

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: March 31, 2020

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

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 April 27, 2020 there were 62,553,394 shares of the registrant’s Common Stock, \$.01 par value, outstanding.

Cullen/Frost Bankers, Inc.
Quarterly Report on Form 10-Q
March 31, 2020

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Part I. Financial Information
Item 1. Financial Statements (Unaudited)
Cullen/Frost Bankers, Inc.
Consolidated Balance Sheets

(Dollars in thousands, except per share amounts)

	March 31, 2020	December 31, 2019
Assets:		
Cash and due from banks	\$ 572,129	\$ 581,857
Interest-bearing deposits	3,246,731	2,849,950
Federal funds sold and resell agreements	376,725	356,374
Total cash and cash equivalents	4,195,585	3,788,181
Securities held to maturity, net of allowance for credit losses of \$200 at March 31, 2020	1,984,149	2,030,005
Securities available for sale, at estimated fair value	10,467,977	11,269,591
Trading account securities	25,921	24,298
Loans, net of unearned discounts	15,338,260	14,750,332
Less: Allowance for credit losses on loans	(263,881)	(132,167)
Net loans	15,074,379	14,618,165
Premises and equipment, net	1,035,881	1,011,947
Goodwill	654,952	654,952
Other intangible assets, net	2,224	2,481
Cash surrender value of life insurance policies	188,078	187,156
Accrued interest receivable and other assets	518,159	440,652
Total assets	<u>\$ 34,147,305</u>	<u>\$ 34,027,428</u>
Liabilities:		
Deposits:		
Non-interest-bearing demand deposits	\$ 11,202,208	\$ 10,873,629
Interest-bearing deposits	16,938,659	16,765,935
Total deposits	28,140,867	27,639,564
Federal funds purchased and repurchase agreements	1,170,978	1,695,342
Junior subordinated deferrable interest debentures, net of unamortized issuance costs	136,314	136,299
Subordinated notes, net of unamortized issuance costs	98,904	98,865
Accrued interest payable and other liabilities	773,576	545,690
Total liabilities	30,320,639	30,115,760
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 December 31, 2019	—	144,486
Common stock, par value \$0.01 per share; 210,000,000 shares authorized; 64,236,306 shares issued at March 31, 2020 and December 31, 2019	642	642
Additional paid-in capital	985,762	983,250
Retained earnings	2,635,588	2,667,534
Accumulated other comprehensive income (loss), net of tax	363,815	267,370
Treasury stock, at cost; 1,682,912 shares at March 31, 2020 and 1,567,302 shares at December 31, 2019	(159,141)	(151,614)
Total shareholders' equity	3,826,666	3,911,668
Total liabilities and shareholders' equity	<u>\$ 34,147,305</u>	<u>\$ 34,027,428</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 March 31,	
	2020	2019
Interest income:		
Loans, including fees	\$ 172,137	\$ 185,272
Securities:		
Taxable	26,030	24,679
Tax-exempt	58,886	59,143
Interest-bearing deposits	8,125	10,639
Federal funds sold and resell agreements	802	1,588
Total interest income	265,980	281,321
Interest expense:		
Deposits	16,053	27,174
Federal funds purchased and repurchase agreements	3,037	5,016
Junior subordinated deferrable interest debentures	1,205	1,498
Other long-term borrowings	1,164	1,164
Total interest expense	21,459	34,852
Net interest income	244,521	246,469
Credit loss expense	175,197	11,003
Net interest income after credit loss expense	69,324	235,466
Non-interest income:		
Trust and investment management fees	34,473	31,697
Service charges on deposit accounts	22,651	20,790
Insurance commissions and fees	16,485	18,406
Interchange and debit card transaction fees	3,255	3,280
Other charges, commissions and fees	9,365	9,062
Net gain (loss) on securities transactions	108,989	—
Other	17,697	13,550
Total non-interest income	212,915	96,785
Non-interest expense:		
Salaries and wages	98,812	92,476
Employee benefits	24,889	23,526
Net occupancy	25,384	19,267
Technology, furniture and equipment	25,240	21,664
Deposit insurance	2,624	2,808
Intangible amortization	257	325
Other	46,957	41,734
Total non-interest expense	224,163	201,800
Income before income taxes	58,076	130,451
Income taxes	3,323	13,955
Net income	54,753	116,496
Preferred stock dividends	2,016	2,016
Redemption of preferred stock	5,514	—
Net income available to common shareholders	\$ 47,223	\$ 114,480
Earnings per common share:		
Basic	\$ 0.75	\$ 1.80
Diluted	0.75	1.79

See Notes to Consolidated Financial Statements.

Cullen/Frost Bankers, Inc.**Consolidated Statements of Comprehensive Income (Loss)**

(Dollars in thousands)

	Three Months Ended March 31,	
	2020	2019
Net income	\$ 54,753	\$ 116,496
Other comprehensive income (loss), before tax:		
Securities available for sale and transferred securities:		
Change in net unrealized gain/loss during the period	230,118	198,146
Change in net unrealized gain on securities transferred to held to maturity	(377)	(344)
Reclassification adjustment for net (gains) losses included in net income	(108,989)	—
Total securities available for sale and transferred securities	120,752	197,802
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)	1,330	1,406
Total defined-benefit post-retirement benefit plans	1,330	1,406
Other comprehensive income (loss), before tax	122,082	199,208
Deferred tax expense (benefit)	25,637	41,834
Other comprehensive income (loss), net of tax	96,445	157,374
Comprehensive income (loss)	<u>\$ 151,198</u>	<u>\$ 273,870</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:							
March 31, 2020							
Balance at beginning of period	\$ 144,486	\$ 642	\$ 983,250	\$ 2,667,534	\$ 267,370	\$ (151,614)	\$ 3,911,668
Cumulative effect of accounting change	—	—	—	(29,252)	—	—	(29,252)
Total shareholders' equity at beginning of period, as adjusted	144,486	642	983,250	2,638,282	267,370	(151,614)	3,882,416
Net income	—	—	—	54,753	—	—	54,753
Other comprehensive income, net of tax	—	—	—	—	96,445	—	96,445
Stock option exercises/stock unit conversions (66,215 shares)	—	—	—	(4,983)	—	6,446	1,463
Stock-based compensation expense recognized in earnings	—	—	2,512	—	—	—	2,512
Redemption of preferred stock (6,000,000 shares)	(144,486)	—	—	(5,514)	—	—	(150,000)
Purchase of treasury stock (181,825 shares)	—	—	—	—	—	(13,973)	(13,973)
Cash dividends – preferred stock (approximately \$0.34 per share)	—	—	—	(2,016)	—	—	(2,016)
Cash dividends – common stock (\$0.71 per share)	—	—	—	(44,934)	—	—	(44,934)
Balance at end of period	\$ —	\$ 642	\$ 985,762	\$ 2,635,588	\$ 363,815	\$ (159,141)	\$ 3,826,666
March 31, 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	—	—	—	116,496	—	—	116,496
Other comprehensive loss, net of tax	—	—	—	—	157,374	—	157,374
Stock option exercises/stock unit conversions (100,865 shares)	—	—	—	(4,001)	—	8,886	4,885
Stock-based compensation expense recognized in earnings	—	—	3,654	—	—	—	3,654
Purchase of treasury stock (5,351 shares)	—	—	—	—	—	(519)	(519)
Cash dividends – preferred stock (approximately \$0.34 per share)	—	—	—	(2,016)	—	—	(2,016)
Cash dividends – common stock (\$0.67 per share)	—	—	—	(42,602)	—	—	(42,602)
Balance at end of period	\$ 144,486	\$ 642	\$ 970,958	\$ 2,493,207	\$ 93,774	\$ (111,550)	\$ 3,591,517

See accompanying Notes to Consolidated Financial Statements

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

	Three Months Ended March 31,	
	2020	2019
Operating Activities:		
Net income	\$ 54,753	\$ 116,496
Adjustments to reconcile net income to net cash from operating activities:		
Credit loss expense	175,197	11,003
Deferred tax expense (benefit)	(26,089)	(1,044)
Accretion of loan discounts	(4,060)	(3,757)
Securities premium amortization (discount accretion), net	31,760	28,696
Net (gain) loss on securities transactions	(108,989)	—
Depreciation and amortization	15,518	12,752
Net (gain) loss on sale/write-down of assets/foreclosed assets	397	(4,437)
Stock-based compensation	2,512	3,654
Net tax benefit from stock-based compensation	336	716
Earnings on life insurance policies	(922)	(898)
Net change in:		
Trading account securities	(12,819)	1,582
Lease right-of-use assets	5,620	4,833
Accrued interest receivable and other assets	(81,100)	32,634
Accrued interest payable and other liabilities	196,814	(56,098)
Net cash from operating activities	248,928	146,132
Investing Activities:		
Securities held to maturity:		
Purchases	(1,500)	—
Maturities, calls and principal repayments	41,526	23,421
Securities available for sale:		
Purchases	(687,759)	(1,526,279)
Sales	1,111,102	944,903
Maturities, calls and principal repayments	581,882	121,471
Proceeds from sale of loans	—	12,699
Net change in loans	(622,514)	(322,308)
Benefits received on life insurance policies	—	—
Proceeds from sales of premises and equipment	1	4,667
Purchases of premises and equipment	(31,749)	(44,039)
Proceeds from sales of repossessed properties	8	—
Net cash from investing activities	390,997	(785,465)
Financing Activities:		
Net change in deposits	501,303	(854,341)
Net change in short-term borrowings	(524,364)	(140,399)
Redemption of preferred stock	(150,000)	—
Proceeds from stock option exercises	1,463	4,885
Purchase of treasury stock	(13,973)	(519)
Cash dividends paid on preferred stock	(2,016)	(2,016)
Cash dividends paid on common stock	(44,934)	(42,602)
Net cash from financing activities	(232,521)	(1,034,992)
Net change in cash and cash equivalents	407,404	(1,674,325)
Cash and cash equivalents at beginning of period	3,788,181	3,955,779

Cash and cash equivalents at end of period	\$ 4,195,585	\$ 2,281,454
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See Notes to Consolidated Financial Statements.

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, 2019, included in our Annual Report on Form 10-K filed with the SEC on February 4, 2020 (the “2019 Form 10-K”). Operating results for the interim periods disclosed herein are not necessarily indicative of the results that may be expected for a full year or any future period.

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

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

	Three Months Ended March 31,	
	2020	2019
Cash paid for interest	\$ 23,168	\$ 34,402
Cash paid for income taxes	—	—
Significant non-cash transactions:		
Unsettled securities transactions	11,196	7,612
Right-of-use lease assets obtained in exchange for lessee operating lease liabilities	9,892	170,479

Accounting Changes, Reclassifications and Restatements. Certain items in prior financial statements have been reclassified to conform to the current presentation. In addition, on January 1, 2020, we adopted Accounting Standards Update (“ASU”) 2016-13, “Financial Instruments - Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments,” as subsequently updated for certain clarifications, targeted relief and codification improvements. Accounting Standards Codification (“ASC”) Topic 326 (“ASC 326”) replaces the previous “incurred loss” model for measuring credit losses, which encompassed allowances for current known and inherent losses within the portfolio, with an “expected loss” model, which encompasses allowances for losses expected to be incurred over the life of the portfolio. The new current expected credit loss (“CECL”) model requires the measurement of all expected credit losses for financial assets measured at amortized cost and certain off-balance-sheet credit exposures based on historical experience, current conditions, and reasonable and supportable forecasts. ASC 326 also 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, ASC 326 includes certain changes to the accounting for available-for-sale securities including the requirement to present credit losses as an allowance rather than as a direct write-down for available-for-sale securities management does not intend to sell or believes that it is more likely than not they will be required to sell.

We adopted ASC 326 using the modified retrospective method for all financial assets measured at amortized cost and off-balance-sheet credit exposures. Upon adoption, we recognized an after-tax cumulative effect reduction to retained earnings totaling \$29.3 million, as detailed in the table below. Operating results for periods after January 1, 2020 are presented in accordance with ASC 326 while prior period amounts continue to be reported in accordance with previously applicable standards and the accounting policies described in our 2019 Form 10-K.

The following table details the impact of the adoption of ASC 326 on the allowance for credit losses as of January 1, 2020.

	January 1, 2020			
	Pre-Adoption Allowance	Impact of Adoption	Post-Adoption Allowance	Cumulative Effect on Retained Earnings
Securities held to maturity:				
U.S. Treasury	\$ —	\$ —	\$ —	\$ —
Residential mortgage-backed securities	—	—	—	—
States and political subdivisions	—	215	215	(170)
Other	—	—	—	—
Total	\$ —	\$ 215	\$ 215	\$ (170)
Loans:				
Commercial and industrial	\$ 51,593	\$ 21,263	\$ 72,856	\$ (16,798)
Energy	37,382	(10,453)	26,929	8,258
Commercial real estate	31,037	(13,519)	17,518	10,680
Consumer real estate	4,113	2,392	6,505	(1,890)
Consumer and other	8,042	(2,248)	5,794	1,776
Total	\$ 132,167	\$ (2,565)	\$ 129,602	\$ 2,026
Off-balance-sheet credit exposures	\$ 500	\$ 39,377	\$ 39,877	\$ (31,108)

In connection with the adoption of ASC 326, we revised certain accounting policies and implemented certain accounting policy elections. The revised accounting policies are described below.

Securities: Securities are classified as held to maturity and carried at amortized cost when management has the positive intent and ability to hold them until maturity. Securities to be held for indefinite periods of time are classified as available for sale and carried at fair value, with the unrealized holding gains and losses (those for which no allowance for credit losses are recorded) reported as a component of other comprehensive income, net of tax. Securities held for resale in anticipation of short-term market movements are classified as trading and are carried at fair value, with changes in unrealized holding gains and losses included in income. Management determines the appropriate classification of securities at the time of purchase. Securities with limited marketability, such as stock in the Federal Reserve Bank and the Federal Home Loan Bank, are carried at cost.

Interest income on securities includes amortization of purchase premiums and discounts. Premiums and discounts on securities are generally amortized using the interest method with a constant effective yield without anticipating prepayments, except for mortgage-backed securities where prepayments are anticipated. Premiums on callable securities are amortized to their earliest call date. A security is placed on non-accrual status if (i) principal or interest has been in default for a period of 90 days or more or (ii) full payment of principal and interest is not expected. Interest accrued but not received for a security placed on non-accrual status is reversed against interest income. Gains and losses on sales are recorded on the trade date and are derived from the amortized cost of the security sold.

Allowance For Credit Losses - Held-to-Maturity Securities: The allowance for credit losses on held-to-maturity securities is a contra-asset valuation account, calculated in accordance with ASC 326, that is deducted from the amortized cost basis of held-to-maturity securities to present management's best estimate of the net amount expected to be collected. Held-to-maturity securities are charged-off against the allowance when deemed uncollectible by management. Adjustments to the allowance are reported in our income statement as a component of credit loss expense. Management measures expected credit losses on held-to-maturity securities on a collective basis by major security type with each type sharing similar risk characteristics, and considers historical credit loss information that is adjusted for current conditions and reasonable and supportable forecasts. Management has made the accounting policy election to exclude accrued interest receivable on held-to-maturity securities from the estimate of credit losses. Further information regarding our policies and methodology used to estimate the allowance for credit losses on held-to-maturity securities is presented in Note 2 - Securities.

Allowance For Credit Losses - Available-for-Sale Securities: For available-for sale securities in an unrealized loss position, we first assess whether (i) we intend to sell, or (ii) it is more likely than not that we will be required to sell the security before recovery of its amortized cost basis. If either case is affirmative, any previously recognized allowances are charged-off and the security's amortized cost is written down to fair value through income. If neither case is affirmative, the security is evaluated to determine whether the decline in fair value has resulted from credit losses or other factors. In making this assessment, management considers the extent to which fair value is less than amortized cost, any changes to the rating of the security by a rating agency and any adverse conditions specifically related to the security, among other factors. If this assessment indicates that a credit loss exists, the present value of cash flows expected to be collected from the security are compared to the amortized cost basis of the security. If the present value of cash flows expected to be collected is less than the amortized cost basis, a credit loss exists and an allowance for credit losses is recorded for the credit loss, limited by the amount that the fair value is less than the amortized cost basis. Any impairment that has not been recorded through an allowance for credit losses is recognized in other comprehensive income. Adjustments to the allowance are reported in our income statement as a component of credit loss expense. Management has made the accounting policy election to exclude accrued interest receivable on available-for-sale securities from the estimate of credit losses. Available-for-sale securities are charged-off against the allowance or, in the absence of any allowance, written down through income when deemed uncollectible by management or when either of the aforementioned criteria regarding intent or requirement to sell is met.

Loans: Loans are reported at the principal balance outstanding net of unearned discounts. Interest income on loans is reported on the level-yield method and includes amortization of deferred loan fees and costs over the loan term. Net loan commitment fees or costs for commitment periods greater than one year are deferred and amortized into fee income or other expense on a straight-line basis over the commitment period. Income on direct financing leases is recognized on a basis that achieves a constant periodic rate of return on the outstanding investment. Further information regarding our accounting policies related to past due loans, non-accrual loans, collateral dependent loans and troubled-debt restructurings is presented in Note 3 - Loans.

Allowance For Credit Losses - Loans: The allowance for credit losses on loans is a contra-asset valuation account, calculated in accordance with ASC 326, that is deducted from the amortized cost basis of loans to present management's best estimate of the net amount expected to be collected. Loans are charged-off against the allowance when deemed uncollectible by management. Expected recoveries do not exceed the aggregate of amounts previously charged-off and expected to be charged-off. Adjustments to the allowance are reported in our income statement as a component of credit loss expense. Management has made the accounting policy election to exclude accrued interest receivable on loans from the estimate of credit losses. Further information regarding our policies and methodology used to estimate the allowance for credit losses on loans is presented in Note 3 - Loans.

Allowance For Credit Losses - Off-Balance-Sheet Credit Exposures: The allowance for credit losses on off-balance-sheet credit exposures is a liability account, calculated in accordance with ASC 326, representing expected credit losses over the contractual period for which we are exposed to credit risk resulting from a contractual obligation to extend credit. No allowance is recognized if we have the unconditional right to cancel the obligation. The allowance is reported as a component of accrued interest payable and other liabilities in our consolidated balance sheets. Adjustments to the allowance are reported in our income statement as a component of credit loss expense. Further information regarding our policies and methodology used to estimate the allowance for credit losses on off-balance-sheet credit exposures is presented in Note 6 - Off-Balance-Sheet Arrangements, Commitments, Guarantees and Contingencies.

As more fully discussed in our 2019 Form 10-K, we adopted certain accounting standard updates related to accounting for leases as of January 1, 2019 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 that date. We also adopted an accounting standard update which shortened the amortization period for certain callable debt securities held at a premium as of January 1, 2019 using a modified retrospective transition adoption approach and recognized a cumulative effect reduction to retained earnings totaling \$14.7 million.

Note 2 - Securities

Securities - Held to Maturity. A summary of the amortized cost, fair value and allowance for credit losses related to securities held to maturity as of March 31, 2020 and December 31, 2019 is presented below.

	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Estimated Fair Value	Allowance for Credit Losses	Net Carrying Amount
March 31, 2020						
Residential mortgage-backed securities	\$ 530,396	\$ 37,234	\$ —	\$ 567,630	\$ —	\$ 530,396
States and political subdivisions	1,452,453	36,296	—	1,488,749	(200)	1,452,253
Other	1,500	—	—	1,500	—	1,500
Total	<u>\$ 1,984,349</u>	<u>\$ 73,530</u>	<u>\$ —</u>	<u>\$ 2,057,879</u>	<u>\$ (200)</u>	<u>\$ 1,984,149</u>
December 31, 2019						
Residential mortgage-backed securities	\$ 530,861	\$ 22	\$ 9,365	\$ 521,518	\$ —	\$ 530,861
States and political subdivisions	1,497,644	28,909	896	1,525,657	—	1,497,644
Other	1,500	—	—	1,500	—	1,500
Total	<u>\$ 2,030,005</u>	<u>\$ 28,931</u>	<u>\$ 10,261</u>	<u>\$ 2,048,675</u>	<u>\$ —</u>	<u>\$ 2,030,005</u>

All mortgage-backed securities included in the above table were issued by U.S. government agencies and corporations. The carrying value of held-to-maturity securities pledged to secure public funds, trust deposits, repurchase agreements and for other purposes, as required or permitted by law was \$647.1 million and \$561.4 million at March 31, 2020 and December 31, 2019, respectively. Accrued interest receivable on held-to-maturity securities totaled \$12.1 million and \$21.1 million at March 31, 2020 and December 31, 2019, respectively and is included in accrued interest receivable and other assets in the accompanying consolidated balance sheets.

From time to time, we have reclassified certain securities from available for sale to held to maturity. During the fourth quarter of 2019, we reclassified securities with an aggregate fair value of \$377.8 million and an aggregate net unrealized gain of \$3.3 million (\$2.6 million, net of tax) on the date of the transfer. The net unamortized, unrealized gain remaining on transferred securities, including those transferred in 2019 and in years prior, included in accumulated other comprehensive income in the accompanying balance sheet totaled \$4.4 million (\$3.5 million, net of tax) at March 31, 2020 and \$4.8 million (\$3.8 million, net of tax) at December 31, 2019. 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.

The allowance for credit losses on held-to-maturity securities is a contra-asset valuation account that is deducted from the amortized cost basis of held-to-maturity securities to present the net amount expected to be collected. Management measures expected credit losses on held-to-maturity securities on a collective basis by major security type with each type sharing similar risk characteristics, and considers historical credit loss information that is adjusted for current conditions and reasonable and supportable forecasts. With regard to U.S. Treasury and residential mortgage-backed securities issued by the U.S. government, or agencies thereof, it is expected that the securities will not be settled at prices less than the amortized cost bases of the securities as such securities are backed by the full faith and credit of and/or guaranteed by the U.S. government. Accordingly, no allowance for credit losses has been recorded for these securities. With regard to securities issued by States and political subdivisions and other held-to-maturity securities, management considers (i) issuer bond ratings, (ii) historical loss rates for given bond ratings, (iii) whether issuers continue to make timely principal and interest payments under the contractual terms of the securities, (iv) internal forecasts and (v) whether or not such securities are guaranteed by the Texas Permanent School Fund ("PSF") or pre-refunded by the issuers.

The following table summarizes Moody's and/or Standard & Poor's bond ratings for our portfolio of held-to-maturity securities issued by States and political subdivisions and other securities as of March 31, 2020:

	States and Political Subdivisions				Other Securities
	Not Guaranteed or Pre-Refunded	Guaranteed by the Texas PSF	Pre-Refunded	Total	
Aaa/AAA	\$ 131,760	\$ 849,396	\$ 284,678	\$ 1,265,834	\$ —
Aa/AA	118,271	—	—	118,271	—
A	68,348	—	—	68,348	—
Not rated	—	—	—	—	1,500
Total	<u>\$ 318,379</u>	<u>\$ 849,396</u>	<u>\$ 284,678</u>	<u>\$ 1,452,453</u>	<u>\$ 1,500</u>

Historical loss rates associated with securities having similar grades as those in our portfolio have generally not been significant. Furthermore, as of March 31, 2020, there were no past due principal or interest payments associated with these securities. The PSF is a sovereign wealth fund which serves to provide revenues for funding of public primary and secondary education in the State of Texas. Based upon (i) the PSF's AAA insurer financial strength rating, (ii) the PSF's substantial capitalization and excess guarantee capacity and (iii) a zero historical loss rate, no allowance for credit losses has been recorded for securities guaranteed by the PSF as there is no current expectation of credit losses related to these securities. Pre-refunded securities have been defeased by the issuer and are fully secured by cash and/or U.S. Treasury securities held in escrow for payment to holders when the underlying call dates of the securities are reached. Accordingly, no allowance for credit losses has been recorded for securities that have been defeased as there is no current expectation of credit losses related to these securities.

The following table details activity in the allowance for credit losses on held-to-maturity securities during the three months ended March 31, 2020.

Beginning balance, prior to adoption of ASC 326	\$	—
Impact of adopting ASC 326		215
Credit loss expense (benefit)		(15)
Ending balance	\$	<u>200</u>

Securities - Available for Sale. A summary of the amortized cost, fair value and allowance for credit losses related to securities available for sale as of March 31, 2020 and December 31, 2019 is presented below.

	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Allowance for Credit Losses	Estimated Fair Value
March 31, 2020					
U.S. Treasury	\$ 1,117,523	\$ 49,741	\$ —	\$ —	\$ 1,167,264
Residential mortgage-backed securities	2,009,523	80,423	—	—	2,089,946
States and political subdivisions	6,785,079	382,976	189	—	7,167,866
Other	42,901	—	—	—	42,901
Total	<u>\$ 9,955,026</u>	<u>\$ 513,140</u>	<u>\$ 189</u>	<u>\$ —</u>	<u>\$ 10,467,977</u>
December 31, 2019					
U.S. Treasury	\$ 1,941,283	\$ 18,934	\$ 12,084	\$ —	\$ 1,948,133
Residential mortgage-backed securities	2,176,275	32,608	1,289	—	2,207,594
States and political subdivisions	6,717,344	353,857	204	—	7,070,997
Other	42,867	—	—	—	42,867
Total	<u>\$ 10,877,769</u>	<u>\$ 405,399</u>	<u>\$ 13,577</u>	<u>\$ —</u>	<u>\$ 11,269,591</u>

All mortgage-backed securities included in the above table were issued by U.S. government agencies and corporations. At March 31, 2020, nearly all of the securities in our available for sale municipal bond portfolio were issued by the State of Texas or political subdivisions or agencies within the State of Texas, of which approximately 70.8% are either guaranteed by the PSF or have been pre-refunded. Securities with limited marketability, such as stock in the Federal Reserve Bank and the Federal Home Loan Bank, are carried at cost and are reported as other available for sale securities in the table above. The carrying value of available-for-sale securities pledged to secure public funds, trust deposits, repurchase agreements and for other purposes, as required or permitted by law was \$2.6 billion and \$3.4 billion at March 31, 2020 and December 31, 2019, respectively. Accrued interest receivable on available-for-sale securities totaled \$69.5 million and \$115.9 million at March 31, 2020 and December 31, 2019, respectively and is included in accrued interest receivable and other assets in the accompanying consolidated balance sheets.

The table below summarizes, as of March 31, 2020, securities available for sale in an unrealized loss position for which an allowance for credit losses has not been recorded, aggregated by type of security and length of time in a continuous unrealized loss position.

	Less than 12 Months		More than 12 Months		Total	
	Estimated Fair Value	Unrealized Losses	Estimated Fair Value	Unrealized Losses	Estimated Fair Value	Unrealized Losses
States and political subdivisions	\$ 67,949	\$ 189	\$ —	\$ —	\$ 67,949	\$ 189
Total	<u>\$ 67,949</u>	<u>\$ 189</u>	<u>\$ —</u>	<u>\$ —</u>	<u>\$ 67,949</u>	<u>\$ 189</u>

As of March 31, 2020, no allowance for credit losses has been recognized on available for sale securities in an unrealized loss position as management does not believe any of the securities are impaired due to reasons of credit quality. This is based upon our analysis of the underlying risk characteristics, including credit ratings, and other qualitative factors (such as a PSF guarantee) related to our available for sale securities and in consideration of our historical credit loss experience and internal forecasts. The issuers of these securities continue to make timely principal and interest payments under the contractual terms of the securities. Furthermore, 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. The 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.

Contractual Maturities. The following table summarizes the maturity distribution schedule of securities held to maturity and securities available for sale as of March 31, 2020. Mortgage-backed securities are included in maturity categories based on their stated maturity date. Expected maturities may differ from contractual maturities because issuers may have the right to call or prepay obligations. Other securities classified as available for sale include stock in the Federal Reserve Bank and the Federal Home Loan Bank, which have no maturity date. These securities have been included in the total column only.

	Within 1 Year	1 - 5 Years	5 - 10 Years	After 10 Years	Total
Held To Maturity					
<i>Amortized Cost</i>					
Residential mortgage-backed securities	\$ —	\$ 332	\$ 516,866	\$ 13,198	\$ 530,396
States and political subdivisions	25,324	170,386	496,235	760,508	1,452,453
Other	—	1,500	—	—	1,500
Total	<u>\$ 25,324</u>	<u>\$ 172,218</u>	<u>\$ 1,013,101</u>	<u>\$ 773,706</u>	<u>\$ 1,984,349</u>
<i>Estimated Fair Value</i>					
Residential mortgage-backed securities	\$ —	\$ 335	\$ 553,409	\$ 13,886	\$ 567,630
States and political subdivisions	25,579	174,896	507,221	781,053	1,488,749
Other	—	1,500	—	—	1,500
Total	<u>\$ 25,579</u>	<u>\$ 176,731</u>	<u>\$ 1,060,630</u>	<u>\$ 794,939</u>	<u>\$ 2,057,879</u>
Available For Sale					
<i>Amortized Cost</i>					
U. S. Treasury	\$ 33,964	\$ 1,083,559	\$ —	\$ —	\$ 1,117,523
Residential mortgage-backed securities	236	68,185	5,859	1,935,243	2,009,523
States and political subdivisions	250,489	220,504	648,416	5,665,670	6,785,079
Other	—	—	—	—	42,901
Total	<u>\$ 284,689</u>	<u>\$ 1,372,248</u>	<u>\$ 654,275</u>	<u>\$ 7,600,913</u>	<u>\$ 9,955,026</u>
<i>Estimated Fair Value</i>					
U. S. Treasury	\$ 34,181	\$ 1,133,083	\$ —	\$ —	\$ 1,167,264
Residential mortgage-backed securities	249	70,834	6,379	2,012,484	2,089,946
States and political subdivisions	252,108	231,285	686,745	5,997,728	7,167,866
Other	—	—	—	—	42,901
Total	<u>\$ 286,538</u>	<u>\$ 1,435,202</u>	<u>\$ 693,124</u>	<u>\$ 8,010,212</u>	<u>\$ 10,467,977</u>

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

	Three Months Ended March 31,	
	2020	2019
Proceeds from sales	\$ 1,111,102	\$ 944,903
Gross realized gains	108,989	—
Gross realized losses	—	—
Tax (expense) benefit of securities gains/losses	22,888	—

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

	Three Months Ended March 31,	
	2020	2019
Premium amortization	\$ (32,345)	\$ (29,879)
Discount accretion	585	1,183
Net (premium amortization) discount accretion	\$ (31,760)	\$ (28,696)

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

	March 31, 2020	December 31, 2019
U.S. Treasury	\$ 24,491	\$ 24,298
States and political subdivisions	1,430	—
Total	\$ 25,921	\$ 24,298

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

	Three Months Ended March 31,	
	2020	2019
Net gain on sales transactions	\$ 470	\$ 506
Net mark-to-market gains (losses)	115	4
Net gain (loss) on trading account securities	\$ 585	\$ 510

Note 3 - Loans

Loans were as follows:

	March 31, 2020	Percentage of Total	December 31, 2019	Percentage of Total
Commercial and industrial	\$ 5,536,760	36.1%	\$ 5,187,466	35.2%
Energy:				
Production	1,268,832	8.3	1,348,900	9.2
Service	185,210	1.2	192,996	1.3
Other	114,812	0.7	110,986	0.8
Total energy	1,568,854	10.2	1,652,882	11.2
Commercial real estate:				
Commercial mortgages	4,920,882	32.1	4,594,113	31.1
Construction	1,265,441	8.3	1,312,659	8.9
Land	286,876	1.9	289,467	2.0
Total commercial real estate	6,473,199	42.3	6,196,239	42.0
Consumer real estate:				
Home equity loans	389,844	2.5	375,596	2.6
Home equity lines of credit	350,330	2.3	354,671	2.4
Other	480,933	3.1	464,146	3.1
Total consumer real estate	1,221,107	7.9	1,194,413	8.1
Total real estate	7,694,306	50.2	7,390,652	50.1
Consumer and other	538,340	3.5	519,332	3.5
Total loans	\$ 15,338,260	100.0%	\$ 14,750,332	100.0%

Concentrations of Credit. Most of our lending activity occurs within the State of Texas, including the four largest metropolitan areas of Austin, Dallas/Ft. Worth, Houston and San Antonio, as well as other markets. The majority of our loan portfolio consists of commercial and industrial and commercial real estate loans. As of March 31, 2020, there were no concentrations of loans related to any single industry in excess of 10% of total loans other than energy loans, which totaled 10.2% of total loans. Unfunded commitments to extend credit and standby letters of credit issued to customers in the energy industry totaled \$1.2 billion and \$84.4 million, respectively, as of March 31, 2020.

Foreign Loans. We have U.S. dollar denominated loans and commitments to borrowers in Mexico. The outstanding balance of these loans and the unfunded amounts available under these commitments were not significant at March 31, 2020 or December 31, 2019.

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 March 31, 2020 and \$298.5 million at December 31, 2019.

Accrued Interest Receivable. Accrued interest receivable on loans totaled \$42.3 million and \$45.5 million at March 31, 2020 and December 31, 2019, respectively and is included in accrued interest receivable and other assets in the accompany consolidated balance sheets.

Non-Accrual and Past Due Loans. Loans are considered past due if the required principal and interest payments have not been received as of the date such payments were due. Loans are placed on non-accrual status when, in management’s opinion, the borrower may be unable to meet payment obligations as they become due, as well as when required by regulatory provisions. In determining whether or not a borrower may be unable to meet payment obligations for each class of loans, we consider the borrower’s debt service capacity through the analysis of current financial information, if available, and/or current information with regards to our collateral position. Regulatory provisions would typically require the placement of a loan on non-accrual status if (i) principal or interest has been in default for a period of 90 days or more unless the loan is both well secured and in the process of collection or (ii) full payment of principal and interest is not expected. Loans may be placed on non-accrual status regardless of whether or not such loans are considered past due. When interest accrual is discontinued, all unpaid accrued interest is reversed against income. Interest income on non-accrual loans is recognized only to the extent that cash payments are received in excess of principal due. A loan may be returned to accrual status when all the principal and interest amounts contractually due are brought current and future principal and interest amounts contractually due are reasonably assured, which is typically evidenced by a sustained period (at least six months) of repayment performance by the borrower.

Non-accrual loans, segregated by class of loans, were as follows:

	March 31, 2020		December 31, 2019	
	Total Non-Accrual	Non-Accrual with No Credit Loss Allowance	Total Non-Accrual	Non-Accrual with No Credit Loss Allowance
Commercial and industrial	\$ 23,913	\$ 11,085	\$ 26,038	\$ 13,266
Energy	28,702	28,702	65,761	3,281
Commercial real estate:				
Buildings, land and other	8,224	5,922	8,912	6,558
Construction	3,774	683	665	665
Consumer real estate	2,094	2,094	922	922
Consumer and other	20	1	5	—
Total	<u>\$ 66,727</u>	<u>\$ 48,487</u>	<u>\$ 102,303</u>	<u>\$ 24,692</u>

The following table presents non-accrual loans as of March 31, 2020 by class and year of origination.

	2020	2019	2018	2017	2016	Prior	Revolving Loans	Revolving Loans Converted to Term	Total
Commercial and industrial	\$ —	\$ 3,187	\$ 9,012	\$ 2,448	\$ 384	\$ 146	\$ 4,601	\$ 4,135	\$ 23,913
Energy	—	—	—	—	—	—	3,035	25,667	28,702
Commercial real estate:									
Buildings, land and other	—	2,207	34	1,470	306	3,639	568	—	8,224
Construction	—	3,774	—	—	—	—	—	—	3,774
Consumer real estate	—	—	—	211	350	628	844	61	2,094
Consumer and other	—	1	—	—	—	—	19	—	20
Total	<u>\$ —</u>	<u>\$ 9,169</u>	<u>\$ 9,046</u>	<u>\$ 4,129</u>	<u>\$ 1,040</u>	<u>\$ 4,413</u>	<u>\$ 9,067</u>	<u>\$ 29,863</u>	<u>\$ 66,727</u>

Had non-accrual loans performed in accordance with their original contract terms, we would have recognized additional interest income, net of tax, of approximately \$1.0 million for the three months ended March 31, 2020, and approximately \$1.0 million for the three months ended March 31, 2019.

An age analysis of past due loans (including both accruing and non-accruing loans), segregated by class of loans, as of March 31, 2020 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	\$ 38,518	\$ 24,217	\$ 62,735	\$ 5,474,025	\$ 5,536,760	\$ 8,343
Energy	23,913	25,667	49,580	1,519,274	1,568,854	—
Commercial real estate:						
Buildings, land and other	39,359	3,472	42,831	5,164,927	5,207,758	817
Construction	4,701	127	4,828	1,260,613	1,265,441	127
Consumer real estate	9,542	3,230	12,772	1,208,335	1,221,107	1,572
Consumer and other	6,134	1,013	7,147	531,193	538,340	1,013
Total	<u>\$ 122,167</u>	<u>\$ 57,726</u>	<u>\$ 179,893</u>	<u>\$ 15,158,367</u>	<u>\$ 15,338,260</u>	<u>\$ 11,872</u>

Troubled Debt Restructurings. Troubled debt restructurings during the three months ended March 31, 2020 and March 31, 2019 are set forth in the following table.

	Three Months Ended March 31, 2020		Three Months Ended March 31, 2019	
	Balance at Restructure	Balance at Period-End	Balance at Restructure	Balance at Period-End
Commercial and industrial	\$ 2,191	\$ 2,198	\$ 307	\$ 293
Commercial real estate:				
Buildings, land and other	—	—	5,901	5,898
	<u>\$ 2,191</u>	<u>\$ 2,198</u>	<u>\$ 6,208</u>	<u>\$ 6,191</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 credit losses on loans.

Additional information related to restructured loans as of or for the three months ended March 31, 2020 and March 31, 2019 is set forth in the following table.

	March 31, 2020	March 31, 2019
Restructured loans past due in excess of 90 days at period-end:		
Number of loans	3	4
Dollar amount of loans	\$ 1,733	\$ 2,367
Restructured loans on non-accrual status at period end	2,198	2,162
Charge-offs of restructured loans:		
Recognized in connection with restructuring	—	—
Recognized on previously restructured loans	1,533	—

Certain borrowers are currently unable to meet their contractual payment obligations because of the adverse effects of COVID-19. To help mitigate these effects, loan customers may apply for a deferral of payments, or portions thereof, for up to 90 days. In the absence of other intervening factors, such short-term modifications made on a good faith basis are not categorized as troubled debt restructurings, nor are loans granted payment deferrals related to COVID-19 reported as past due or placed on non-accrual status (provided the loans were not past due or on non-accrual status prior to the deferral).

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 (iv) 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 2019 Form 10-K. We monitor portfolio credit quality by the weighted-average risk grade of each class of commercial loan. Individual relationship managers, under the oversight of credit administration, 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 and year of origination/renewal as of March 31, 2020.

	2020	2019	2018	2017	2016	Prior	Revolving Loans	Revolving Loans Converted to Term	Total	W/A Risk Grade
Commercial and industrial										
Risk grades 1-8	\$ 765,088	\$ 813,141	\$ 433,145	\$ 333,114	\$ 168,744	\$ 143,770	\$ 2,362,308	\$ 47,080	\$ 5,066,390	6.14
Risk grade 9	15,539	34,847	51,906	14,167	7,700	10,993	127,148	6,267	268,567	9.00
Risk grade 10	21,815	10,918	13,042	7,237	6,670	3,377	74,625	679	138,363	10.00
Risk grade 11	45	5,853	2,276	3,149	922	661	17,664	8,957	39,527	11.00
Risk grade 12	—	536	7,179	1,432	384	146	2,520	2,512	14,709	12.00
Risk grade 13	—	2,651	1,833	1,016	—	—	2,081	1,623	9,204	13.00
	<u>\$ 802,487</u>	<u>\$ 867,946</u>	<u>\$ 509,381</u>	<u>\$ 360,115</u>	<u>\$ 184,420</u>	<u>\$ 158,947</u>	<u>\$ 2,586,346</u>	<u>\$ 67,118</u>	<u>\$ 5,536,760</u>	6.44
W/A Risk grade	5.75	6.69	7.12	6.18	6.24	6.10	6.46	7.89	6.44	
Energy										
Risk grades 1-8	\$ 585,655	\$ 95,004	\$ 22,101	\$ 11,048	\$ 3,187	\$ 5,514	\$ 665,347	\$ 9,642	\$ 1,397,498	6.33
Risk grade 9	215	2,105	999	587	—	—	25,658	46	29,610	9.00
Risk grade 10	—	669	—	—	—	47	10,250	—	10,966	10.00
Risk grade 11	62,509	325	941	300	8	770	36,105	1,120	102,078	11.00
Risk grade 12	—	—	—	—	—	—	3,035	25,667	28,702	12.00
Risk grade 13	—	—	—	—	—	—	—	—	—	13.00
	<u>\$ 648,379</u>	<u>\$ 98,103</u>	<u>\$ 24,041</u>	<u>\$ 11,935</u>	<u>\$ 3,195</u>	<u>\$ 6,331</u>	<u>\$ 740,395</u>	<u>\$ 36,475</u>	<u>\$ 1,568,854</u>	6.81
W/A Risk grade	6.89	7.21	7.25	7.34	6.60	7.48	6.48	10.69	6.81	
Commercial real estate:										
Buildings, land, other										
Risk grades 1-8	\$ 503,028	\$ 1,080,494	\$ 780,270	\$ 745,352	\$ 518,981	\$ 909,275	\$ 83,274	\$ 59,064	\$ 4,679,738	6.89
Risk grade 9	1,872	89,718	41,520	79,696	55,037	59,672	400	264	328,179	9.00
Risk grade 10	—	14,619	500	20,394	26,200	58,297	632	—	120,642	10.00
Risk grade 11	249	11,275	1,789	31,201	8,235	16,135	100	1,991	70,975	11.00
Risk grade 12	—	2,207	34	1,470	306	3,389	505	—	7,911	12.00
Risk grade 13	—	—	—	—	—	250	63	—	313	13.00
	<u>\$ 505,149</u>	<u>\$ 1,198,313</u>	<u>\$ 824,113</u>	<u>\$ 878,113</u>	<u>\$ 608,759</u>	<u>\$ 1,047,018</u>	<u>\$ 84,974</u>	<u>\$ 61,319</u>	<u>\$ 5,207,758</u>	7.16
W/A Risk grade	6.97	7.19	7.08	7.32	7.37	7.04	7.03	6.84	7.16	
Construction										
Risk grades 1-8	\$ 115,476	\$ 374,393	\$ 456,568	\$ 105,160	\$ 1,196	\$ 17,193	\$ 144,922	\$ —	\$ 1,214,908	7.15
Risk grade 9	406	14,003	3,500	2,919	6,984	—	127	—	27,939	9.00
Risk grade 10	12,991	2,744	—	917	—	—	—	—	16,652	10.00
Risk grade 11	1,192	—	—	—	—	976	—	—	2,168	11.00
Risk grade 12	—	683	—	—	—	—	—	—	683	12.00
Risk grade 13	—	3,091	—	—	—	—	—	—	3,091	13.00
	<u>\$ 130,065</u>	<u>\$ 394,914</u>	<u>\$ 460,068</u>	<u>\$ 108,996</u>	<u>\$ 8,180</u>	<u>\$ 18,169</u>	<u>\$ 145,049</u>	<u>\$ —</u>	<u>\$ 1,265,441</u>	7.25
W/A Risk grade	7.59	7.24	7.24	7.54	8.71	6.31	6.84	—	7.25	
Total commercial	\$ 635,214	\$ 1,593,227	\$ 1,284,181	\$ 987,109	\$ 616,939	\$ 1,065,187	\$ 230,023	\$ 61,319	\$ 6,473,199	7.18

real estate

W/A Risk grade	7.10	7.21	7.14	7.35	7.38	7.02	6.91	6.84	7.18
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In the table above, energy loans include \$62.5 million related to 2020 originations/renewals that have a risk grade of 11. Of this amount, \$50.9 million related to the renewal of a loan that was first originated in 2017 and \$11.5 million related to the renewal of a loan that was first originated in 2016.

The following tables present weighted average risk grades for all commercial loans by class as of December 31, 2019.

	Commercial and Industrial		Energy		Commercial Real Estate - Buildings, Land and Other		Commercial Real Estate - Construction		Total Commercial Real Estate	
	W/A Risk Grade	Loans	W/A Risk Grade	Loans	W/A Risk Grade	Loans	W/A Risk Grade	Loans	W/A Risk Grade	Loans
Risk grades 1-8	6.17	\$ 4,788,857	5.90	\$ 1,488,301	6.78	\$ 4,523,271	7.25	\$ 1,274,098	6.88	\$ 5,797,369
Risk grade 9	9.00	247,212	9.00	32,163	9.00	163,714	9.00	21,509	9.00	185,223
Risk grade 10	10.00	71,472	10.00	51,898	10.00	103,626	10.00	15,243	10.00	118,869
Risk grade 11	11.00	53,887	11.00	14,760	11.00	84,057	11.00	1,144	11.00	85,201
Risk grade 12	12.00	18,189	12.00	45,514	12.00	8,529	12.00	665	12.00	9,194
Risk grade 13	13.00	7,849	13.00	20,246	13.00	383	13.00	—	13.00	383
Total	6.44	<u>\$ 5,187,466</u>	6.39	<u>\$ 1,652,882</u>	7.01	<u>\$ 4,883,580</u>	7.31	<u>\$ 1,312,659</u>	7.07	<u>\$ 6,196,239</u>

Information about the payment status of consumer loans, segregated by portfolio segment and year of origination, as of March 31, 2020 was as follows:

	2020	2019	2018	2017	2016	Prior	Revolving Loans	Revolving Loans Converted to Term	Total
Consumer real estate:									
Past due 30-89 days	\$ —	\$ 623	\$ 771	\$ 1,490	\$ 763	\$ 3,575	\$ 1,206	\$ 1,114	\$ 9,542
Past due 90 or more days	—	—	512	108	386	1,000	1,224	—	3,230
Total past due	—	623	1,283	1,598	1,149	4,575	2,430	1,114	12,772
Current loans	65,082	217,726	142,566	122,282	93,385	180,883	367,149	19,262	1,208,335
Total	<u>\$ 65,082</u>	<u>\$ 218,349</u>	<u>\$ 143,849</u>	<u>\$ 123,880</u>	<u>\$ 94,534</u>	<u>\$ 185,458</u>	<u>\$ 369,579</u>	<u>\$ 20,376</u>	<u>\$ 1,221,107</u>
Consumer and other:									
Past due 30-89 days	\$ 1,414	\$ 801	\$ 263	\$ 151	\$ 102	\$ 23	\$ 3,380	\$ —	\$ 6,134
Past due 90 or more days	—	902	—	—	—	—	111	—	1,013
Total past due	1,414	1,703	263	151	102	23	3,491	—	7,147
Current loans	19,780	44,825	14,699	4,329	2,762	1,490	420,517	22,791	531,193
Total	<u>\$ 21,194</u>	<u>\$ 46,528</u>	<u>\$ 14,962</u>	<u>\$ 4,480</u>	<u>\$ 2,864</u>	<u>\$ 1,513</u>	<u>\$ 424,008</u>	<u>\$ 22,791</u>	<u>\$ 538,340</u>

Revolving loans that converted to term during the three months ended March 31, 2020 were as follows:

Commercial and industrial	\$ 11,346
Energy	15,353
Commercial real estate:	
Buildings, land and other	7,639
Construction	—
Consumer real estate	1,071
Consumer and other	—
Total	<u>\$ 35,409</u>

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 2019 Form 10-K, totaled 111.8 at March 31, 2020 (most recent date available) and 127.9 at December 31, 2019. A higher TLI value implies more favorable economic conditions.

Allowance For Credit Losses - Loans. The allowance for credit losses on loans is a contra-asset valuation account, calculated in accordance with ASC 326, that is deducted from the amortized cost basis of loans to present the net amount expected to be collected. The amount of the allowance represents management's best estimate of current expected credit losses on loans considering available information, from internal and external sources, relevant to assessing collectibility over the loans' contractual terms, adjusted for expected prepayments when appropriate. The contractual term excludes expected extensions, renewals and modifications unless (i) management has a reasonable expectation that a trouble debt restructuring will be executed with an

individual borrower or (ii) such extension or renewal options are not unconditionally cancellable by us and, in such cases, the borrower is likely to meet applicable conditions and likely to request extension or renewal. Relevant available information includes historical credit loss experience, current conditions and reasonable and supportable forecasts. While historical credit loss experience provides the basis for the estimation of expected credit losses, adjustments to historical loss information may be made for differences in current portfolio-specific risk characteristics, environmental conditions or other relevant factors. The allowance for credit losses is measured on a collective basis for portfolios of loans when similar risk characteristics exist. Loans that do not share risk characteristics are evaluated for expected credit losses on an individual basis and excluded from the collective evaluation. Expected credit losses for collateral dependent loans, including loans where the borrower is experiencing financial difficulty but foreclosure is not probable, are based on the fair value of the collateral at the reporting date, adjusted for selling costs as appropriate.

Credit loss expense related to loans reflects the totality of actions taken on all loans for a particular period including any necessary increases or decreases in the allowance related to changes in credit loss expectations associated with specific loans or pools of loans. 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. While management utilizes its best judgment and information available, the ultimate appropriateness of the allowance is dependent upon a variety of factors beyond our control, including the performance of our loan portfolio, the economy, changes in interest rates and the view of the regulatory authorities toward loan classifications.

In calculating the allowance for credit losses, most loans are segmented into pools based upon similar characteristics and risk profiles. Common characteristics and risk profiles include the type/purpose of loan, underlying collateral, geographical similarity and historical/expected credit loss patterns. In developing these loan pools for the purposes of modeling expected credit losses, we also analyzed the degree of correlation in how loans within each portfolio respond when subjected to varying economic conditions and scenarios as well as other portfolio stress factors. For modeling purposes, our loan pools include (i) commercial and industrial and energy - non-revolving, (ii) commercial and industrial and energy - revolving, (iii) commercial real estate - owner occupied, (iv) commercial real estate - non-owner occupied, (v) commercial real estate - construction/land development, (vi) consumer real estate and (vii) consumer and other. We periodically reassess each pool to ensure the loans within the pool continue to share similar characteristics and risk profiles and to determine whether further segmentation is necessary.

For each loan pool, we measure expected credit losses over the life of each loan utilizing a combination of models which measure (i) probability of default ("PD"), which is the likelihood that loan will stop performing/default, (ii) probability of attrition ("PA"), which is the likelihood that a loan will pay-off prior to maturity, (iii) loss given default ("LGD"), which is the expected loss rate for loans in default and (iv) exposure at default ("EAD"), which is the estimated outstanding principal balance of the loans upon default, including the expected funding of unfunded commitments outstanding as of the measurement date. For certain commercial loan portfolios, the PD is calculated using a transition matrix to determine the likelihood of a customer's risk grade migrating from one specified range of risk grades to a different specified range. Expected credit losses are calculated as the product of PD (adjusted for attrition), LGD and EAD. This methodology builds on default probabilities already incorporated into our risk grading process by utilizing pool-specific historical loss rates to calculate expected credit losses. These pool-specific historical loss rates may be adjusted for current macroeconomic assumptions, as further discussed below, and other factors such as differences in underwriting standards, portfolio mix, or when historical asset terms do not reflect the contractual terms of the financial assets being evaluated as of the measurement date. Each time we measure expected credit losses, we assess the relevancy of historical loss information and consider any necessary adjustments to address any differences in asset-specific characteristics. Due to their short-term nature, expected credit losses for overdrafts included in consumer and other loans are based solely upon a weighting of recent historical charge-offs over a period of three years.

The measurement of expected credit losses is impacted by loan/borrower attributes and certain macroeconomic variables. Significant loan/borrower attributes utilized in our modeling processes include, among other things, (i) origination date, (ii) maturity date, (iii) payment type, (iv) collateral type and amount, (v) current risk grade, (vi) current unpaid balance and commitment utilization rate, (vii) payment status/delinquency history and (viii) expected recoveries of previously charged-off amounts. Significant macroeconomic variables utilized in our modeling processes include, among other things, (i) Gross State Product for Texas and U.S. Gross Domestic Product, (ii) selected market interest rates including U.S. Treasury rates, bank prime rate, 30-year fixed mortgage rate, BBB corporate bond rate, among others, (iii) unemployment rates, (iv) commercial and residential property prices in Texas and the U.S. as a whole, (v) West Texas Intermediate crude oil price and (vi) total stock market index.

PD and PA were estimated by analyzing internally-sourced data related to historical performance of each loan pool over a complete economic cycle. PD and PA are adjusted to reflect the current impact of certain macroeconomic variables as well as their expected changes over a reasonable and supportable forecast period. We have determined that we are reasonably able to forecast the macroeconomic variables used in our modeling processes with an acceptable degree of confidence for a total of two years with the last twelve months of the forecast period encompassing a reversion process whereby the forecasted macroeconomic variables are reverted to their historical mean utilizing a rational, systematic basis. The macroeconomic variables utilized as inputs in our modeling processes were subjected to a variety of analysis procedures and were selected primarily based on statistical relevancy

and correlation to our historical credit losses. By reverting these modeling inputs to their historical mean and considering loan/borrower specific attributes, our models will yield a measurement of expected credit losses that reflects our average historical loss rates for periods subsequent to the twelve-month reversion period. The LGD is based on historical recovery averages for each loan pool, adjusted to reflect the current impact of certain macroeconomic variables as well as their expected changes over a two-year forecast period, with the final twelve months of the forecast period encompassing a reversion process, which management considers to be both reasonable and supportable. This same forecast/reversion period is used for all macroeconomic variables used in all of our models. EAD is estimated using a linear regression model that estimates the average percentage of the loan balance that remains at the time of a default event.

Management qualitatively adjusts model results for risk factors that are not considered within our modeling processes but are nonetheless relevant in assessing the expected credit losses within our loan pools. These qualitative factor (“Q-Factor”) adjustments may increase or decrease management’s estimate of expected credit losses by a calculated percentage or amount based upon the estimated level of risk. The various risks that may be considered in making Q-Factor adjustments include, among other things, the impact of (i) changes in lending policies and procedures, including changes in underwriting standards and practices for collections, write-offs, and recoveries, (ii) actual and expected changes in international, national, regional, and local economic and business conditions and developments that affect the collectibility of the loan pools, (iii) changes in the nature and volume of the loan pools and in the terms of the underlying loans, (iv) changes in the experience, ability, and depth of our lending management and staff, (v) changes in volume and severity of past due financial assets, the volume of non-accrual assets, and the volume and severity of adversely classified or graded assets, (vi) changes in the quality of our credit review function, (vii) changes in the value of the underlying collateral for loans that are non-collateral dependent, (viii) the existence, growth, and effect of any concentrations of credit and (ix) other external factors such as the regulatory, legal and technological environments; competition; and events such as natural disasters or health pandemics.

In some cases, management may determine that an individual loan exhibits unique risk characteristics which differentiate the loan from other loans within our loan pools. In such cases, the loans are evaluated for expected credit losses on an individual basis and excluded from the collective evaluation. Specific allocations of the allowance for credit losses are determined by analyzing the borrower’s ability to repay amounts owed, collateral deficiencies, the relative risk grade of the loan and economic conditions affecting the borrower’s industry, among other things. A loan is considered to be collateral dependent when, based upon management’s assessment, the borrower is experiencing financial difficulty and repayment is expected to be provided substantially through the operation or sale of the collateral. In such cases, expected credit losses are based on the fair value of the collateral at the measurement date, adjusted for estimated selling costs if satisfaction of the loan depends on the sale of the collateral. We reevaluate the fair value of collateral supporting collateral dependent loans on a quarterly basis. The fair value of real estate collateral supporting collateral dependent loans is evaluated by our internal appraisal services using a methodology that is consistent with the Uniform Standards of Professional Appraisal Practice. The fair value of collateral supporting collateral dependent construction loans is based on an “as is” valuation.

The following table presents details of the allowance for credit losses on loans segregated by loan portfolio segment as of March 31, 2020, calculated in accordance with the CECL methodology described above.

	Commercial and Industrial	Energy	Commercial Real Estate	Consumer Real Estate	Consumer and Other	Total
Modeled expected credit losses	\$ 69,446	\$ 15,425	\$ 34,941	\$ 6,974	\$ 6,950	\$ 133,736
Q-Factor adjustments	13,501	87,776	13,974	1,196	1,070	117,517
Specific allocations	9,205	—	3,404	—	19	12,628
Total	<u>\$ 92,152</u>	<u>\$ 103,201</u>	<u>\$ 52,319</u>	<u>\$ 8,170</u>	<u>\$ 8,039</u>	<u>\$ 263,881</u>

The following table presents details of the allowance for credit losses on loans segregated by loan portfolio segment as of December 31, 2019, calculated in accordance with our prior incurred loss methodology described in our 2019 Form 10-K.

	Commercial and Industrial	Energy	Commercial Real Estate	Consumer Real Estate	Consumer and Other	Total
December 31, 2019						
Historical valuation allowances	\$ 29,015	\$ 7,873	\$ 21,947	\$ 2,690	\$ 7,562	\$ 69,087
Specific valuation allowances	7,849	20,246	383	—	5	28,483
General valuation allowances	9,840	5,196	4,201	904	(409)	19,732
Macroeconomic valuation allowances	4,889	4,067	4,506	519	884	14,865
Total	<u>\$ 51,593</u>	<u>\$ 37,382</u>	<u>\$ 31,037</u>	<u>\$ 4,113</u>	<u>\$ 8,042</u>	<u>\$ 132,167</u>

The following table details activity in the allowance for credit losses on loans by portfolio segment for the three months ended March 31, 2020 and 2019. 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
March 31, 2020						
Beginning balance	\$ 51,593	\$ 37,382	\$ 31,037	\$ 4,113	\$ 8,042	\$ 132,167
Impact of adopting ASC 326	21,263	(10,453)	(13,519)	2,392	(2,248)	(2,565)
Credit loss expense	21,950	110,006	34,761	1,570	4,638	172,925
Charge-offs	(4,369)	(33,800)	(73)	(285)	(5,005)	(43,532)
Recoveries	1,715	66	113	380	2,612	4,886
Net charge-offs	(2,654)	(33,734)	40	95	(2,393)	(38,646)
Ending balance	<u>\$ 92,152</u>	<u>\$ 103,201</u>	<u>\$ 52,319</u>	<u>\$ 8,170</u>	<u>\$ 8,039</u>	<u>\$ 263,881</u>
March 31, 2019						
Beginning balance	\$ 48,580	\$ 29,052	\$ 38,777	\$ 6,103	\$ 9,620	\$ 132,132
Credit loss expense	11,929	(3,756)	(2,352)	1,247	3,935	11,003
Charge-offs	(2,688)	—	(60)	(1,778)	(5,697)	(10,223)
Recoveries	750	47	90	89	2,462	3,438
Net charge-offs	(1,938)	47	30	(1,689)	(3,235)	(6,785)
Ending balance	<u>\$ 58,571</u>	<u>\$ 25,343</u>	<u>\$ 36,455</u>	<u>\$ 5,661</u>	<u>\$ 10,320</u>	<u>\$ 136,350</u>

The following table presents loans that were evaluated for expected credit losses on an individual basis and the related specific allocations, by loan portfolio segment as of March 31, 2020 and December 31, 2019.

	March 31, 2020		December 31, 2019	
	Loan Balance	Specific Allocations	Loan Balance	Specific Allocations
Commercial and industrial	\$ 21,925	\$ 9,205	\$ 24,360	\$ 7,849
Energy	28,330	—	65,244	20,246
Commercial real estate	11,669	3,404	9,274	383
Consumer real estate	1,423	—	570	—
Consumer and other	20	19	5	5
Total	<u>\$ 63,367</u>	<u>\$ 12,628</u>	<u>\$ 99,453</u>	<u>\$ 28,483</u>

Note 4 - Goodwill and Other Intangible Assets

Goodwill and other intangible assets are presented in the table below. As of March 31, 2020, we evaluated recent potential triggering events that might be indicators that our goodwill was impaired. The events include the economic disruption and uncertainty surrounding the COVID-19 pandemic and the circumstances surrounding recent volatility in the market price of crude oil. Based on our evaluation, we concluded that our goodwill was not more than likely impaired as of that date.

	March 31, 2020	December 31, 2019
Goodwill	\$ 654,952	\$ 654,952
Other intangible assets:		
Core deposits	\$ 1,832	\$ 2,043
Customer relationships	392	438
	<u>\$ 2,224</u>	<u>\$ 2,481</u>

The estimated aggregate future amortization expense for intangible assets remaining as of March 31, 2020 is as follows:

Remainder of 2020	\$ 661
2021	697
2022	481
2023	282
2024	87
Thereafter	16
	<u>\$ 2,224</u>

Note 5 - Deposits

Deposits were as follows:

	March 31, 2020	Percentage of Total	December 31, 2019	Percentage of Total
Non-interest-bearing demand deposits:				
Commercial and individual	\$ 10,524,338	37.4%	\$ 10,212,265	36.9%
Correspondent banks	221,761	0.8	246,181	0.9
Public funds	456,109	1.6	415,183	1.5
Total non-interest-bearing demand deposits	<u>11,202,208</u>	<u>39.8</u>	<u>10,873,629</u>	<u>39.3</u>
Interest-bearing deposits:				
Private accounts:				
Savings and interest checking	7,240,821	25.7	7,147,327	25.9
Money market accounts	7,995,061	28.4	7,888,433	28.5
Time accounts of \$100,000 or more	773,373	2.8	736,481	2.7
Time accounts under \$100,000	347,349	1.2	347,418	1.2
Total private accounts	<u>16,356,604</u>	<u>58.1</u>	<u>16,119,659</u>	<u>58.3</u>
Public funds:				
Savings and interest checking	479,629	1.7	548,399	2.0
Money market accounts	78,899	0.3	73,180	0.3
Time accounts of \$100,000 or more	23,502	0.1	24,672	0.1
Time accounts under \$100,000	25	—	25	—
Total public funds	<u>582,055</u>	<u>2.1</u>	<u>646,276</u>	<u>2.4</u>
Total interest-bearing deposits	<u>16,938,659</u>	<u>60.2</u>	<u>16,765,935</u>	<u>60.7</u>
Total deposits	<u>\$ 28,140,867</u>	<u>100.0%</u>	<u>\$ 27,639,564</u>	<u>100.0%</u>

The following table presents additional information about our deposits:

	March 31, 2020	December 31, 2019
Deposits from the Certificate of Deposit Account Registry Service (CDARS) deposits	\$ 364	\$ 361
Deposits from foreign sources (primarily Mexico)	787,331	805,828
Deposits not covered by deposit insurance	13,592,104	13,115,796

Note 6 - Off-Balance-Sheet Arrangements, Commitments, Guarantees 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 2019 Form 10-K, these transactions include commitments to extend credit and standby letters of credit, which involve, to varying degrees, elements of credit risk and interest rate risk in excess of the amounts recognized in the consolidated balance sheets. We minimize our exposure to loss under these commitments by subjecting them to credit approval and monitoring procedures.

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

	March 31, 2020	December 31, 2019
Commitments to extend credit	\$ 9,204,873	\$ 9,306,043
Standby letters of credit	268,202	260,587
Deferred standby letter of credit fees	1,773	1,276

Allowance For Credit Losses - Off-Balance-Sheet Credit Exposures. The allowance for credit losses on off-balance-sheet credit exposures is a liability account, calculated in accordance with ASC 326, representing expected credit losses over the contractual period for which we are exposed to credit risk resulting from a contractual obligation to extend credit. No allowance is recognized if we have the unconditional right to cancel the obligation. Off-balance-sheet credit exposures primarily consist of amounts available under outstanding lines of credit and letters of credit detailed in the table above. For the period of exposure, the estimate of expected credit losses considers both the likelihood that funding will occur and the amount expected to be funded over the estimated remaining life of the commitment or other off-balance-sheet exposure. The likelihood and expected amount of funding are based on historical utilization rates. The amount of the allowance represents management's best estimate of expected credit losses on commitments expected to be funded over the contractual life of the commitment. Estimating credit losses on amounts expected to be funded uses the same methodology as described for loans in Note 3 - Loans as if such commitments were funded.

The following table details activity in the allowance for credit losses on off-balance-sheet commitments.

	Three Months Ended March 31,	
	2020	2019
Beginning balance, prior to adoption of ASC 326	\$ 500	\$ 500
Impact of adopting ASC 326	39,377	—
Credit loss expense	2,287	—
Ending balance	<u>\$ 42,164</u>	<u>\$ 500</u>

Lease Commitments. We lease certain office facilities and office equipment under operating leases. The components of total lease expense were as follows:

	Three Months Ended March 31,	
	2020	2019
Amortization of lease right-of-use assets	\$ 7,874	\$ 5,796
Short-term lease expense	561	1,079
Non-lease components (including taxes, insurance, common maintenance, etc.)	2,927	1,733
Total	<u>\$ 11,362</u>	<u>\$ 8,608</u>

Right-of-use lease assets totaled \$302.0 million at March 31, 2020 and \$297.7 million at December 31, 2019 and are reported as a component of premises and equipment on our accompanying consolidated balance sheets. The related lease liabilities totaled \$331.5 million at March 31, 2020 and \$323.7 million at December 31, 2019 and are reported as a component of accrued interest payable and other liabilities in the accompanying consolidated balance sheets. Lease payments under operating leases that were applied to our operating lease liability totaled \$7.7 million and \$6.0 million during the three months March 31, 2020 and 2019, respectively. There has been no significant change in our expected future minimum lease payments since December 31, 2019. See the 2019 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. We also elected to exclude, for a five-year transitional period, the effects of credit loss accounting under CECL from Common Equity Tier 1, as further discussed below. 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. 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. Cullen/Frost and Frost Bank did not have any additional Tier 1 capital beyond Common Equity Tier 1 at March 31, 2020. For Cullen/Frost, additional Tier 1 capital at December 31, 2019 included \$144.5 million of 5.375% non-cumulative perpetual preferred stock. This preferred stock was redeemed during the first quarter of 2020, as further discussed below. Frost Bank did not have any additional Tier 1 capital beyond Common Equity Tier 1 at December 31, 2019.

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 allowances for credit losses on securities, loans and off-balance-sheet credit exposures. Tier 2 capital for Cullen/Frost also includes \$100.0 million of qualified subordinated debt and \$133.0 million of trust preferred securities at both March 31, 2020 and December 31, 2019.

As discussed in Note 1 - Significant Accounting Policies, in connection with the adoption of ASC 326, we recognized an after-tax cumulative effect reduction to retained earnings totaling \$29.3 million. In February 2019, the federal bank regulatory agencies issued a final rule (the "2019 CECL Rule") that revised certain capital regulations to account for changes to credit loss accounting under U.S. GAAP. The 2019 CECL Rule included a transition option that allows banking organizations to phase in, over a three-year period, the day-one adverse effects of CECL on their regulatory capital ratios (three-year transition option). In March 2020, the federal bank regulatory agencies issued an interim final rule that maintains the three-year transition option of the 2019 CECL Rule and also provides banking organizations that were required under U.S. GAAP (as of January 2020) to implement CECL before the end of 2020 the option to delay for two years an estimate of the effect of CECL on regulatory capital, relative to the incurred loss methodology's effect on regulatory capital, followed by a three-year transition period (five-year transition option). We elected to adopt the five-year transition option. Accordingly, a CECL transitional amount totaling \$63.4 million has been added back to CET1 as of March 31, 2020. The CECL transitional amount includes \$29.3 million related to cumulative effect of adopting CECL and \$34.1 million related to the estimated incremental effect of CECL during the three months ended March 31, 2020.

The following tables present actual and required capital ratios as of March 31, 2020 and December 31, 2019 for Cullen/Frost and Frost Bank under the Basel III Capital Rules. 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 2019 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, 2019 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
March 31, 2020						
Common Equity Tier 1 to Risk-Weighted Assets						
Cullen/Frost	\$ 2,884,385	12.02%	\$ 1,679,810	7.00%	\$ 1,559,824	6.50%
Frost Bank	2,924,082	12.21	1,676,269	7.00	1,556,535	6.50
Tier 1 Capital to Risk-Weighted Assets						
Cullen/Frost	2,884,385	12.02	2,039,770	8.50	1,919,783	8.00
Frost Bank	2,924,082	12.21	2,035,469	8.50	1,915,736	8.00
Total Capital to Risk-Weighted Assets						
Cullen/Frost	3,352,464	13.97	2,519,715	10.50	2,399,729	10.00
Frost Bank	3,159,161	13.19	2,514,403	10.50	2,394,670	10.00
Leverage Ratio						
Cullen/Frost	2,884,385	8.84	1,305,429	4.00	1,631,786	5.00
Frost Bank	2,924,082	8.97	1,304,257	4.00	1,630,322	5.00
December 31, 2019						
Common Equity Tier 1 to Risk-Weighted Assets						
Cullen/Frost	\$ 2,857,250	12.36%	\$ 1,617,886	7.00%	\$ 1,502,323	6.50%
Frost Bank	2,958,326	12.82	1,615,206	7.00	1,499,834	6.50
Tier 1 Capital to Risk-Weighted Assets						
Cullen/Frost	3,001,736	12.99	1,964,576	8.50	1,849,013	8.00
Frost Bank	2,958,326	12.82	1,961,322	8.50	1,845,950	8.00
Total Capital to Risk-Weighted Assets						
Cullen/Frost	3,367,403	14.57	2,426,829	10.50	2,311,266	10.00
Frost Bank	3,090,993	13.40	2,422,809	10.50	2,307,438	10.00
Leverage Ratio						
Cullen/Frost	3,001,736	9.28	1,293,188	4.00	1,616,485	5.00
Frost Bank	2,958,326	9.15	1,292,743	4.00	1,615,929	5.00

As of March 31, 2020, 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 March 31, 2020 at Cullen/Frost and Frost Bank exceed the minimum levels necessary to be considered “well capitalized.”

Cullen/Frost and Frost Bank are subject to the regulatory capital requirements administered by the Federal Reserve Board and, for Frost Bank, the Federal Deposit Insurance Corporation (“FDIC”). Regulatory authorities can initiate certain mandatory actions if Cullen/Frost or Frost Bank fail to meet the minimum capital requirements, which could have a direct material effect on our financial statements. Management believes, as of March 31, 2020, that Cullen/Frost and Frost Bank meet all capital adequacy requirements to which they are subject.

Preferred Stock. On March 16, 2020, we redeemed all 6,000,000 shares of our 5.375% Non-Cumulative Perpetual Preferred Stock, Series A, (“Series A Preferred Stock”) at a redemption price of \$25 per share, or an aggregate redemption of \$150.0 million. When issued, the net proceeds of the Series A Preferred Stock totaled \$144.5 million after deducting \$5.5 million of issuance costs including the underwriting discount and professional service fees, among other things. Upon redemption, these issuance costs were reclassified to retained earnings and reported as a reduction of net income available to common shareholders.

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 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. Under this plan, we repurchased 177,834 shares at a total cost of \$13.7 million during the first quarter of 2020 and 202,724 shares at a total cost of \$17.2 million during the third quarter of 2019. Under the Basel III Capital Rules, Cullen/Frost may not repurchase or redeem any of its 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 March 31, 2020, Frost Bank could pay aggregate dividends of up to \$395.9 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.

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 2019 Form 10-K.

The notional amounts and estimated fair values of interest rate derivative contracts are presented in the following table. The fair values of interest rate derivative contracts are estimated utilizing internal valuation models with observable market data inputs, or as determined by the Chicago Mercantile Exchange (“CME”) for centrally cleared derivative contracts. CME rules legally characterize variation margin payments for centrally cleared derivatives as settlements of the derivatives' exposure rather than collateral. As a result, the variation margin payment and the related derivative instruments are considered a single unit of account for accounting and financial reporting purposes. Variation margin, as determined by the CME, is settled daily. As a result, derivative contracts that clear through the CME have an estimated fair value of zero as of March 31, 2020 and December 31, 2019.

	March 31, 2020		December 31, 2019	
	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	\$ —	\$ —	\$ 2,545	\$ 6
Loan/lease interest rate swaps – liabilities	4,732	(219)	6,000	(138)
Non-hedging interest rate derivatives:				
Financial institution counterparties:				
Loan/lease interest rate swaps – assets	—	—	122,788	67
Loan/lease interest rate swaps – liabilities	1,191,926	(37,403)	1,002,860	(19,483)
Loan/lease interest rate caps – assets	155,597	682	107,835	266
Customer counterparties:				
Loan/lease interest rate swaps – assets	1,191,926	97,232	1,002,860	43,857
Loan/lease interest rate swaps – liabilities	—	—	122,788	(310)
Loan/lease interest rate caps – liabilities	155,597	(682)	107,835	(266)

The weighted-average rates paid and received for interest rate swaps outstanding at March 31, 2020 were as follows:

	Weighted-Average	
	Interest Rate Paid	Interest Rate Received
Interest rate swaps:		
Fair value hedge loan/lease interest rate swaps	3.54%	1.26%
Non-hedging interest rate swaps – financial institution counterparties	4.05	2.93
Non-hedging interest rate swaps – customer counterparties	2.93	4.05

The weighted-average strike rate for outstanding interest rate caps was 2.86% at March 31, 2020.

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.

		March 31, 2020		December 31, 2019	
	Notional Units	Notional Amount	Estimated Fair Value	Notional Amount	Estimated Fair Value
Financial institution counterparties:					
Oil – assets	Barrels	2,639	\$ 61,479	1,214	\$ 2,796
Oil – liabilities	Barrels	576	(634)	2,148	(6,916)
Natural gas – assets	MMBTUs	5,807	2,455	8,295	2,131
Natural gas – liabilities	MMBTUs	4,313	(346)	2,689	(70)
Customer counterparties:					
Oil – assets	Barrels	576	645	2,172	7,208
Oil – liabilities	Barrels	2,639	(61,087)	1,190	(2,652)
Natural gas – assets	MMBTUs	4,313	397	2,689	83
Natural gas – liabilities	MMBTUs	5,807	(2,392)	8,295	(2,039)

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

		March 31, 2020		December 31, 2019	
	Notional Currency	Notional Amount	Estimated Fair Value	Notional Amount	Estimated Fair Value
Financial institution counterparties:					
Forward contracts – liabilities	CAD	2,821	\$ (16)	4,593	\$ (33)
Customer counterparties:					
Forward contracts – assets	CAD	2,814	24	4,583	45

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 March 31,	
	2020	2019
Commercial loan/lease interest rate swaps:		
Amount of gain (loss) included in interest income on loans	\$ (8)	\$ 26
Amount of (gain) loss included in other non-interest expense	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.

During the three months ended March 31, 2020, we sold certain non-hedge related, short-term put options on U.S. Treasury securities with an aggregate notional amount of \$500 million and realized gains totaling approximately \$6.0 million in connection with the sales. The put options were not exercised and expired in March 2020.

Amounts included in the consolidated statements of income related to non-hedge related derivative instruments are presented in the table below.

	Three Months Ended March 31,	
	2020	2019
Non-hedging interest rate derivatives:		
Other non-interest income	\$ 2,039	\$ 586
Other non-interest expense	—	—
Non-hedging commodity derivatives:		
Other non-interest income	139	103
Non-hedging foreign currency derivatives:		
Other non-interest income	7	17
Non-hedging put options:		
Other non-interest income	5,980	—

Counterparty Credit Risk. Our credit exposure relating to interest rate swaps, commodity swaps/options and foreign currency forward contracts with bank customers was approximately \$96.8 million at March 31, 2020. 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 \$22.6 million at March 31, 2020. 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 March 31, 2020, we had \$41.6 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 March 31, 2020 is presented in the following tables.

	Gross Amount Recognized	Gross Amount Offset	Net Amount Recognized
March 31, 2020			
Financial assets:			
Derivatives:			
Loan/lease interest rate swaps and caps	\$ 682	\$ —	\$ 682
Commodity swaps and options	63,934	—	63,934
Foreign currency forward contracts	—	—	—
Total derivatives	64,616	—	64,616
Resell agreements	20,000	—	20,000
Total	<u>\$ 84,616</u>	<u>\$ —</u>	<u>\$ 84,616</u>
Financial liabilities:			
Derivatives:			
Loan/lease interest rate swaps	\$ 37,622	\$ —	\$ 37,622
Commodity swaps and options	980	—	980
Foreign currency forward contracts	16	—	16
Total derivatives	38,618	—	38,618
Repurchase agreements	1,146,478	—	1,146,478
Total	<u>\$ 1,185,096</u>	<u>\$ —</u>	<u>\$ 1,185,096</u>

	Net Amount Recognized	Gross Amounts Not Offset		Net Amount
		Financial Instruments	Collateral	
March 31, 2020				
Financial assets:				
Derivatives:				
Counterparty A	\$ 10	\$ (10)	\$ —	\$ —
Counterparty B	10,483	(10,483)	—	—
Other counterparties	54,123	(8,728)	(45,090)	305
Total derivatives	64,616	(19,221)	(45,090)	305
Resell agreements	20,000	—	(20,000)	—
Total	<u>\$ 84,616</u>	<u>\$ (19,221)</u>	<u>\$ (65,090)</u>	<u>\$ 305</u>
Financial liabilities:				
Derivatives:				
Counterparty A	\$ 7,606	\$ (10)	\$ (7,580)	\$ 16
Counterparty B	11,111	(10,483)	(580)	48
Counterparty C	146	—	(146)	—
Other counterparties	19,755	(8,728)	(11,027)	—
Total derivatives	38,618	(19,221)	(19,333)	64
Repurchase agreements	1,146,478	—	(1,146,478)	—
Total	<u>\$ 1,185,096</u>	<u>\$ (19,221)</u>	<u>\$ (1,165,811)</u>	<u>\$ 64</u>

Information about financial instruments that are eligible for offset in the consolidated balance sheet as of December 31, 2019 is presented in the following tables.

	Gross Amount Recognized	Gross Amount Offset	Net Amount Recognized
December 31, 2019			
Financial assets:			
Derivatives:			
Loan/lease interest rate swaps and caps	\$ 339	\$ —	\$ 339
Commodity swaps and options	4,927	—	4,927
Total derivatives	5,266	—	5,266
Resell agreements	31,299	—	31,299
Total	\$ 36,565	\$ —	\$ 36,565
Financial liabilities:			
Derivatives:			
Loan/lease interest rate swaps	\$ 19,621	\$ —	\$ 19,621
Commodity swaps and options	6,986	—	6,986
Foreign currency forward contracts	33	—	33
Total derivatives	26,640	—	26,640
Repurchase agreements	1,668,142	—	1,668,142
Total	\$ 1,694,782	\$ —	\$ 1,694,782

	Net Amount Recognized	Gross Amounts Not Offset		Net Amount
		Financial Instruments	Collateral	
December 31, 2019				
Financial assets:				
Derivatives:				
Counterparty A	\$ 39	\$ (39)	\$ —	\$ —
Counterparty B	1,650	(1,650)	—	—
Counterparty C	1	(1)	—	—
Other counterparties	3,576	(3,546)	—	30
Total derivatives	5,266	(5,236)	—	30
Resell agreements	31,299	—	(31,299)	—
Total	\$ 36,565	\$ (5,236)	\$ (31,299)	\$ 30
Financial liabilities:				
Derivatives:				
Counterparty A	\$ 5,192	\$ (39)	\$ (5,153)	\$ —
Counterparty B	7,424	(1,650)	(5,774)	—
Counterparty C	135	(1)	(134)	—
Other counterparties	13,889	(3,546)	(10,343)	—
Total derivatives	26,640	(5,236)	(21,404)	—
Repurchase agreements	1,668,142	—	(1,668,142)	—
Total	\$ 1,694,782	\$ (5,236)	\$ (1,689,546)	\$ —

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

The remaining contractual maturity of repurchase agreements in the consolidated balance sheets as of March 31, 2020 and December 31, 2019 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
March 31, 2020					
Repurchase agreements:					
Residential mortgage-backed securities	\$ 1,146,478	\$ —	\$ —	\$ —	\$ 1,146,478
Total borrowings	\$ 1,146,478	\$ —	\$ —	\$ —	\$ 1,146,478
Gross amount of recognized liabilities for repurchase agreements					\$ 1,146,478
Amounts related to agreements not included in offsetting disclosures above					\$ —
December 31, 2019					
Repurchase agreements:					
U.S. Treasury	\$ 435,904	\$ —	\$ —	\$ —	\$ 435,904
Residential mortgage-backed securities	1,232,238	—	—	—	1,232,238
Total borrowings	\$ 1,668,142	\$ —	\$ —	\$ —	\$ 1,668,142
Gross amount of recognized liabilities for repurchase agreements					\$ 1,668,142
Amounts related to agreements not included in offsetting disclosures above					\$ —

Note 10 - Stock-Based Compensation

A combined summary of activity in our active stock plans is presented in the table. Performance stock units outstanding are presented assuming attainment of the maximum payout rate as set forth by the performance criteria. As of March 31, 2020, there were 1,115,490 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, 2020	55,370	\$ 74.76	440,647	\$ 90.22	177,288	\$ 83.48	1,980,866	\$ 64.60
Authorized	—	—	—	—	—	—	—	—
Granted	—	—	458	65.43	—	—	—	—
Exercised/vested	—	—	—	—	(41,755)	69.70	(24,460)	59.81
Forfeited/expired	—	—	(1,438)	88.69	(6,894)	81.33	(2,000)	72.02
Balance, March 31, 2020	55,370	\$ 74.76	439,667	\$ 90.20	128,639	\$ 88.07	1,954,406	\$ 64.65

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

	Three Months Ended March 31,	
	2020	2019
New shares issued from available authorized shares	—	—
Issued from available treasury stock	66,215	100,865
Total	66,215	100,865
Proceeds from stock option exercises	\$ 1,463	\$ 4,885

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

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

	Three Months Ended March 31,	
	2020	2019
Stock options	\$ —	\$ 382
Non-vested stock awards/stock units	2,264	2,135
Performance stock units	248	1,137
Total	\$ 2,512	\$ 3,654
Income tax benefit	\$ 465	\$ 584

Unrecognized stock-based compensation expense at March 31, 2020 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.

Non-vested stock awards/stock units	\$ 16,524
Performance stock units	5,536
Total	\$ 22,060

Note 11 - Earnings Per Common Share

Earnings per common share is computed using the two-class method as more fully described in our 2019 Form 10-K. The following table presents a reconciliation of net income available to common shareholders, net earnings allocated to common stock and the number of shares used in the calculation of basic and diluted earnings per common share.

	Three Months Ended March 31,	
	2020	2019
Net income	\$ 54,753	\$ 116,496
Less: Preferred stock dividends	2,016	2,016
Redemption of preferred stock	5,514	—
Net income available to common shareholders	47,223	114,480
Less: Earnings allocated to participating securities	445	980
Net earnings allocated to common stock	\$ 46,778	\$ 113,500
Distributed earnings allocated to common stock	\$ 44,512	\$ 42,238
Undistributed earnings allocated to common stock	2,266	71,262
Net earnings allocated to common stock	\$ 46,778	\$ 113,500
Weighted-average shares outstanding for basic earnings per common share	62,642,682	63,009,060
Dilutive effect of stock compensation	407,154	818,896
Weighted-average shares outstanding for diluted earnings per common share	63,049,836	63,827,956

Note 12 - Defined Benefit Plans

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

	Three Months Ended March 31,	
	2020	2019
Expected return on plan assets, net of expenses	\$ (3,072)	\$ (2,693)
Interest cost on projected benefit obligation	1,252	1,618
Net amortization and deferral	1,330	1,406
Net periodic expense (benefit)	\$ (490)	\$ 331

Our non-qualified defined benefit pension plan is not funded. No contributions to the qualified defined benefit pension plan were made during the three months ended March 31, 2020. We do not expect to make any contributions to the qualified defined benefit plan during the remainder of 2020.

Note 13 - Income Taxes

Income tax expense was as follows:

	Three Months Ended March 31,	
	2020	2019
Current income tax expense (benefit)	\$ 29,412	\$ 14,999
Deferred income tax expense (benefit)	(26,089)	(1,044)
Income tax expense, as reported	<u>\$ 3,323</u>	<u>\$ 13,955</u>
Effective tax rate	<u>5.7%</u>	<u>10.7%</u>

We had a net deferred tax liability totaling \$67.6 million at March 31, 2020 and \$75.8 million at December 31, 2019. No valuation allowance for deferred tax assets was recorded at March 31, 2020 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 March 31, 2020			Three Months Ended March 31, 2019		
	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	\$ 230,118	\$ 48,325	\$ 181,793	\$ 198,146	\$ 41,611	\$ 156,535
Change in net unrealized gain on securities transferred to held to maturity	(377)	(79)	(298)	(344)	(72)	(272)
Reclassification adjustment for net (gains) losses included in net income	(108,989)	(22,888)	(86,101)	—	—	—
Total securities available for sale and transferred securities	<u>120,752</u>	<u>25,358</u>	<u>95,394</u>	<u>197,802</u>	<u>41,539</u>	<u>156,263</u>
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)	<u>1,330</u>	<u>279</u>	<u>1,051</u>	<u>1,406</u>	<u>295</u>	<u>1,111</u>
Total defined-benefit post-retirement benefit plans	<u>1,330</u>	<u>279</u>	<u>1,051</u>	<u>1,406</u>	<u>295</u>	<u>1,111</u>
Total other comprehensive income (loss)	<u>\$ 122,082</u>	<u>\$ 25,637</u>	<u>\$ 96,445</u>	<u>\$ 199,208</u>	<u>\$ 41,834</u>	<u>\$ 157,374</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, 2020	\$ 313,304	\$ (45,934)	\$ 267,370
Other comprehensive income (loss) before reclassifications	181,495	—	181,495
Reclassification of amounts included in net income	(86,101)	1,051	(85,050)
Net other comprehensive income (loss) during period	95,394	1,051	96,445
Balance at March 31, 2020	<u>\$ 408,698</u>	<u>\$ (44,883)</u>	<u>\$ 363,815</u>
Balance January 1, 2019	\$ (16,103)	\$ (47,497)	\$ (63,600)
Other comprehensive income (loss) before reclassifications	156,263	—	156,263
Reclassification of amounts included in net income	—	1,111	1,111
Net other comprehensive income (loss) during period	156,263	1,111	157,374
Balance at March 31, 2019	<u>\$ 140,160</u>	<u>\$ (46,386)</u>	<u>\$ 93,774</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 2019 Form 10-K for additional information regarding our operating segments. Summarized operating results by segment were as follows:

	Banking	Frost Wealth Advisors	Non-Banks	Consolidated
Revenues from (expenses to) external customers:				
Three months ended:				
March 31, 2020	\$ 419,429	\$ 40,607	\$ (2,600)	\$ 457,436
March 31, 2019	308,613	37,351	(2,710)	343,254
Net income (loss):				
Three months ended:				
March 31, 2020	\$ 52,024	\$ 5,587	\$ (2,858)	\$ 54,753
March 31, 2019	112,917	6,400	(2,821)	116,496

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 2019 Form 10-K for additional information regarding the fair value hierarchy and a description of our valuation techniques.

Financial Assets and Financial Liabilities. The table below summarizes financial assets and financial liabilities measured at fair value on a recurring basis as of March 31, 2020 and December 31, 2019, segregated by the level of the valuation inputs within the fair value hierarchy of ASC Topic 820 utilized to measure fair value.

	Level 1 Inputs	Level 2 Inputs	Level 3 Inputs	Total Fair Value
March 31, 2020				
Securities available for sale:				
U.S. Treasury	\$ 1,167,264	\$ —	\$ —	\$ 1,167,264
Residential mortgage-backed securities	—	2,089,946	—	2,089,946
States and political subdivisions	—	7,167,866	—	7,167,866
Other	—	42,901	—	42,901
Trading account securities:				
U.S. Treasury	24,491	—	—	24,491
States and political subdivisions	—	1,430	—	1,430
Derivative assets:				
Interest rate swaps, caps and floors	—	97,914	—	97,914
Commodity swaps and options	—	64,976	—	64,976
Foreign currency forward contracts	24	—	—	24
Derivative liabilities:				
Interest rate swaps, caps and floors	—	38,304	—	38,304
Commodity swaps and options	—	64,459	—	64,459
Foreign currency forward contracts	16	—	—	16
December 31, 2019				
Securities available for sale:				
U.S. Treasury	\$ 1,948,133	\$ —	\$ —	\$ 1,948,133
Residential mortgage-backed securities	—	2,207,594	—	2,207,594
States and political subdivisions	—	7,070,997	—	7,070,997
Other	—	42,867	—	42,867
Trading account securities:				
U.S. Treasury	24,298	—	—	24,298
Derivative assets:				
Interest rate swaps, caps and floors	—	44,196	—	44,196
Commodity swaps and options	—	12,218	—	12,218
Foreign currency forward contracts	45	—	—	45
Derivative liabilities:				
Interest rate swaps, caps and floors	—	20,197	—	20,197
Commodity swaps and options	—	11,677	—	11,677
Foreign currency forward contracts	33	—	—	33

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. Financial assets measured at fair value on a non-recurring basis during the reported periods include certain collateral dependent loans reported at the fair value of the underlying collateral if repayment is expected solely from the collateral. The following table presents collateral

dependent loans that were remeasured and reported at fair value through a specific allocation of the allowance for credit losses on loans based upon the fair value of the underlying collateral during the reported periods.

	Three Months Ended March 31, 2020		Three Months Ended March 31, 2019	
	Level 2	Level 3	Level 2	Level 3
Carrying value before allocations	\$ 1,919	\$ 3,867	\$ 11,487	\$ 37,525
Specific allocations	70	(244)	(256)	(3,441)
Fair value	<u>\$ 1,989</u>	<u>\$ 3,623</u>	<u>\$ 11,231</u>	<u>\$ 34,084</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 may include certain foreclosed assets which, upon initial recognition, were remeasured and reported at fair value through a charge-off to the allowance for loan losses and certain foreclosed assets which, subsequent to their initial recognition, were remeasured at fair value through a write-down included in other non-interest expense. The following table presents foreclosed assets that were remeasured and reported at fair value during the reported periods:

	Three Months Ended March 31,	
	2020	2019
Foreclosed assets remeasured subsequent to initial recognition:		
Carrying value of foreclosed assets prior to remeasurement	\$ 328	\$ —
Write-downs included in other non-interest expense	(231)	—
Fair value	<u>\$ 97</u>	<u>\$ —</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:

	March 31, 2020		December 31, 2019	
	Carrying Amount	Estimated Fair Value	Carrying Amount	Estimated Fair Value
Financial assets:				
Level 2 inputs:				
Cash and cash equivalents	\$ 4,195,585	\$ 4,195,585	\$ 3,788,181	\$ 3,788,181
Securities held to maturity	1,984,149	2,057,879	2,030,005	2,048,675
Cash surrender value of life insurance policies	188,078	188,078	187,156	187,156
Accrued interest receivable	123,995	123,995	183,850	183,850
Level 3 inputs:				
Loans, net	15,074,379	15,246,193	14,618,165	14,654,615
Financial liabilities:				
Level 2 inputs:				
Deposits	28,140,867	28,150,786	27,639,564	27,641,255
Federal funds purchased and repurchase agreements	1,170,978	1,170,978	1,695,342	1,695,342
Junior subordinated deferrable interest debentures	136,314	137,115	136,299	137,115
Subordinated notes payable and other borrowings	98,904	102,250	98,865	89,077
Accrued interest payable	10,684	10,684	12,393	12,393

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 2019 Form 10-K for additional information related to previously issued accounting standards updates.

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. We adopted ASU 2016-13, as subsequently updated for certain clarifications, targeted relief and codification improvements, as of January 1, 2020. See Note 1 - Significant Accounting Policies for additional information.

ASU 2020-4, "Reference Rate Reform (Topic 848): Facilitation of the Effects of Reference Rate Reform on Financial Reporting." ASU 2020-4 provides optional expedients and exceptions for accounting related to contracts, hedging relationships and other transactions affected by reference rate reform if certain criteria are met. ASU 2020-04 applies only to contracts, hedging relationships, and other transactions that reference LIBOR or another reference rate expected to be discontinued because of reference rate reform and do not apply to contract modifications made and hedging relationships entered into or evaluated after December 31, 2022, except for hedging relationships existing as of December 31, 2022, that an entity has elected certain optional expedients for and that are retained through the end of the hedging relationship. ASU 2020-4 was effective upon issuance and generally can be applied through December 31, 2022. The adoption of ASU 2020-4 did not significantly impact 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, 2019, and the other information included in the 2019 Form 10-K. Operating results for the three months ended March 31, 2020 are not necessarily indicative of the results for the year ending December 31, 2020 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"), including statements regarding the potential effects of the COVID-19 pandemic on our business, financial condition, liquidity and results of operations, 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 impact of the COVID-19 pandemic and any other pandemic, epidemic or health-related crisis.
- 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.

Further, statements about the potential effects of the COVID-19 pandemic on our business, financial condition, liquidity and results of operations may constitute forward-looking statements and are subject to the risk that the actual effects may differ, possibly materially, from what is reflected in those forward-looking statements due to factors and future developments that are uncertain, unpredictable and in many cases beyond our control, including the scope and duration of the pandemic, actions taken by governmental authorities in response to the pandemic, and the direct and indirect impact of the pandemic on our customers, clients, third parties and us.

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.

Recent Developments Related to COVID-19

Overview. Our business has been, and continues to be, impacted by the recent and ongoing outbreak of COVID-19. In March 2020, COVID-19 was declared a pandemic by the World Health Organization and a national emergency by the President of the United States. Efforts to limit the spread of COVID-19 have led to shelter-in-place orders, the closure of non-essential businesses, travel restrictions, supply chain disruptions and prohibitions on public gatherings, among other things, throughout many parts of the United States and, in particular, the markets in which we operate. As the current pandemic is ongoing and dynamic in nature, there are many uncertainties related to COVID-19 including, among other things, its ultimate geographic spread; its severity; the duration of the outbreak; the impact to our customers, employees and vendors; the impact to the financial services and banking industry; and the impact to the economy as a whole as well the effect of actions taken, or that may yet be taken, by governmental authorities to contain the outbreak or to mitigate its impact (both economic and health-related). COVID-19 has negatively affected, and is expected to continue to negatively affect, our business, financial position and operating results. In light of the uncertainties and continuing developments discussed herein, the ultimate adverse impact of COVID-19 cannot be reliably estimated at this time, but it has been and is expected to continue to be material.

Impact on our Operations. In the State of Texas, many jurisdictions have declared health emergencies. The resulting closures of non-essential businesses and related economic disruption has impacted our operations as well as the operations of our customers. Financial services have been identified as a Critical Infrastructure Sector by the Department of Homeland Security. Accordingly, our business remains open. To address the issues arising as a result of COVID-19, and in order to facilitate the continued delivery of essential services while maintaining a high level of safety for our customers as well as our employees, we have implemented our Business Continuity and Health Emergency Response plans. Among other things, significant actions taken under these plans include:

- Implemented our communications plans to ensure our employees, customers and critical vendors are kept abreast of developments affecting our operations.
- Restricted all non-essential travel and large external gatherings and have instituted a mandatory quarantine period for anyone that has traveled to an impacted area.
- Temporarily closed all of our financial center lobbies and other corporate facilities to non-employees, except for certain limited cases by appointment only. We continue to serve our consumer and business customers through our motor-banks, ATMs, internet banking, mobile app and telephone customer service capabilities.
- Expanded remote-access availability so that nearly 90% of our work-force has the capability to work from home or other remote locations. All activities are performed in accordance with our compliance and information security policies designed to ensure customer data and other information is properly safeguarded.
- Instituted mandatory social distancing policies for those employees not working remotely. Members of certain operations teams have been split into separate buildings or locations to create redundancy for key functions across the organization.

Notwithstanding the foregoing actions, the COVID-19 outbreak could still greatly affect our routine and essential operations due to staff absenteeism, particularly among key personnel; further limited access to or closures of our branch facilities and other physical offices; operational, technical or security-related risks arising from a remote work-force; and government or regulatory agency orders, among other things. The business and operations of our third party service providers, many of whom perform critical services for our business, could also be significantly impacted, which in turn could impact us. As a result, we are currently unable to fully assess or predict the extent of the effects of COVID-19 on our operations as the ultimate impact will depend on factors that are currently unknown and/or beyond our control.

Impact on our Financial Position and Results of Operations. Our financial position and results of operations are particularly susceptible to the ability of our loan customers to meet loan obligations, the availability of our workforce, the availability of our vendors and the decline in the value of assets held by us. While its effects continue to materialize, the COVID-19 pandemic has resulted in a significant decrease in commercial activity throughout the State of Texas as well as nationally. This decrease in commercial activity may cause our customers (including affected businesses and individuals), vendors and counterparties to be unable to meet existing payment or other obligations to us. The national public health crisis arising from the COVID-19 pandemic (and public expectations about it), combined with certain pre-existing factors, including, but not limited to, international trade disputes, inflation risks and oil price volatility, could further destabilize the financial markets and geographies in which we operate. The resulting economic pressure on consumers and uncertainty regarding the sustainability of any economic improvements has impacted the creditworthiness of potential and current borrowers. Borrower loan defaults that adversely affect our earnings correlate with deteriorating economic conditions (such as the unemployment rate), which, in turn, are likely to impact our borrowers' creditworthiness and our ability to make loans. See further information related to the risk exposure of our loan portfolio under the sections captioned "Loans" and "Allowance for Credit Losses" elsewhere in this discussion.

In addition, the economic pressures and uncertainties arising from the COVID-19 pandemic may result in specific changes in consumer and business spending and borrowing and saving habits, affecting the demand for loans and other products and services we offer. Consumers affected by COVID-19 may continue to demonstrate changed behavior even after the crisis is over. For example, consumers may decrease discretionary spending on a permanent or long-term basis, certain industries may take longer to recover (particularly those that rely on travel or large gatherings) as consumers may be hesitant to return to full social interaction. We lend to customers operating in such industries including energy, restaurants, hotels/lodging, aviation, entertainment, retail and commercial real estate, among others, that have been significantly impacted by COVID-19 and we are continuing to monitor these customers closely. To help mitigate the adverse effects of COVID-19, loan customers may apply for a deferral of payments, or portions thereof, for up to 90 days. Additionally, the temporary closures of bank branches could result in consumers becoming more comfortable with technology and devaluing face-to-face interaction. Our business is relationship driven and such changes could necessitate changes to our business practices to accommodate changing consumer behaviors. The potential changes in behaviors driven by COVID-19 also present heightened liquidity risks, for example, arising from increased demand for our products and services (such as unusually high draws on credit facilities) or decreased demand for our products and services (such as idiosyncratic, or broad-based, market or other developments that lead to deposit outflows).

Legislative and Regulatory Developments. Recent actions taken by the federal government and the Federal Reserve and other bank regulatory agencies to mitigate the economic effects of COVID-19 will also have an impact on our financial position and results of operations. These actions are further discussed below.

In an emergency measure aimed at blunting the economic impact of COVID-19, the Federal Reserve lowered the target for the federal funds rate to a range of between zero to 0.25% on March 15, 2020. This action by the Federal Reserve followed a prior reduction of the targeted federal funds rates to a range of 1.0% to 1.25% on March 3, 2020. Our earnings and cash flows are largely dependent upon our net interest income. Net interest income is the difference between interest income earned on interest-earning assets such as loans and securities and interest expense paid on interest-bearing liabilities such as deposits and borrowed funds. As our balance sheet is more asset sensitive, our earnings are more adversely affected by decreases in market interest rates as the interest rates received on loans and other investments fall more quickly and to a larger degree than the interest rates paid on deposits and other borrowings. The decline in interest rates has already led to new all-time low yields across the US Treasury maturity curve. If the Federal Reserve decreases the targeted federal funds rates even further in response to the economic effects of COVID-19, overall interest rates will decline further, which will negatively impact our net interest income and further compress our net interest margin. Alternatively, if the COVID-19 outbreak abates and general economic conditions improve, the Federal Reserve may determine to increase the targeted federal funds rates and overall interest rates will likely rise, which may positively impact our net interest income, but may negatively impact commercial lending activity and the U.S. economy.

Other actions taken by the Federal Reserve in an effort to provide monetary stimulus to counteract the economic disruption caused by COVID-19 include:

- Expanded reverse repo operations, adding liquidity to the banking system.
- Restarted quantitative easing.
- Lowered the interest rate on the discount window by 1.5% to 0.25%.
- Reduced reserve requirement ratios to zero percent.
- Encouraged banks to use their capital and liquidity buffers to lend.
- Introduced several new programs that will operate on a temporary basis to help preserve market liquidity.

The U.S. government has also enacted certain fiscal stimulus measures in several phases to counteract the economic disruption caused by the COVID-19. The Phase 1 legislation, the Coronavirus Preparedness and Response Supplemental Appropriations Act, was enacted on March 6, 2020 and, among other things, authorized funding for research and development of vaccines and allocated money to state and local governments to aid containment and response measures. The Phase 2 legislation, the Families First Coronavirus Response Act, was enacted on March 18, 2020 and provides for paid sick/medical leave, establishes no-cost coverage for coronavirus testing, expands unemployment benefits, expands food assistance, and provides additional funding to states for the ongoing economic consequences of the pandemic, among other provisions. The Phase 3 legislation, the Coronavirus Aid, Relief, and Economic Security Act (the “CARES Act”), was enacted on March 27, 2020. Among other provisions, the CARES Act (i) authorizes the Secretary of the Treasury to make loans, loan guarantees and other investments, up to \$500 billion, for assistance to eligible businesses, States and municipalities with limited, targeted relief for passenger air carriers, cargo air carriers, and businesses critical to maintaining national security, (ii) creates a \$349 billion loan program called the Paycheck Protection Program (the “PPP”) for loans to small businesses for, among other things, payroll, group health care benefit costs and qualifying mortgage, rent and utility payments, (iii) provides certain credits against the 2020 personal income tax for eligible individuals and their dependents, (iv) expands eligibility for unemployment insurance and provides eligible recipients with an additional \$600 per week on top of the unemployment amount determined by each State and (v) expands tele-health services in Medicare. The Phase 3.5 legislation, the Paycheck Protection Program and Healthcare Enhancement Act of 2020 (the “PPPHE Act”), was enacted on April 24, 2020. Among other things, the PPPHE Act provided an additional \$310 billion of funding for the PPP of which, \$30 billion is specifically allocated for use by banks and other insured depository institutions that have assets between \$10 billion and \$50 billion. We are continuing to monitor the potential development of so-called “Phase 4” legislation and further actions taken by the U.S. government.

The Federal Reserve has created various additional lending facilities and expanded existing facilities to help provide up to \$2.6 trillion in financing in response to the financial disruptions caused by COVID-19. The programs include, among other things, (i) the Paycheck Protection Program Lending Facility (the “PPP Facility”), which is intended to extend loans to banks making PPP loans, (ii) the Municipal Liquidity Facility, which is intended to facilitate the purchase of eligible notes from states, and certain counties and cities around the country, and (iii) the Main Street Lending Program, which is intended to facilitate credit flows to businesses affected by the COVID-19 pandemic with up to 10,000 employees or up to \$2.5 billion in 2019 annual revenues.

Banks and bank holding companies have been particularly impacted by the COVID-19 pandemic as a result of disruption and volatility in the global capital markets. This disruption has impacted our cost of capital and may adversely affect our ability to access the capital markets if we need or desire to do so and, although the ultimate impact cannot be reliably estimated at this time in light of the uncertainties and ongoing developments noted herein, such impacts could be material. Furthermore, bank regulatory agencies have been (and are expected to continue to be) very proactive in responding to both market and supervisory concerns arising from the COVID-19 pandemic as well as the potential impact on customers, especially borrowers. As shown during and following the financial crisis of 2007-2008, periods of economic and financial disruption and stress have, in the past, resulted in increased scrutiny of banking organizations. We are closely monitoring the potential for new laws and regulations impacting lending and funding practices as well as capital and liquidity standards. Such changes could require us to maintain significantly more capital, with common equity as a more predominant component, or manage the composition of our assets and liabilities to comply with formulaic liquidity requirements. Furthermore, provisions of the CARES Act allow, but do not require, the FDIC to guarantee deposit obligations of banks in non-interest-bearing transaction accounts through December 31, 2020. Participation in any such guarantee program may result in fees and other assessments as the FDIC determines and may include special assessments. Other provisions of the CARES Act as well as actions taken by bank regulators, such as potential relief for working with borrowers who are distressed as a result of the effects of COVID-19, could similarly impact aggregate deposit insurance expense.

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 credit losses on financial instruments including loans and off-balance-sheet credit exposures are considered to be critical as these policies involve considerable subjective judgment and estimation by management. As discussed in Note 1 - Summary of Significant Accounting Policies, our policies related to allowances for credit losses changed on January 1, 2020 in connection with the adoption of a new accounting standard update as codified in Accounting Standards Codification ("ASC") Topic 326 ("ASC 326") Financial Instruments - Credit Losses. In the case of loans, the allowance for credit losses is a contra-asset valuation account, calculated in accordance with ASC 326, that is deducted from the amortized cost basis of loans to present the net amount expected to be collected. In the case of off-balance-sheet credit exposures, the allowance for credit losses is a liability account, calculated in accordance with ASC 326, reported as a component of accrued interest payable and other liabilities in our consolidated balance sheets. The amount of each allowance account represents management's best estimate of current expected credit losses on these financial instruments considering available information, from internal and external sources, relevant to assessing exposure to credit loss over the contractual term of the instrument. Relevant available information includes historical credit loss experience, current conditions and reasonable and supportable forecasts. While historical credit loss experience provides the basis for the estimation of expected credit losses, adjustments to historical loss information may be made for differences in current portfolio-specific risk characteristics, environmental conditions or other relevant factors. While management utilizes its best judgment and information available, the ultimate adequacy of our allowance accounts is dependent upon a variety of factors beyond our control, including the performance of our portfolios, the economy, changes in interest rates and the view of the regulatory authorities toward classification of assets. 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.

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 \$47.2 million, or \$0.75 per diluted common share, for the three months ended March 31, 2020 compared to \$114.5 million, or \$1.79 per diluted common share, for the three months ended March 31, 2019.

Selected data for the comparable periods was as follows:

	Three Months Ended March 31,	
	2020	2019
Taxable-equivalent net interest income	\$ 268,453	\$ 271,179
Taxable-equivalent adjustment	23,932	24,710
Net interest income	244,521	246,469
Credit loss expense	175,197	11,003
Net interest income after credit loss expense	69,324	235,466
Non-interest income	212,915	96,785
Non-interest expense	224,163	201,800
Income before income taxes	58,076	130,451
Income taxes	3,323	13,955
Net income	54,753	116,496
Preferred stock dividends	2,016	2,016
Redemption of preferred stock	5,514	—
Net income available to common shareholders	\$ 47,223	\$ 114,480
Earnings per common share – basic	\$ 0.75	\$ 1.80
Earnings per common share – diluted	0.75	1.79
Dividends per common share	0.71	0.67
Return on average assets	0.57%	1.48%
Return on average common equity	4.88	14.08
Average shareholders' equity to average assets	11.95	10.97

Net income available to common shareholders decreased \$67.3 million, or 58.8%, for the three months ended March 31, 2020 compared to the same period in 2019. The decrease was primarily the result of a \$164.2 million increase in credit loss expense, a \$22.4 million increase in non-interest expense and a \$1.9 million decrease in net interest income partly offset by a \$116.1 million increase in non-interest income and a \$10.6 million decrease in income tax expense. The increase in credit loss expense resulted from both our adoption of a new credit loss accounting standard and the adverse events impacting our loan portfolio, including those arising from the COVID-19 pandemic and the significant decline in oil prices. The increase in non-interest income was primarily related to a \$109.0 million net gain on securities transactions. Net income available to common shareholders for the three months ended March 31, 2020 was also impacted by the reclassification of \$5.5 million of issuance costs associated with our preferred stock to retained earnings upon redemption of the preferred stock in the first quarter.

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 53.5% of total revenue during the first three months of 2020. Excluding the revenue associated with the \$109.0 million net gain on securities transactions realized during the quarter, net interest income would have represented 70.2% of total revenue. 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 2019 at 5.50% and decreased 50 basis points during the third quarter of 2019 (25 basis points in each of August and September) and 25 basis points in October 2019 to end the year at 4.75%. During 2020, the prime rate decreased 150 basis points in March to end the first quarter at 3.25%. Our loan portfolio is also impacted by changes in the London Interbank Offered Rate (LIBOR). At March 31, 2020, the one-month and three-month U.S. dollar LIBOR interest rates were 0.99% and 1.45%, respectively, while at

March 31, 2019, the one-month and three-month U.S. dollar LIBOR interest rates were 2.50% and 2.60%, respectively. The target range for the federal funds rate, which is the cost of immediately available overnight funds, began 2019 at 2.25% to 2.50% and decreased 50 basis points during the third quarter of 2019 (25 basis points in each of August and September) and 25 basis points in October 2019 to end the year at 1.50 to 1.75%. During 2020, the target range for the federal funds rate decreased 150 basis points in March to end the first quarter at zero to 0.25%. As noted in the section captioned “Recent Developments Related to COVID-19” elsewhere in this discussion, the decrease in the target range for the federal funds rate in March 2020 was largely an emergency measure by the Federal Reserve aimed at blunting the economic impact of COVID-19.

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. Though federal prohibitions on the payment of interest on demand deposits were repealed in 2011, we have not experienced any significant additional interest costs as a result. See Item 3. Quantitative and Qualitative Disclosures About Market Risk elsewhere in this report for information about our sensitivity to interest rates. Further analysis of the components of our net interest margin is presented below.

The following table presents the changes in taxable-equivalent net interest income and identifies the changes due to differences in the average volume of earning assets and interest-bearing liabilities and the changes due to changes in the average interest rate on those assets and liabilities. The changes in net interest income due to changes in both average volume and average interest rate have been allocated to the average volume change or the average interest rate change in proportion to the absolute amounts of the change in each. The comparison between the quarters includes an additional change factor that shows the effect of the difference in the number of days in each period for assets and liabilities that accrue interest based upon the actual number of days in the period, as further discussed below.

	Three Months Ended			
	March 31, 2020 vs. March 31, 2019			
	Increase (Decrease) Due to Change in			Total
	Rate	Volume	Number of days	
Interest-bearing deposits	\$ (6,722)	\$ 4,119	\$ 89	\$ (2,514)
Federal funds sold and resell agreements	(860)	65	9	(786)
Securities:				
Taxable	1,975	(720)	96	1,351
Tax-exempt	806	(1,704)	—	(898)
Loans, net of unearned discounts	(25,224)	10,047	1,905	(13,272)
Total earning assets	(30,025)	11,807	2,099	(16,119)
Savings and interest checking	(1,140)	60	4	(1,076)
Money market deposit accounts	(11,532)	481	107	(10,944)
Time accounts	580	825	51	1,456
Public funds	(836)	264	15	(557)
Federal funds purchased and repurchase agreements	(2,342)	330	33	(1,979)
Junior subordinated deferrable interest debentures	(294)	1	—	(293)
Subordinated notes payable and other notes	(2)	2	—	—
Total interest-bearing liabilities	(15,566)	1,963	210	(13,393)
Net change	\$ (14,459)	\$ 9,844	\$ 1,889	\$ (2,726)

Taxable-equivalent net interest income for the three months ended March 31, 2020 decreased \$2.7 million, or 1.0%, compared to the same period in 2019. Taxable-equivalent net interest income for the first quarter of 2020 included 91 days compared to 90 days for the first quarter of 2019 as a result of the leap year. The additional day added approximately \$1.9 million to taxable-equivalent net interest income during the first quarter of 2020. Excluding the impact of the additional day during the first quarter of 2020 results in an effective decrease in taxable-equivalent net interest income of approximately \$4.6 million during the first quarter of 2020. The taxable-equivalent net interest margin decreased 23 basis points from 3.79% during the three months ended March 31, 2019 to 3.56% during the three months ended March 31, 2020. The decreases in taxable-equivalent net interest income and taxable-equivalent net interest margin were primarily related to decreases in the average yields on loans, interest-bearing deposits and federal funds sold and resell agreements combined with decreases in the average volumes of tax-exempt and taxable securities (based on amortized cost) and an increase in the average volume of interest bearing liabilities. The impact of these items was partly offset by decreases in the average cost of interest-bearing deposits and other borrowed funds, increases in the average volumes of loans and interest-bearing deposits (primarily amounts held in an interest-bearing account at the Federal Reserve) and increases in the average yields on taxable and tax-exempt securities.

The average volume of interest-earning assets for the three months ended March 31, 2020 increased \$1.9 billion compared to the same period in 2019. The increase in the average volume of interest-earning assets for the three months ended March 31, 2020 included an \$866.9 million increase in average interest-bearing deposits, federal funds sold and resell agreements, a \$790.0 million increase in average loans and a \$238.6 million increase in average tax-exempt securities partly offset by a \$45.4 million decrease in average taxable securities.

The average taxable-equivalent yield on interest-earning assets decreased 43 basis points from 4.27% during the three months ended March 31, 2019 to 3.84% during the three months ended March 31, 2020. 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 decreased 68 basis points from 5.33% during the three months ended March 31, 2019 to 4.65% during the three months ended March 31, 2020. The average taxable-equivalent yield on loans was negatively impacted by lower average market interest rates during the three months ended March 31, 2020 compared to the same period in 2019. The average volume of loans for the three months ended March 31, 2020 increased \$790.0 million, or 5.6%, compared to the same period in 2019. Loans made up approximately 48.7% of average interest-earning assets during the three months ended March 31, 2020 compared to 49.1% during the same period in 2019.

The average taxable-equivalent yield on securities was 3.46% during the three months ended March 31, 2020, increasing 9 basis points compared to the 3.37% during the same period in 2019. The average taxable-equivalent yield on securities during the three months ended March 31, 2020 compared to the same period in 2019 was positively impacted by increases in the average yields on both taxable and tax-exempt securities as a result of investments in higher-yielding, longer-duration securities while the relative proportions of taxable and tax-exempt securities to total securities did not significantly change. The average yield on taxable securities increased 17 basis points from 2.19% during the three months ended March 31, 2019 to 2.36% during the three months ended March 31, 2020. This increase resulted as the proceeds from the maturity of a significant volume of U.S. Treasury securities during the second half of 2019 were reinvested in higher-yielding residential mortgage-backed securities. The average taxable-equivalent yield on tax-exempt securities increased 4 basis points from 4.03% during the three months ended March 31, 2019 to 4.07% during the three months ended March 31, 2020. Tax exempt securities made up approximately 65.3% of total average securities during the three months ended March 31, 2020, compared to 64.4% during the same period in 2019. The average volume of total securities (based on carrying amount) during the three months ended March 31, 2020 increased \$193.1 million, or 1.5%, compared to the same period in 2019. Securities made up approximately 42.1% of average interest-earning assets during the three months ended March 31, 2020 compared to 44.1% during the same period in 2019.

Average interest-bearing deposits, federal funds sold and resell agreements for the three months ended March 31, 2020 increased \$866.9 million, or 43.8%, compared to the same period in 2019. Interest-bearing deposits, federal funds sold and resell agreements made up approximately 9.2% of average interest-earning assets during the three months ended March 31, 2020 compared to 6.8% during the three months ended March 31, 2019. The increase in the average volume of interest-bearing deposits, federal funds sold and resell agreements was primarily due to an increase in the average volume of amounts held in an interest-bearing account at the Federal Reserve during the first three months of 2020 compared to the same period in 2019 primarily due to an increase in the average volume of deposits and the proceeds from the sale of securities. The combined average yield on interest-bearing deposits, federal funds sold and resell agreements was 1.24% during the three months ended March 31, 2020 compared to 2.51% during the same period in 2019. The average yield on interest-bearing deposits, federal funds sold and resell agreements was negatively impacted by lower average market interest rates for the three months ended March 31, 2020 compared to the same period in 2019.

The average rate paid on interest-bearing liabilities was 0.47% during the three months ended March 31, 2020 decreasing 34 basis points from 0.81% during the same period in 2019. Average deposits increased \$1.3 billion, or 4.9%, during the three months ended March 31, 2020 compared to the same period in 2019 and included a \$734.8 million increase in average interest-bearing deposits and a \$544.9 million increase in average non-interest bearing deposits. The ratio of average interest-bearing deposits to total average deposits was 60.8% during the three months ended March 31, 2020 compared to 61.0% during the same period in 2019. 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 0.39% and 0.24%, respectively, during the three months ended March 31, 2020 compared to 0.69% and 0.42%, respectively, during the three months ended March 31, 2019. The average cost of deposits during the first quarter of 2020 was impacted by decreases in the interest rates we pay on most of our interest-bearing deposit products as a result of the aforementioned decreases in market interest rates.

Our net interest spread, which represents the difference between the average rate earned on earning assets and the average rate paid on interest-bearing liabilities, was 3.37% during the three months ended March 31, 2020 compared to 3.46% during same period in 2019. 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.

As discussed in the section captioned “Loans” elsewhere in this discussion, in April 2020, we began originating loans to qualified small businesses under the PPP administered by the U.S. Small Business Administration (“SBA”) under the provisions of the CARES Act. Through April 27, 2020, we have funded approximately \$3.0 billion of SBA-approved PPP loans to over 10,500 customers. We expect to recognize approximately \$87.0 million in PPP loan related processing fees as a yield adjustment over the terms of these loans. In April 2020, we borrowed \$250 million from the FHLB under the COVID-19 Relief Program to provide supplemental funding for PPP loan originations. The short-term, full-recourse advance has a term of six months and bears interest at an annualized rate of 0.25%. We are currently considering participation in the Federal Reserve's PPP Facility, as further discussed in the sections captioned “Loans” and “Capital and Liquidity” elsewhere in this discussion.

We currently expect our net interest income and net interest margin to decline in the latter part of 2020 as a result of the aforementioned decreases in market interest rates and the expectation that interest rates will remain at such levels for some period of time. The near term impact of the decrease in market interest rates is partly mitigated as certain variable-rate loans adjust on a delayed basis. Additionally, our participation in the PPP, as further discussed below, is expected to positively impact net interest income and net interest margin.

Credit Loss Expense

Credit loss expense is determined by management as the amount to be added to the allowance for credit loss accounts for various types of financial instruments including loans, securities and off-balance-sheet credit exposures after net charge-offs have been deducted to bring the allowances to a level which, in management's best estimate, is necessary to absorb expected credit losses over the lives of the respective financial instruments. Credit loss expense totaled \$175.2 million for the three months ended March 31, 2020, of which \$172.9 million related to loans and \$2.3 million related to off-balance-sheet credit exposures. Credit loss expense totaled \$11.0 million for the three months ended March 31, 2019, all of which related to loans and which was calculated under the prior incurred loss accounting methodology. See the section captioned “Allowance for Credit Losses” elsewhere in this discussion for further analysis of credit loss expense related to loans and off-balance-sheet commitments.

Non-Interest Income

The components of non-interest income were as follows:

	Three Months Ended March 31,	
	2020	2019
Trust and investment management fees	\$ 34,473	\$ 31,697
Service charges on deposit accounts	22,651	20,790
Insurance commissions and fees	16,485	18,406
Interchange and debit card transaction fees	3,255	3,280
Other charges, commissions and fees	9,365	9,062
Net gain (loss) on securities transactions	108,989	—
Other	17,697	13,550
Total	<u>\$ 212,915</u>	<u>\$ 96,785</u>

Total non-interest income for the three months ended March 31, 2020 increased \$116.1 million, or 120.0%, compared to the same period in 2019. Excluding \$109.0 million net gain on securities transaction during the three months ended March 31, 2020, total non-interest income increased \$7.1 million, or 7.4%. Changes in the various components of non-interest income are discussed in more detail below.

Trust and Investment Management Fees. Trust and investment management fees for the three months ended March 31, 2020 increased \$2.8 million, or 8.8%, compared to the same period in 2019. Investment fees are the most significant component of trust and investment management fees, making up approximately 78.7% and 83.2% of total trust and investment management fees for the first three months of 2020 and 2019, respectively. The increase in trust and investment management fees was primarily the

result of increases in estate fees (up \$1.1 million), trust investment fees (up \$749 thousand), real estate fees (up \$641 thousand) and oil and gas fees (up \$475 thousand). Investment and other custodial account fees are generally based on the market value of assets within a trust account. The increase in estate fees and real estate fees were primarily related to an increase in transaction volume. The increase in trust investment fees was primarily related to an increase in the number of accounts partly offset by the impact of a decrease in average equity valuations. Volatility in the equity and bond markets impacts the market value of trust assets and the related investment fees. Investor concerns related to the uncertain economic outlook arising from the COVID-19 pandemic have caused significant market volatility resulting in significant declines in market valuations, particularly among equity securities, during the latter part of the first quarter of 2020. We currently expect this volatility and the decline in market valuations will adversely affect trust and investment management fee income in future periods. Furthermore on-going uncertainty related to the economic effects of COVID-19 is currently expected to impact the demand and overall transaction volume for our other trust services and further adversely affect our revenues.

At March 31, 2020, trust assets, including both managed assets and custody assets, were primarily composed of equity securities (46.1% of assets), fixed income securities (37.6% of assets) and cash equivalents (9.4% of assets). The estimated fair value of these assets was \$33.9 billion (including managed assets of \$14.6 billion and custody assets of \$19.3 billion) at March 31, 2020, compared to \$37.8 billion (including managed assets of \$16.4 billion and custody assets of \$21.4 billion) at December 31, 2019 and \$35.0 billion (including managed assets of \$15.0 billion and custody assets of \$20.0 billion) at March 31, 2019.

Service Charges on Deposit Accounts. Service charges on deposit accounts for the three months ended March 31, 2020 increased \$1.9 million, or 9.0% compared to the same period in 2019. The increase was primarily related to an increase in commercial service charges (up \$1.3 million) and increases in overdraft/insufficient funds charges on consumer and commercial accounts (up \$668 thousand and \$209 thousand, respectively). The increase in commercial service charges was impacted by a lower earnings credit rate. The earnings credit rate is the value given to deposits maintained by treasury management customers. Earnings credits applied to customer deposit balances offset service fees that would otherwise be charged. Because average market interest rates in 2020 were lower compared to 2019, deposit balances have become less valuable and are yielding a lower earnings credit rate. Overdraft/insufficient funds charges totaled \$10.5 million (\$8.1 million consumer and \$2.4 million commercial) during the three months ended March 31, 2020 compared to \$9.6 million (\$7.4 million consumer and \$2.2 million commercial) during the same period in 2019. The increases in overdraft/insufficient funds charges were partly due to increased transaction volumes during the three months ended March 31, 2020 compared to the same period in 2019. In response to the economic pressures and uncertainties faced by our customers as a result of the COVID-19 pandemic, we have begun to waive certain deposit account related fees on a case-by-case basis as needed and requested by our customers. In some cases, overdraft/insufficient funds charges are automatically waived or reimbursed. We currently expect these actions to result in reduced service charges on deposit accounts.

Insurance Commissions and Fees. Insurance commissions and fees for the three months ended March 31, 2020 decreased \$1.9 million, or 10.4%, compared to the same period in 2019. The decrease was related to decreases in commission income (down \$1.3 million) and contingent income (down \$591 thousand). The decrease in commission income was primarily related to decreases in benefit plan commissions, life insurance commissions and commissions on commercial lines property and casualty policies. The decrease in benefit plan commissions was related to decreased business volumes, premium reductions and flat to lower market rates. The decreases in property and casualty commissions and life insurance commissions were related to decreased business volumes.

Contingent income totaled \$2.6 million during the three months ended March 31, 2020 compared to \$3.2 million during the same period in 2019. 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 \$2.0 million and \$2.6 million during the three months ended March 31, 2020 and 2019, respectively. The decrease in performance related contingent income during 2020 was related to lower growth within the portfolio combined with a deterioration 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 \$608 thousand during the three months ended March 31, 2020 and \$603 thousand during the same period in 2019.

We currently expect commission income to be adversely impacted by reduced business volumes resulting from the COVID-19 pandemic. We currently expect benefit plan commissions will be particularly impacted by the effects of temporary furloughs and permanent layoffs. Further, clients may drop or adjust coverage choices as part of expense control measures as their businesses reopen from the temporary shutdown. Reduced business volumes are also expected to adversely impact the level of contingent commissions we receive in 2021. The COVID-19 pandemic has also given rise to a hard insurance market characterized by decreased capacity for most types of insurance coupled with more stringent underwriting standards among insurers, which could potentially result in reduced commissions to agencies.

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. We currently expect that revenue from interchange and debit card transactions will be impacted by reduced transaction volumes and fee waivers resulting from the COVID-19 pandemic.

	Three Months Ended March 31,	
	2020	2019
Income from debit card transactions	\$ 5,805	\$ 5,405
ATM service fees	927	981
Gross interchange and debit card transaction fees	6,732	6,386
Network costs	3,477	3,106
Net interchange and debit card transaction fees	\$ 3,255	\$ 3,280

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

Other Charges, Commissions and Fees. Other charges, commissions and fees for the three months ended March 31, 2020 increased \$303 thousand, or 3.3%, compared to the same period in 2019. The increase included increases in income from the sale of mutual funds (up \$412 thousand), money market accounts (up \$253 thousand) and annuities (up \$218 thousand); and an increase in brokerage commissions (up \$139 thousand), among other things. These items were partly offset by decreases in income from the sale of life insurance (down \$377 thousand), letter of credit fees (down \$366 thousand) and income from capital markets advisory services (down \$135 thousand), among other things. We currently expect that most of the aforementioned revenue streams will be adversely impacted by reduced transaction volumes resulting from the COVID-19 pandemic.

Net Gain/Loss on Securities Transactions. During the three months ended March 31, 2020 and 2019, we sold certain available-for-sale securities with amortized costs totaling \$1.0 billion and \$944.9 million, respectively. We realized a net gain of \$109.0 million on the 2020 sales while no significant net gain or loss was realized on the 2019 sales. During the first quarter of 2020, we sold \$483.1 million of residential mortgage-backed securities and realized a net gain of \$1.9 million on those sales. The proceeds from these sales were reinvested into other residential mortgage-backed securities that had lower pre-payment rates. We also sold \$519.1 million of U.S. Treasury securities during the first quarter of 2020 and realized a net gain of \$107.1 million on those sales. These U.S. Treasury securities were purchased during the fourth quarter of 2019 to hedge, in effect, against falling interest rates. Prior to their sale, these securities had significant unrealized holding gains as a result of decreases in market interest rates during the first quarter of 2020. We elected to sell these securities to provide liquidity and realize the gains. The sales of securities during the first quarter of 2019 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.

Other Non-Interest Income. Other non-interest income for the three months ended March 31, 2020 increased \$4.1 million, or 30.6%, compared to the same period in 2019. Other non-interest income during the three months ended March 31, 2020 included approximately \$6.0 million in gains realized on the sale of certain non-hedge related, short-term put options on U.S. Treasury securities with an aggregate notional amount of \$500 million. The put options were not exercised and expired in March 2020. The increase in other non-interest income during the three months ended March 31, 2020 was also partly related to an increase in income from customer derivative and trading activities (up \$1.6 million), primarily due to an increase in business volume, and an increase in sundry and other miscellaneous income (up \$1.2 million). During the comparable periods, sundry and other miscellaneous income included \$2.5 million and \$931 thousand related to the recovery of prior write-offs in 2020 and 2019, respectively, and \$250 thousand related to a settlement in 2019. The aforementioned items were partly offset by a decrease in gains on the sale of foreclosed and other assets (down \$4.6 million). Other non-interest income for the three months ended March 31, 2019 included gains on the sale of various branch and operational facilities totaling \$4.7 million.

Non-Interest Expense

The components of non-interest expense were as follows:

	Three Months Ended March 31,	
	2020	2019
Salaries and wages	\$ 98,812	\$ 92,476
Employee benefits	24,889	23,526
Net occupancy	25,384	19,267
Technology, furniture and equipment	25,240	21,664
Deposit insurance	2,624	2,808
Intangible amortization	257	325
Other	46,957	41,734
Total	\$ 224,163	\$ 201,800

Total non-interest expense for the three months ended March 31, 2020 increased \$22.4 million, or 11.1%, compared to the same period in 2019. Changes in the various components of non-interest expense are discussed below.

Salaries and Wages. Salaries and wages for the three months ended March 31, 2020 increased \$6.3 million, or 6.9%, compared to the same period in 2019. The increase was primarily related to an increase in salaries, due to an increase in the number of employees and normal annual merit and market increases.

Employee Benefits. Employee benefits expense for the three months ended March 31, 2020 increased \$1.4 million, or 5.8%, compared to the same period in 2019. The increase was primarily due to increases in medical benefits expense (up \$1.5 million) and payroll taxes (up \$639 thousand) partly offset by a decrease in expense related to our defined benefit retirement plans (down \$821 thousand).

During the three months ended March 31, 2020, we recognized a combined net periodic pension benefit of \$490 thousand related to our defined benefit retirement plans compared to a combined net periodic pension expense of \$331 thousand during the same period in 2019. 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. A prolonged negative impact on the value of stocks and other asset classes due to the COVID-19 pandemic could result in a significant reduction to pension plan asset values and expected returns, which could impact the level of future funding and expense. See Note 12 - Defined Benefit Plans for additional information related to our net periodic pension benefit/cost.

Net Occupancy. Net occupancy expense for the three months ended March 31, 2020 increased \$6.1 million, or 31.7%, compared to the same period in 2019. The increase was primarily related to increases in lease expense (up \$2.8 million), depreciation on leasehold improvements (up \$1.1 million), property taxes (up \$813 thousand), building depreciation (up \$498 thousand) and repairs and maintenance/service contracts expense (up \$475 thousand). Net occupancy expense was impacted by the commencement of the lease of our new corporate headquarters building in San Antonio in June 2019, as well as renewals of other leases related to existing facilities and new locations, in part related to our expansion within the Houston market area.

Technology, Furniture and Equipment. Technology, furniture and equipment expense for the three months ended March 31, 2020 increased \$3.6 million, or 16.5%, compared to the same period in 2019. The increase was primarily related to increases in cloud services expense (up \$1.5 million), software maintenance (up \$1.2 million) and depreciation of furniture and equipment (up \$995 thousand).

Deposit Insurance. Deposit insurance expense totaled \$2.6 million for the three months ended March 31, 2020 compared to \$2.8 million for the three months ended March 31, 2019. Provisions of the CARES Act allow, but do not require, the FDIC to expand deposit insurance coverage for non-interest-bearing transaction accounts through December 31, 2020. Such action could result in additional deposit insurance expense. Other provisions of the CARES Act as well as actions taken by bank regulators, such as potential relief for working with borrowers who are distressed as a result of the effects of COVID-19, could similarly impact aggregate deposit insurance expense.

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 months ended March 31, 2020 decreased \$68 thousand, or 20.9%, compared to the same period in 2019. The decrease in amortization during 2020 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 months ended March 31, 2020 increased \$5.2 million, or 12.5%, compared to the same period in 2019. The increase included increases in professional services expense (up \$1.5 million); donations expense (up \$912 thousand); platform fees related to investment services (up \$697 thousand); advertising/promotions expense (up \$548 thousand); and sundry and other miscellaneous expense (up \$435 thousand), among other things.

Results of Segment Operations

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

	Three Months Ended March 31,	
	2020	2019
Banking	\$ 52,024	\$ 112,917
Frost Wealth Advisors	5,587	6,400
Non-Banks	(2,858)	(2,821)
Consolidated net income	<u>\$ 54,753</u>	<u>\$ 116,496</u>

Banking

Net income for the three months ended March 31, 2020 decreased \$60.9 million, or 53.9%, compared to the same period in 2019. The decrease during the three months ended March 31, 2020 was primarily the result of a \$164.2 million increase in credit loss expense, a \$17.6 million increase in non-interest expense and a \$2.2 million decrease in net interest income partly offset by a \$113.0 million increase in non-interest income and a \$10.1 million decrease in income tax expense.

Net interest income for the three months ended March 31, 2020 decreased \$2.2 million, or 0.9%, compared to the same period in 2019. The decrease was primarily related to decreases in the average yields on loans, interest-bearing deposits and federal funds sold and resell agreements combined with decreases in the average volumes of tax-exempt and taxable securities (based on amortized cost) and an increase in the average volume of interest bearing liabilities. The impact of these items was partly offset by decreases in the average cost of interest-bearing deposits and other borrowed funds, increases in the average volumes of loans and interest-bearing deposits (primarily amounts held in an interest-bearing account at the Federal Reserve) and increases in the average yields on taxable and tax-exempt securities. Net interest income for the first quarter of 2020 was also positively impacted by the additional day as a result of leap year. See the analysis of net interest income included in the section captioned "Net Interest Income" included elsewhere in this discussion.

Credit loss expense for the three months ended March 31, 2020 totaled \$175.2 million compared to \$11.0 million for the same periods in 2019. The increase resulted from both our adoption of a new credit loss accounting standard and the adverse events impacting our loan portfolio, including those arising from the COVID-19 pandemic and the significant decline in oil prices. See the sections captioned "Credit Loss Expense" and "Allowance for Credit Losses" elsewhere in this discussion for further analysis of credit loss expense related to loans and off-balance-sheet commitments.

Non-interest income for the three months ended March 31, 2020 increased \$113.0 million, or 186.9% compared to the same period in 2019. The increase was primarily due to a \$109.0 million net gain on securities transactions during the three months ended March 31, 2020. Excluding the net gain on securities transactions during the three months ended March 31, 2020, total non-interest income for the Banking segment increased \$4.0 million, or 6.6%. This increase was due to increases in other non-interest income and service charges on deposit accounts partly offset by decreases in insurance commissions and fees and other charges, commissions and fees. The increase in other non-interest income was partly related to \$6.0 million in gains realized on the sale of certain non-hedge related, short-term put options on U.S. Treasury securities during the three months ended March 31, 2020. The increase in other non-interest income was also partly related to an increase in income from customer derivative and trading activities, primarily due to an increase in business volume, and an increase in sundry and other miscellaneous income. The aforementioned items were partly offset by a decrease in gains on the sale of foreclosed and other assets as we realized gains on the sale of various branch and operational facilities totaling \$4.7 million during the three months ended March 31, 2019. The

increase in service charges on deposit accounts was primarily related to an increase in commercial service charges, which was partly due to a lower earnings credit rate given to our treasury management customers due to lower average market interest rates, and increases in overdraft/insufficient funds charges on consumer and commercial accounts, which was partly due to increased transaction volumes. The decrease in insurance commissions and fees was partly related to decreases in business volumes and, for benefit plan commissions, premium reductions and flat to lower market rates. The decrease was also partly related to a decrease in contingent income due to lower growth and a deterioration in the loss performance of insurance policies previously placed. The decrease in other charges, commissions and fees was primarily related to decreases in letter of credit fees and income from capital markets advisory services, among other things. See the analysis of these categories of non-interest income included in the section captioned “Non-Interest Income” included elsewhere in this discussion.

Non-interest expense for the three months ended March 31, 2020 increased \$17.6 million, or 10.3%, compared to the same period in 2019. The increase was primarily related to increases in salaries and wages; net occupancy expense; technology, furniture and equipment expense; other non-interest expense and employee benefits. The increase in salaries and wages was primarily related to an increase in salaries, due to an increase in the number of employees and normal annual merit and market increases. The increase in net occupancy expense was primarily related to increases in lease expense, depreciation on leasehold improvements, property taxes, building depreciation and repairs and maintenance/service contracts expense. Net occupancy expense was impacted by the commencement of the lease of our new corporate headquarters building in San Antonio in June 2019, as well as renewals of other leases related to existing facilities and new locations, in part related to our expansion within the Houston market area. The increase in technology, furniture and equipment expense was primarily related to increases in cloud services expense, software maintenance and depreciation of furniture and equipment. The increase in other non-interest expense included increases in professional services expense; donations expense, advertising/promotions expense; and sundry and other miscellaneous expense, among other things. The increase in employee benefits was primarily due to increases in medical benefits expense and payroll taxes partly offset by a decrease in expense related to our defined benefit retirement plans. See the analysis of these categories of non-interest expense included in the section captioned “Non-Interest Expense” included elsewhere in this discussion.

Frost Insurance Agency, which is included in the Banking operating segment, had gross commission revenues of \$16.6 million during the three months ended March 31, 2020 compared to \$18.5 million during the three months ended March 31, 2019. The decrease during the three months ended March 31, 2020 was partly related to decreases in business volumes and, for benefit plan commissions, premium reductions and flat to lower market rates. The decrease was also partly related to a decrease in contingent income due to lower growth and a deterioration in the loss performance of insurance policies previously placed. See the analysis of insurance commissions and fees included in the section captioned “Non-Interest Income” included elsewhere in this discussion.

Frost Wealth Advisors

Net income for the three months ended March 31, 2020 decreased \$813 thousand, or 12.7%, compared to the same period in 2019. The decreases were primarily related to an increase in non-interest expense (up \$4.3 million) partly offset by an increase in non-interest income (up \$3.3 million) and a decrease in income tax expense (down \$216 thousand).

Non-interest income for the three months ended March 31, 2020 increased \$3.3 million, or 9.2%, compared to the same period in 2019. The increase was primarily related to an increase in trust and investment management fees and other charges, commissions and 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 78.7% of total trust and investment management fees for the first three months of 2020. The increase in trust and investment management fees was primarily the result of increases in estate fees, trust investment fees, real estate fees and oil and gas fees. Investment and other custodial account fees are generally based on the market value of assets within a trust account. The increase in estate fees and real estate fees were primarily related to an increase in transaction volume. The increase in trust investment fees was primarily related to an increase in the number of accounts partly offset by the impact of a decrease in average equity valuations. The increase in other charges, commissions and fees was primarily due to increases in income from the sale of mutual funds, money market accounts and annuities; and an increase in brokerage commissions, among other things, partly offset by a decrease in income from the sale of life insurance, among other things. See the analysis of trust and investment management fees, particularly as it relates to the effects of the COVID-19 pandemic, and other charges, commissions and fees included in the section captioned “Non-Interest Income” included elsewhere in this discussion.

Non-interest expense for the three months ended March 31, 2020 increased \$4.3 million, or 14.7% compared to the same period in 2019. The increase was primarily related to increases in net occupancy expense, other non-interest expense and salaries and wages. The increase in net occupancy expense was primarily related to an increase in lease expense. The increase in other non-interest expense was due to increases in platform fees related to investment services; outside computer services; professional services expense; and sundry and other miscellaneous expense, among other things. The increase in salaries and wages was partly due to normal annual merit and market increases.

Non-Banks

The Non-Banks operating segment had a net loss of \$2.9 million during the three months ended March 31, 2020, compared to a net losses of \$2.8 million during the same periods in 2019. Net loss for the three months ended March 31, 2020 compared to the same period in 2019 was negatively impacted by an increase in other non-interest expense, which was primarily due to an increase in professional services expense, among other things, and a decrease in other non-interest income, which was primarily due to a decrease in mineral interest income. The impact from these items was mostly offset by a decrease in net interest expense, which was primarily related to a decrease in average rate paid on our long-term borrowings, and an increase in income tax benefit.

Income Taxes

We recognized income tax expense of \$3.3 million, for an effective tax rate of 5.7% for the three months ended March 31, 2020 compared to \$14.0 million, for an effective tax rate of 10.7% for the three months ended March 31, 2019. The effective income tax rates differed from the U.S. statutory federal income tax rate of 21% during 2020 and 2019 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, among other things, and their relative proportion to total pre-tax net income. The decrease in the effective tax rate during the three months ended March 31, 2020 was primarily related to a decrease in pre-tax net income.

Average Balance Sheet

Average assets totaled \$33.5 billion for the three months ended March 31, 2020 representing an increase of \$2.2 billion, or 6.9%, compared to average assets for the same period in 2019. Earning assets increased \$1.9 billion, or 6.4%, during the first three months of 2020 compared to the same period in 2019. The increase in earning assets was primarily related to a \$790.0 million increase in average loans; an \$866.9 million increase in average interest-bearing deposits, federal funds sold and resell agreements; and a \$238.6 million increase in average tax-exempt securities partly offset by a \$45.4 million decrease in average taxable securities. Average premises and equipment increased \$287.3 million, or 39.1%, in part due to the commencement of the lease on our new downtown San Antonio headquarters in the second quarter of 2019. Average deposits increased \$1.3 billion, or 4.9%, during the first three months of 2020 compared to the same period in 2019. The increase included a \$734.8 million increase in interest-bearing deposit accounts and a \$544.9 million increase in non-interest bearing deposits. Average non-interest bearing deposits made up 39.2% and 39.0% of average total deposits during the first three months of 2020 and 2019, respectively.

Loans

Loans were as follows as of the dates indicated:

	March 31, 2020	Percentage of Total	December 31, 2019	Percentage of Total
Commercial and industrial	\$ 5,536,760	36.1%	\$ 5,187,466	35.2%
Energy:				
Production	1,268,832	8.3	1,348,900	9.2
Service	185,210	1.2	192,996	1.3
Other	114,812	0.7	110,986	0.8
Total energy	1,568,854	10.2	1,652,882	11.2
Commercial real estate:				
Commercial mortgages	4,920,882	32.1	4,594,113	31.1
Construction	1,265,441	8.3	1,312,659	8.9
Land	286,876	1.9	289,467	2.0
Total commercial real estate	6,473,199	42.3	6,196,239	42.0
Consumer real estate:				
Home equity loans	389,844	2.5	375,596	2.6
Home equity lines of credit	350,330	2.3	354,671	2.4
Other	480,933	3.1	464,146	3.1
Total consumer real estate	1,221,107	7.9	1,194,413	8.1
Total real estate	7,694,306	50.2	7,390,652	50.1
Consumer and other	538,340	3.5	519,332	3.5
Total loans	\$ 15,338,260	100.0%	\$ 14,750,332	100.0%

Loans increased \$587.9 million, or 4.0%, compared to December 31, 2019. The majority of our loan portfolio is comprised of commercial and industrial loans, energy loans and real estate loans. Commercial and industrial loans made up 36.1% and 35.2% of total loans at March 31, 2020 and December 31, 2019, respectively, while energy loans made up 10.2% and 11.2% of total loans, respectively, and real estate loans made up 50.2% and 50.1% 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 2019 Form 10-K for a more detailed discussion of our loan origination and risk management processes. Other than in connection with our making PPP loans as described below, we have not experienced any unusual or significant declines or increases in our loan portfolio since March 31, 2020. Nonetheless, it is possible that the effects of COVID-19 could result in less demand for our loan products.

Commercial and industrial. Commercial and industrial loans increased \$349.3 million, or 6.7%, during the first three months of 2020. 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 \$84.0 million, or 5.1%, during the first three months of 2020 compared to December 31, 2019. 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 \$1.0 billion at March 31, 2020, increasing \$72.7 million, or 7.7%, from \$948.8 million at December 31, 2019. At March 31, 2020, 40.9% of outstanding purchased SNCs were related to the energy industry while 17.5% were related to the construction industry and 10.3% were related to the financial services 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 \$6.5 billion at March 31, 2020, increasing \$277.0 million, or 4.5%, compared to \$6.2 billion at December 31, 2019. At such dates, commercial real estate loans represented 84.1% and 83.8% of total real estate loans, respectively. The majority of this portfolio consists of commercial real estate mortgages, which includes both permanent and intermediate term loans. These loans are viewed primarily as cash flow loans and secondarily as loans secured by real estate. Consequently, these loans must undergo the analysis and underwriting process of a commercial and industrial loan, as well as that of a real estate loan. At March 31, 2020, approximately 46% 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 \$1.8 billion at March 31, 2020 and \$1.7 billion at December 31, 2019. Consumer real estate loans increased \$26.7 million, or 2.2%, from December 31, 2019. Combined, home equity loans and lines of credit made up 60.6% and 61.1% of the consumer real estate loan total at March 31, 2020 and December 31, 2019, respectively. We offer home equity loans up to 80% of the estimated value of the personal residence of the borrower, less the value of existing mortgages and home improvement loans. In general, we do not originate 1-4 family mortgage loans; however, from time to time, we may invest in such loans to meet the needs of our customers or for other regulatory compliance purposes. Consumer and other loans increased \$19.0 million, or 3.7%, from December 31, 2019. 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.

Paycheck Protection Program. In April 2020, we began originating loans to qualified small businesses under the PPP administered by the SBA under the provisions of the CARES Act. Loans covered by the PPP may be eligible for loan forgiveness for certain costs incurred related to payroll, group health care benefit costs and qualifying mortgage, rent and utility payments. The remaining loan balance after forgiveness of any amounts is still fully guaranteed by the SBA. Terms of the PPP loans include the following (i) maximum amount limited to the lesser of \$10 million or an amount calculated using a payroll-based formula, (ii) maximum loan term of two years, (iii) interest rate of 1.00%, (iv) no collateral or personal guarantees are required, (v) no payments are required for six months following the loan disbursement date and (vi) loan forgiveness up to the full principal amount of the loan and any accrued interest, subject to certain requirements including that no more than 25% of the loan forgiveness

amount may be attributable to non-payroll costs. In return for processing and booking the loan, the SBA will pay the lender a processing fee tiered by the size of the loan (5% for loans of not more than \$350 thousand; 3% for loans more than \$350 thousand and less than \$2 million; and 1% for loans of at least \$2 million). Through April 27, 2020, we have funded approximately \$3.0 billion of SBA-approved PPP loans to over 10,500 customers. We expect to recognize approximately \$87.0 million in PPP loan related processing fees as a yield adjustment over the terms of these loans.

We are currently considering participation in the Federal Reserve's PPP Facility which, through September 30, 2020, will extend loans to banks who are loaning money to small businesses under the PPP. Should we ultimately participate in the PPP Facility, amounts borrowed would be non-recourse and secured by and limited to the amount of the PPP loans we originate. The maturity date of a borrowing under the PPP Facility is equal the maturity date of the PPP loan pledged to secure the borrowing and would be accelerated (i) if the underlying PPP loan goes into default and is sold to the SBA to realize on the SBA guarantee or (ii) to the extent that any loan forgiveness reimbursement is received from the SBA. Borrowings under the PPP Facility will bear interest at a rate of 0.35% and there would be no fees to us.

Federal bank regulatory agencies have issued an interim final rule that permits banks to neutralize the regulatory capital effects of participating in the PPP and, if applicable, the PPP Facility. Specifically, all PPP loans have a zero percent risk weight under applicable risk-based capital rules. Additionally, a bank may exclude all PPP loans pledged as collateral to the PPP Facility from its average total consolidated assets for the purposes of calculating its leverage ratio, while PPP loans that are not pledged as collateral to the PPP Facility will be included.

Purported class action lawsuits have been filed against Frost Bank in Federal and Texas State courts alleging, among other claims, unspecified violations of the CARES Act and the SBA's 7(a) loan program in connection with Frost Bank's participation in the PPP. The lawsuits seek monetary damages and injunctive relief. Frost Bank believes the claims to be without merit.

Non-Performing Assets

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

	March 31, 2020	December 31, 2019
Non-accrual loans:		
Commercial and industrial	\$ 23,913	\$ 26,038
Energy	28,702	65,761
Commercial real estate:		
Buildings, land and other	8,224	8,912
Construction	3,774	665
Consumer real estate	2,094	922
Consumer and other	20	5
Total non-accrual loans	66,727	102,303
Restructured loans	—	6,098
Foreclosed assets:		
Real estate	806	1,084
Other	—	—
Total foreclosed assets	806	1,084
Total non-performing assets	\$ 67,533	\$ 109,485
Ratio of non-performing assets to:		
Total loans and foreclosed assets	0.44%	0.74%
Total assets	0.20	0.32
Accruing past due loans:		
30 to 89 days past due	\$ 110,274	\$ 50,784
90 or more days past due	11,872	7,421
Total accruing past due loans	\$ 122,146	\$ 58,205
Ratio of accruing past due loans to total loans:		
30 to 89 days past due	0.72%	0.34%
90 or more days past due	0.08	0.05
Total accruing past due loans	0.80%	0.39%

Non-performing assets include non-accrual loans, troubled debt restructurings and foreclosed assets. Non-performing assets at March 31, 2020 decreased \$42.0 million from December 31, 2019 reflecting decreases primarily in non-accrual energy loans, restructured loans and commercial and industrial loans, partly offset by increases in non-accrual construction loans and consumer real estate loans.

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. Non-accrual commercial and industrial loans included one credit relationship in excess of \$5.0 million totaling \$8.5 million at March 31, 2020. This credit relationship was previously reported as non-accrual with an aggregate balance of \$8.4 million at December 31, 2019. Non-accrual energy loans included two credit relationships in excess of \$5 million totaling \$28.3 million at March 31, 2020. Both credit relationships were previously reported as non-accrual with an aggregate balance of \$61.7 million at December 31, 2019. We charged off \$33.8 million related to these credit relationships during the three months ended March 31, 2020. Non-accrual real estate loans primarily consist of land development, 1-4 family residential construction credit relationships and loans secured by office buildings and religious facilities. There were no non-accrual commercial real estate loans in excess of \$5.0 million at March 31, 2020 or December 31, 2019.

There were no restructured loans at March 31, 2020. Restructured loans at December 31, 2019 totaled \$6.1 million and consisted of three credit relationships primarily related to commercial real estate.

Foreclosed assets represent property acquired as the result of borrower defaults on loans. Foreclosed assets are recorded at estimated fair value, less estimated selling costs, at the time of foreclosure. Write-downs occurring at foreclosure are charged against the allowance for loan losses. Regulatory guidelines require us to reevaluate the fair value of foreclosed assets on at least an annual basis. Our policy is to comply with the regulatory guidelines. Write-downs are provided for subsequent declines in value and are included in other non-interest expense along with other expenses related to maintaining the properties. Write-downs of foreclosed assets totaled \$231 thousand during the three months ended March 31, 2020, while there were no write-downs of foreclosed assets during the three months ended March 31, 2019.

Accruing past due loans at March 31, 2020 increased \$63.9 million compared to December 31, 2019. The increase was primarily related to increases in past due commercial real estate loans (up 26.0 million), commercial and industrial loans (up \$19.2 million) and energy loans (\$15.2 million).

Potential problem loans consist of loans that are performing in accordance with contractual terms but for which management has concerns about the ability of an obligor to continue to comply with repayment terms because of the obligor's potential operating or financial difficulties. Management monitors these loans closely and reviews their performance on a regular basis. At March 31, 2020 and December 31, 2019, we had \$105.9 million and \$63.4 million in loans of this type which are not included in any one of the non-performing non-accrual, restructured or 90 days past due loan categories. At March 31, 2020, potential problem loans consisted of eleven credit relationships. Of the total outstanding balance at March 31, 2020, 72.7% was related to the energy industry and 13.4% was related to the restaurant industry. Weakness in these organizations' operating performance and financial condition, among other factors, have caused us to heighten the attention given to these credits.

Certain borrowers are currently unable to meet their contractual payment obligations because of the effects of COVID-19. In an effort to mitigate the adverse effects of COVID-19 on our loan customers, we are providing them the opportunity to defer payments, or portions thereof, for up to 90 days, should they so request. In the absence of other intervening factors, such short-term modifications made on a good faith basis are not categorized as troubled debt restructurings, nor are loans granted payment deferrals related to COVID-19 reported as past due or placed on non-accrual status (provided the loans were not past due or on non-accrual status prior to the deferral). The COVID-19 pandemic has contributed to an increased risk of delinquencies, defaults and foreclosures. We currently expect that a significant number and amount of our loans will experience ratings downgrades, credit deterioration and defaults in many industries, particularly energy, aviation, restaurants, hotels/lodging, entertainment, retail and commercial real estate, among others. See additional information about the effects of and risks associated with the COVID-19 pandemic in the section captioned "Recent Developments Related to COVID-19" elsewhere in this discussion and Part II. Other Information, Item 1A. Risk Factors elsewhere in this report.

Allowance for Credit Losses

As discussed in Note 1 - Summary of Significant Accounting Policies in the accompanying notes to consolidated financial statements, our policies and procedures related to accounting for credit losses changed on January 1, 2020 in connection with the adoption of a new accounting standard update as codified in Accounting Standards Codification (“ASC”) Topic 326 (“ASC 326”) Financial Instruments - Credit Losses. In the case of loans and securities, allowances for credit losses are contra-asset valuation accounts, calculated in accordance with ASC 326, that are deducted from the amortized cost basis of these assets to present the net amount expected to be collected. In the case of off-balance-sheet credit exposures, the allowance for credit losses is a liability account, calculated in accordance with ASC 326, reported as a component of accrued interest payable and other liabilities in our consolidated balance sheets. The amount of each allowance account represents management's best estimate of current expected credit losses (“CECL”) on these financial instruments considering available information, from internal and external sources, relevant to assessing exposure to credit loss over the contractual term of the instrument. Relevant available information includes historical credit loss experience, current conditions and reasonable and supportable forecasts. While historical credit loss experience provides the basis for the estimation of expected credit losses, adjustments to historical loss information may be made for differences in current portfolio-specific risk characteristics, environmental conditions or other relevant factors. While management utilizes its best judgment and information available, the ultimate adequacy of our allowance accounts is dependent upon a variety of factors beyond our control, including the performance of our portfolios, the economy, changes in interest rates and the view of the regulatory authorities toward classification of assets. For additional information regarding critical accounting policies, refer to Note 1 - Summary of Significant Accounting Policies and Note 3 - Loans in the accompanying notes to consolidated financial statements.

Allowance for Credit Losses - Loans. The table below provides, as of the dates indicated, an allocation of the allowance for loan losses by loan portfolio segment; however, allocation of a portion of the allowance to one segment does not preclude its availability to absorb losses in other segments:

	March 31, 2020	Post ASC 326 Adoption on January 1, 2020	December 31, 2019
Commercial and industrial	\$ 92,152	\$ 72,856	\$ 51,593
Energy	103,201	26,929	37,382
Commercial real estate	52,319	17,518	31,037
Consumer real estate	8,170	6,505	4,113
Consumer and other	8,039	5,794	8,042
Total	<u>\$ 263,881</u>	<u>\$ 129,602</u>	<u>\$ 132,167</u>

Upon the adoption of ASC 326 on January 1, 2020, the total amount of the allowance for credit losses on loans estimated using the CECL methodology decreased \$2.6 million compared to the total amount of the allowance for credit losses on loans estimated as of December 31, 2019 using the prior incurred loss model. Fluctuations in the estimated allowances by portfolio segment offset one another, for the most part, and, as a result, the overall estimated amount of allowance for credit losses did not significantly change as a result of the change in methodology. The manner in which credit loss allowances are allocated to the individual portfolio segments was partly impacted by a change in the way the underlying loans within each segment are pooled for modeling purposes. The impact of varying economic conditions and portfolio stress factors are now a component of the credit loss models applied to each modeling pool. In that regard, the amounts allocated to the underlying pools of loans within each portfolio segment more directly reflect the economic variables and portfolio stress factors that correlate with credit losses within each portfolio. Under the prior methodology, allocations in excess of those derived from historical loss rates were recognized as an overlay on each of the various portfolios based upon management judgment. Nonetheless, despite fluctuations in the allocation of portions of the overall allowance to the various portfolio segments, the entire allowance is available to absorb any credit losses within the entire loan portfolio. The remainder of this discussion focuses on expected credit losses estimated as of March 31, 2020 compared to the post ASC 326 estimate of expected credit losses as of January 1, 2020.

The allowance allocated to commercial and industrial loans totaled \$92.2 million, or 1.66% of total commercial and industrial loans, at March 31, 2020 increasing \$19.3 million, or 26.5%, compared to \$72.9 million, or 1.40% of total commercial and industrial loans, post ASC 326 adoption on January 1, 2020. Modeled expected credit losses increased \$12.3 million while Q-Factor adjustments related to commercial and industrial loans increased \$5.8 million. Specific allocations for commercial and industrial loans that were evaluated for expected credit losses on an individual basis increased from \$7.9 million post ASC 326 adoption on January 1, 2020 to \$9.2 million at March 31, 2020. The allowance allocated to energy loans totaled \$103.2 million, or 6.58% of total energy loans, at March 31, 2020 increasing \$76.3 million, or 283.2%, compared to \$26.9 million, or 1.63% of total energy loans, post ASC 326 adoption on January 1, 2020. Modeled expected credit losses related to energy loans increased \$9.5 million while Q-Factor adjustments related to energy loans increased \$87.0 million. Specific allocations for energy loans that were evaluated for expected credit losses on an individual basis totaled \$20.2 million post ASC 326 adoption on January 1, 2020. The loans to

which these specific allocations were related were subsequently charged off and there were no specific allocations at March 31, 2020. The allowance allocated to commercial real estate loans totaled \$52.3 million, or 0.81% of total commercial real estate loans, at March 31, 2020 increasing \$34.8 million, or 198.7%, compared to \$17.5 million, or 0.28% of total commercial real estate loans, post ASC 326 adoption on January 1, 2020. Modeled expected credit losses related to commercial real estate loans increased \$19.6 million while Q-Factor adjustments related to commercial real estate loans increased \$12.2 million. Specific allocations for commercial real estate loans that were evaluated for expected credit losses on an individual basis increased from \$383 thousand post ASC 326 adoption on January 1, 2020 to \$3.4 million at March 31, 2020. The allowance allocated to consumer real estate loans totaled \$8.2 million, or 0.67% of total consumer real estate loans, at March 31, 2020 increasing \$1.7 million, or 25.6%, compared to \$6.5 million, or 0.54% of total consumer real estate loans, post ASC 326 adoption on January 1, 2020. Modeled expected credit losses related to consumer real estate loans increased \$1.1 million while Q-Factor adjustments related to consumer real estate loans increased \$605 thousand. The allowance allocated to consumer loans totaled \$8.0 million, or 1.49% of total consumer loans, at March 31, 2020 increasing \$2.2 million, or 38.7%, compared to \$5.8 million, or 1.12% of total consumer loans, post ASC 326 adoption on January 1, 2020. Modeled expected credit losses related to consumer loans increased \$1.3 million while Q-Factor adjustments related to consumer loans increased \$916 thousand.

As more fully described in Note 3 - Loans in the accompanying consolidated financial statements, we measure expected credit losses over the life of each loan utilizing a combination of models which measure probability of default and loss given default, among other things. The measurement of expected credit losses is impacted by loan/borrower attributes and certain macroeconomic variables. Models are adjusted to reflect current impact of certain macroeconomic variables as well as their expected changes over a reasonable and supportable forecast period.

In estimating expected credit losses as of March 31, 2020, we utilized the Moody's Analytics March 2020 S8 Low Oil Price Scenario (the "S8 Scenario") to forecast the macroeconomic variables used in our models. The S8 scenario used the Moody's Baseline forecast, updated during the week of March 16, 2020, adjusted to assume that the price per barrel of West Texas Intermediate ("WTI") crude oil will remain at \$35 flat for two years. The S8 Scenario also assumed the persistence of the oil price war between Saudi Arabia and Russia and increasing oil supplies in the face of decreasing global demand. At that time, the S8 Scenario forecasted declines in the U.S. Gross Domestic Product and the Texas Gross State Product in the second quarter of 2020, a flat U.S. unemployment rate for the remainder of 2020 and the 10-yr Treasury rate dropping to 0.49% in second quarter of 2020 and remaining below 1.0% until the second quarter of 2021. The low oil prices incorporated in the S8 Scenario also resulted in a forecasted gradual increase in the Texas unemployment rate, from 3.6% in the first quarter of 2020 to 6.2% by the first quarter of 2022, exceeding the forecasted U.S. unemployment rate of 4.1% for the first quarter of 2022 and reflecting the impact of oil prices on the overall Texas economy. The economic forecast used in our initial estimate of expected credit losses under ASC 326 on January 1, 2020 projected that the Texas unemployment rate would remain below 4.0% through 2021. The increases in modeled expected credit losses across all of our loan portfolios as of March 31, 2020 compared to the modeled expected credit losses as of our initial adoption of ASC 326 on January 1, 2020 were primarily the result of changes in portfolio volumes and risk attributes, as discussed below, and also partly related to the changes in our economic forecast.

The overall loan portfolio increased \$587.9 million, or 4.0%, which included a \$349.3 million, or 6.7%, increase in commercial and industrial loans and a \$277.0 million, or 4.5%, increase in commercial real estate loan partly offset by an \$84.0 million, or 5.08%, decrease in energy loans. The weighted average risk grade for commercial and industrial loans remained unchanged totaling 6.44 at both March 31, 2020 and December 31, 2019. Commercial and industrial loans graded "watch" and "special mention" (risk grades 9 and 10) increased \$88.2 million during the first quarter of 2020 while classified commercial and industrial loans decreased \$16.5 million. Classified loans consist of loans having a risk grade of 11, 12 or 13. The weighted-average risk grade for energy loans increased to 6.81 at March 31, 2020 from 6.39 at December 31, 2019. The increase in weighted average risk grade was primarily related to a \$50.3 million increase in classified loans while non classified loans decreased \$134.3 million. The weighted average risk grade for commercial real estate loans increase to 7.18 at March 31, 2020 from 7.07 at December 31, 2019. Commercial real estate loans graded as "watch" increased \$170.9 million while classified commercial real estate loans decreased \$9.6 million.

As noted above our credit loss models utilized the economic forecasts in the Moody's S8 Scenario from the week of March 16, 2020. In late March and early April 2020, Moody's updated various macroeconomic variables in Moody's Baseline forecast subsequent to our modeling processes in order to incorporate the expected economic impact of recent developments related to the COVID-19 pandemic. Given the level of economic disruption and uncertainty within the State of Texas and the nation as a whole, arising from the COVID-19 pandemic and volatility and declines in oil and gas prices driven by decreased demand and increased supply, we qualitatively adjusted the model results for these and other risk factors that are not considered within our modeling processes but are nonetheless relevant in assessing the expected credit losses within our loan pools. These Q-Factor adjustments are discussed below. Also see the section captioned "Recent Developments Related to COVID-19" elsewhere in this discussion and Part II. Other Information, Item 1A. Risk Factors elsewhere in this report.

Q-Factor adjustments are based upon management judgment and current assessment as to the impact of risks related to changes in lending policies and procedures; economic and business conditions; loan portfolio attributes and credit concentrations; and external factors, among other things. Management assesses the potential impact of such items within a range of severely negative impact to positive impact and adjusts the modeled expected credit loss by an aggregate adjustment percentage based upon the assessment. As a result of this assessment as of March 31, 2020, modeled expected credit losses were adjusted upwards by a weighted-average Q-Factor adjustment of approximately 17.9%. This weighted-average Q-Factor adjustment is based upon a severely negative expected impact from changes in economic and business conditions resulting from the COVID-19 pandemic and a negative to limited negative expected impact associated with changes in loan portfolio attributes and concentrations, risk grades and other practices and procedures; the depth and experience of lending staff in dealing with potential issues related to credit deterioration; and potential deterioration of collateral values. The weighted-average Q-Factor adjustment also includes a 10% upward adjustment to modeled expected credit losses related to risks associated with model uncertainty and under-prediction. This adjustment was based upon the results of certain back testing procedures performed on our credit loss models. In connection with our assessment of Q-Factor adjustments for our initial estimate of expected credit losses upon the adoption of ASC 326 on January 1, 2020, modeled expected credit losses were adjusted upwards by a weighted-average Q-Factor adjustment of approximately 12.9%, which also included the aforementioned 10% upward adjustment related to model uncertainty and under-prediction. We expect to continue to adjust modeled expected credit loss results for model uncertainty and under-prediction until such time as the models are enhanced and the degree of uncertainty and under-prediction is reduced. Management also made certain other qualitative adjustments for loans within certain industries that are expected to be more significantly impacted by the COVID-19 pandemic and oil price volatility and declines as described below.

In early March 2020, Saudi Arabia announced significant price discounts on oil which resulted in a sharp decrease in global oil prices including the benchmark WTI. Saudi Arabia further announced that it would significantly increase its production leading Russia to respond in kind. These actions arose in the face of increasing global supplies and decreasing global demand. The subsequent worsening global economic outlook and decreased demand resulting from the COVID-19 pandemic resulted in further decreases in energy prices. The WTI price per barrel of crude oil was approximately \$20 per barrel on March 31, 2020 down from approximately \$61 per barrel as of December 31, 2019. In late March 2020, we established a special Energy Oversight Council to oversee and assess the credit quality of our energy loan portfolio.

As of March 31, 2020, we provided an additional \$85.0 million of qualitative adjustments for our energy loan portfolio. In assessing the energy portfolio for the additional qualitative adjustment, we performed a series of different stress testing exercises to assess borrowing base deficiencies for energy production loans. The final stress testing exercise approved by management was based on an oil price deck of \$9 in 2020 and increasing to \$36 in 2021, \$40 in 2022 and \$45 thereafter. From this exercise, we determined which borrowers had a borrowing base deficiency. We further identified which of these borrowers we believed to have strong secondary sources of capital and those that did not. We determined that the borrowers with insufficient secondary sources of capital had an aggregate net borrowing based deficiency of approximately \$106.0 million. We concluded that this amount should serve as the minimum level of expected credit losses for energy production loans. Accordingly, we provided an additional qualitative adjustment of \$84.0 million for this category of energy loans. We performed a separate assessment of other energy loans which includes borrowers associated with transportation and logistics; equipment manufacturing and energy services, among other things. Over half of this portfolio of energy loans was made up of a small number of borrowers with loans in excess of \$5.0 million. Based upon further analysis of these loans, we provided an additional qualitative adjustment of \$1.0 million.

As of April 27, 2020, the WTI price per barrel of crude oil was approximately \$13. Oil prices continue to be impacted by concerns that the demand for oil will remain depressed as the COVID-19 pandemic has led to a sharp decrease in global travel and business activity in other energy-heavy industries. Excess oil supply has compounded concerns related to oil storage capacity, as the cost for producers to store unused oil has begun to exceed the value of the underlying oil.

While its effects continue to materialize, the COVID-19 pandemic has resulted in a significant decrease in commercial activity throughout the State of Texas as well as nationally. Efforts to limit the spread of COVID-19 have led to the closure of non-essential businesses, travel restrictions, supply chain disruptions and prohibitions on public gatherings, among other things, throughout many parts of the United States and, in particular, the markets in which we operate. Aside from the energy industry, which is discussed above, we lend to customers operating in certain other industries that have been, and are expected to be, more significantly impacted by the effects of the COVID-19 pandemic. These industries include, with outstanding balances as of March 31, 2020, restaurants (approximately \$274.9 million, or 1.79% of total loans), hotels/lodging (approximately \$238.9 million, or 1.56% of total loans), aviation (approximately \$196.4 million, or 1.28% of total loans), entertainment (approximately \$113.8 million, or 0.74% of total loans) and retail (approximately \$85.6 million, or 0.56% of total loans). We are continuing to monitor these customers closely. In assessing these portfolios for an additional qualitative adjustment as of March 31, 2020, we performed a comprehensive review of the financial condition and overall outlook of the borrowers within these portfolios. Based on this analysis, we determined that these portfolios had an elevated level of risk due to nationwide and global restrictions impacting each of these industries. As a result, we provided an additional qualitative adjustment of \$8.8 million, of which \$7.8 million was allocated to commercial real estate loans and \$1.0 million was allocated to commercial and industrial loans.

According to Department of Labor statistical data, in the final week of March 2020, there was a record number of initial unemployment insurance claims totaling 6.6 million. For the entire month, initial claims totaled in excess of 10 million. Through April 16, 2020, the four-week moving average of initial unemployment claims was approximately 5.5 million per week. The rapid rate and magnitude of job losses is unprecedented. During this time, the U.S. government has also enacted certain monetary and fiscal stimulus measures in several phases to counteract the economic disruption caused by the COVID-19. Such measures are more fully discussed in the section captioned “Recent Developments Related to COVID-19” elsewhere in this discussion. The success of these measures is unknown and they may not be sufficient to fully mitigate the negative impact of the COVID-19 pandemic. In light of this uncertainty as well as other uncertainties related to unemployment trends and how long business closures and restrictions on travel and public gatherings will continue, we determined that our consumer and other portfolio had an elevated level of risk, particularly related to the performance unsecured loans within this portfolio. As a result, we provided an additional qualitative adjustment of \$800 thousand for these loans.

Activity in the allowance for credit losses on loans is presented in the following table.

	Three Months Ended March 31,	
	2020	2019
Balance at beginning of period	\$ 132,167	\$ 132,132
Impact of adopting ASC 326	(2,565)	—
Credit loss expense	172,925	11,003
Charge-offs:		
Commercial and industrial	(4,369)	(2,688)
Energy	(33,800)	—
Commercial real estate	(73)	(60)
Consumer real estate	(285)	(1,778)
Consumer and other	(5,005)	(5,697)
Total charge-offs	(43,532)	(10,223)
Recoveries:		
Commercial and industrial	1,715	750
Energy	66	47
Commercial real estate	113	90
Consumer real estate	380	89
Consumer and other	2,612	2,462
Total recoveries	4,886	3,438
Net charge-offs	(38,646)	(6,785)
Balance at end of period	\$ 263,881	\$ 136,350
Ratio of allowance for credit losses on loans to:		
Total loans	1.72%	0.95%
Non-accrual loans	395.46	147.95
Ratio of annualized net charge-offs to average total loans	1.04	0.19

Credit loss expense related to loans increased \$161.9 million during the three months ended March 31, 2020 compared to the same period in 2019. Credit loss expense related to loans during the three months ended March 31, 2020 primarily reflects the increase in expected credit losses resulting from a deterioration in forecasted economic conditions and the current and uncertain future impacts associated with the COVID-19 pandemic and the sharp decline in oil prices. Credit loss expense also reflects the level of net charge-offs, the deterioration of credit quality and the overall growth in the loan portfolio during the first quarter of 2020. The ratio of the allowance for credit losses on loans to total loans was 1.72% at March 31, 2020 compared to 0.90% at December 31, 2019. Management believes the recorded amount of the allowance for credit losses on loans is appropriate based upon management’s best estimate of current expected credit losses within the existing portfolio of loans. Should any of the factors considered by management in making this estimate change, our estimate of current expected credit losses could also change, which could affect the level of future credit loss expense related to loans.

Allowance for Credit Losses - Off-Balance-Sheet Credit Exposures. Upon the adoption of ASC 326 on January 1, 2020, the total amount of the allowance for credit losses on off-balance-sheet credit exposures estimated using the CECL methodology increased \$39.4 million compared to the total amount of the allowance for credit losses on off-balance-sheet credit exposures estimated as of December 31, 2019 using the prior incurred loss model. The increase reflects the impact of assuming portions of all of these commitments will fund in the future and applying our credit loss modeling processes to such amounts as if such amounts were funded loans. Previously, we only recognized a liability for estimated incurred credit losses on off-balance-sheet credit exposures when the borrowers to which such commitments were extended exceeded certain risk grades and had not violated any underlying covenants that would relieve us of any obligation to fund additional amounts under the commitment. Subsequent to the adoption of ASC 326 on January 1, 2020, we recognized credit loss expense related to off-balance-sheet credit exposures totaling \$2.3 million during the first quarter of 2020 to increase the amount of the related allowance for credit losses on off-balance-sheet credit exposures to \$42.2 million as of March 31, 2020. The increase primarily reflects changes in underlying risk grades and expected utilization of available funds, an increase in overall off-balance-sheet credit exposures and a deterioration in forecasted economic conditions and the current and uncertain future impacts associated with COVID-19. Further information regarding our policies and methodology used to estimate the allowance for credit losses on off-balance-sheet credit exposures is presented in Note 6 - Off-Balance-Sheet Arrangements, Commitments, Guarantees and Contingencies in the accompanying notes to consolidated financial statements.

Capital and Liquidity

Capital. Shareholders' equity totaled \$3.8 billion at both March 31, 2020 and December 31, 2019. In addition to net income of \$54.8 million, other sources of capital during the three months ended March 31, 2020 included other comprehensive income, net of tax, of \$96.4 million; \$2.5 million related to stock-based compensation and \$1.5 million in proceeds from stock option exercises. Uses of capital during the three months ended March 31, 2020 included a \$150.0 million redemption of preferred stock, \$47.0 million of dividends paid on preferred and common stock, \$29.3 million related to the cumulative effect of adopting a new accounting principle and \$14.0 million of treasury stock purchases. See Note 1 - Significant Accounting Policies.

The accumulated other comprehensive income/loss component of shareholders' equity totaled a net, after-tax, unrealized gain of \$363.8 million at March 31, 2020 compared to \$267.4 million at December 31, 2019. The change was primarily due to a \$95.7 million net, after-tax, increase in the net unrealized gain 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 our regulatory capital ratios. In connection with the adoption of ASC 326 on January 1, 2020, we also elected to exclude, for a transitional period, the effects of credit loss accounting under CECL in the calculation of our regulatory capital and regulatory capital 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 \$0.71 and \$0.67 per common share during the first quarters of 2020 and 2019, respectively. This equates to a common stock dividend payout ratio of 95.2% and 37.2% during the first three months of 2020 and 2019, 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.

Preferred Stock. On March 16, 2020, we redeemed all 6,000,000 shares of our 5.375% Non-Cumulative Perpetual Preferred Stock, Series A, ("Series A Preferred Stock") at a redemption price of \$25 per share, or an aggregate redemption of \$150.0 million. When issued, the net proceeds of the Series A Preferred Stock totaled \$144.5 million after deducting \$5.5 million of issuance costs including the underwriting discount and professional service fees, among other things. Upon redemption, these issuance costs were reclassified to retained earnings and reported as a reduction of net income available to common shareholders.

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 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 177,834 shares at a total cost of \$13.7 million during the first quarter of 2020 and 202,724 shares at a total cost of \$17.2 million during the third quarter of 2019. In light of the uncertainties arising from the COVID-19 pandemic, we currently do not anticipate any further repurchases of common stock under this stock repurchase program. 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 2019 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. Our principal source of funding has been our customer deposits, supplemented by our short-term and long-term borrowings as well as maturities of securities and loan amortization. As of April 27, 2020, we had approximately \$4.3 billion held in an interest-bearing account at the Federal Reserve. We also have the ability to borrow funds as a member of the Federal Home Loan Bank (“FHLB”). As of March 31, 2020, based upon available, pledgeable collateral, our total borrowing capacity with the FHLB was approximately \$2.6 billion. Furthermore, at March 31, 2020, we had approximately \$9.1 billion in securities that were unencumbered by a pledge and could be used to support additional borrowings through repurchase agreements or the Federal Reserve discount window, as needed.

As further discussed in the section captioned “Loans” elsewhere in this discussion, in April 2020, we began originating loans to qualified small businesses under the PPP administered by the SBA. Through April 27, 2020, we have funded approximately \$3.0 billion of SBA-approved PPP loans to over 10,500 customers. We expect to recognize approximately \$87.0 million in PPP loan related processing fees as a yield adjustment over the terms of these loans. In April 2020, we borrowed \$250 million from the FHLB under the COVID-19 Relief Program to provide supplemental funding for PPP loan originations. The short-term, full-recourse advance has a term of six months and bears interest at an annualized rate of 0.25%. We are also considering participation in the Federal Reserve's PPP Facility, which is further discussed in the section captioned “Loans” elsewhere in this discussion. Federal bank regulatory agencies have issued an interim final rule that permits banks to neutralize the regulatory capital effects of participating in the PPP and, if applicable, the PPP Facility. Specifically, all PPP loans have a zero percent risk weight under applicable risk-based capital rules. Additionally, a bank may exclude all PPP loans pledged as collateral to the PPP Facility from its average total consolidated assets for the purposes of calculating its leverage ratio, while PPP loans that are not pledged as collateral to the PPP Facility will be included.

Since Cullen/Frost is a holding company and does not conduct operations, its primary sources of liquidity are dividends upstreamed from Frost Bank and borrowings from outside sources. Banking regulations may limit the amount of dividends that may be paid by Frost Bank. See Note 7 - Capital and Regulatory Matters in the accompanying notes to consolidated financial statements included elsewhere in this report regarding such dividends. At March 31, 2020, Cullen/Frost had liquid assets, including cash and resell agreements, totaling \$178.2 million.

Accounting Standards Updates

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

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

(Dollars in thousands - taxable-equivalent basis)

	March 31, 2020			March 31, 2019		
	Average Balance	Interest Income/Expense	Yield/Cost	Average Balance	Interest Income/Expense	Yield/Cost
Assets:						
Interest-bearing deposits	\$ 2,585,692	\$ 8,125	1.24%	\$ 1,728,982	\$ 10,639	2.50%
Federal funds sold and resell agreements	260,134	802	1.22	249,946	1,588	2.58
Securities:						
Taxable	4,495,407	26,030	2.36	4,540,814	24,679	2.19
Tax-exempt	8,467,982	81,577	4.07	8,229,430	82,475	4.03
Total securities	12,963,389	107,607	3.46	12,770,244	107,154	3.37
Loans, net of unearned discounts	14,995,175	173,378	4.65	14,205,191	186,650	5.33
Total Earning Assets and Average Rate Earned	30,804,390	289,912	3.84	28,954,363	306,031	4.27
Cash and due from banks	542,890			522,701		
Allowance for credit losses on loans and securities	(131,317)			(133,647)		
Premises and equipment, net	1,022,413			735,090		
Accrued interest and other assets	1,295,784			1,277,795		
Total Assets	\$ 33,534,160			\$ 31,356,302		
Liabilities:						
Non-interest-bearing demand deposits:						
Commercial and individual	\$ 10,119,185			\$ 9,634,087		
Correspondent banks	238,888			205,735		
Public funds	379,151			352,467		
Total non-interest-bearing demand deposits	10,737,224			10,192,289		
Interest-bearing deposits:						
Private accounts						
Savings and interest checking	7,030,285	396	0.02	6,773,862	1,472	0.09
Money market deposit accounts	7,874,446	9,696	0.50	7,695,514	20,640	1.09
Time accounts	1,109,076	4,612	1.67	895,464	3,156	1.43
Public funds	640,208	1,349	0.85	554,415	1,906	1.39
Total interest-bearing deposits	16,654,015	16,053	0.39	15,919,255	27,174	0.69
Total deposits	27,391,239			26,111,544		
Federal funds purchased and repurchase agreements	1,259,306	3,037	0.95	1,180,163	5,016	1.72
Junior subordinated deferrable interest debentures	136,308	1,205	3.54	136,251	1,498	4.40
Subordinated notes payable and other notes	98,889	1,164	4.71	98,733	1,164	4.72
Total Interest-Bearing Funds and Average Rate Paid	18,148,518	21,459	0.47	17,334,402	34,852	0.81
Accrued interest and other liabilities	639,874			388,743		
Total Liabilities	29,525,616			27,915,434		
Shareholders' Equity	4,008,544			3,440,868		
Total Liabilities and Shareholders' Equity	\$ 33,534,160			\$ 31,356,302		
Net interest income		<u>\$ 268,453</u>			<u>\$ 271,179</u>	
Net interest spread			<u>3.37%</u>			<u>3.46%</u>
Net interest income to total average earning assets			<u>3.56%</u>			<u>3.79%</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 2019 Form 10-K. There has been no significant change in the types of market risks we face since December 31, 2019.

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

For modeling purposes, as of March 31, 2020, the model simulations projected that 100 and 200 basis point ratable increases in interest rates would result in positive variances in net interest income of 1.6% and 3.9%, respectively, relative to the flat-rate case over the next 12 months, while a 25 basis point ratable decrease in interest rates would result in a negative variance in net interest income of 4.5% relative to the flat-rate case over the next 12 months. The March 31, 2020 model simulations for increased interest rates were impacted by the assumption, for modeling purposes, that we will begin to pay interest on commercial demand deposits (those not already receiving an earnings credit rate) in the second quarter of 2020, as further discussed below. For modeling purposes, as of March 31, 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 1.2%, 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 2.5% and 7.3%, respectively, relative to the flat-rate case over the next 12 months. The March 31, 2019 model simulations for increased interest rates were impacted by the assumption, for modeling purposes, that we would begin to pay interest on commercial demand deposits (those not already receiving an earnings credit rate) in the second quarter of 2019, as further discussed below. The likelihood of a decrease in interest rates beyond 25 basis points as of March 31, 2020 was considered remote given prevailing interest rate levels.

The model simulations as of March 31, 2020 indicate that our projected balance sheet is more asset sensitive in comparison to our balance sheet as of March 31, 2019. The shift to a more asset sensitive position was primarily due to a decrease in the assumed interest rate paid on projected commercial demand deposits (those not already receiving an earnings credit rate), as further discussed below, and an increase 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. 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. Our modeling simulation as of March 31, 2020 assumed a moderate pricing structure with regards to interest payments on commercial demand deposits (those not already receiving an earnings credit) with interest payments assumed to begin in the second quarter of 2020. This moderate pricing structure on commercial demand deposits assumes a deposit pricing beta of 25%. The pricing beta is a measure of how much deposit rates reprice, up or down, given a defined change in market rates. Our modeling simulation as of March 31, 2019 assumed a much more aggressive pricing structure with regards to interest payments for commercial demand deposits (those not already receiving an earnings credit) with interest payments assumed to begin in the second quarter of 2019. We modified our assumed pricing structure during 2020 compared to 2019 based upon our market observations during the most recent interest rate cycle.

As of March 31, 2020, the effects of a 200 basis point increase and a 25 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

Refer to the risk factors disclosed under Item 1A. of our 2019 Form 10-K for a discussion of certain material risks and uncertainties that management believed affect our business. The following risk factors are provided to supplement that discussion.

Our business, financial condition, liquidity and results of operations have been, and will likely continue to be, adversely affected by the COVID-19 pandemic.

The COVID-19 pandemic has created economic and financial disruptions that have adversely affected, and are likely to continue to adversely affect, our business, financial condition, liquidity and results of operations. The extent to which the COVID-19 pandemic will continue to negatively affect our business, financial condition, liquidity and results of operations will depend on future developments, which are highly uncertain and cannot be predicted, including the scope and duration of the pandemic, the effectiveness of our Business Continuity and Health Emergency Response plans, the direct and indirect impact of the pandemic on our employees, customers, clients, counterparties and service providers, as well as other market participants, and actions taken by governmental authorities and other third parties in response to the pandemic.

The COVID-19 pandemic has contributed to:

- Increased unemployment and business disruption and decreased consumer confidence and commercial activity generally, leading to an increased risk of delinquencies, defaults and foreclosures.
- Higher and more volatile credit loss expense and potential for increased charge-offs, particularly as customers may need to draw on their committed credit lines to help finance their businesses and activities.
- Ratings downgrades, credit deterioration and defaults in many industries, particularly energy and natural resources, restaurants, hospitality, entertainment, transportation and commercial real estate.
- A sudden and significant reduction in the valuation of the equity, fixed-income and commodity markets and the significant increase in the volatility of those markets.
- A decrease in the rates and yields on U.S. Treasury securities, which may lead to decreased net interest income.
- Increased demands on capital and liquidity, leading us to cease repurchases of our common stock in order to preserve capital and provide added liquidity.
- A reduction in the value of the assets that we manage or otherwise administer or service for others, affecting related fee income and demand for our services.
- Heightened cybersecurity, information security and operational risks as a result of work-from-home arrangements and impacts on our service providers.

Any disruption to our ability to deliver financial products or services to, or interact with, our clients and customers could result in losses or increased operational costs, regulatory fines, penalties and other sanctions, or harm our reputation.

As noted in the section captioned “Recent Developments Related to COVID-19” in Part I. Financial Information, Item 2. Management’s Discussion and Analysis of Financial Condition and Results of Operations elsewhere in this report, the Federal Reserve has taken various actions and the U.S. government has enacted several fiscal stimulus measures to counteract the economic disruption caused by the COVID-19 pandemic and provide economic assistance to individual households and businesses, stabilize the markets and support economic growth. The success of these measures is unknown and they may not be sufficient to fully mitigate the negative impact of the COVID-19 pandemic. We face an increased risk of litigation and governmental, regulatory and third-party scrutiny as a result of the effects of COVID-19 on market and economic conditions and actions governmental authorities take in response to those conditions. Furthermore, various governmental programs such as the PPP are complex and our participation may lead to additional litigation and governmental, regulatory and third-party scrutiny, negative publicity and damage to our reputation.

The length of the pandemic and the efficacy of the extraordinary measures being put in place to address it are unknown. Until the pandemic subsides, we expect continued draws on lines of credit, reduced fee income and revenues related to investment management, insurance and brokerage operations and increased customer and client defaults, including defaults of unsecured loans. Even after the pandemic subsides, the U.S. economy may continue to experience a recession, and we anticipate our businesses would be materially and adversely affected by a prolonged recession. To the extent the pandemic adversely affects our business, financial condition, liquidity or results of operations, it may also have the effect of heightening many of the other risks described in the section entitled “Risk Factors” in our 2019 Form 10-K and any subsequent Quarterly Reports on Form 10-Q. See the section

captioned “Recent Developments Related to COVID-19” in Part I. Financial Information, Item 2. Management’s Discussion and Analysis of Financial Condition and Results of Operations elsewhere in this report for further discussion.

We Are Subject To Volatility Risk In Crude Oil Prices

As of March 31, 2020, we had \$1.6 billion of energy loans which comprised approximately 10.2% of our loan portfolio at that date. Furthermore, energy production and related industries represent a large part of the economies in some of our primary markets. In recent years, actions by certain members of the Organization of Petroleum Exporting Countries (“OPEC”) impacting crude oil production levels have led to increased global oil supplies, which has resulted in significant declines in market oil prices. Decreased market oil prices compressed margins for many U.S. and Texas-based oil producers, particularly those that utilize higher-cost production technologies such as hydraulic fracking and horizontal drilling, as well as oilfield service providers, energy equipment manufacturers and transportation suppliers, among others. In March of 2020, disagreements between members of OPEC signaled that production levels would rise and led to a significant decline in market oil prices. Further, increased oil price volatility, and depressed market oil prices, are expected to continue due to the uncertainties and economic impacts of COVID-19. See the section captioned “Recent Developments Related to COVID-19” in Part I. Financial Information, Item 2. Management’s Discussion and Analysis of Financial Condition and Results of Operations elsewhere in this report for further discussion. The price per barrel of crude oil was approximately \$13 as of April 27, 2020 down from \$61 as of December 31, 2019. We have experienced increased losses within our energy portfolio recently as a result of depressed oil prices and increased oil price volatility, relative to our historical experience. Continued and further depressed oil prices and increased oil price volatility could have further negative impacts on the U.S. economy, in particular, the economies of energy-dominant states such as Texas, and our borrowers and customers.

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

The following table provides information with respect to purchases we made or were made on our behalf or any “affiliated purchaser” (as defined in Rule 10b-18(a)(3) under the Securities Exchange Act of 1934), of our common stock during the three months ended March 31, 2020. Dollar amounts in thousands.

Period	Total Number of Shares Purchased	Average Price Paid Per Share	Total Number of Shares Purchased as Part of Publicly Announced Plan	Maximum Number of Shares (or Approximate Dollar Value) That May Yet Be Purchased Under the Plan at the End of the Period
January 1, 2020 to January 31, 2020	—	\$ —	—	\$ 82,809
February 1, 2020 to February 29, 2020	—	—	—	82,809
March 1, 2020 to March 31, 2020	181,825 ⁽¹⁾	76.85	177,834	69,153
Total	<u>181,825</u>		<u>177,834</u>	

(1) Includes 3,991 shares repurchased in connection with the vesting of certain share awards.

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 ⁽¹⁾	Section 1350 Certification of the Corporation's Chief Executive Officer
32.2 ⁽¹⁾	Section 1350 Certification of the Corporation's Chief Financial Officer
101.INS ⁽²⁾	Inline XBRL Instance Document
101.SCH	Inline XBRL Taxonomy Extension Schema Document
101.CAL	Inline XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF	Inline XBRL Taxonomy Extension Definition Linkbase Document
101.LAB	InlineXBRL Taxonomy Extension Label Linkbase Document
101.PRE	Inline XBRL Taxonomy Extension Presentation Linkbase Document
104 ⁽³⁾	Cover Page Interactive Data File

(1) 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.

(2) The instance document does not appear in the interactive data file because its XBRL tags are embedded within the Inline XBRL document.

(3) Formatted as Inline XBRL and contained within the Inline XBRL Instance Document in Exhibit 101.

Signatures

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

Cullen/Frost Bankers, Inc.
(Registrant)

Date: April 30, 2020

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.

April 30, 2020

/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.

April 30, 2020

/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

**Section 1350 Certification of the
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 March 31, 2020 (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

April 30, 2020

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 March 31, 2020 (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

April 30, 2020

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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