

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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)

	September 30, 2019	December 31, 2018
Assets:		
Cash and due from banks	\$ 653,969	\$ 678,791
Interest-bearing deposits	1,865,883	2,641,971
Federal funds sold and resell agreements	388,049	635,017
Total cash and cash equivalents	2,907,901	3,955,779
Securities held to maturity, at amortized cost	1,020,838	1,106,057
Securities available for sale, at estimated fair value	12,420,446	11,387,321
Trading account securities	27,669	24,086
Loans, net of unearned discounts	14,634,928	14,099,733
Less: Allowance for loan losses	(136,559)	(132,132)
Net loans	14,498,369	13,967,601
Premises and equipment, net	987,503	552,330
Goodwill	654,952	654,952
Other intangible assets, net	2,745	3,649
Cash surrender value of life insurance policies	186,217	183,473
Accrued interest receivable and other assets	391,536	457,718
Total assets	<u>\$ 33,098,176</u>	<u>\$ 32,292,966</u>
Liabilities:		
Deposits:		
Non-interest-bearing demand deposits	\$ 10,750,244	\$ 10,997,494
Interest-bearing deposits	16,333,338	16,151,710
Total deposits	27,083,582	27,149,204
Federal funds purchased and repurchase agreements	1,200,655	1,367,548
Junior subordinated deferrable interest debentures, net of unamortized issuance costs	136,285	136,242
Subordinated notes, net of unamortized issuance costs	98,826	98,708
Accrued interest payable and other liabilities	697,371	172,347
Total liabilities	29,216,719	28,924,049
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 September 30, 2019 and December 31, 2018	144,486	144,486
Common stock, par value \$0.01 per share; 210,000,000 shares authorized; 64,236,306 shares issued at September 30, 2019 and December 31, 2018	642	642
Additional paid-in capital	977,997	967,304
Retained earnings	2,617,500	2,440,002
Accumulated other comprehensive income (loss), net of tax	305,383	(63,600)
Treasury stock, at cost; 1,699,662 shares at September 30, 2019 and 1,250,464 shares at December 31, 2018	(164,551)	(119,917)
Total shareholders' equity	3,881,457	3,368,917
Total liabilities and shareholders' equity	<u>\$ 33,098,176</u>	<u>\$ 32,292,966</u>

See Notes to Consolidated Financial Statements.

Cullen/Frost Bankers, Inc.
Consolidated Statements of Income

(Dollars in thousands, except per share amounts)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
Interest income:				
Loans, including fees	\$ 186,870	\$ 172,333	\$ 561,990	\$ 487,668
Securities:				
Taxable	32,122	21,339	87,125	63,085
Tax-exempt	57,328	59,200	175,067	173,209
Interest-bearing deposits	8,759	14,445	27,226	42,456
Federal funds sold and resell agreements	1,194	1,399	4,323	3,575
Total interest income	286,273	268,716	855,731	769,993
Interest expense:				
Deposits	25,637	22,201	79,655	50,414
Federal funds purchased and repurchase agreements	5,040	2,292	15,276	3,557
Junior subordinated deferrable interest debentures	1,425	1,394	4,401	3,847
Other long-term borrowings	1,164	1,164	3,492	3,492
Total interest expense	33,266	27,051	102,824	61,310
Net interest income	253,007	241,665	752,907	708,683
Provision for loan losses	8,001	2,650	25,404	17,846
Net interest income after provision for loan losses	245,006	239,015	727,503	690,837
Non-interest income:				
Trust and investment management fees	31,649	30,801	93,794	89,509
Service charges on deposit accounts	22,941	21,569	65,529	63,554
Insurance commissions and fees	11,683	11,037	40,207	37,573
Interchange and debit card transaction fees	4,117	3,499	11,265	10,103
Other charges, commissions and fees	10,108	9,580	28,103	27,860
Net gain (loss) on securities transactions	96	(34)	265	(113)
Other	8,630	11,205	29,484	35,682
Total non-interest income	89,224	87,657	268,647	264,168
Non-interest expense:				
Salaries and wages	93,812	87,547	277,078	259,434
Employee benefits	21,002	18,355	64,579	58,257
Net occupancy	24,202	19,894	64,602	59,089
Technology, furniture and equipment	22,415	21,004	66,236	61,142
Deposit insurance	2,491	4,694	7,752	14,178
Intangible amortization	274	336	904	1,093
Other	44,668	41,838	132,722	125,994
Total non-interest expense	208,864	193,668	613,873	579,187
Income before income taxes	125,366	133,004	382,277	375,818
Income taxes	13,530	15,160	42,359	40,153
Net income	111,836	117,844	339,918	335,665
Preferred stock dividends	2,016	2,016	6,047	6,047
Net income available to common shareholders	\$ 109,820	\$ 115,828	\$ 333,871	\$ 329,618
Earnings per common share:				
Basic	\$ 1.74	\$ 1.80	\$ 5.28	\$ 5.13
Diluted	1.73	1.78	5.24	5.08

See Notes to Consolidated Financial Statements.

Cullen/Frost Bankers, Inc.
Consolidated Statements of Comprehensive Income (Loss)
(Dollars in thousands)

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
Net income	\$ 111,836	\$ 117,844	\$ 339,918	\$ 335,665
Other comprehensive income (loss), before tax:				
Securities available for sale and transferred securities:				
Change in net unrealized gain/loss during the period	107,786	(96,147)	464,072	(286,935)
Change in net unrealized gain on securities transferred to held to maturity	(305)	(3,764)	(957)	(8,424)
Reclassification adjustment for net (gains) losses included in net income	(97)	34	(266)	113
Total securities available for sale and transferred securities	107,384	(99,877)	462,849	(295,246)
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)	1,406	1,250	4,218	3,751
Total defined-benefit post-retirement benefit plans	1,406	1,250	4,218	3,751
Other comprehensive income (loss), before tax	108,790	(98,627)	467,067	(291,495)
Deferred tax expense (benefit)	22,845	(20,711)	98,084	(61,213)
Other comprehensive income (loss), net of tax	85,945	(77,916)	368,983	(230,282)
Comprehensive income (loss)	<u>\$ 197,781</u>	<u>\$ 39,928</u>	<u>\$ 708,901</u>	<u>\$ 105,383</u>

See Notes to Consolidated Financial Statements.

Cullen/Frost Bankers, Inc.
Consolidated Statements of Changes in Shareholders' Equity
(Dollars in thousands, except per share amounts)

	Preferred Stock	Common Stock	Additional Paid-In Capital	Retained Earnings	Accumulated Other Comprehensive Income (Loss), Net of Tax	Treasury Stock	Total
Three months ended:							
September 30, 2019							
Balance at beginning of period	\$ 144,486	\$ 642	\$ 975,322	\$ 2,556,235	\$ 219,438	\$ (156,877)	\$ 3,739,246
Net income	—	—	—	111,836	—	—	111,836
Other comprehensive loss, net of tax	—	—	—	—	85,945	—	85,945
Stock option exercises/stock unit conversions (101,284 shares)	—	—	—	(3,851)	—	9,516	5,665
Stock-based compensation expense recognized in earnings	—	—	2,675	—	—	—	2,675
Purchase of treasury stock (202,724 shares)	—	—	—	—	—	(17,190)	(17,190)
Cash dividends – preferred stock (approximately \$0.34 per share)	—	—	—	(2,016)	—	—	(2,016)
Cash dividends - common stock (\$0.71 per share)	—	—	—	(44,704)	—	—	(44,704)
Balance at end of period	<u>\$ 144,486</u>	<u>\$ 642</u>	<u>\$ 977,997</u>	<u>\$ 2,617,500</u>	<u>\$ 305,383</u>	<u>\$ (164,551)</u>	<u>\$ 3,881,457</u>
September 30, 2018							
Balance at beginning of period	\$ 144,486	\$ 642	\$ 960,121	\$ 2,297,099	\$ (63,319)	\$ (29,517)	\$ 3,309,512
Net income	—	—	—	117,844	—	—	117,844
Other comprehensive income, net of tax	—	—	—	—	(77,916)	—	(77,916)
Stock option exercises/stock unit conversions (19,232 shares)	—	—	—	(575)	—	1,694	1,119
Stock-based compensation expense recognized in earnings	—	—	2,796	—	—	—	2,796
Cash dividends – preferred stock (approximately \$0.34 per share)	—	—	—	(2,016)	—	—	(2,016)
Cash dividends – common stock (\$0.67 per share)	—	—	—	(43,093)	—	—	(43,093)
Balance at end of period	<u>\$ 144,486</u>	<u>\$ 642</u>	<u>\$ 962,917</u>	<u>\$ 2,369,259</u>	<u>\$ (141,235)</u>	<u>\$ (27,823)</u>	<u>\$ 3,308,246</u>

See accompanying Notes to Consolidated Financial Statements

Cullen/Frost Bankers, Inc.
Consolidated Statements of Changes in Shareholders' Equity (continued)
(Dollars in thousands, except per share amounts)

	Preferred Stock	Common Stock	Additional Paid-In Capital	Retained Earnings	Accumulated Other Comprehensive Income (Loss), Net of Tax	Treasury Stock	Total
Nine months ended:							
September 30, 2019							
Balance at beginning of period	\$ 144,486	\$ 642	\$ 967,304	\$ 2,440,002	\$ (63,600)	\$ (119,917)	\$ 3,368,917
Cumulative effect of accounting change	—	—	—	(14,672)	—	—	(14,672)
Total shareholders' equity at beginning of period, as adjusted	144,486	642	967,304	2,425,330	(63,600)	(119,917)	3,354,245
Net income	—	—	—	339,918	—	—	339,918
Other comprehensive income, net of tax	—	—	—	—	368,983	—	368,983
Stock option exercises/stock unit conversions (255,184 shares)	—	—	—	(9,569)	—	23,075	13,506
Stock-based compensation expense recognized in earnings	—	—	10,693	—	—	—	10,693
Purchase of treasury stock (704,382 shares)	—	—	—	—	—	(67,709)	(67,709)
Cash dividends – preferred stock (approximately \$1.01 per share)	—	—	—	(6,047)	—	—	(6,047)
Cash dividends – common stock (\$2.09 per share)	—	—	—	(132,132)	—	—	(132,132)
Balance at end of period	<u>\$ 144,486</u>	<u>\$ 642</u>	<u>\$ 977,997</u>	<u>\$ 2,617,500</u>	<u>\$ 305,383</u>	<u>\$ (164,551)</u>	<u>\$ 3,881,457</u>
September 30, 2018							
Balance at beginning of period	\$ 144,486	\$ 642	\$ 953,361	\$ 2,187,069	\$ 79,512	\$ (67,207)	\$ 3,297,863
Cumulative effect of accounting change	—	—	—	(2,285)	—	—	(2,285)
Total shareholders' equity at beginning of period, as adjusted	144,486	642	953,361	2,184,784	79,512	(67,207)	3,295,578
Net income	—	—	—	335,665	—	—	335,665
Other comprehensive loss, net of tax	—	—	—	—	(230,282)	—	(230,282)
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	—	—	—	(9,535)	9,535	—	—
Stock option exercises/stock unit conversions (447,831 shares)	—	—	—	(12,887)	—	39,454	26,567
Stock-based compensation expense recognized in earnings	—	—	9,556	—	—	—	9,556
Purchase of treasury stock (601 shares)	—	—	—	—	—	(70)	(70)
Cash dividends – preferred stock (approximately \$1.01 per share)	—	—	—	(6,047)	—	—	(6,047)
Cash dividends – common stock (\$1.91 per share)	—	—	—	(122,721)	—	—	(122,721)
Balance at end of period	<u>\$ 144,486</u>	<u>\$ 642</u>	<u>\$ 962,917</u>	<u>\$ 2,369,259</u>	<u>\$ (141,235)</u>	<u>\$ (27,823)</u>	<u>\$ 3,308,246</u>

See accompanying Notes to Consolidated Financial Statements

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

	Nine Months Ended September 30,	
	2019	2018
Operating Activities:		
Net income	\$ 339,918	\$ 335,665
Adjustments to reconcile net income to net cash from operating activities:		
Provision for loan losses	25,404	17,846
Deferred tax expense (benefit)	(1,625)	39,198
Accretion of loan discounts	(11,364)	(10,470)
Securities premium amortization (discount accretion), net	84,963	73,748
Net (gain) loss on securities transactions	(265)	113
Depreciation and amortization	39,182	37,452
Net (gain) loss on sale/write-down of assets/foreclosed assets	(6,016)	(6,122)
Stock-based compensation	10,693	9,556
Net tax benefit from stock-based compensation	1,602	3,378
Earnings on life insurance policies	(2,744)	(2,510)
Net change in:		
Trading account securities	(3,132)	(1,094)
Lease right-of-use assets	14,618	—
Accrued interest receivable and other assets	37,608	(19,047)
Accrued interest payable and other liabilities	56,354	(17,545)
Net cash from operating activities	585,196	460,168
Investing Activities:		
Securities held to maturity:		
Purchases	—	(1,500)
Maturities, calls and principal repayments	69,273	300,340
Securities available for sale:		
Purchases	(9,815,936)	(14,983,642)
Sales	8,236,066	13,838,566
Maturities, calls and principal repayments	1,007,783	182,028
Proceeds from sale of loans	24,036	21,318
Net change in loans	(569,223)	(718,551)
Benefits received on life insurance policies	—	384
Proceeds from sales of premises and equipment	8,019	12,859
Purchases of premises and equipment	(168,326)	(56,781)
Proceeds from sales of repossessed properties	131	1,106
Net cash from investing activities	(1,208,177)	(1,403,873)
Financing Activities:		
Net change in deposits	(65,622)	(523,535)
Net change in short-term borrowings	(166,893)	(64,047)
Proceeds from stock option exercises	13,506	26,567
Purchase of treasury stock	(67,709)	(70)
Cash dividends paid on preferred stock	(6,047)	(6,047)
Cash dividends paid on common stock	(132,132)	(122,721)
Net cash from financing activities	(424,897)	(689,853)
Net change in cash and cash equivalents	(1,047,878)	(1,633,558)
Cash and cash equivalents at beginning of period	3,955,779	5,053,047
Cash and cash equivalents at end of period	\$ 2,907,901	\$ 3,419,489

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, 2018, included in our Annual Report on Form 10-K filed with the SEC on February 6, 2019 (the “2018 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:

	Nine Months Ended September 30,	
	2019	2018
Cash paid for interest	\$ 100,041	\$ 59,764
Cash paid for income taxes	42,352	5,112
Significant non-cash transactions:		
Unsettled purchases/sales of securities	82,064	74,191
Loans foreclosed and transferred to other real estate owned and foreclosed assets	1,302	2,898
Loans to facilitate the sale of other real estate owned	847	—
Right-of-use lease assets obtained in exchange for lessee operating lease liabilities	315,542	—

Accounting Changes, Reclassifications and Restatements. Certain items in prior financial statements have been reclassified to conform to the current presentation. In addition, as of January 1, 2019, we adopted certain accounting standard updates related to accounting for leases (Topic 842 - Leases), primarily Accounting Standards Update (“ASU”) 2016-02 and subsequent updates. Among other things, these updates require lessees to recognize a lease liability, measured on a discounted basis, related to the lessee's obligation to make lease payments arising under a lease contract; and a right-of-use asset related to the lessee's right to use, or control the use of, a specified asset for the lease term. The updates did not significantly change lease accounting requirements applicable to lessors and did not significantly impact our financial statements in relation to contracts whereby we act as a lessor. We adopted the updates using a modified-retrospective transition approach and recognized right-of-use lease assets and related lease liabilities totaling \$170.5 million and \$174.4 million, respectively, as of January 1, 2019. We elected to apply certain practical adoption expedients provided under the updates whereby we did not reassess (i) whether any expired or existing contracts are or contain leases, (ii) the lease classification for any expired or existing leases and (iii) initial direct costs for any existing leases. We did not elect to apply the recognition requirements of the updates to any short-term leases (as discussed below). As of September 30, 2019, right-of-use lease assets and related lease liabilities totaled \$299.5 million and \$325.3 million, respectively. During the

second quarter of 2019, we recognized a right-of-use asset totaling \$121.7 million and a related lease liability totaling \$121.7 million in connection with the commencement of the lease of our new corporate headquarters facility in downtown San Antonio. See Note 6 - Commitments and Contingencies.

We lease certain office facilities and office equipment under operating leases. We also own certain office facilities which we lease to outside parties under operating lessor leases; however, such leases are not significant. We do not apply the recognition requirements of Topic 842 - Leases to short-term operating leases. A short-term operating lease has an original term of 12 months or less and does not have a purchase option that is likely to be exercised. For non-short-term operating leases, we recognized lease right-of-use assets and related lease liabilities on our balance sheet upon commencement of the lease in accordance with Topic 842 - Leases. In recognizing lease right-of-use assets and related lease liabilities, we account for lease and non-lease components (such as taxes, insurance, and common area maintenance costs) separately as such amounts are generally readily determinable under our lease contracts. Lease payments over the expected term are discounted using our incremental borrowing rate referenced to the Federal Home Loan Bank Secure Connect advance rates for borrowings of similar term. We also consider renewal and termination options in the determination of the term of the lease. If it is reasonably certain that a renewal or termination option will be exercised, the effects of such options are included in the determination of the expected lease term. Generally, we cannot be reasonably certain about whether or not we will renew a lease until such time the lease is within the last two years of the existing lease term. However, renewal options related to our regional headquarter facilities or operations centers are evaluated on a case-by-case basis, typically in advance of such time frame. When we are reasonably certain that a renewal option will be exercised, we measure/remeasure the right-of-use asset and related lease liability using the lease payments specified for the renewal period or, if such amounts are unspecified, we generally assume an increase (evaluated on a case-by-case basis in light of prevailing market conditions) in the lease payment over the final period of the existing lease term.

We also adopted ASU 2017-08 "Receivables - Nonrefundable Fees and Other Costs (Subtopic 310-20) - Premium Amortization on Purchased Callable Debt Securities" as of January 1, 2019. 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. Upon adoption, using a modified retrospective transition adoption approach, we recognized a cumulative effect reduction to retained earnings totaling \$14.7 million. We previously reported a cumulative effect reduction of \$12.6 million. During the third quarter of 2019, we retroactively corrected this amount and reduced retained earnings by an additional \$2.1 million. All financial information related to prior periods has been revised to reflect this adjustment. We expect premium amortization expense for 2019 will be approximately \$5.2 million higher than what would have been the case had we continued to amortize the affected securities to their respective maturity dates.

Note 2 - Securities

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

	September 30, 2019				December 31, 2018			
	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	\$ 2,472	\$ 25	\$ 2	\$ 2,495	\$ 2,737	\$ 8	\$ 85	\$ 2,660
States and political subdivisions	1,016,866	26,563	—	1,043,429	1,101,820	11,525	552	1,112,793
Other	1,500	—	1	1,499	1,500	—	—	1,500
Total	\$ 1,020,838	\$ 26,588	\$ 3	\$ 1,047,423	\$ 1,106,057	\$ 11,533	\$ 637	\$ 1,116,953
Available for Sale								
U.S. Treasury	\$ 2,806,802	\$ 20,725	\$ 1,731	\$ 2,825,796	\$ 3,455,417	\$ 1,772	\$ 29,500	\$ 3,427,689
Residential mortgage-backed securities	2,198,466	42,766	780	2,240,452	823,208	13,079	6,547	829,740
States and political subdivisions	6,931,673	380,113	413	7,311,373	7,089,132	70,760	72,690	7,087,202
Other	42,825	—	—	42,825	42,690	—	—	42,690
Total	\$ 11,979,766	\$ 443,604	\$ 2,924	\$ 12,420,446	\$ 11,410,447	\$ 85,611	\$ 108,737	\$ 11,387,321

All mortgage-backed securities included in the above table were issued by U.S. government agencies and corporations. At September 30, 2019, approximately 99.7% of the securities in our municipal bond portfolio were issued by political subdivisions or agencies within the State of Texas, of which approximately 69.3% 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 \$3.6 billion at September 30, 2019 and \$3.8 billion at December 31, 2018.

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 September 30, 2019 totaled \$1.8 million (\$1.4 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 September 30, 2019, 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	\$ —	\$ —	\$ 413	\$ 2	\$ 413	\$ 2
Other	1,499	1	—	—	1,499	1
Total	\$ 1,499	\$ 1	\$ 413	\$ 2	\$ 1,912	\$ 3
Available for Sale						
U.S. Treasury	\$ —	\$ —	\$ 1,722,158	\$ 1,731	\$ 1,722,158	\$ 1,731
Residential mortgage-backed securities	49,657	290	44,458	490	94,115	780
States and political subdivisions	41,619	413	—	—	41,619	413
Total	\$ 91,276	\$ 703	\$ 1,766,616	\$ 2,221	\$ 1,857,892	\$ 2,924

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 September 30, 2019, 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 September 30, 2019, management believes the impairments detailed in the table above are temporary and no impairment loss has been realized in our consolidated income statement.

Contractual Maturities. The amortized cost and estimated fair value of securities, excluding trading securities, at September 30, 2019 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	\$ 25,254	\$ 25,418	\$ 1,882,023	\$ 1,881,435
Due after one year through five years	166,412	170,675	1,328,841	1,356,833
Due after five years through ten years	530,808	543,464	453,192	480,892
Due after ten years	295,892	305,371	6,074,419	6,418,009
Residential mortgage-backed securities	2,472	2,495	2,198,466	2,240,452
Equity securities	—	—	42,825	42,825
Total	\$ 1,020,838	\$ 1,047,423	\$ 11,979,766	\$ 12,420,446

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

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
Proceeds from sales	\$ 4,944,537	\$ 2,948,178	\$ 8,236,066	\$ 13,838,566
Gross realized gains	96	—	899	3
Gross realized losses	—	(34)	(634)	(116)
Tax (expense) benefit of securities gains/losses	(21)	7	(56)	24

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

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
Premium amortization	\$ (29,511)	\$ (27,381)	\$ (88,798)	\$ (80,104)
Discount accretion	1,274	2,569	3,835	6,356
Net (premium amortization) discount accretion	\$ (28,237)	\$ (24,812)	\$ (84,963)	\$ (73,748)

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

	September 30, 2019	December 31, 2018
U.S. Treasury	\$ 23,747	\$ 21,928
States and political subdivisions	3,922	2,158
Total	\$ 27,669	\$ 24,086

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

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
Net gain on sales transactions	\$ 731	\$ 465	\$ 1,789	\$ 1,404
Net mark-to-market gains (losses)	(201)	(8)	(170)	(21)
Net gain (loss) on trading account securities	\$ 530	\$ 457	\$ 1,619	\$ 1,383

Note 3 - Loans

Loans were as follows:

	September 30, 2019	Percentage of Total	December 31, 2018	Percentage of Total
Commercial and industrial	\$ 5,179,780	35.4%	\$ 5,111,957	36.3%
Energy:				
Production	1,282,180	8.7	1,309,314	9.3
Service	189,350	1.3	168,775	1.2
Other	75,388	0.5	124,509	0.9
Total energy	1,546,918	10.5	1,602,598	11.4
Commercial real estate:				
Commercial mortgages	4,555,171	31.1	4,121,966	29.2
Construction	1,370,206	9.4	1,267,717	9.0
Land	290,706	2.0	306,755	2.2
Total commercial real estate	6,216,083	42.5	5,696,438	40.4
Consumer real estate:				
Home equity loans	363,224	2.5	353,924	2.5
Home equity lines of credit	350,461	2.4	337,168	2.4
Other	458,618	3.1	427,898	3.0
Total consumer real estate	1,172,303	8.0	1,118,990	7.9
Total real estate	7,388,386	50.5	6,815,428	48.3
Consumer and other	519,844	3.6	569,750	4.0
Total loans	\$ 14,634,928	100.0%	\$ 14,099,733	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 September 30, 2019, there were no concentrations of loans related to any single industry in excess of 10% of total loans other than energy loans, which totaled 10.5% of total loans. Unfunded commitments to extend credit and standby letters of credit issued to customers in the energy industry totaled \$1.3 billion and \$66.1 million, respectively, as of September 30, 2019.

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 September 30, 2019 or December 31, 2018.

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 \$326.1 million at September 30, 2019 and \$256.1 million at December 31, 2018.

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

	September 30, 2019	December 31, 2018
Commercial and industrial	\$ 13,929	\$ 9,239
Energy	70,883	46,932
Commercial real estate:		
Buildings, land and other	9,240	15,268
Construction	697	—
Consumer real estate	527	892
Consumer and other	2,170	1,408
Total	\$ 97,446	\$ 73,739

Had non-accrual loans performed in accordance with their original contract terms, we would have recognized additional interest income, net of tax, of approximately \$0.9 million and \$3.0 million for the three and nine months ended September 30, 2019, compared to \$1.3 million and \$4.2 million for the three and nine months ended September 30, 2018.

An age analysis of past due loans (including both accruing and non-accruing loans), segregated by class of loans, as of September 30, 2019 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	\$ 39,540	\$ 13,622	\$ 53,162	\$ 5,126,618	\$ 5,179,780	\$ 3,574
Energy	3,350	21,836	25,186	1,521,732	1,546,918	530
Commercial real estate:						
Buildings, land and other	29,147	8,279	37,426	4,808,451	4,845,877	6,513
Construction	1,412	1,471	2,883	1,367,323	1,370,206	774
Consumer real estate	8,305	2,443	10,748	1,161,555	1,172,303	2,150
Consumer and other	7,815	2,419	10,234	509,610	519,844	855
Total	<u>\$ 89,569</u>	<u>\$ 50,070</u>	<u>\$ 139,639</u>	<u>\$ 14,495,289</u>	<u>\$ 14,634,928</u>	<u>\$ 14,396</u>

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
September 30, 2019					
Commercial and industrial	\$ 15,020	\$ 4,874	\$ 7,280	\$ 12,154	\$ 5,785
Energy	88,531	4,777	65,800	70,577	19,722
Commercial real estate:					
Buildings, land and other	9,553	3,864	5,015	8,879	1,483
Construction	697	697	—	697	—
Consumer real estate	293	293	—	293	—
Consumer and other	2,171	—	2,170	2,170	2,170
Total	<u>\$ 116,265</u>	<u>\$ 14,505</u>	<u>\$ 80,265</u>	<u>\$ 94,770</u>	<u>\$ 29,160</u>
December 31, 2018					
Commercial and industrial	\$ 9,094	\$ 2,842	\$ 4,287	\$ 7,129	\$ 2,558
Energy	67,900	6,817	39,890	46,707	9,671
Commercial real estate:					
Buildings, land and other	15,774	2,168	12,517	14,685	2,599
Construction	—	—	—	—	—
Consumer real estate	293	293	—	293	—
Consumer and other	1,475	—	1,407	1,407	1,407
Total	<u>\$ 94,536</u>	<u>\$ 12,120</u>	<u>\$ 58,101</u>	<u>\$ 70,221</u>	<u>\$ 16,235</u>

The average recorded investment in impaired loans was as follows:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
Commercial and industrial	\$ 14,438	\$ 13,447	\$ 12,552	\$ 21,025
Energy	55,195	78,772	50,642	82,640
Commercial real estate:				
Buildings, land and other	9,418	14,306	14,961	12,328
Construction	349	—	277	—
Consumer real estate	293	671	541	807
Consumer and other	1,795	1,073	1,605	805
Total	<u>\$ 81,488</u>	<u>\$ 108,269</u>	<u>\$ 80,578</u>	<u>\$ 117,605</u>

Troubled Debt Restructurings. Troubled debt restructurings during the nine months ended September 30, 2019 and September 30, 2018 are set forth in the following table.

	Nine Months Ended September 30, 2019		Nine Months Ended September 30, 2018	
	Balance at Restructure	Balance at Period-End	Balance at Restructure	Balance at Period-End
Commercial and industrial	\$ 3,845	\$ 2,188	\$ 2,203	\$ —
Energy	—	—	13,708	—
Commercial real estate:				
Buildings, land and other	9,456	9,494	—	—
Consumer real estate	124	123	—	—
	<u>\$ 13,425</u>	<u>\$ 11,805</u>	<u>\$ 15,911</u>	<u>\$ —</u>

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 as of or for the three months ended September 30, 2019 and September 30, 2018 is set forth in the following table.

	September 30, 2019	September 30, 2018
Restructured loans past due in excess of 90 days at period-end:		
Number of loans	4	—
Dollar amount of loans	\$ 3,244	\$ —
Restructured loans on non-accrual status at period end	5,645	—
Charge-offs of restructured loans:		
Recognized in connection with restructuring	1,500	—
Recognized on previously restructured loans	—	4,650
Proceeds from sale of restructured loans	—	15,750

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 2018 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.

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

	September 30, 2019		December 31, 2018	
	Weighted Average Risk Grade	Loans	Weighted Average Risk Grade	Loans
Commercial and industrial:				
Risk grades 1-8	6.19	\$ 4,856,712	6.12	\$ 4,862,275
Risk grade 9	9.00	165,195	9.00	112,431
Risk grade 10	10.00	75,276	10.00	58,328
Risk grade 11	11.00	68,668	11.00	69,684
Risk grade 12	12.00	8,144	12.00	6,681
Risk grade 13	13.00	5,785	13.00	2,558
Total	6.42	\$ 5,179,780	6.30	\$ 5,111,957
Energy				
Risk grades 1-8	5.85	\$ 1,379,566	5.76	\$ 1,451,673
Risk grade 9	9.00	80,170	9.00	35,565
Risk grade 10	10.00	1,105	10.00	43,001
Risk grade 11	11.00	15,194	11.00	25,427
Risk grade 12	12.00	51,161	12.00	37,261
Risk grade 13	13.00	19,722	13.00	9,671
Total	6.36	\$ 1,546,918	6.22	\$ 1,602,598
Commercial real estate:				
Buildings, land and other				
Risk grades 1-8	6.78	\$ 4,528,963	6.76	\$ 4,143,264
Risk grade 9	9.00	117,739	9.00	109,660
Risk grade 10	10.00	97,083	10.00	62,353
Risk grade 11	11.00	92,852	11.00	98,176
Risk grade 12	12.00	7,757	12.00	12,669
Risk grade 13	13.00	1,483	13.00	2,599
Total	6.99	\$ 4,845,877	6.98	\$ 4,428,721
Construction				
Risk grades 1-8	7.19	\$ 1,314,076	7.13	\$ 1,177,260
Risk grade 9	9.00	31,506	9.00	60,754
Risk grade 10	10.00	21,686	10.00	24,877
Risk grade 11	11.00	2,241	11.00	4,826
Risk grade 12	12.00	697	12.00	—
Risk grade 13	13.00	—	13.00	—
Total	7.28	\$ 1,370,206	7.29	\$ 1,267,717

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

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
Commercial and industrial	\$ (1,520)	\$ (7,807)	\$ (5,912)	\$ (19,030)
Energy	(1,260)	(5,347)	(3,184)	(10,272)
Commercial real estate:				
Buildings, land and other	38	33	(466)	(288)
Construction	8	3	14	11
Consumer real estate	(103)	(388)	(2,078)	(1,078)
Consumer and other	(3,534)	(1,792)	(9,351)	(4,975)
Total	\$ (6,371)	\$ (15,298)	\$ (20,977)	\$ (35,632)

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 2018 Form 10-K, totaled 128.1 at September 30, 2019 and 126.4 at December 31, 2018. 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 2018 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 September 30, 2019 and December 31, 2018 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
September 30, 2019						
Historical valuation allowances	\$ 28,872	\$ 7,422	\$ 22,051	\$ 2,641	\$ 7,545	\$ 68,531
Specific valuation allowances	5,785	19,722	1,483	—	2,170	29,160
General valuation allowances	10,866	4,120	4,349	1,172	(325)	20,182
Macroeconomic valuation allowances	7,144	2,082	7,470	1,071	919	18,686
Total	<u>\$ 52,667</u>	<u>\$ 33,346</u>	<u>\$ 35,353</u>	<u>\$ 4,884</u>	<u>\$ 10,309</u>	<u>\$ 136,559</u>
Allocated to loans:						
Individually evaluated	\$ 5,785	\$ 19,722	\$ 1,483	\$ —	\$ 2,170	\$ 29,160
Collectively evaluated	46,882	13,624	33,870	4,884	8,139	107,399
Total	<u>\$ 52,667</u>	<u>\$ 33,346</u>	<u>\$ 35,353</u>	<u>\$ 4,884</u>	<u>\$ 10,309</u>	<u>\$ 136,559</u>
December 31, 2018						
Historical valuation allowances	\$ 25,351	\$ 9,697	\$ 20,817	\$ 2,688	\$ 6,845	\$ 65,398
Specific valuation allowances	2,558	9,671	2,599	—	1,407	16,235
General valuation allowances	10,062	6,014	4,366	1,671	(13)	22,100
Macroeconomic valuation allowances	10,609	3,670	10,995	1,744	1,381	28,399
Total	<u>\$ 48,580</u>	<u>\$ 29,052</u>	<u>\$ 38,777</u>	<u>\$ 6,103</u>	<u>\$ 9,620</u>	<u>\$ 132,132</u>
Allocated to loans:						
Individually evaluated	\$ 2,558	\$ 9,671	\$ 2,599	\$ —	\$ 1,407	\$ 16,235
Collectively evaluated	46,022	19,381	36,178	6,103	8,213	115,897
Total	<u>\$ 48,580</u>	<u>\$ 29,052</u>	<u>\$ 38,777</u>	<u>\$ 6,103</u>	<u>\$ 9,620</u>	<u>\$ 132,132</u>

Our recorded investment in loans as of September 30, 2019 and December 31, 2018 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
September 30, 2019						
Individually evaluated	\$ 12,154	\$ 70,577	\$ 9,576	\$ 293	\$ 2,170	\$ 94,770
Collectively evaluated	5,167,626	1,476,341	6,206,507	1,172,010	517,674	14,540,158
Total	<u>\$ 5,179,780</u>	<u>\$ 1,546,918</u>	<u>\$ 6,216,083</u>	<u>\$ 1,172,303</u>	<u>\$ 519,844</u>	<u>\$ 14,634,928</u>
December 31, 2018						
Individually evaluated	\$ 7,129	\$ 46,707	\$ 14,685	\$ 293	\$ 1,407	\$ 70,221
Collectively evaluated	5,104,828	1,555,891	5,681,753	1,118,697	568,343	14,029,512
Total	<u>\$ 5,111,957</u>	<u>\$ 1,602,598</u>	<u>\$ 5,696,438</u>	<u>\$ 1,118,990</u>	<u>\$ 569,750</u>	<u>\$ 14,099,733</u>

The following table details activity in the allowance for loan losses by portfolio segment for the three and nine months ended September 30, 2019 and 2018. 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:						
September 30, 2019						
Beginning balance	\$ 57,714	\$ 25,818	\$ 35,914	\$ 5,637	\$ 9,846	\$ 134,929
Provision for loan losses	(3,527)	8,788	(607)	(650)	3,997	8,001
Charge-offs	(2,705)	(2,000)	—	(557)	(6,357)	(11,619)
Recoveries	1,185	740	46	454	2,823	5,248
Net charge-offs	<u>(1,520)</u>	<u>(1,260)</u>	<u>46</u>	<u>(103)</u>	<u>(3,534)</u>	<u>(6,371)</u>
Ending balance	<u>\$ 52,667</u>	<u>\$ 33,346</u>	<u>\$ 35,353</u>	<u>\$ 4,884</u>	<u>\$ 10,309</u>	<u>\$ 136,559</u>
September 30, 2018						
Beginning balance	\$ 57,713	\$ 37,313	\$ 38,918	\$ 6,336	\$ 9,946	\$ 150,226
Provision for loan losses	1,085	(521)	250	246	1,590	2,650
Charge-offs	(8,491)	(5,400)	—	(431)	(4,274)	(18,596)
Recoveries	684	53	36	43	2,482	3,298
Net charge-offs	<u>(7,807)</u>	<u>(5,347)</u>	<u>36</u>	<u>(388)</u>	<u>(1,792)</u>	<u>(15,298)</u>
Ending balance	<u>\$ 50,991</u>	<u>\$ 31,445</u>	<u>\$ 39,204</u>	<u>\$ 6,194</u>	<u>\$ 9,744</u>	<u>\$ 137,578</u>
Nine months ended:						
September 30, 2019						
Beginning balance	\$ 48,580	\$ 29,052	\$ 38,777	\$ 6,103	\$ 9,620	\$ 132,132
Provision for loan losses	9,999	7,478	(2,972)	859	10,040	25,404
Charge-offs	(8,782)	(4,000)	(617)	(2,936)	(17,157)	(33,492)
Recoveries	2,870	816	165	858	7,806	12,515
Net charge-offs	<u>(5,912)</u>	<u>(3,184)</u>	<u>(452)</u>	<u>(2,078)</u>	<u>(9,351)</u>	<u>(20,977)</u>
Ending balance	<u>\$ 52,667</u>	<u>\$ 33,346</u>	<u>\$ 35,353</u>	<u>\$ 4,884</u>	<u>\$ 10,309</u>	<u>\$ 136,559</u>
September 30, 2018						
Beginning balance	\$ 59,614	\$ 51,528	\$ 30,948	\$ 5,657	\$ 7,617	\$ 155,364
Provision for loan losses	10,407	(9,811)	8,533	1,615	7,102	17,846
Charge-offs	(21,896)	(10,939)	(619)	(1,632)	(12,240)	(47,326)
Recoveries	2,866	667	342	554	7,265	11,694
Net charge-offs	<u>(19,030)</u>	<u>(10,272)</u>	<u>(277)</u>	<u>(1,078)</u>	<u>(4,975)</u>	<u>(35,632)</u>
Ending balance	<u>\$ 50,991</u>	<u>\$ 31,445</u>	<u>\$ 39,204</u>	<u>\$ 6,194</u>	<u>\$ 9,744</u>	<u>\$ 137,578</u>

Note 4 - Goodwill and Other Intangible Assets

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

	September 30, 2019	December 31, 2018
Goodwill	\$ 654,952	\$ 654,952
Other intangible assets:		
Core deposits	\$ 2,254	\$ 2,959
Customer relationships	491	672
Non-compete agreements	—	18
	<u>\$ 2,745</u>	<u>\$ 3,649</u>

The estimated aggregate future amortization expense for intangible assets remaining as of September 30, 2019 is as follows:

Remainder of 2019	\$ 263
2020	919
2021	697
2022	481
2023	283
Thereafter	102
	<u>\$ 2,745</u>

Note 5 - Deposits

Deposits were as follows:

	September 30, 2019	Percentage of Total	December 31, 2018	Percentage of Total
Non-interest-bearing demand deposits:				
Commercial and individual	\$ 10,070,621	37.2%	\$ 10,305,850	37.9%
Correspondent banks	258,981	1.0	235,748	0.9
Public funds	420,642	1.5	455,896	1.7
Total non-interest-bearing demand deposits	<u>10,750,244</u>	<u>39.7</u>	<u>10,997,494</u>	<u>40.5</u>
Interest-bearing deposits:				
Private accounts:				
Savings and interest checking	6,741,340	24.9	6,977,813	25.7
Money market accounts	7,960,223	29.4	7,777,470	28.6
Time accounts of \$100,000 or more	707,657	2.6	526,789	2.0
Time accounts under \$100,000	346,440	1.3	331,511	1.2
Total private accounts	<u>15,755,660</u>	<u>58.2</u>	<u>15,613,583</u>	<u>57.5</u>
Public funds:				
Savings and interest checking	483,303	1.8	473,754	1.8
Money market accounts	68,321	0.2	59,953	0.2
Time accounts of \$100,000 or more	25,922	0.1	4,332	—
Time accounts under \$100,000	132	—	88	—
Total public funds	<u>577,678</u>	<u>2.1</u>	<u>538,127</u>	<u>2.0</u>
Total interest-bearing deposits	<u>16,333,338</u>	<u>60.3</u>	<u>16,151,710</u>	<u>59.5</u>
Total deposits	<u>\$ 27,083,582</u>	<u>100.0%</u>	<u>\$ 27,149,204</u>	<u>100.0%</u>

The following table presents additional information about our deposits:

	September 30, 2019	December 31, 2018
Deposits from the Certificate of Deposit Account Registry Service (CDARS) deposits	\$ 358	\$ —
Deposits from foreign sources (primarily Mexico)	776,490	752,658
Deposits not covered by deposit insurance	12,681,664	13,111,210

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 2018 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:

	September 30, 2019	December 31, 2018
Commitments to extend credit	\$ 9,036,441	\$ 8,369,721
Standby letters of credit	283,821	271,575
Deferred standby letter of credit fees	1,547	2,069

Lease Commitments. We lease certain office facilities and office equipment under operating leases. Rent expense for all operating leases totaled \$11.7 million and \$30.0 million during the three and nine months ended September 30, 2019 and \$8.1 million and \$24.4 million during the three and nine months ended September 30, 2018. On January 1, 2019, we adopted a new accounting standard which required the recognition of our operating leases on our balance sheet. See Note 1 - Significant Accounting Policies. As of September 30, 2019, right-of-use lease assets and related lease liabilities totaled \$299.5 million and \$325.3 million, respectively, and are included with premises and equipment and accrued interest payable and other liabilities, respectively, on our accompanying consolidated balance sheet. During the second quarter of 2019, we recognized a right-of-use asset totaling \$121.7 million and a related lease liability totaling \$121.7 million in connection with the commencement of the lease of our new corporate headquarters facility in downtown San Antonio. There has been no significant change in our expected future minimum lease payments since December 31, 2018. See the 2018 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 September 30, 2019 and December 31, 2018 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 September 30, 2019 or December 31, 2018.

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 September 30, 2019 and December 31, 2018.

The following tables present actual and required capital ratios as of September 30, 2019 and December 31, 2018 for Cullen/Frost and Frost Bank under the Basel III Capital Rules. The Basel III Capital Rules became fully phased-in on January 1, 2019. The minimum required capital amounts presented as of December 31, 2018 include the minimum required capital levels applicable as of that date as well as the minimum required capital levels as of January 1, 2019 when the Basel III Capital Rules became 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 2018 Form 10-K for a more detailed discussion of the Basel III Capital Rules. After a review of risk-weight classifications during the first quarter of 2019, risk-weightings for certain loans were reclassified. Amounts reported as of December 31, 2018 have been revised to reflect these reclassifications.

			Actual		Minimum Capital Required - Basel III		Required to be Considered Well Capitalized			
			Capital Amount	Ratio	Capital Amount	Ratio	Capital Amount	Ratio		
September 30, 2019										
Common Equity Tier 1 to Risk-Weighted Assets										
Cullen/Frost			\$ 2,788,313	12.35%	\$ 1,580,199	7.00%	\$ 1,467,328	6.50%		
Frost Bank			2,910,446	12.92	1,576,393	7.00	1,463,794	6.50		
Tier 1 Capital to Risk-Weighted Assets										
Cullen/Frost			2,932,799	12.99	1,918,813	8.50	1,805,942	8.00		
Frost Bank			2,910,446	12.92	1,914,192	8.50	1,801,593	8.00		
Total Capital to Risk-Weighted Assets										
Cullen/Frost			3,302,858	14.63	2,370,298	10.50	2,257,427	10.00		
Frost Bank			3,047,505	13.53	2,364,590	10.50	2,251,991	10.00		
Leverage Ratio										
Cullen/Frost			2,932,798	9.36	1,252,781	4.00	1,565,976	5.00		
Frost Bank			2,910,446	9.30	1,251,713	4.00	1,564,642	5.00		
			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, 2018										
Common Equity Tier 1 to Risk-Weighted Assets										
Cullen/Frost	\$ 2,642,475	12.27%	\$ 1,372,573	6.375%	\$ 1,507,139	7.00%	\$ 1,358,171	6.50%		
Frost Bank	2,743,973	12.78	1,368,701	6.375	1,502,887	7.00	1,354,222	6.50		
Tier 1 Capital to Risk- Weighted Assets										
Cullen/Frost	2,786,961	12.94	1,695,532	7.875	1,830,098	8.50	1,671,595	8.00		
Frost Bank	2,743,973	12.78	1,690,748	7.875	1,824,934	8.50	1,666,735	8.00		
Total Capital to Risk-Weighted Assets										
Cullen/Frost	3,152,593	14.64	2,126,143	9.875	2,260,709	10.50	2,089,494	10.00		
Frost Bank	2,876,605	13.40	2,120,144	9.875	2,254,331	10.50	2,083,419	10.00		
Leverage Ratio										
Cullen/Frost	2,786,961	9.06	1,231,028	4.00	1,231,028	4.00	1,538,785	5.00		
Frost Bank	2,743,973	8.93	1,229,650	4.00	1,229,650	4.00	1,537,062	5.00		

As of September 30, 2019, capital levels at Cullen/Frost and Frost Bank exceed all capital adequacy requirements under the fully phased-in Basel III Capital Rules. Based on the ratios presented above, capital levels as of September 30, 2019 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 September 30, 2019, 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. We repurchased 496,307 shares at a total cost of \$50.0 million under this plan during the second quarter of 2019 and 1,027,292 shares at a total cost of \$100.0 million during the fourth quarter of 2018. On July 24, 2019, our board of directors authorized a \$100.0 million stock repurchase program, allowing us to repurchase shares of our common stock over a one-year period from time to time at various prices in the open market or through private transactions. We repurchased 202,724 shares at a total cost of \$17.2 million under this plan during the third quarter of 2019. Under the Basel III Capital Rules, Cullen/Frost may not repurchase or redeem any of its preferred stock or subordinated notes and, in some cases, its common stock without the prior approval of the Federal Reserve Board.

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, including to repurchase its common stock. 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 September 30, 2019, Frost Bank could pay aggregate dividends of up to \$633.8 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.

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 2018 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 September 30, 2019 and December 31, 2018.

	September 30, 2019		December 31, 2018	
	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	\$ 5,583	\$ 15	\$ 10,941	\$ 207
Loan/lease interest rate swaps – liabilities	6,356	(179)	3,885	(199)
Non-hedging interest rate derivatives:				
Financial institution counterparties:				
Loan/lease interest rate swaps – assets	94,855	65	496,887	2,384
Loan/lease interest rate swaps – liabilities	1,008,173	(24,268)	691,143	(8,921)
Loan/lease interest rate caps – assets	102,634	233	122,791	509
Customer counterparties:				
Loan/lease interest rate swaps – assets	1,008,173	55,529	691,143	16,706
Loan/lease interest rate swaps – liabilities	94,855	(175)	496,887	(8,891)
Loan/lease interest rate caps – liabilities	102,634	(233)	122,791	(509)

The weighted-average rates paid and received for interest rate swaps outstanding at September 30, 2019 were as follows:

	Weighted-Average	
	Interest Rate Paid	Interest Rate Received
Interest rate swaps:		
Fair value hedge loan/lease interest rate swaps	2.33%	2.05%
Non-hedging interest rate swaps – financial institution counterparties	4.17	3.71
Non-hedging interest rate swaps – customer counterparties	3.71	4.17

The weighted-average strike rate for outstanding interest rate caps was 3.16% at September 30, 2019.

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.

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.

		September 30, 2019		December 31, 2018	
	Notional Units	Notional Amount	Estimated Fair Value	Notional Amount	Estimated Fair Value
Financial institution counterparties:					
Oil – assets	Barrels	2,280	\$ 12,884	2,416	\$ 24,332
Oil – liabilities	Barrels	727	(1,363)	415	(646)
Natural gas – assets	MMBTUs	8,716	2,053	5,745	417
Natural gas – liabilities	MMBTUs	3,439	(191)	9,314	(1,272)
Customer counterparties:					
Oil – assets	Barrels	730	1,392	415	646
Oil – liabilities	Barrels	2,277	(12,572)	2,416	(24,009)
Natural gas – assets	MMBTUs	3,543	205	10,236	1,373
Natural gas – liabilities	MMBTUs	8,613	(1,960)	4,823	(393)

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:

		September 30, 2019		December 31, 2018	
	Notional Currency	Notional Amount	Estimated Fair Value	Notional Amount	Estimated Fair Value
Financial institution counterparties:					
Forward contracts – liabilities	CAD	5,283	\$ (11)	11,003	\$ (13)
Forward contracts – liabilities	GBP	—	—	142	(2)
Forward contracts – liabilities	MXN	—	—	3,015	(132)
Customer counterparties:					
Forward contracts – assets	CAD	5,271	24	10,979	40
Forward contracts – assets	GBP	—	—	145	4
Forward contracts – assets	MXN	—	—	3,000	149

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.

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 September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
Commercial loan/lease interest rate swaps:				
Amount of gain (loss) included in interest income on loans	\$ 24	\$ 12	\$ 78	\$ 1
Amount of (gain) loss included in other non-interest expense	(1)	—	—	(1)

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 September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
Non-hedging interest rate derivatives:				
Other non-interest income	\$ 215	\$ 699	\$ 1,188	\$ 2,889
Other non-interest expense	—	2	—	(2)
Non-hedging commodity derivatives:				
Other non-interest income	109	456	322	492
Non-hedging foreign currency derivatives:				
Other non-interest income	12	53	41	203

Counterparty Credit Risk. Our credit exposure relating to interest rate swaps, commodity swaps/options and foreign currency forward contracts with bank customers was approximately \$55.4 million at September 30, 2019. 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 \$18.6 million at September 30, 2019. This amount was primarily related to initial margin payments to the CME and 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. At September 30, 2019, we had \$32.1 million in cash collateral related to derivative contracts on deposit with other financial institution counterparties.

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 September 30, 2019 is presented in the following tables.

	Gross Amount Recognized	Gross Amount Offset	Net Amount Recognized
September 30, 2019			
Financial assets:			
Derivatives:			
Loan/lease interest rate swaps and caps	\$ 313	\$ —	\$ 313
Commodity swaps and options	14,937	—	14,937
Foreign currency forward contracts	—	—	—
Total derivatives	15,250	—	15,250
Resell agreements	11,299	—	11,299
Total	\$ 26,549	\$ —	\$ 26,549
Financial liabilities:			
Derivatives:			
Loan/lease interest rate swaps	\$ 24,447	\$ —	\$ 24,447
Commodity swaps and options	1,554	—	1,554
Foreign currency forward contracts	11	—	11
Total derivatives	26,012	—	26,012
Repurchase agreements	1,187,355	—	1,187,355
Total	\$ 1,213,367	\$ —	\$ 1,213,367

	Net Amount Recognized	Gross Amounts Not Offset		Net Amount
		Financial Instruments	Collateral	
September 30, 2019				
Financial assets:				
Derivatives:				
Counterparty A	\$ 38	\$ (38)	\$ —	\$ —
Counterparty B	4,344	(4,344)	—	—
Counterparty C	8	(8)	—	—
Other counterparties	10,860	(5,503)	(2,880)	2,477
Total derivatives	15,250	(9,893)	(2,880)	2,477
Resell agreements	11,299	—	(11,299)	—
Total	<u>\$ 26,549</u>	<u>\$ (9,893)</u>	<u>\$ (14,179)</u>	<u>\$ 2,477</u>
Financial liabilities:				
Derivatives:				
Counterparty A	\$ 6,192	\$ (38)	\$ (6,154)	\$ —
Counterparty B	7,810	(4,344)	(3,466)	—
Counterparty C	164	(8)	(156)	—
Other counterparties	11,846	(5,503)	(6,259)	84
Total derivatives	26,012	(9,893)	(16,035)	84
Repurchase agreements	1,187,355	—	(1,187,355)	—
Total	<u>\$ 1,213,367</u>	<u>\$ (9,893)</u>	<u>\$ (1,203,390)</u>	<u>\$ 84</u>

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

	Gross Amount Recognized	Gross Amount Offset	Net Amount Recognized
December 31, 2018			
Financial assets:			
Derivatives:			
Loan/lease interest rate swaps and caps	\$ 3,100	\$ —	\$ 3,100
Commodity swaps and options	24,749	—	24,749
Foreign currency forward contracts	—	—	—
Total derivatives	27,849	—	27,849
Resell agreements	11,642	—	11,642
Total	<u>\$ 39,491</u>	<u>\$ —</u>	<u>\$ 39,491</u>
Financial liabilities:			
Derivatives:			
Loan/lease interest rate swaps	\$ 9,120	\$ —	\$ 9,120
Commodity swaps and options	1,918	—	1,918
Foreign currency forward contracts	147	—	147
Total derivatives	11,185	—	11,185
Repurchase agreements	1,360,298	—	1,360,298
Total	<u>\$ 1,371,483</u>	<u>\$ —</u>	<u>\$ 1,371,483</u>

		Gross Amounts Not Offset		
	Net Amount Recognized	Financial Instruments	Collateral	Net Amount
December 31, 2018				
Financial assets:				
Derivatives:				
Counterparty A	\$ 598	\$ (598)	\$ —	\$ —
Counterparty B	7,255	(3,380)	(3,875)	—
Counterparty C	81	(81)	—	—
Other counterparties	19,915	(2,084)	(17,776)	55
Total derivatives	27,849	(6,143)	(21,651)	55
Resell agreements	11,642	—	(11,642)	—
Total	\$ 39,491	\$ (6,143)	\$ (33,293)	\$ 55
Financial liabilities:				
Derivatives:				
Counterparty A	\$ 4,293	\$ (598)	\$ (3,651)	\$ 44
Counterparty B	3,380	(3,380)	—	—
Counterparty C	326	(81)	(245)	—
Other counterparties	3,186	(2,084)	(725)	377
Total derivatives	11,185	(6,143)	(4,621)	421
Repurchase agreements	1,360,298	—	(1,360,298)	—
Total	\$ 1,371,483	\$ (6,143)	\$ (1,364,919)	\$ 421

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 September 30, 2019 and December 31, 2018 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	
September 30, 2019						
Repurchase agreements:						
U.S. Treasury	\$ 162,566	\$ 2,550	\$ —	\$ —	\$ 165,116	
Residential mortgage-backed securities	1,022,239	—	—	—	1,022,239	
Total borrowings	<u>\$ 1,184,805</u>	<u>\$ 2,550</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 1,187,355</u>	
Gross amount of recognized liabilities for repurchase agreements					<u>\$ 1,187,355</u>	
Amounts related to agreements not included in offsetting disclosures above					<u>\$ —</u>	
December 31, 2018						
Repurchase agreements:						
U.S. Treasury	\$ 1,334,063	\$ —	\$ —	\$ —	\$ 1,334,063	
Residential mortgage-backed securities	26,235	—	—	—	26,235	
Total borrowings	<u>\$ 1,360,298</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 1,360,298</u>	
Gross amount of recognized liabilities for repurchase agreements					<u>\$ 1,360,298</u>	
Amounts related to agreements not included in offsetting disclosures above					<u>\$ —</u>	

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 September 30, 2019, there were 1,277,578 shares remaining available for grant for future stock-based compensation awards.

	Director Deferred Stock Units Outstanding		Non-Vested Stock Awards/Stock Units Outstanding		Performance Stock Units Outstanding		Stock Options 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, 2019	48,910	\$ 71.14	383,797	\$ 85.59	125,809	\$ 82.55	2,352,008	\$ 63.55
Authorized	—	—	—	—	—	—	—	—
Granted	7,592	102.70	1,957	91.96	—	—	—	—
Exercised/vested	(1,132)	106.03	(17,800)	65.11	—	—	(236,252)	57.17
Forfeited/expired	—	—	(11,850)	89.29	—	—	(11,000)	65.11
Balance, September 30, 2019	<u>55,370</u>	<u>\$ 74.76</u>	<u>356,104</u>	<u>\$ 86.53</u>	<u>125,809</u>	<u>\$ 82.55</u>	<u>2,104,756</u>	<u>\$ 64.26</u>

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 September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
New shares issued from available authorized shares	—	—	—	—
Issued from available treasury stock	71,284	19,232	225,184	447,831
Total	<u>71,284</u>	<u>19,232</u>	<u>225,184</u>	<u>447,831</u>

Proceeds from stock option exercises	\$ 5,665	\$ 1,119	\$ 13,506	\$ 26,567
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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 September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
Stock options	\$ 330	\$ 960	\$ 1,091	\$ 3,064
Non-vested stock awards/stock units	1,536	1,357	5,727	4,196
Director deferred stock units	—	—	780	720
Performance stock units	809	479	3,095	1,576
Total	<u>\$ 2,675</u>	<u>\$ 2,796</u>	<u>\$ 10,693</u>	<u>\$ 9,556</u>
Income tax benefit	<u>\$ 452</u>	<u>\$ 587</u>	<u>\$ 1,768</u>	<u>\$ 2,007</u>

Unrecognized stock-based compensation expense at September 30, 2019 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	\$ 96
Non-vested stock awards/stock units	11,196
Performance stock units	3,432
Total	<u>\$ 14,724</u>

Note 11 - Earnings Per Common Share

Earnings per common share is computed using the two-class method as more fully described in our 2018 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 September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
Net income	\$ 111,836	\$ 117,844	\$ 339,918	\$ 335,665
Less: Preferred stock dividends	2,016	2,016	6,047	6,047
Net income available to common shareholders	109,820	115,828	333,871	329,618
Less: Earnings allocated to participating securities	876	750	2,761	2,178
Net earnings allocated to common stock	<u>\$ 108,944</u>	<u>\$ 115,078</u>	<u>\$ 331,110</u>	<u>\$ 327,440</u>
Distributed earnings allocated to common stock	\$ 44,370	\$ 42,811	\$ 131,069	\$ 121,907
Undistributed earnings allocated to common stock	64,574	72,267	200,041	205,533
Net earnings allocated to common stock	<u>\$ 108,944</u>	<u>\$ 115,078</u>	<u>\$ 331,110</u>	<u>\$ 327,440</u>
Weighted-average shares outstanding for basic earnings per common share	62,566,128	63,892,023	62,786,501	63,793,514
Dilutive effect of stock compensation	592,866	1,022,168	725,911	1,037,043
Weighted-average shares outstanding for diluted earnings per common share	<u>63,158,994</u>	<u>64,914,191</u>	<u>63,512,412</u>	<u>64,830,557</u>

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 September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
Expected return on plan assets, net of expenses	\$ (2,693)	\$ (2,979)	\$ (8,079)	\$ (8,937)
Interest cost on projected benefit obligation	1,618	1,475	4,854	4,424
Net amortization and deferral	1,406	1,250	4,218	3,751
Net periodic expense (benefit)	<u>\$ 331</u>	<u>\$ (254)</u>	<u>\$ 993</u>	<u>\$ (762)</u>

Our non-qualified defined benefit pension plan is not funded. No contributions to the qualified defined benefit pension plan were made during the nine months ended September 30, 2019. We do not expect to make any contributions to the qualified defined benefit plan during the remainder of 2019.

Note 13 - Income Taxes

Income tax expense was as follows:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
Current income tax expense (benefit)	\$ 14,480	\$ (1,152)	\$ 43,984	\$ 955
Deferred income tax expense (benefit)	(950)	16,312	(1,625)	39,198
Income tax expense, as reported	<u>\$ 13,530</u>	<u>\$ 15,160</u>	<u>\$ 42,359</u>	<u>\$ 40,153</u>
Effective tax rate	<u>10.8%</u>	<u>11.4%</u>	<u>11.1%</u>	<u>10.7%</u>

We had a net deferred tax liability totaling \$76.7 million at September 30, 2019 and a net deferred tax asset totaling \$19.8 million at December 31, 2018. The change in net deferred taxes was primarily related to unrealized gains on available-for-sale securities during the nine months ended September 30, 2019. No valuation allowance for deferred tax assets was recorded at September 30, 2019 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 the comparable periods 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 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 2016.

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 September 30, 2019			Three Months Ended September 30, 2018		
	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	\$ 107,786	\$ 22,635	\$ 85,151	\$ (96,147)	\$ (20,190)	\$ (75,957)
Change in net unrealized gain on securities transferred to held to maturity	(305)	(64)	(241)	(3,764)	(790)	(2,974)
Reclassification adjustment for net (gains) losses included in net income	(97)	(21)	(76)	34	7	27
Total securities available for sale and transferred securities	107,384	22,550	84,834	(99,877)	(20,973)	(78,904)
Defined-benefit post-retirement benefit plans:						
Reclassification adjustment for net amortization of actuarial gain/loss included in net income as a component of net periodic cost (benefit)	1,406	295	1,111	1,250	262	988
Total defined-benefit post-retirement benefit plans	1,406	295	1,111	1,250	262	988
Total other comprehensive income (loss)	<u>\$ 108,790</u>	<u>\$ 22,845</u>	<u>\$ 85,945</u>	<u>\$ (98,627)</u>	<u>\$ (20,711)</u>	<u>\$ (77,916)</u>
	Nine Months Ended September 30, 2019			Nine Months Ended September 30, 2018		
	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	\$ 464,072	\$ 97,455	\$ 366,617	\$ (286,935)	\$ (60,256)	\$ (226,679)
Change in net unrealized gain on securities transferred to held to maturity	(957)	(201)	(756)	(8,424)	(1,769)	(6,655)
Reclassification adjustment for net (gains) losses included in net income	(266)	(56)	(210)	113	24	89
Total securities available for sale and transferred securities	462,849	97,198	365,651	(295,246)	(62,001)	(233,245)
Defined-benefit post-retirement benefit plans:						
Reclassification adjustment for net amortization of actuarial gain/loss included in net income as a component of net periodic cost (benefit)	4,218	886	3,332	3,751	788	2,963
Total defined-benefit post-retirement benefit plans	4,218	886	3,332	3,751	788	2,963
Total other comprehensive income (loss)	<u>\$ 467,067</u>	<u>\$ 98,084</u>	<u>\$ 368,983</u>	<u>\$ (291,495)</u>	<u>\$ (61,213)</u>	<u>\$ (230,282)</u>

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, 2019	\$ (16,103)	\$ (47,497)	\$ (63,600)
Other comprehensive income (loss) before reclassifications	365,861	—	365,861
Reclassification of amounts included in net income	(210)	3,332	3,122
Net other comprehensive income (loss) during period	365,651	3,332	368,983
Balance at September 30, 2019	<u>\$ 349,548</u>	<u>\$ (44,165)</u>	<u>\$ 305,383</u>
Balance January 1, 2018	\$ 117,230	\$ (37,718)	\$ 79,512
Other comprehensive income (loss) before reclassifications	(233,334)	—	(233,334)
Reclassification of amounts included in net income	89	2,963	3,052
Net other comprehensive income (loss) during period	(233,245)	2,963	(230,282)
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 September 30, 2018	<u>\$ (98,458)</u>	<u>\$ (42,777)</u>	<u>\$ (141,235)</u>

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 2018 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:				
September 30, 2019	\$ 307,312	\$ 37,549	\$ (2,630)	\$ 342,231
September 30, 2018	295,062	36,868	(2,608)	329,322
Nine months ended:				
September 30, 2019	\$ 918,672	\$ 111,064	\$ (8,182)	\$ 1,021,554
September 30, 2018	874,056	106,475	(7,680)	972,851
Net income (loss):				
Three months ended:				
September 30, 2019	\$ 110,583	\$ 4,106	\$ (2,853)	\$ 111,836
September 30, 2018	114,214	6,442	(2,812)	117,844
Nine months ended:				
September 30, 2019	\$ 334,393	\$ 15,403	\$ (9,878)	\$ 339,918
September 30, 2018	327,131	17,977	(9,443)	335,665

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 2018 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 September 30, 2019 and December 31, 2018, 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
September 30, 2019				
Securities available for sale:				
U.S. Treasury	\$ 2,825,796	\$ —	\$ —	\$ 2,825,796
Residential mortgage-backed securities	—	2,240,452	—	2,240,452
States and political subdivisions	—	7,311,373	—	7,311,373
Other	—	42,825	—	42,825
Trading account securities:				
U.S. Treasury	23,747	—	—	23,747
States and political subdivisions	—	3,922	—	3,922
Derivative assets:				
Interest rate swaps, caps and floors	—	55,842	—	55,842
Commodity swaps and options	—	16,534	—	16,534
Foreign currency forward contracts	24	—	—	24
Derivative liabilities:				
Interest rate swaps, caps and floors	—	24,855	—	24,855
Commodity swaps and options	—	16,086	—	16,086
Foreign currency forward contracts	11	—	—	11
December 31, 2018				
Securities available for sale:				
U.S. Treasury	\$ 3,427,689	\$ —	\$ —	\$ 3,427,689
Residential mortgage-backed securities	—	829,740	—	829,740
States and political subdivisions	—	7,087,202	—	7,087,202
Other	—	42,690	—	42,690
Trading account securities:				
U.S. Treasury	21,928	—	—	21,928
States and political subdivisions	—	2,158	—	2,158
Derivative assets:				
Interest rate swaps, caps and floors	—	19,806	—	19,806
Commodity swaps and options	—	26,768	—	26,768
Foreign currency forward contracts	193	—	—	193
Derivative liabilities:				
Interest rate swaps, caps and floors	—	18,520	—	18,520
Commodity swaps and options	—	26,320	—	26,320
Foreign currency forward contracts	147	—	—	147

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.

	Nine Months Ended September 30, 2019		Nine Months Ended September 30, 2018	
	Level 2	Level 3	Level 2	Level 3
Carrying value of impaired loans before allocations	\$ 2,416	\$ 60,010	\$ 12,876	\$ 28,638
Specific valuation allowance (allocations) reversals of prior allocations	1,116	(12,437)	(2,599)	4,256
Fair value	<u>\$ 3,532</u>	<u>\$ 47,573</u>	<u>\$ 10,277</u>	<u>\$ 32,894</u>

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:

	Nine Months Ended September 30,	
	2019	2018
Foreclosed assets remeasured at initial recognition:		
Carrying value of foreclosed assets prior to remeasurement	\$ 1,302	\$ 2,898
Charge-offs recognized in the allowance for loan losses	(76)	—
Fair value	<u>\$ 1,226</u>	<u>\$ 2,898</u>
Foreclosed assets remeasured subsequent to initial recognition:		
Carrying value of foreclosed assets prior to remeasurement	\$ —	\$ 1,823
Write-downs included in other non-interest expense	—	(473)
Fair value	<u>\$ —</u>	<u>\$ 1,350</u>

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:

	September 30, 2019		December 31, 2018	
	Carrying Amount	Estimated Fair Value	Carrying Amount	Estimated Fair Value
Financial assets:				
Level 2 inputs:				
Cash and cash equivalents	\$ 2,907,901	\$ 2,907,901	\$ 3,955,779	\$ 3,955,779
Securities held to maturity	1,020,838	1,047,423	1,106,057	1,116,953
Cash surrender value of life insurance policies	186,217	186,217	183,473	183,473
Accrued interest receivable	133,950	133,950	188,989	188,989
Level 3 inputs:				
Loans, net	14,498,369	14,542,918	13,967,601	13,933,239
Financial liabilities:				
Level 2 inputs:				
Deposits	27,083,582	27,084,765	27,149,204	27,143,572
Federal funds purchased and repurchase agreements	1,200,655	1,200,655	1,367,548	1,367,548
Junior subordinated deferrable interest debentures	136,285	137,115	136,242	137,115
Subordinated notes payable and other borrowings	98,826	106,447	98,708	98,458
Accrued interest payable	10,177	10,177	7,394	7,394

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 20 - Accounting Standards Updates in our 2018 Form 10-K for additional information related to previously issued accounting standards updates.

ASU 2016-02, "Leases (Topic 842)." ASU 2016-02, among other things, requires 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. We adopted ASU 2016-02, along with several other subsequent codification updates related to lease accounting, as of January 1, 2019. See Note 1 - Significant Accounting Policies for additional information.

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. In April 2019, ASU 2019-04, "Codification Improvements to Topic 326, Financial Instruments—Credit Losses, Topic 815, Derivatives and Hedging, and Topic 825, Financial Instruments," was issued to address certain codification improvements and to provide certain accounting policy electives related to accrued interest as well as disclosure related to credit losses, among other things. In May 2019, ASU 2019-05, "Financial Instruments—Credit Losses (Topic 326): Targeted Transition Relief," was issued to provide transition relief in connection with the adoption of ASU 2016-03 whereby entities would have the option to irrevocably elect the fair value option for certain financial assets previously measured at amortized cost basis. ASU 2016-13, as updated, will be effective on January 1, 2020.

We are currently working through our implementation plan with our cross-functional working group, under the direction of our Chief Financial Officer and our Chief Credit Officer. The working group is comprised of individuals from various functional areas including credit, risk management, finance and information technology, among others. Our implementation plan includes assessment and documentation of processes, internal controls and data sources; model development, documentation and validation; and system configuration, among other things. We are also in the process of implementing a third-party vendor solution to assist us in the application of ASU 2016-13. Based upon our preliminary parallel run as of September 30, 2019, we currently expect the adoption of ASU 2016-13 will result in a combined 15.0% to 25.0% increase in our allowance for loan losses and our reserves for unfunded commitments. This increase is 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; however, we do not expect these allowances to be significant. Additionally, the adoption of ASU 2016-13 is not expected to have a significant impact on our regulatory capital ratios. The ultimate impact of adoption on January 1, 2020 could be significantly different than our current expectation as our modeling processes 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 that date, notwithstanding any further refinements to our expected credit loss models.

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 did not change the accounting for callable debt securities held at a discount. We adopted ASU 2017-08 effective January 1, 2019 and recognized a cumulative effect adjustment reducing retained earnings by \$14.7 million. See Note 1 - Significant Accounting Policies.

ASU 2017-12, “*Derivatives and Hedging (Topic 815) - Targeted Improvements to Accounting for Hedging Activities.*” ASU 2017-12 amends the hedge accounting recognition and presentation requirements in ASC 815 to improve the transparency and understandability of information conveyed to financial statement users about an entity’s risk management activities to better align the entity’s financial reporting for hedging relationships with those risk management activities and to reduce the complexity of and simplify the application of hedge accounting. ASU 2017-12 became effective for us on January 1, 2019 and did not have a significant impact on our financial statements. In April 2019, ASU 2019-04 was issued to clarify certain aspects of accounting for hedging activities addressed by ASU 2017-12, among other things.

ASU 2018-16, “*Derivatives and Hedging (Topic 815) - Inclusion of the Secured Overnight Financing Rate (“SOFR”) Overnight Index Swap (“OIS”) Rate as a Benchmark Interest Rate for Hedge Accounting Purposes.*” The amendments in this update permit use of the OIS rate based on SOFR as a U.S. benchmark interest rate for hedge accounting purposes under Topic 815 in addition to the interest rates on direct U.S. Treasury obligations, the LIBOR swap rate, the OIS rate based on the Fed Funds Effective Rate and the Securities Industry and Financial Markets Association (“SIFMA”) Municipal Swap Rate. ASU 2018-16 became effective for us on January 1, 2019 and did not have a significant impact on our financial statements.

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, 2018, and the other information included in the 2018 Form 10-K. Operating results for the three and nine months ended September 30, 2019 are not necessarily indicative of the results for the year ending December 31, 2019 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.
- 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 2018 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, 2018.

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 a 21% federal tax rate, thus making tax-exempt yields comparable to taxable asset yields.

Results of Operations

Net income available to common shareholders totaled \$109.8 million, or \$1.73 per diluted common share, and \$333.9 million, or \$5.24 per diluted common share, for the three and nine months ended September 30, 2019 compared to \$115.8 million, or \$1.78 per diluted common share, and \$329.6 million, or \$5.08 per diluted common share, for the three and nine months ended September 30, 2018.

Selected data for the comparable periods was as follows:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
Taxable-equivalent net interest income	\$ 276,618	\$ 265,687	\$ 825,547	\$ 778,754
Taxable-equivalent adjustment	23,611	24,022	72,640	70,071
Net interest income	253,007	241,665	752,907	708,683
Provision for loan losses	8,001	2,650	25,404	17,846
Net interest income after provision for loan losses	245,006	239,015	727,503	690,837
Non-interest income	89,224	87,657	268,647	264,168
Non-interest expense	208,864	193,668	613,873	579,187
Income before income taxes	125,366	133,004	382,277	375,818
Income taxes	13,530	15,160	42,359	40,153
Net income	111,836	117,844	339,918	335,665
Preferred stock dividends	2,016	2,016	6,047	6,047
Net income available to common shareholders	\$ 109,820	\$ 115,828	\$ 333,871	\$ 329,618
Earnings per common share – basic	\$ 1.74	\$ 1.80	\$ 5.28	\$ 5.13
Earnings per common share – diluted	1.73	1.78	5.24	5.08
Dividends per common share	0.71	0.67	2.09	1.91
Return on average assets	1.35%	1.49%	1.41%	1.42%
Return on average common equity	11.83	14.40	12.79	14.02
Average shareholders' equity to average assets	11.87	10.79	11.48	10.63

Net income available to common shareholders decreased \$6.0 million, or 5.2%, for the three months ended September 30, 2019 and increased \$4.3 million, or 1.3%, for the nine months ended September 30, 2019 compared to the same periods in 2018. The decrease during the three months ended September 30, 2019 was primarily the result of a \$15.2 million increase in non-interest expense and a \$5.4 million increase in the provision for loan losses partly offset by an \$11.3 million increase in net interest income, a \$1.6 million increase in non-interest income and a \$1.6 million decrease in income tax expense. The increase during the nine months ended September 30, 2019 was primarily the result of a \$44.2 million increase in net interest income and a \$4.5 million increase in non-interest income partly offset by a \$34.7 million increase in non-interest expense, a \$7.6 million increase in the provision for loan losses and a \$2.2 million increase in income tax 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 73.7% of total revenue during the first nine months of 2019. 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 2018 at 4.50% and subsequently increased 100 basis points (25 basis points in each of March, June, September and December) to end 2018 at 5.50%. The prime rate decreased 50 basis points during the third quarter of 2019 (25 basis points in each of August and September) to end the quarter at 5.00%. Our loan portfolio is also impacted by changes in the London Interbank Offered Rate (LIBOR). At September 30, 2019, the one-month and three-month U.S. dollar LIBOR interest rates were 2.02% and 2.09%, respectively, while at September 30, 2018, the one-month and three-month U.S. dollar LIBOR interest rates were 2.26% and 2.40%, respectively. The effective federal funds rate, which is the cost of immediately available overnight funds, began 2018 at 1.50% and subsequently increased 100 basis points (25 basis points in each of, March, June, September and December) to end

2018 at 2.50%. The effective federal funds rate decreased 50 basis points during the third quarter of 2019 (25 basis points in each of August and September) to end the quarter at 2.00%.

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”) 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.

	Three Months Ended			Nine Months Ended		
	September 30, 2019 vs. September 30, 2018			September 30, 2019 vs. September 30, 2018		
	Increase (Decrease) Due to Change in			Increase (Decrease) Due to Change in		
	Rate	Volume	Total	Rate	Volume	Total
Interest-bearing deposits	\$ 934	\$ (6,620)	\$ (5,686)	\$ 11,214	\$ (26,444)	\$ (15,230)
Federal funds sold and resell agreements	46	(251)	(205)	920	(172)	748
Securities:						
Taxable	5,045	5,738	10,783	11,954	12,086	24,040
Tax-exempt	(1,398)	(869)	(2,267)	(3,602)	7,734	4,132
Loans, net of unearned discounts	4,247	10,274	14,521	42,837	31,780	74,617
Total earning assets	8,874	8,272	17,146	63,323	24,984	88,307
Savings and interest checking	(446)	5	(441)	—	(46)	(46)
Money market deposit accounts	—	369	369	18,360	457	18,817
Time accounts	2,123	596	2,719	6,568	1,054	7,622
Public funds	246	543	789	1,740	1,108	2,848
Federal funds purchased and repurchase agreements	1,970	778	2,748	10,843	876	11,719
Junior subordinated deferrable interest debentures	30	1	31	552	2	554
Subordinated notes payable and other notes	(2)	2	—	(6)	6	—
Total interest-bearing liabilities	3,921	2,294	6,215	38,057	3,457	41,514
Net change	\$ 4,953	\$ 5,978	\$ 10,931	\$ 25,266	\$ 21,527	\$ 46,793

Taxable-equivalent net interest income for the three months ended September 30, 2019 increased \$10.9 million, or 4.1%, while taxable-equivalent net interest income for the nine months ended September 30, 2019 increased \$46.8 million, or 6.0%, compared to the same periods in 2018. The increases were primarily related to increases in the average yields on loans, taxable securities and interest-bearing deposits combined with increases in the average volumes of loans and taxable securities and, for the nine months ended September 30, 2019, an increase in the average balance in tax-exempt securities. The impact of these items was partly offset by increases in the average rates paid on interest-bearing deposits and other borrowed funds and a decrease in the average volume of interest bearing deposits (primarily excess reserves held in an interest-bearing account at the Federal Reserve).

The average volume of interest-earning assets for the three months ended September 30, 2019 increased \$897.6 million, while the average volume of interest-earning assets for the nine months ended September 30, 2019 increased \$442.4 million compared to the same periods in 2018. The increase in the average volume of interest-earning assets for the three months ended September 30, 2019 included a \$1.1 billion increase in average taxable securities, a \$788.1 million increase in average loans and a \$276.0 million increase in average tax-exempt securities partly offset by a \$1.3 billion decrease in average interest-bearing deposits, federal funds sold and resell agreements. The increase in the average volume of interest-earning assets for the nine months ended September 30, 2019 included an \$845.3 million increase in average loans, a \$793.9 million increase in average taxable securities and a \$446.7

million increase in average tax-exempt securities partly offset by a \$1.6 billion decrease in average interest-bearing deposits, federal funds sold and resell agreements

The taxable-equivalent net interest margin increased 10 basis points from 3.66% during the three months ended September 30, 2018 to 3.76% during the three months ended September 30, 2019 and increased 19 basis points from 3.61% during the nine months ended September 30, 2018 to 3.80% during the nine months ended September 30, 2019. The increases in the taxable-equivalent net interest margin during the three and nine months ended September 30, 2019 were primarily related to increases in the average yields on loans; taxable securities; interest-bearing deposits; and federal funds sold and resell agreements partly offset by increases in the average cost of interest-bearing deposits and other borrowed funds and a decrease in the average yield on tax-exempt securities. The taxable-equivalent net interest margin was also positively impacted by a decrease in the relative proportion of interest-earning assets invested in lower-yielding interest-bearing deposits (primarily excess reserves held in an interest-bearing account at the Federal Reserve).

The average taxable-equivalent yield on interest-earning assets increased 17 basis points from 4.04% during the three months ended September 30, 2018 to 4.21% during the three months ended September 30, 2019 and increased 38 basis points from 3.89% during the nine months ended September 30, 2018 to 4.27% during the nine months ended September 30, 2019. The average taxable-equivalent yield on interest-earning assets was primarily impacted by the aforementioned changes in market interest rates and changes in the volume and relative mix of interest-earning assets.

The average taxable-equivalent yield on loans increased 41 basis points from 4.86% during the nine months ended September 30, 2018 to 5.27% during the nine months ended September 30, 2019. The average taxable-equivalent yield on loans was positively impacted by higher average market interest rates in 2019 compared to 2018. The average volume of loans for the nine months ended September 30, 2019 increased \$845.3 million, or 6.3%, compared to the same period in 2018. Loans made up approximately 49.0% of average interest-earning assets during the nine months ended September 30, 2019 compared to 46.9% during the same period in 2018.

The average taxable-equivalent yield on securities was 3.41% during the nine months ended September 30, 2019, increasing 3 basis points compared to the 3.38% during the same period in 2018. The average taxable-equivalent yield on securities during the nine months ended September 30, 2019 compared to the same period in 2018 was positively impacted by increases in the average volume of tax-exempt and taxable securities and an increase in the average yield on taxable securities but was negatively impacted by a decrease in the average yield on tax-exempt securities. The average yield on taxable securities increased 35 basis points from 2.00% during the nine months ended September 30, 2018 to 2.35% during the nine months ended September 30, 2019. The average taxable-equivalent yield on tax-exempt securities decreased 6 basis points from 4.12% during the nine months ended September 30, 2018 to 4.06% during the nine months ended September 30, 2019. Tax exempt securities made up approximately 62.3% of total average securities during the nine months ended September 30, 2019, compared to 65.0% during the same period in 2018. The average volume of total securities during the nine months ended September 30, 2019 increased \$1.2 billion, or 10.4%, compared to the same period in 2018. Securities made up approximately 45.1% of average interest-earning assets during the nine months ended September 30, 2019 compared to 41.4% during the same period in 2018.

Average interest-bearing deposits, federal funds sold and resell agreements for the nine months ended September 30, 2019 decreased \$1.6 billion, or 48.8%, compared to the same period in 2018. Interest-bearing deposits, federal funds sold and resell agreements made up approximately 5.9% of average interest-earning assets during the nine months ended September 30, 2019 compared to 11.7% during the nine months ended September 30, 2018. The decrease in the average volume of interest-bearing deposits, federal funds sold and resell agreements was primarily due to a decrease in the average volume of our excess reserves held in an interest-bearing account at the Federal Reserve during the first nine months of 2019 compared to the same period in 2018 as such funds were invested in higher yielding loans and securities. The combined average yield on interest-bearing deposits, federal funds sold and resell agreements was 2.41% during the nine months ended September 30, 2019 compared to 1.83% during the same period in 2018. The average yield on interest-bearing deposits, federal funds sold and resell agreements was positively impacted by higher average market interest rates in 2019 compared to 2018.

The average rate paid on interest-bearing liabilities was 0.79% during the nine months ended September 30, 2019 increasing 30 basis points from 0.49% during the same period in 2018. Average deposits decreased \$62.6 million, or 0.24%, during the nine months ended September 30, 2019 compared to the same period in 2018 and included a \$543.2 million decrease in average non-interest bearing deposits mostly offset by a \$480.7 million increase in average interest-bearing deposits. The ratio of average interest-bearing deposits to total average deposits was 60.9% during the nine months ended September 30, 2019 compared to 58.9% during the same period in 2018. 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 0.67% and 0.41%, respectively, during the nine months ended September 30, 2019 compared to 0.44% and 0.26%, respectively, during the nine months ended September 30, 2018. The average cost of deposits during 2019 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 and market competition.

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 3.48% during the nine months ended September 30, 2019 compared to 3.40% during same period in 2018. 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 \$8.0 million and \$25.4 million for the three and nine months ended September 30, 2019 compared to \$2.7 million and \$17.8 million for the three and nine months ended September 30, 2018. 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 September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
Trust and investment management fees	\$ 31,649	\$ 30,801	\$ 93,794	\$ 89,509
Service charges on deposit accounts	22,941	21,569	65,529	63,554
Insurance commissions and fees	11,683	11,037	40,207	37,573
Interchange and debit card transaction fees	4,117	3,499	11,265	10,103
Other charges, commissions and fees	10,108	9,580	28,103	27,860
Net gain (loss) on securities transactions	96	(34)	265	(113)
Other	8,630	11,205	29,484	35,682
Total	\$ 89,224	\$ 87,657	\$ 268,647	\$ 264,168

Total non-interest income for the three months ended September 30, 2019 increased \$1.6 million, or 1.8%, while total non-interest income for the nine months ended September 30, 2019 increased \$4.5 million, or 1.7%, compared to the same periods in 2018, respectively. 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 and nine months ended September 30, 2019 increased \$848 thousand, or 2.8%, and \$4.3 million, or 4.8%, compared to the same periods in 2018, respectively. Investment fees are the most significant component of trust and investment management fees, making up approximately 82.5% of total trust and investment management fees for both the first nine months of 2019 and 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 assets and the related investment fees. The increase in trust and investment management fees during the three and nine months ended September 30, 2019 compared to the same periods in 2018 was primarily the result of increases in trust investment fees (up \$793 thousand and \$3.5 million, respectively) due to higher average equity valuations and an increase in the number of accounts.

At September 30, 2019, trust assets, including both managed assets and custody assets, were primarily composed of equity securities (49.7% of assets), fixed income securities (36.3% of assets) and cash equivalents (8.7% of assets). The estimated fair value of these assets was \$36.4 billion (including managed assets of \$15.7 billion and custody assets of \$20.7 billion) at September 30, 2019, compared to \$33.3 billion (including managed assets of \$14.7 billion and custody assets of \$18.7 billion) at December 31, 2018 and \$34.7 billion (including managed assets of \$15.6 billion and custody assets of \$19.1 billion) at September 30, 2018.

Service Charges on Deposit Accounts. Service charges on deposit accounts for the three and nine months ended September 30, 2019 increased \$1.4 million, or 6.4%, and \$2.0 million, or 3.1%, respectively, compared to the same periods in 2018. The increases were primarily related to increases in overdraft/insufficient funds charges on consumer and commercial accounts (up \$1.2 million and \$3.2 million, respectively) partly offset, during the nine months ended September 30, 2019, by a decrease in commercial service charges (down \$942 thousand). Overdraft/insufficient funds charges totaled \$11.2 million (\$8.8 million consumer and \$2.4 million commercial) during the three months ended September 30, 2019 compared to \$10.0 million (\$7.8 million consumer and \$2.2 million) during the same period in 2018. Overdraft/insufficient funds charges totaled \$31.1 million (\$24.3 million consumer and \$6.8 million commercial) during the nine months ended September 30, 2019 compared to \$28.0 million (\$21.6 million consumer and \$6.4 million commercial) during the same period in 2018. The increases in overdraft/insufficient funds charges were partly due to increased transaction volumes during the three and nine months ended September 30, 2019 compared to the same periods in 2018. Overdraft/insufficient funds charges were also impacted by a change in the fee schedule during the second quarter of 2019. The decrease in commercial service charges were partly related to a higher earnings credit rate. The earnings credit rate is the value given to deposits maintained by treasury management customers. Because average market interest rates in 2019 were higher compared to 2018, deposit balances have become more valuable and are yielding a higher earnings credit rate. Earnings credits applied to customer deposit balances offset service fees that would otherwise be charged.

Insurance Commissions and Fees. Insurance commissions and fees for the three months ended September 30, 2019 increased \$646 thousand, or 5.9%, compared to the same period in 2018. The increase was related to an increase in commission income (up \$666 thousand). Insurance commissions and fees for the nine months ended September 30, 2019 increased \$2.6 million, or 7.0%, compared to the same period in 2018. The increase was related to an increase in commission income (up \$3.0 million) partly offset by a decrease in contingent income (down \$341 thousand). The increase in commission income during the three months ended September 30, 2019 was primarily related to an increase in commissions on commercial lines property and casualty policies. The increase in commission income during the nine months ended September 30, 2019 was primarily related to increases in commissions on commercial lines property and casualty policies, benefit plan commissions and life insurance commissions. The increases in property and casualty commissions and benefit plan commissions were related to increased business volumes and market rates. The increase in life insurance commissions was related to increased business volumes.

Contingent income totaled \$254 thousand and \$3.8 million during the three and nine months ended September 30, 2019, respectively, compared to \$273 thousand and \$4.2 million during the same periods in 2018. 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 \$2.8 million and \$3.1 million during the nine months ended September 30, 2019 and 2018, respectively. The decrease in performance related contingent income during 2019 was related to lower growth within the portfolio partly offset by the impact of 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 \$193 thousand and \$1.1 million during the three and nine months ended September 30, 2019, respectively, and \$200 thousand and \$1.1 million during the same periods in 2018.

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 debit card usage, point of sale income from PIN-based debit card transactions and ATM service fees. Interchange and debit card transaction fees are reported net of related network costs. A comparison of gross and net interchange and debit card transaction fees for the reported periods is presented in the table below:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
Income from debit card transactions	\$ 6,191	\$ 5,484	\$ 17,569	\$ 16,075
ATM service fees	1,069	991	3,136	2,954
Gross interchange and debit card transaction fees	7,260	6,475	20,705	19,029
Network costs	3,143	2,976	9,440	8,926
Net interchange and debit card transaction fees	\$ 4,117	\$ 3,499	\$ 11,265	\$ 10,103

The increase in interchange and debit card transaction fees during 2019, on a net basis, was primarily related to increased transaction volumes.

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 September 30, 2019 increased \$528 thousand, or 5.5%, compared to the same period in 2018. The increase was primarily related to increases in income from the sale of money market accounts (up \$426 thousand), letter of credit fees (up \$256 thousand) and income from capital markets advisory services (up \$131 thousand), among other things, partly offset by decreases in income from sale of life insurance (down \$322 thousand) and processing fees (down \$181 thousand). Other charges, commissions and fees for the nine months ended September 30, 2019 increased \$243 thousand, or 0.9%, compared to the same period in 2018. The increase was primarily related to increases in income from the sale of money market accounts (up \$1.1 million) and letter of credit fees (up \$534 thousand), among other things, mostly offset by decreases in processing fees (down \$592 thousand), brokerage commissions (down \$392 thousand), income from the sale of mutual funds and annuities (down \$268 thousand and \$247 thousand, respectively) and income from capital markets advisory services (down \$225 thousand).

Net Gain/Loss on Securities Transactions. During the nine months ended September 30, 2019, and 2018, we sold certain available-for-sale U.S. Treasury securities with amortized costs totaling \$7.4 billion and \$13.8 billion, respectively. We realized a net gain of \$99 thousand on the 2019 sales and a net loss of \$113 thousand on the 2018 sales. The sales were primarily related to securities purchased and subsequently sold in the same period of their purchase 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.

Additionally, during the second quarter of 2019, we sold certain available-for-sale U.S. Treasury securities with an amortized cost totaling \$548.9 million and certain available-for-sale municipal securities with an amortized cost totaling \$310.7 million. We realized a net gain of \$166 thousand on those sales. The proceeds from the sales provided short-term liquidity and were subsequently reinvested in other higher yielding securities.

Other Non-Interest Income. Other non-interest income for the three months ended September 30, 2019 decreased \$2.6 million, or 23.0%, compared to the same period in 2018. The decrease was primarily related to decreases in sundry and other miscellaneous income (down \$2.9 million) and income from customer derivative and trading activities (down \$798 thousand) partly offset by increases in gains on the sale of foreclosed and other assets (up \$638 thousand) and public finance underwriting fees (up \$430 thousand). Other non-interest income for the nine months ended September 30, 2019 decreased \$6.2 million, or 17.4%, compared to the same period in 2018. The decrease was primarily related to decreases in sundry and other miscellaneous income (down \$4.9 million) and income from customer derivative and trading activities (down \$1.8 million) partly offset by an increase in public finance underwriting fees (up \$299 thousand). Sundry income during the nine months ended September 30, 2019 included \$1.1 million related to the recovery of prior write-offs, \$277 thousand related to distributions from a private equity investment and \$250 thousand related to a settlement, among other things, while sundry income for the same period in 2018 included \$4.5 million related to the recovery of prior write-offs, \$1.2 million related to a distribution from a private equity investment and \$775 thousand related to the settlement of an insurance claim, among other things. The fluctuations in public finance underwriting fees and income from customer derivative and trading activities during the three and nine months ended September 30, 2019 were primarily related to changes in business volumes. Other non-interest income also included gains on the sale of various branch and operational facilities totaling \$6.7 million during the nine months ended September 30, 2019 and \$6.8 million during the same period in 2018.

Non-Interest Expense

The components of non-interest expense were as follows:

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
Salaries and wages	\$ 93,812	\$ 87,547	\$ 277,078	\$ 259,434
Employee benefits	21,002	18,355	64,579	58,257
Net occupancy	24,202	19,894	64,602	59,089
Technology, furniture and equipment	22,415	21,004	66,236	61,142
Deposit insurance	2,491	4,694	7,752	14,178
Intangible amortization	274	336	904	1,093
Other	44,668	41,838	132,722	125,994
Total	<u>\$ 208,864</u>	<u>\$ 193,668</u>	<u>\$ 613,873</u>	<u>\$ 579,187</u>

Total non-interest expense for the three and nine months ended September 30, 2019 increased \$15.2 million, or 7.8%, and \$34.7 million, or 6.0%, compared to the same periods in 2018, respectively. Changes in the various components of non-interest expense are discussed below.

Salaries and Wages. Salaries and wages for the three and nine months ended September 30, 2019 increased \$6.3 million, or 7.2%, and \$17.6 million, or 6.8%, compared to the same periods in 2018. The increases were primarily related to increases in salaries, due to an increase in the number of employees and normal annual merit and market increases and, to a lesser extent, increases in incentive compensation. The increase for the nine months ended September 30, 2019 was also impacted by an increase in stock compensation.

Employee Benefits. Employee benefits expense for the three and nine months ended September 30, 2019 increased \$2.6 million, or 14.4%, and \$6.3 million, or 10.9%, compared to the same periods in 2018, respectively. The increases were primarily due to increases in medical benefits expense (up \$838 thousand and \$2.1 million, respectively), expenses related to our defined benefit retirement plans (up \$585 thousand and \$1.8 million, respectively), expenses related to our 401(k) plan (up \$373 thousand and \$1.3 million, respectively) and payroll taxes (up \$562 thousand and \$859 thousand, respectively).

During the three and nine months ended September 30, 2019, we recognized a combined net periodic pension expense of \$331 thousand and \$993 thousand, respectively, related to our defined benefit retirement plans compared to a combined net periodic pension benefit of \$254 thousand and \$762 thousand during the same periods in 2018. Our defined benefit retirement and restoration plans were frozen effective as of December 31, 2001 and were replaced by a profit sharing plan (which was merged with and into our 401(k) plan during 2019). 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 and nine months ended September 30, 2019 increased \$4.3 million, or 21.7%, and \$5.5 million, or 9.3%, respectively, compared to the same periods in 2018. The increases during the three and nine months ended September 30, 2019 were primarily related to increases in lease expense (up \$3.8 million and \$6.0 million, respectively) and depreciation on leasehold improvements (up \$708 thousand and \$1.2 million, respectively) partly offset by decreases in property taxes (down \$370 thousand and \$1.9 million, respectively) and utilities expense (down \$438 thousand and \$838 thousand, respectively). Fluctuations in the foregoing categories of net occupancy expense were primarily related to the commencement of the lease of our new corporate headquarters building in San Antonio and other leases related to existing facilities and our expansion within the Houston market area.

Technology, Furniture and Equipment. Technology, furniture and equipment expense for the three and nine months ended September 30, 2019 increased \$1.4 million, or 6.7%, and \$5.1 million, or 8.3%, respectively, compared to the same periods in 2018. The increases were primarily related to increases in software maintenance (up \$1.7 million and \$4.8 million for the three and nine months ended September 30, 2019, respectively). The increase for the nine months ended September 30, 2019 was also impacted by an increase in software amortization (up \$483 thousand).

Deposit Insurance. Deposit insurance expense totaled \$2.5 million and \$7.8 million for the three and nine months ended September 30, 2019 compared to \$4.7 million and \$14.2 million for the three and nine months ended September 30, 2018. The decrease in deposit insurance expense during 2019 was primarily related to the termination of the quarterly Deposit Insurance Fund surcharge in the fourth quarter of 2018, as further discussed below.

In August 2016, the Federal Deposit Insurance Corporation (“FDIC”) announced that the Deposit Insurance Fund 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 was terminated in the fourth quarter of 2018 as the Deposit Insurance Fund reserve ratio as of September 30, 2018 exceeded the statutory minimum of 1.35% required by the Dodd-Frank Act.

Intangible Amortization. Intangible amortization is primarily related to core deposit intangibles and, to a lesser extent, intangibles related to customer relationships and non-compete agreements. Intangible amortization for the three and nine months ended September 30, 2019 decreased \$62 thousand, or 18.5%, and \$189 thousand, or 17.3%, respectively, compared to the same periods in 2018. The decrease in amortization during 2019 was primarily related to the completion of amortization of certain previously recognized intangible assets as well as a reduction in the annual amortization rate of certain previously recognized intangible assets as we use an accelerated amortization approach which results in higher amortization rates during the earlier years of the useful lives of intangible assets.

Other Non-Interest Expense. Other non-interest expense for the three and nine months ended September 30, 2019 increased \$2.8 million, or 6.8%, and \$6.7 million, or 5.3%, respectively, compared to the same periods in 2018. The increase during the three months ended September 30, 2019 included, among other things, increases in professional services expense (up \$2.3 million); platform fees related to investment services (up \$558 thousand); losses on the sale of foreclosed and other assets (up \$424 thousand) and computer services expense (up \$325 thousand). The increase from these items was partly offset by a decrease in advertising/promotions expense (down \$1.3 million), among other things. The increase during the nine months ended September 30, 2019 included, among other things, increases in advertising/promotions expense, partly related to new sponsorship arrangements (up \$5.5 million); professional services expense (up \$2.2 million); platform fees related to investment services (up \$2.1 million); and travel, meals and entertainment expense (up \$1.4 million). The increase from these items was partly offset by decreases in donations expense, which was impacted by a significant contribution to our charitable foundation in 2018 (down \$4.1 million); and sundry and other miscellaneous expense (down \$1.4 million).

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 September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
Banking	\$ 110,583	\$ 114,214	\$ 334,393	\$ 327,131
Frost Wealth Advisors	4,106	6,442	15,403	17,977
Non-Banks	(2,853)	(2,812)	(9,878)	(9,443)
Consolidated net income	\$ 111,836	\$ 117,844	\$ 339,918	\$ 335,665

Banking

Net income for the three and nine months ended September 30, 2019 decreased \$3.6 million, or 3.2%, and increased \$7.3 million, or 2.2%, compared to the same periods in 2018. The decrease during the three months ended September 30, 2019 was primarily the result of an \$11.5 million increase in non-interest expense and a \$5.4 million increase in the provision for loan losses partly offset by an \$11.4 million increase in net interest income, an \$839 thousand increase in non-interest income and a \$980 thousand decrease in income tax expense. The increase during the nine months ended September 30, 2019 was primarily the result of a \$44.8 million increase in net interest income partly offset by a \$27.1 million increase in non-interest expense, a \$7.6 million increase in the provision for loan losses and a \$2.7 million increase in income tax expense.

Net interest income for the three and nine months ended September 30, 2019 increased \$11.4 million, or 4.7%, and \$44.8 million, or 6.3%, compared to the same periods in 2018. The increases were primarily related to increases in the average yields on loans, taxable securities and interest-bearing deposits combined with increases in the average volumes of loans and taxable securities and, for the nine months ended September 30, 2019, an increase in the average balance in tax-exempt securities. The impact of these items was partly offset by increases in the average rates paid on interest-bearing deposits and other borrowed funds and a decrease in the average volume of interest bearing deposits (primarily excess reserves held in an interest-bearing account at the Federal Reserve). See the analysis of net interest income included in the section captioned "Net Interest Income" included elsewhere in this discussion.

The provision for loan losses for the three and nine months ended September 30, 2019 totaled \$8.0 million and \$25.4 million compared to \$2.6 million and \$17.8 million for the same periods in 2018. 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 and nine months ended September 30, 2019 increased \$839 thousand, or 1.6%, and decreased \$161 thousand, or 0.1%, compared to the same periods in 2018, respectively. The increase during the three months ended September 30, 2019 was primarily due to increases in service charges on deposit accounts; insurance commissions and fees; interchange and debit card transaction fees; and other charges, commissions and fees partly offset by a decrease in other non-interest income. The decrease during the nine months ended September 30, 2019 was primarily due to a decrease in other non-interest income mostly offset by increases in insurance commissions and fees; service charges on deposit accounts and interchange and debit card transaction fees. The increase in insurance commissions and fees during the three and nine months ended September 30, 2019 was primarily related to increased business volumes and market rates partly offset by a decrease in contingent income. The increase in service charges on deposit accounts during 2019 was primarily related to an increase in overdraft/insufficient funds charges on consumer and commercial accounts partly offset by a decrease in commercial service charges. The increase in interchange and debit card transaction fees during 2019 was primarily related to increased transaction volumes. The increase in

other charges, commissions and fees during the three months ended September 30, 2019 was primarily related to increases in letter of credit fees, income from capital markets advisory services and unused balance fees on loan commitments. The decreases in other non-interest income during the three and nine months ended September 30, 2019 were primarily related to decreases in sundry and other miscellaneous income and income from customer derivative and trading activities partly offset by an increase in public finance underwriting fees and, for the three months ended September 30, 2019, gains on the sale of foreclosed and other assets. 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 and nine months ended September 30, 2019 increased \$11.5 million, or 7.0%, and \$27.1 million, or 5.5%, compared to the same periods in 2018. The increases were primarily related to increases in salaries and wages; employee benefits; technology, furniture and equipment expense; net occupancy expense; and other non-interest expense partly offset by decreases in deposit insurance expense. The increases in salaries and wages during 2019 were primarily due to an increase in the number of employees and normal annual merit and market increases and, to a lesser extent increases in incentive compensation. The increase in salaries expense during the nine months ended September 30, 2019 was also impacted by an increase in stock compensation. The increases in employee benefits were primarily related to increases in medical benefits expense, expenses related to our defined benefit retirement plans, expenses related to our 401(k) plan and payroll taxes. The increases in technology, furniture and equipment expense during 2019 were primarily related to increases in software maintenance, software amortization and depreciation. The increases in net occupancy expense during 2019 were primarily related to increases in lease expense, depreciation on leasehold improvements and insurance expense partly offset by decreases in property taxes and utilities expenses. The increase in other non-interest expense during the three months ended September 30, 2019 compared to the same period in 2018 included increases in professional services expense; losses on the sale of foreclosed and other assets; and stationary/supplies expense partly offset by a decrease in advertising/promotions expense, among other things. The increase in other non-interest expense during the nine months ended September 30, 2019 compared to the same period in 2018 included increases in advertising/promotions expense; professional services expense; travel, meals and entertainment; losses on the sale of foreclosed and other assets; and stationary/supplies expense partly offset by decreases in donations expense and sundry and other miscellaneous expense, among other things. The decreases in deposit insurance expense during 2019 were primarily related to the termination of the quarterly Deposit Insurance Fund surcharge in the fourth quarter of 2018. 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 \$11.7 million and \$40.3 million during the three and nine months ended September 30, 2019 compared to \$11.0 million and \$37.7 million during the three and nine months ended September 30, 2018. The increase during the three months ended September 30, 2019 was primarily related to an increase in commissions on commercial lines property and casualty policies. The increase during the nine months ended September 30, 2019 was primarily related to increases in commissions on commercial lines property and casualty policies; benefit plan commissions; and life insurance commissions. The increases in property and casualty commissions and benefit plan commissions were related to increased business volumes and market rates. The increase in life insurance commissions was related to increased business volumes. 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 and nine months ended September 30, 2019 decreased \$2.3 million, or 36.3%, and \$2.6 million, or 14.3%, compared to the same periods in 2018. The decreases were primarily related to increases in non-interest expense (up \$3.6 million and \$7.8 million, respectively) partly offset by increases in non-interest income (up \$720 thousand and \$4.6 million, respectively) and decreases in income tax expense (down \$621 thousand and \$686 thousand, respectively).

Non-interest income for the three and nine months ended September 30, 2019 increased \$720 thousand, or 2.0%, and \$4.6 million, or 4.4%, compared to the same periods in 2018. The increases were 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 82.5% of total trust and investment management fees for the first nine months of 2019. 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 increases in trust and investment management fees during the three and nine months ended September 30, 2019 compared to the same periods in 2018 were primarily the result of increases in trust investment fees due to higher average equity valuations and an increase in the number of accounts. 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 and nine months ended September 30, 2019 increased \$3.6 million, or 12.7%, and \$7.8 million, or 9.4%, compared to the same periods in 2018. The increases were primarily related to increases in other non-interest expense, net occupancy expense and salaries and wages. The increases in other non-interest expense during 2019 were primarily

due to increases in platform fees related to investment services; professional service expense; and travel, meals and entertainment expense, among other things. The increases in salaries and wages during 2019 were primarily due to an increase in the number of employees and normal annual merit and market increases, as well as increases in incentive compensation. The increases in net occupancy expense during 2019 were partly related to increases in lease overhead allocations.

Non-Banks

The Non-Banks operating segment had net losses of \$2.9 million and \$9.9 million during the three and nine months ended September 30, 2019, respectively, compared to net losses of \$2.8 million and \$9.4 million during the same periods in 2018. The increased net losses for the three and nine months ended September 30, 2019 were primarily due to increases in net interest expense due to increases in the interest rate paid on our long-term borrowings and increases in other non-interest expense partly offset by decreases in salaries and wages compared to the same periods in 2018.

Income Taxes

We recognized income tax expense of \$13.5 million and \$42.4 million, for an effective tax rate of 10.8% and 11.1% for the three and nine months ended September 30, 2019 compared to \$15.2 million and \$40.2 million, for an effective tax rate of 11.4% and 10.7% for the three and nine months ended September 30, 2018. The effective income tax rates differed from the U.S. statutory federal income tax rates of 21% during 2019 and 2018 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.

Average Balance Sheet

Average assets totaled \$31.7 billion for the nine months ended September 30, 2019 representing an increase of \$744.8 million, or 2.4%, compared to average assets for the same period in 2018. Earning assets increased \$442.4 million, or 1.5%, during the first nine months of 2019 compared to the same period in 2018. The increase in earning assets was primarily related to an \$845.3 million increase in average loans, a \$793.9 million increase in average taxable securities and a \$446.7 million increase in average tax-exempt securities mostly offset by a \$1.6 billion decrease in average interest-bearing deposits, federal funds sold and resell agreements. Average premises and equipment increased \$301.5 million, or 56.6%, primarily resulting from the adoption of a new accounting standard which required the recognition of our operating leases on our balance sheet (See Note 1 - Significant Accounting Policies in the accompanying Notes to Financial Statements). Average deposits decreased \$62.6 million, or 0.2%, during the first nine months of 2019 compared to the same period in 2018. The decrease included a \$543.2 million decrease in non-interest bearing deposits mostly offset by a \$480.7 million increase in interest-bearing deposit accounts. Average non-interest bearing deposits made up 39.1% and 41.1% of average total deposits during the first nine months of 2019 and 2018, respectively.

Loans

Loans were as follows as of the dates indicated:

	September 30, 2019	Percentage of Total	December 31, 2018	Percentage of Total
Commercial and industrial	\$ 5,179,780	35.4%	\$ 5,111,957	36.3%
Energy:				
Production	1,282,180	8.7	1,309,314	9.3
Service	189,350	1.3	168,775	1.2
Other	75,388	0.5	124,509	0.9
Total energy	1,546,918	10.5	1,602,598	11.4
Commercial real estate:				
Commercial mortgages	4,555,171	31.1	4,121,966	29.2
Construction	1,370,206	9.4	1,267,717	9.0
Land	290,706	2.0	306,755	2.2
Total commercial real estate	6,216,083	42.5	5,696,438	40.4
Consumer real estate:				
Home equity loans	363,224	2.5	353,924	2.5
Home equity lines of credit	350,461	2.4	337,168	2.4
Other	458,618	3.1	427,898	3.0
Total consumer real estate	1,172,303	8.0	1,118,990	7.9
Total real estate	7,388,386	50.5	6,815,428	48.3
Consumer and other	519,844	3.6	569,750	4.0
Total loans	\$ 14,634,928	100.0%	\$ 14,099,733	100.0%

Loans increased \$535.2 million, or 3.8%, compared to December 31, 2018. 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 35.4% and 36.3% of total loans at September 30, 2019 and December 31, 2018, respectively, while energy loans made up 10.5% and 11.4% of total loans, respectively, and real estate loans made up 50.5% and 48.3% 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 2018 Form 10-K for a more detailed discussion of our loan origination and risk management processes.

Commercial and industrial. Commercial and industrial loans increased \$67.8 million, or 1.3%, during the first nine months of 2019. 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 \$55.7 million, or 3.5%, during the first nine months of 2019 compared to December 31, 2018. The average loan size, the significance of the portfolio and the specialized nature of the energy industry requires a highly 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 \$876.9 million at September 30, 2019, increasing \$119.3 million, or 15.8%, from \$757.5 million at December 31, 2018. At September 30, 2019, 46.4% of outstanding purchased SNCs were related to the energy industry and 17.2% related to the construction 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 \$6.2 billion at September 30, 2019, increasing \$519.6 million, or 9.1%, compared to \$5.7 billion at December 31, 2018. At such dates, commercial real estate loans represented 84.1% and 83.6% 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 September 30, 2019, approximately 47% 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 \$1.7 billion at both September 30, 2019 and December 31, 2018. Consumer real estate loans increased \$53.3 million, or 4.8%, from December 31, 2018. Combined, home equity loans and lines of credit made up 60.9% and 61.8% of the consumer real estate loan total at September 30, 2019 and December 31, 2018, 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 decreased \$49.9 million, or 8.8%, from December 31, 2018. 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.

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.

	September 30, 2019	December 31, 2018
Non-accrual loans:		
Commercial and industrial	\$ 13,929	\$ 9,239
Energy	70,883	46,932
Commercial real estate:		
Buildings, land and other	9,240	15,268
Construction	697	—
Consumer real estate	527	892
Consumer and other	2,170	1,408
Total non-accrual loans	97,446	73,739
Restructured loans	6,160	—
Foreclosed assets:		
Real estate	1,427	1,175
Other	—	—
Total foreclosed assets	1,427	1,175
Total non-performing assets	\$ 105,033	\$ 74,914
Ratio of non-performing assets to:		
Total loans and foreclosed assets	0.72%	0.53%
Total assets	0.32	0.23
Accruing past due loans:		
30 to 89 days past due	\$ 85,678	\$ 59,595
90 or more days past due	14,396	20,468
Total accruing past due loans	\$ 100,074	\$ 80,063
Ratio of accruing past due loans to total loans:		
30 to 89 days past due	0.59%	0.42%
90 or more days past due	0.10	0.15
Total accruing past due loans	0.69%	0.57%

Non-performing assets include non-accrual loans, troubled debt restructurings and foreclosed assets. Non-performing assets at September 30, 2019 increased \$30.1 million from December 31, 2018 reflecting increases in non-accrual commercial and industrial loans, energy loans and restructured loans partly offset by decreases in non-accrual commercial real estate loans. There were no non-accrual commercial and industrial loans in excess of \$5.0 million at September 30, 2019 or December 31, 2018. Non-accrual energy loans included two credit relationships in excess of \$5 million totaling \$65.8 million at September 30, 2019. This included a single credit relationship totaling \$34.0 million that was classified as non-accrual during the third quarter of 2019. The other credit relationship, which totaled \$31.8 million at September 30, 2019, was previously reported as non-accrual with an aggregate balance of \$37.6 million at December 31, 2018. We charged off \$4.0 million related to this credit relationship during the nine months ended September 30, 2019. Non-accrual energy loans included one other credit relationship in excess of \$5 million totaling \$6.4 million at December 31, 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 September 30, 2019. Non-accrual commercial real estate loans included one relationship in excess of \$5.0 million totaling \$12.2 million at December 31, 2018. This credit relationship was sold during the second quarter of 2019.

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 \$6.2 million at September 30, 2019 and consisted of three credit relationships primarily related to commercial real estate. There were no restructured loans at December 31, 2018.

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. There were no write-downs of foreclosed assets during the nine months ended September 30, 2019 while write-downs of foreclosed assets totaled \$473 thousand during the nine months ended September 30, 2018.

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 September 30, 2019 and December 31, 2018, we had \$62.0 million and \$63.4 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 September 30, 2019, potential problem loans consisted of thirteen credit relationships. Of the total outstanding balance at September 30, 2019, 18.3% was related to the energy industry, 18.2% was related to the restaurant industry, 13.6% was related to the medical industry, 12.8% was related to the leasing industry and 10.6% was related to the entertainment 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 2018 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:

	September 30, 2019	December 31, 2018
Commercial and industrial	\$ 52,667	\$ 48,580
Energy	33,346	29,052
Commercial real estate	35,353	38,777
Consumer real estate	4,884	6,103
Consumer and other	10,309	9,620
Total	<u>\$ 136,559</u>	<u>\$ 132,132</u>

The reserve allocated to commercial and industrial loans at September 30, 2019 increased \$4.1 million compared to December 31, 2018. The increase was primarily due to increases in historical valuation allowances and specific valuation allowances partly offset by a decrease in macroeconomic valuation allowances. Historical valuation allowances increased \$3.5 million from \$25.4 million at December 31, 2018 to \$28.9 million at September 30, 2019. The increase was primarily related to an increase in the historical loss allocation factor applied to classified loans graded as "substandard - accrual" (risk grade 11) and an increase in the volume of non-classified 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 \$82.6 million at September 30, 2019 compared to \$78.9 million at December 31, 2018. The weighted-average risk grade of commercial and industrial loans was 6.42 at September 30, 2019 compared to 6.30 at December 31, 2018. Commercial loan net charge-offs totaled \$5.9 million during the first nine months of 2019 compared to \$19.0 million during the first nine months of 2018. Charge-offs in 2018 included \$15.3 million related to four credit relationships. Specific valuation allowances for commercial and industrial loans increased \$3.2 million from \$2.6 million at December 31, 2018 to \$5.8 million at September 30, 2019. The increase included a new specific valuation allowance totaling \$2.5 million on a single credit relationships which had an aggregate outstanding balance totaling \$3.1 million at September 30, 2019. Macroeconomic valuation allowances for commercial and industrial loans decreased \$3.5 million from \$10.6 million at December 31, 2018 to \$7.1 million at September 30, 2019. The decrease was primarily related to a decrease in the general macroeconomic risk allocation (down \$2.5 million), as further discussed below, and a decrease in the environmental risk adjustment (down \$936 thousand) as a result of a decrease in the environmental adjustment factor. General valuation allowances

for commercial and industrial loans increased \$804 thousand from \$10.1 million at December 31, 2018 to \$10.9 million at September 30, 2019 primarily due to an increase in allocations for excessive industry concentrations.

The reserve allocated to energy loans at September 30, 2019 increased \$4.3 million compared to December 31, 2018. As a result, reserves allocated to energy loans as a percentage of total energy loans totaled 2.16% at September 30, 2019 compared to 1.81% at December 31, 2018. This increase was primarily related to an increase in specific valuation allowances partly offset by decreases in historical valuation allowances, general valuation allowances and macroeconomic valuation allowances. Specific valuation allowances for energy loans totaled \$19.7 million at September 30, 2019 and related to two credit relationships totaling \$65.8 million while specific valuation allowances for energy loans totaled \$9.7 million at December 31, 2018 and related to four credit relationships totaling \$39.9 million. Historical valuation allowances decreased \$2.3 million from \$9.7 million at December 31, 2018 to \$7.4 million at September 30, 2019. The decrease was partly related to decreases in the historical loss allocation factors for both non-classified energy loans and classified energy loans. The decrease was also partly related to decreases in the volume of non-classified energy loans graded as "pass" (risk grades below 9) (down \$72.1 million) and "special mention" (risk grade 10) (down \$41.9 million) and classified energy loans graded as "substandard - accrual" (risk grade 11) (down \$10.2 million) partly offset by an increase in the volume of non-classified energy loans graded as "watch" (risk grade 9) (up \$44.6 million). Total classified energy loans increased \$13.7 million from \$72.4 million at December 31, 2018 to \$86.1 million at September 30, 2019. The weighted-average risk grade of energy loans increased to 6.36 at September 30, 2019 from 6.22 at December 31, 2018. Energy loan net charge-offs totaled \$3.2 million during the nine months ended September 30, 2019 compared to net charge-offs of \$10.3 million during the same period in 2018. Charge-offs in 2019 included \$4.0 million related to a single credit relationship. We also charged-off \$3.0 million related to this credit relationship in 2018 as well as \$7.3 million related to two other credit relationships. General valuation allowances for energy loans decreased \$1.9 million from \$6.0 million at December 31, 2018 to \$4.1 million at September 30, 2019. The decrease was primarily related to a decrease in the allocation for highly-leveraged transactions. Macroeconomic valuation allowances related to energy loans decreased \$1.6 million from \$3.7 million at December 31, 2018 to \$2.1 million at September 30, 2019, due to a decrease in the general macroeconomic risk allocation (down \$805 thousand), as further discussed below, and a decrease in the environmental risk adjustment (down \$783 thousand), as a result of decreases in the environmental adjustment factor and the historical loss valuation allowances to which the environmental risk adjustment factor is applied.

The reserve allocated to commercial real estate loans at September 30, 2019 decreased \$3.4 million compared to December 31, 2018. The decrease was primarily related to decreases in macroeconomic valuation allowances and specific valuation allowances partly offset by an increase in historical valuation allowances. Macroeconomic valuation allowances decreased \$3.5 million from \$11.0 million at December 31, 2018 to \$7.5 million at September 30, 2019. The decrease was primarily related to a decrease in the general macroeconomic risk allocation (down \$2.5 million), as further discussed below, and a decrease in the environmental risk adjustment (down \$1.0 million), primarily resulting from a decrease in the environmental risk adjustment factor. Specific valuation allowances for commercial real estate loans totaled \$1.5 million at September 30, 2019 decreasing \$1.1 million from \$2.6 million at December 31, 2018. Specific valuation allowances at December 31, 2018 primarily related to a single credit relationship totaling \$12.2 million. This relationship was sold during the second quarter of 2019. We recognized net charge-offs totaling \$266 thousand in connection with the sale. Specific valuation allowances for commercial real estate loans at September 30, 2019 related to three credit relationships totaling \$5.0 million. Historical valuation allowances related to commercial real estate loans increased \$1.2 million from \$20.8 million at December 31, 2018 to \$22.1 million at September 30, 2019. Non-classified commercial real estate loans increased \$532.9 million from \$5.6 billion at December 31, 2018 to \$6.1 billion at September 30, 2019 while classified commercial real estate loans decreased \$13.2 million from \$118.3 million at December 31, 2018 to \$105.0 million at September 30, 2019. The weighted-average risk grade of commercial real estate loans was 7.05 at both September 30, 2019 and December 31, 2018. General valuation allowances for commercial real estate loans decreased \$17 thousand from \$4.4 million at December 31, 2018 to \$4.3 million at September 30, 2019.

The reserve allocated to consumer real estate loans at September 30, 2019 decreased \$1.2 million compared to December 31, 2018. This decrease was primarily due to a \$531 thousand decrease in the general macroeconomic risk allocation, as further discussed below, and a \$499 thousand decrease in general valuation allowances, which was primarily related to an increase in the adjustment for recoveries combined with a decrease in the allocation for loans not reviewed by concurrence.

The reserve allocated to consumer and other loans at September 30, 2019 increased \$689 thousand compared to December 31, 2018. The increase was primarily related to an increase in specific valuation allowances (up \$763 thousand) as well as an increase in historical valuation allowances (up \$700 thousand) primarily due to an increase in the historical loss allocation factor. These items were partly offset by decreases in macroeconomic valuation allowances (down \$462 thousand) and general valuation allowances (down \$312 thousand). The decrease in macroeconomic valuation allowances was primarily related to a decrease in the general macroeconomic risk allocation, as further discussed below, and a decrease in the environmental risk adjustment due to a decrease in the environmental risk adjustment factor. The decrease in general valuation allowances was primarily related to a decrease in the allocation for loans not reviewed by concurrence combined with an increase in the adjustment for recoveries.

As more fully discussed in our 2018 Form 10-K, under our allowance methodology, we allocate additional reserves for general macroeconomic risk in excess of our minimum calculated need using our allowance model. These additional reserves are based upon management's assessment of current and expected economic conditions, trends and other quantitative and qualitative portfolio risk factors that are external to us or that are not otherwise captured in our allowance modeling process but impact the credit risk or inherent losses within our loan portfolio segments. These additional reserves are allocated to our various portfolio segments based upon management judgment.

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

	Three Months Ended September 30,		Nine Months Ended September 30,	
	2019	2018	2019	2018
Balance at beginning of period	\$ 134,929	\$ 150,226	\$ 132,132	\$ 155,364
Provision for loan losses	8,001	2,650	25,404	17,846
Charge-offs:				
Commercial and industrial	(2,705)	(8,491)	(8,782)	(21,896)
Energy	(2,000)	(5,400)	(4,000)	(10,939)
Commercial real estate	—	—	(617)	(619)
Consumer real estate	(557)	(431)	(2,936)	(1,632)
Consumer and other	(6,357)	(4,274)	(17,157)	(12,240)
Total charge-offs	(11,619)	(18,596)	(33,492)	(47,326)
Recoveries:				
Commercial and industrial	1,185	684	2,870	2,866
Energy	740	53	816	667
Commercial real estate	46	36	165	342
Consumer real estate	454	43	858	554
Consumer and other	2,823	2,482	7,806	7,265
Total recoveries	5,248	3,298	12,515	11,694
Net charge-offs	(6,371)	(15,298)	(20,977)	(35,632)
Balance at end of period	\$ 136,559	\$ 137,578	\$ 136,559	\$ 137,578
Ratio of allowance for loan losses to:				
Total loans	0.93%	1.00%	0.93%	1.00%
Non-accrual loans	140.14	166.56	140.14	166.56
Ratio of annualized net charge-offs to average total loans	0.17	0.44	0.20	0.35

The provision for loan losses increased \$7.6 million, or 42.4%, during the nine months ended September 30, 2019 compared to the same period in 2018. The provision for loan losses during the nine months ended September 30, 2019 primarily reflects the level of net charge-offs and specific valuation allowances as well as the impact of an increase in classified/non-accrual loans and the overall growth in the loan portfolio since December 31, 2018. Net charge-offs totaled \$21.0 million for the nine months ended September 30, 2019 compared to \$35.6 million for the same period in 2018. Specific valuation allowances totaled \$29.2 million at September 30, 2019 compared to \$16.2 million at December 31, 2018 and \$21.5 million at September 30, 2018. Classified energy, commercial and industrial and commercial real estate loans totaled \$273.7 million at September 30, 2019 compared to \$269.6 million at December 31, 2018 and \$288.3 million at September 30, 2018. The overall weighted-average risk grade of our energy, commercial and industrial and commercial real estate loan portfolios was 6.72 at September 30, 2019 compared to 6.63 at December 31, 2018 and 6.65 at September 30, 2018.

The ratio of the allowance for loan losses to total loans was 0.93% at September 30, 2019 compared to 0.94% at December 31, 2018. 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.

Capital and Liquidity

Capital. Shareholders' equity totaled \$3.9 billion at September 30, 2019 and \$3.4 billion December 31, 2018. In addition to net income of \$339.9 million, other sources of capital during the nine months ended September 30, 2019 included other comprehensive income, net of tax, of \$369.0 million; \$13.5 million in proceeds from stock option exercises and \$10.7 million

related to stock-based compensation. Uses of capital during the nine months ended September 30, 2019 included \$138.2 million of dividends paid on preferred and common stock, \$67.7 million of treasury stock purchases and \$14.7 million related to the cumulative effect of a new accounting principle adopted during the first quarter of 2019. See Note 1 - Significant Accounting Policies.

The accumulated other comprehensive income/loss component of shareholders' equity totaled a net, after-tax, unrealized gain of \$305.4 million at September 30, 2019 compared to a net, after-tax, unrealized loss of \$63.6 million at December 31, 2018. The change was primarily due to a \$366.4 million net, after-tax, change in the net unrealized gain/loss on securities available for sale.

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 \$0.67, \$0.71 and \$0.71 per common share during the first, second and third quarters of 2019, respectively, and a quarterly dividend of \$0.57, \$0.67 and \$0.67 per common share during the first, second and third quarters of 2018, respectively. This equates to a common stock dividend payout ratio of 39.6% and 37.2% during the first nine months of 2019 and 2018, 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 described in Note 7 - 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. We repurchased 496,307 shares under this plan at a total cost of \$50.0 million during the second quarter of 2019 while we repurchased 1,027,292 shares at a total cost of \$100.0 million during the fourth quarter of 2018. On July 24, 2019, our board of directors authorized a \$100.0 million stock repurchase program, allowing us to repurchase shares of our common stock over a one-year period from time to time at various prices in the open market or through private transactions. We repurchased 202,724 shares at a total cost of \$17.2 million under this plan during the third quarter of 2019. See Note 7 - Capital and Regulatory Matters in the accompanying notes to consolidated financial statements and Part II, Item 2 - Unregistered Sales of Equity Securities and Use of Proceeds, each included elsewhere in this report.

Liquidity. As more fully discussed in our 2018 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 September 30, 2019, management is not aware of any events that are reasonably likely to have a material adverse effect on our liquidity, capital resources or operations.

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 September 30, 2019, Cullen/Frost had liquid assets, including cash and resell agreements, totaling \$230.3 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.

Consolidated Average Balance Sheets and Interest Income Analysis - Quarter To Date

(Dollars in thousands - taxable-equivalent basis)

	September 30, 2019			September 30, 2018		
	Average Balance	Interest Income/Expense	Yield/Cost	Average Balance	Interest Income/Expense	Yield/Cost
Assets:						
Interest-bearing deposits	\$ 1,565,515	\$ 8,759	2.19%	\$ 2,799,277	\$ 14,445	2.05%
Federal funds sold and resell agreements	211,756	1,194	2.21	259,563	1,399	2.14
Securities:						
Taxable	5,278,040	32,122	2.45	4,162,978	21,339	2.02
Tax-exempt	8,166,344	79,617	4.08	7,890,373	81,884	4.15
Total securities	13,444,384	111,739	3.43	12,053,351	103,223	3.41
Loans, net of unearned discounts	14,471,414	188,192	5.16	13,683,311	173,671	5.04
Total Earning Assets and Average Rate Earned	29,693,069	309,884	4.21	28,795,502	292,738	4.04
Cash and due from banks	479,357			475,701		
Allowance for loan losses	(136,783)			(151,654)		
Premises and equipment, net	954,989			542,011		
Accrued interest and other assets	1,257,836			1,255,983		
Total Assets	<u>\$ 32,248,468</u>			<u>\$ 30,917,543</u>		
Liabilities:						
Non-interest-bearing demand deposits:						
Commercial and individual	\$ 9,819,992			\$ 10,139,627		
Correspondent banks	207,394			195,387		
Public funds	289,079			355,005		
Total non-interest-bearing demand deposits	10,316,465			10,690,019		
Interest-bearing deposits:						
Private accounts						
Savings and interest checking	6,711,866	1,140	0.07	6,674,665	1,581	0.09
Money market deposit accounts	7,763,380	18,201	0.93	7,619,901	17,832	0.93
Time accounts	1,022,716	4,476	1.74	798,500	1,757	0.87
Public funds	537,599	1,820	1.34	369,180	1,031	1.11
Total interest-bearing deposits	16,035,561	25,637	0.63	15,462,246	22,201	0.57
Total deposits	26,352,026			26,152,265		
Federal funds purchased and repurchase agreements	1,290,963	5,040	1.53	1,011,290	2,292	0.90
Junior subordinated deferrable interest debentures	136,279	1,425	4.18	136,222	1,394	4.09
Subordinated notes payable and other notes	98,811	1,164	4.71	98,654	1,164	4.72
Total Interest-Bearing Funds and Average Rate Paid	17,561,614	33,266	0.75	16,708,412	27,051	0.64
Accrued interest and other liabilities	542,091			184,222		
Total Liabilities	28,420,170			27,582,653		
Shareholders' Equity	3,828,298			3,334,890		
Total Liabilities and Shareholders' Equity	<u>\$ 32,248,468</u>			<u>\$ 30,917,543</u>		
Net interest income		<u>\$ 276,618</u>			<u>\$ 265,687</u>	
Net interest spread			<u>3.46%</u>			<u>3.40%</u>
Net interest income to total average earning assets			<u>3.76%</u>			<u>3.66%</u>

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 (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.

Consolidated Average Balance Sheets and Interest Income Analysis - Year To Date

(Dollars in thousands - taxable-equivalent basis)

	September 30, 2019			September 30, 2018		
	Average Balance	Interest Income/Expense	Yield/Cost	Average Balance	Interest Income/Expense	Yield/Cost
Assets:						
Interest-bearing deposits	\$ 1,487,947	\$ 27,226	2.41%	\$ 3,119,311	\$ 42,456	1.82%
Federal funds sold and resell agreements	235,612	4,323	2.42	247,660	3,575	1.93
Securities:						
Taxable	4,969,843	87,125	2.35	4,175,985	63,085	2.00
Tax-exempt	8,211,558	243,628	4.06	7,764,855	239,496	4.12
Total securities	13,181,401	330,753	3.41	11,940,840	302,581	3.38
Loans, net of unearned discounts	14,351,562	566,069	5.27	13,506,270	491,452	4.86
Total Earning Assets and Average Rate Earned	29,256,522	928,371	4.27	28,814,081	840,064	3.89
Cash and due from banks	495,222			487,821		
Allowance for loan losses	(136,271)			(152,890)		
Premises and equipment, net	833,861			532,400		
Accrued interest and other assets	1,228,440			1,251,554		
Total Assets	<u>\$ 31,677,774</u>			<u>\$ 30,932,966</u>		
Liabilities:						
Non-interest-bearing demand deposits:						
Commercial and individual	\$ 9,699,019			\$ 10,161,035		
Correspondent banks	204,975			203,625		
Public funds	315,249			397,822		
Total non-interest-bearing demand deposits	10,219,243			10,762,482		
Interest-bearing deposits:						
Private accounts						
Savings and interest checking	6,753,063	3,976	0.08	6,666,044	4,022	0.08
Money market deposit accounts	7,682,565	58,370	1.02	7,596,128	39,553	0.70
Time accounts	963,082	11,653	1.62	788,160	4,031	0.68
Public funds	535,034	5,656	1.41	402,723	2,808	0.93
Total interest-bearing deposits	15,933,744	79,655	0.67	15,453,055	50,414	0.44
Total deposits	26,152,987			26,215,537		
Federal funds purchased and repurchase agreements	1,238,197	15,276	1.63	1,027,077	3,557	0.46
Junior subordinated deferrable interest debentures	136,265	4,401	4.31	136,208	3,847	3.77
Subordinated notes payable and other notes	98,772	3,492	4.71	98,616	3,492	4.72
Total Interest-Bearing Funds and Average Rate Paid	17,406,978	102,824	0.79	16,714,956	61,310	0.49
Accrued interest and other liabilities	416,288			168,514		
Total Liabilities	28,042,509			27,645,952		
Shareholders' Equity	3,635,265			3,287,014		
Total Liabilities and Shareholders' Equity	<u>\$ 31,677,774</u>			<u>\$ 30,932,966</u>		
Net interest income		<u>\$ 825,547</u>			<u>\$ 778,754</u>	
Net interest spread			<u>3.48%</u>			<u>3.40%</u>
Net interest income to total average earning assets			<u>3.80%</u>			<u>3.61%</u>

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, (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.

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 2018 Form 10-K. There has been no significant change in the types of market risks we face since December 31, 2018.

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 September 30, 2019, 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 0.2% and 1.3%, respectively, relative to the flat-rate case over the next 12 months, while 100 and 200 basis point ratable decreases in interest rates would result in negative variances in net interest income of 1.7% and 5.7%, respectively, relative to the flat-rate case over the next 12 months. The September 30, 2019 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 fourth quarter of 2019, as further discussed below. For modeling purposes, as of September 30, 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 0.3% and 1.5%, respectively, relative to the flat-rate case over the next 12 months, while 100 and 200 basis point ratable decreases in interest rates would result in negative variances in net interest income of 2.9% and 8.0%, respectively, relative to the flat-rate case over the next 12 months. The September 30, 2018 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 fourth quarter of 2018, as further discussed below. The model simulations as of September 30, 2019 indicate that our projected balance sheet is less asset sensitive in comparison to our projected balance sheet as of September 30, 2018. The shift to a less asset sensitive position was primarily due to a decrease in the relative proportion of interest-bearing deposits and federal funds sold to projected average interest-earning assets. Interest-bearing deposits and federal funds sold are more immediately impacted by changes in interest rates in comparison to our other categories of earning assets.

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 fourth quarters of 2018 and 2019, 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 September 30, 2019, the effects of a 200 basis point increase and a 200 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.

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.

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 2018 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 September 30, 2019. 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
July 1, 2019 to July 31, 2019	—	\$ —	—	\$ 100,000
August 1, 2019 to August 31, 2019	202,724	84.80	202,724	82,809
September 1, 2019 to September 30, 2019	—	—	—	82,809
Total	<u>202,724</u>		<u>202,724</u>	

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 - The instance document does not appear in the interactive data file because its XBRL tags are embedded within the inline XBRL document.
104	Cover Page Interactive Data File - The cover page XBRL tags are embedded within the inline XBRL document (included in Exhibit 101)

+ 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.

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: October 31, 2019

By: /s/ Jerry Salinas

Jerry Salinas

Group Executive Vice President

and Chief Financial Officer

(Duly Authorized Officer, Principal Financial

Officer and Principal Accounting Officer)

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Section 2: EX-31.1 (EXHIBIT 31.1 - CHIEF EXECUTIVE OFFICER CERTIFICATION)

Exhibit 31.1

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

I, Phillip D. Green, certify that:

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

October 31, 2019

/s/ Phillip D. Green

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Section 3: EX-31.2 (EXHIBIT 31.2 - CHIEF FINANCIAL OFFICER CERTIFICATION)

Exhibit 31.2

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

I, Jerry Salinas, certify that:

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

October 31, 2019

/s/ Jerry Salinas

Jerry Salinas
Group Executive Vice President and Chief Financial Officer

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Section 4: EX-32.1 (EXHIBIT 32.1 - CHIEF EXECUTIVE OFFICER SECTION 1350 CERTIFICATION)

Exhibit 32.1

Corporation's Chief Executive Officer

Pursuant to Subsections (a) and (b) of Section 1350 of Chapter 63 of Title 18 of the United States Code in accordance with Section 906 of the Sarbanes-Oxley Act of 2002, the undersigned, Phillip D. Green, Chief Executive Officer, of Cullen/Frost Bankers, Inc. (the "Corporation"), hereby certifies, to his knowledge, that the Corporation's Quarterly Report on Form 10-Q for the quarter ended September 30, 2019 (the "Report") fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, and that the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Corporation.

/s/ Phillip D. Green

October 31, 2019

Phillip D. Green

The forgoing certification is being furnished solely pursuant to Subsections (a) and (b) of Section 1350 of Chapter 63 of Title 18 of the United States Code in accordance with Section 906 of the Sarbanes-Oxley Act of 2002 and 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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Section 5: EX-32.2 (EXHIBIT 32.2 - CHIEF FINANCIAL OFFICER SECTION 1350 CERTIFICATION)

Exhibit 32.2

Section 1350 Certification of the Corporation's Chief Financial Officer

Pursuant to Subsections (a) and (b) of Section 1350 of Chapter 63 of Title 18 of the United States Code in accordance with Section 906 of the Sarbanes-Oxley Act of 2002, the undersigned, Jerry Salinas, Chief Financial Officer, of Cullen/Frost Bankers, Inc. (the "Corporation"), hereby certifies, to his knowledge, that the Corporation's Quarterly Report on Form 10-Q for the quarter ended September 30, 2019 (the "Report") fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934, and that the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Corporation.

/s/ Jerry Salinas

October 31, 2019

Jerry Salinas

The forgoing certification is being furnished solely pursuant to Subsections (a) and (b) of Section 1350 of Chapter 63 of Title 18 of the United States Code in accordance with Section 906 of the Sarbanes-Oxley Act of 2002 and 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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