Section 1: 10-Q (10-Q)

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 20549

FORM 10-Q

(Mark One)

☒ **QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

For the quarterly period ended March 31, 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 0-17706

QNB Corp.
(Exact Name of Registrant as Specified in Its Charter)

Pennsylvania	**23-2318082**
(State or Other Jurisdiction of Incorporation or Organization)	**(I.R.S. Employer Identification No.)**
15 North Third Street, P.O. Box 9005 Quakertown, PA	**18951-9005**
(Address of Principal Executive Offices)	**(Zip Code)**

(215) 538-5600
Registrant's Telephone Number, Including Area Code

Not Applicable
Former Name, Former Address and Former Fiscal Year, if Changed Since Last Report.

Securities registered pursuant to Section 12(b) of the Act: None.

Title of each class	Trading Symbol(s)	Name of each exchange on which registered
Common Stock	QNBC	N/A

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, a smaller reporting company, or an emerging growth company. See definition 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 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 ☒

Indicate the number of shares outstanding of each of the issuer's classes of common stock, as of the latest practicable date.

Class	Outstanding at May 1, 2020
Common Stock, par value $0.625	3,530,670

QNB CORP. AND SUBSIDIARY
FORM 10-Q
QUARTER ENDED MARCH 31, 2020

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PART I - FINANCIAL INFORMATION

CONSOLIDATED BALANCE SHEETS

	(in thousands, except share data) (current period unaudited)	
	March 31, 2020	December 31, 2019
Assets		
Cash and due from banks	$ 12,071	$ 12,398
Interest-bearing deposits in banks	34,418	5,210
Total cash and cash equivalents	46,489	17,608
Investments:		
Available-for-sale (amortized cost $321,188 and $349,385)	327,325	349,710
Equity securities (cost of $12,246 and $9,053)	9,417	9,164
Restricted investment in stocks	1,000	1,073
Loans held-for-sale	216	977
Loans receivable	821,283	820,616
Allowance for loan losses	(10,334)	(9,887)
Net loans	810,949	810,729
Bank-owned life insurance	11,559	11,490
Premises and equipment, net	16,417	15,608
Accrued interest receivable	3,023	2,828
Net deferred tax assets	1,007	1,441
Other assets	4,608	4,395
Total assets	$ 1,232,010	$ 1,225,023
Liabilities		
Deposits		
Demand, non-interest bearing	$ 146,143	$ 146,270
Interest-bearing demand	339,049	332,918
Money market	81,564	75,634
Savings	261,690	247,462
Time	115,936	120,917
Time of $100 or more	99,139	114,659
Total deposits	1,043,521	1,037,860
Short-term borrowings	43,265	55,931
Long-term debt	10,000	—
Accrued interest payable	507	909
Other liabilities	10,104	9,606
Total liabilities	1,107,397	1,104,306
Shareholders' Equity		
Common stock, par value $0.625 per share; authorized 10,000,000 shares; 3,695,239 shares and 3,684,336 shares issued; 3,530,670 and 3,519,767 shares outstanding	2,309	2,303
Surplus	21,537	21,261
Retained earnings	98,395	99,372
Accumulated other comprehensive gain, net of tax	4,848	257
Treasury stock, at cost; 164,569 shares	(2,476)	(2,476)
Total shareholders' equity	124,613	120,717
Total liabilities and shareholders' equity	$ 1,232,010	$ 1,225,023

The accompanying notes are an integral part of the consolidated financial statements.

CONSOLIDATED STATEMENTS OF INCOME

(in thousands, except per share data - unaudited)	For the Three Months Ended March 31, 2020	2019
Interest income		
Interest and fees on loans	$ 9,376	$ 9,223
Interest and dividends on investment securities (Available-for-sale & Equity):		
Taxable	1,565	1,614
Tax-exempt	350	426
Interest on interest-bearing balances and other interest income	40	26
Total interest income	11,331	11,289
Interest expense		
Interest on deposits		
Interest-bearing demand	580	693
Money market	147	285
Savings	368	408
Time	463	419
Time of $100,000 or more	501	458
Interest on short-term borrowings	92	190
Interest on long-term debt	17	—
Total interest expense	2,168	2,453
Net interest income	9,163	8,836
Provision for loan losses	500	225
Net interest income after provision for loan losses	8,663	8,611
Non-interest income		
Net gain on sales of investments available-for-sale and equity securities	—	6
Unrealized (loss) gain on investment equity securities	(2,940)	976
Fees for services to customers	411	393
ATM and debit card	488	470
Retail brokerage and advisory	113	141
Bank-owned life insurance	68	68
Merchant	91	75
Net gain on sale of loans	81	21
Other	117	159
Total non-interest income	(1,571)	2,309
Non-interest expense		
Salaries and employee benefits	4,072	3,781
Net occupancy	523	505
Furniture and equipment	675	557
Marketing	322	237
Third party services	454	440
Telephone, postage and supplies	195	199
State taxes	243	171
FDIC insurance premiums	137	130
Other	657	704
Total non-interest expense	7,278	6,724
Income before income taxes	(186)	4,196
Provision for income taxes	(406)	817
Net income	$ 220	$ 3,379
Earnings per share - basic	$ 0.06	$ 0.97
Earnings per share - diluted	$ 0.06	$ 0.97
Cash dividends per share	$ 0.34	$ 0.33

The accompanying notes are an integral part of the consolidated financial statements.

CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME (LOSS)

	(in thousands - unaudited)					
	2020			2019		
For the Three Months Ended March 31,	**Before tax amount**	**Tax expense (benefit)**	**Net of tax amount**	**Before tax amount**	**Tax expense (benefit)**	**Net of tax amount**
Net (loss) income	$ (186)	$ (406)	$ 220	$ 4,196	$ 817	$ 3,379
Other comprehensive income:						
Net unrealized holding gains (losses) on available-for-sale securities:						
Unrealized holding gains arising during the period	5,812	1,221	4,591	4,391	922	3,469
Reclassification adjustment for losses included in net income	—	—	—	39	8	31
Other comprehensive income	5,812	1,221	4,591	4,430	930	3,500
Total comprehensive income	$ 5,626	$ 815	$ 4,811	$ 8,626	$ 1,747	$ 6,879

Tax rate of 21% for 2020 and 2019
The accompanying notes are an integral part of the consolidated financial statements

CONSOLIDATED STATEMENT OF SHAREHOLDERS' EQUITY

Three month ended March 31, 2020 and 2019

(unaudited) (in thousands, except share and per share data)	Number of Shares Outstanding	Common Stock	Surplus	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Treasury Stock	Total
Balance, December 31, 2019	3,519,767	$ 2,303	$ 21,261	$ 99,372	$ 257	$ (2,476)	$ 120,717
Net income		—	—	220	—	—	220
Other comprehensive income, net of tax		—	—	—	4,591	—	4,591
Cash dividends declared ($0.34 per share)		—	—	(1,197)	—	—	(1,197)
Stock issued in connection with dividend reinvestment and stock purchase plan	7,782	4	216	—	—	—	220
Stock issued for options exercised	3,121	2	35	—	—	—	37
Stock-based compensation expense		—	25	—	—	—	25
Balance, March 31, 2020	3,530,670	$ 2,309	$ 21,537	$ 98,395	$ 4,848	$ (2,476)	$ 124,613

(unaudited) (in thousands, except share and per share data)	Number of Shares Outstanding	Common Stock	Surplus	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Treasury Stock	Total
Balance, December 31, 2018	3,484,080	$ 2,280	$ 20,041	$ 91,635	$ (7,132)	$ (2,476)	$ 104,348
Net income		—	—	3,379	—	—	3,379
Other comprehensive loss, net of tax		—	—	—	3,500	—	3,500
Cash dividends declared ($0.33 per share)		—	—	(1,151)	—	—	(1,151)
Stock issued in connection with dividend reinvestment and stock purchase plan	6,646	4	231	—	—	—	235
Stock issued for options exercised	3,209	2	20	—	—	—	22
Stock-based compensation expense		—	27	—	—	—	27
Balance, March 31, 2019	3,493,935	$ 2,286	$ 20,319	$ 93,863	$ (3,632)	$ (2,476)	$ 110,360

The accompanying notes are an integral part of the consolidated financial statements.

CONSOLIDATED STATEMENTS OF CASH FLOWS

	(in thousands, unaudited)	
For the three months ended March 31,	**2020**	**2019**
Operating Activities		
Net income	$ 220	$ 3,379
Adjustments to reconcile net income to net cash provided by operating activities:		
Depreciation and amortization	498	385
Provision for loan losses	500	225
Net gain on sales of debt and equity securities	—	(6)
Net unrealized loss (gain) on equity securities	2,940	(976)
Net gain on sale of loans	(81)	(21)
Proceeds from sales of residential mortgages held-for-sale	2,498	675
Origination of residential mortgages held-for-sale	(1,656)	(654)
Increase in cash surrender value of bank-owned life insurance	(68)	(68)
Stock-based compensation expense	25	27
Deferred income tax (benefit) provision	(787)	511
Net increase in income taxes payable	380	279
Net increase in accrued interest receivable	(196)	(1,360)
Amortization of mortgage servicing rights and change in valuation allowance	21	11
Net amortization of premiums and discounts on investment securities	412	345
Net (decrease) increase in accrued interest payable	(402)	1
Operating lease payments	(161)	(133)
Decrease (increase) in other assets	668	(826)
Decrease in other liabilities	(2,714)	(490)
Net cash provided by operating activities	2,097	1,304
Investing Activities		
Proceeds from payments, maturities and calls of investments available-for-sale	54,977	8,541
Proceeds from the sale of investments available-for-sale	5,975	11,192
Proceeds from the sale of equity securities	—	358
Purchases of investments available-for-sale	(32,167)	(17,898)
Purchases of equity securities	(3,193)	(398)
Proceeds from redemption of investment in restricted stock	1,495	2,063
Purchases of restricted stock	(1,422)	(2,504)
Net increase in loans	(720)	(19,124)
Net purchases of premises and equipment	(216)	(431)
Net cash provided (used) in investing activities	24,729	(18,201)
Financing Activities		
Net (decrease) increase in non-interest bearing deposits	(127)	11,355
Net increase in interest-bearing deposits	5,788	7,661
Net decrease in short-term borrowings	(12,666)	(975)
Increase in long-term debt	10,000	—
Cash dividends paid, net of reinvestment	(1,054)	(1,015)
Proceeds from issuance of common stock	114	121
Net cash provided by financing activities	2,055	17,147
Increase (decrease) in cash and cash equivalents	28,881	250
Cash and cash equivalents at beginning of year	17,608	13,458
Cash and cash equivalents at end of period	$ 46,489	$ 13,708
Supplemental Cash Flow Disclosures		
Interest paid	$ 2,570	$ 2,453
Net income taxes paid	—	28
Non-cash transactions:		
Unsettled trades to purchase securities	(1,000)	(2,238)
Unsettled trades to sell securities	—	4,303
Right-of-use assets obtained in exchange for new operating lease liabilities	1,086	—

The accompanying notes are an integral part of the consolidated financial statements

1. BASIS OF PRESENTATION

The accompanying unaudited consolidated financial statements include the accounts of QNB Corp. and its wholly-owned subsidiary, QNB Bank (the "Bank"). The consolidated entity is referred to herein as "QNB" or the "Company". All significant intercompany accounts and transactions are eliminated in the consolidated financial statements.

These consolidated financial statements should be read in conjunction with the audited consolidated financial statements and notes thereto included in QNB's 2019 Annual Report incorporated in the Form 10-K. Operating results for the three-month period ended March 31, 2020 are not necessarily indicative of the results that may be expected for the year ending December 31, 2020.

The unaudited consolidated financial statements reflect all adjustments which, in the opinion of management, are necessary for a fair presentation of the results of operations for the period and are of a normal and recurring nature.

Tabular information, other than share and per share data, is presented in thousands of dollars.

In preparing the consolidated financial statements, management is required to make estimates and assumptions that affect the reported amounts of assets and liabilities at the dates of the consolidated financial statements and the reported amounts of revenues and expenses during the reporting periods. Actual results could differ from such estimates.

QNB has evaluated events and transactions occurring subsequent to the balance sheet date of March 31, 2020 for items that should potentially be recognized or disclosed in these consolidated financial statements.

Subsequent Events

On March 11, 2020, the disease caused by the coronavirus was declared a pandemic by the World Health Organization (the "COVID-19 Pandemic"). QNB, its employees, customers and shareholders are being impacted by the COVID-19 Pandemic. QNB immediately activated portions of its business continuity program to prepare for possible alternate work arrangements and loss of staff due to illness. QNB has provided several solutions to maintain the health and safety of its employees, customers and shareholders. Nine branches are servicing customers primarily via drive-up window; customers may also make an appointment for in-branch service. Drive-ups are operating under normal or expanded hours. Night Drops remain available 24/7. Three of QNB's twelve offices do not offer drive-up service. Our Quakertown Commons Office in the GIANT Food Store is temporarily closed. Our Allentown and Warminster Offices remain available for restricted access (one customer at a time) during normal business hours. Because banking was designated an essential service by Governor Wolf, access to safe deposit boxes or to conduct any other in-person transaction can be arranged by appointment only. All visitors to any QNB office will be required to wear face masks upon entering the building, in accordance with the state mandates. All QNB employees are required to wear face masks when working on company premises. Employees with remote access are strongly encouraged to work from home. QNB has not incurred any significant disruptions to its business continuity.

On March 27, 2020, the Coronavirus Aid, Relief, and Economic Security ("CARES") Act was signed into law. As permitted under Section 4013 of the CARES Act, QNB continues to provide customers experiencing financial hardship caused by the COVID-19 Pandemic, solutions to help them through this difficult period. Upon requests from customers, QNB has provided: payment deferment for mortgage and consumer loans with no late fee during the deferment period; has granted foreclosure and motor vehicle repossession reprieve; and will not adversely impact credit reporting for customers who were granted relief on mortgage or consumer loans. None of these modifications are considered troubled-debt restructuring as the customers were not experiencing financial difficulty prior to COVID-19 Pandemic. As of May 5, 2020, QNB has granted modifications to approximately 18% of the March 31, 2020 commercial portfolio and granted modifications to approximately 3% of the March 31, 2020 retail portfolio, related to the COVID-19 Pandemic.

As provided under the CARES Act, the U.S. Small Business Administration ("SBA") and Treasury have implemented the Paycheck Protection Program ("PPP") which is designed to assist small businesses and their employees during this crisis. This program provides small businesses with payroll assistance in the form of a 100% guaranteed loan from SBA. Eligible borrowers can receive up to 2.5 times their monthly average payroll expenses for the prior year. Congress originally approved $349 billion for this program as part of the CARES Act. The first round of funding was quickly exhausted by April 16, 2020 and Congress worked to provide an additional $310 billion in funding which was approved on April 23, 2020. The SBA reopened its portal to begin accepting PPP loans for approval on Monday, April 27, 2020. As of May 5, 2020, under the first and second rounds of SBA funding, QNB closed 412 loans totaling $71,941,000. QNB continues to process new applications. Funds are primarily being transferred into the borrowers' deposit accounts and disbursement on these PPP loan proceeds are being funded by cash held at the Federal Reserve and proceeds from calls and payments of investment securities. QNB has ample resources to cover future disbursements through short-term Federal Home Loan Bank ("FHLB") advances and participation in the Federal Reserve's Paycheck Protection Program Liquidity Facility ("PPPLF"), if necessary.

The full impact of the COVID-19 Pandemic is unknown and rapidly evolving. Uncertainties exist related to the duration of the COVID-19 Pandemic and its potential effects on QNB's customers and prospects, including impacts on national and local economies, unemployment, maintaining a competent workforce, and disruptions in the supply chain. There are no assurances as to how the COVID-19 Pandemic might affect QNB's loan, investment and deposit portfolios.

2. RECENT ACCOUNTING PRONOUNCEMENTS

On June 16, 2016, the FASB issued ASU No. 2016-13, *Financial Instruments—Credit Losses (Topic 326)* (CECL). The new guidance requires organizations to measure all expected credit losses for financial instruments held at the reporting date based on historical experience, current conditions and reasonable and supportable forecasts.

To that end, the new guidance:

- Eliminates the probable initial recognition threshold in current U.S. generally accepted accounting principles ("U.S. GAAP") and, instead, reflects an organization's current estimate of all expected credit losses over the contractual term of its financial assets
- Broadens the information an entity can consider when measuring credit losses to include forward-looking information
- Increases usefulness of the financial statements by requiring timely inclusion of forecasted information in forming expectations of credit losses
- Increases comparability of purchased financial assets with credit deterioration (PCD assets) with other purchased assets that do not have credit deterioration as well as originated assets because credit losses that are expected will be recorded through an allowance for credit losses for all assets
- Increases users' understanding of underwriting standards and credit quality trends by requiring additional information about credit quality indicators by year of origination (vintage)
- For available-for-sale debt securities, aligns the income statement recognition of credit losses with the reporting period in which changes occur by recording credit losses (and subsequent changes in credit losses) through an allowance rather than a write down

The new guidance affects organizations that hold financial assets and net investments in leases that are not accounted for at fair value with changes in fair value reported in net income. The new guidance affects loans, debt securities, trade receivables, net investments in leases, off-balance-sheet credit exposures, reinsurance receivables, and any other financial assets not excluded from the scope that have the contractual right to receive cash.

On October 16, 2019, FASB adopted its August 15, 2019 proposal to delay the effective dates for certain smaller reporting companies for the implementation CECL. For public business entities that are U.S. Securities and Exchange Commission (SEC) filers, the new guidance is effective for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2019, except for smaller reporting companies, whose effective date is effective for fiscal years, and interim periods with those fiscal years, beginning after December 15, 2022. QNB continues to evaluate the impact of this new standard on its consolidated financial statements and currently anticipates a material change to its allowance for loan losses upon the eventual implementation of CECL.

On August 28, 2018, the FASB issued ASU 2018-13, Fair Value Measurement (Topic 820): Disclosure Framework — Changes to the Disclosure Requirements for Fair Value Measurement. This ASU changes the fair value measurement disclosure requirements of ASC 820. The amendments in this ASU are the result of a broader disclosure project called FASB Concepts Statement, Conceptual Framework for Financial Reporting — Chapter 8: Notes to Financial Statements, which the FASB finalized on August 28, 2018. The FASB used the guidance in the Concepts Statement to improve the effectiveness of ASC 820's disclosure requirements. New disclosure requirements include: 1) Changes in unrealized gains or losses included in other comprehensive income (OCI) for recurring Level 3 fair value measurements held at the end of the reporting period; and 2) Explicit requirement to disclose the range and weighted average used to develop significant unobservable inputs for Level 3 fair value measurements. Disclosures eliminated include: 1) Amount of and reasons for transfers between Level 1 and Level 2; 2) Valuation processes for Level 3 fair value measurements; and 3) Policy for timing of transfers between levels of the fair value hierarchy. The ASU was effective for all entities for fiscal years beginning after December 15, 2019, including interim periods therein. The adoption of this ASU had no material impact on QNB.

3. STOCK-BASED COMPENSATION AND SHAREHOLDERS' EQUITY

QNB sponsors stock-based compensation plans, administered by a Board committee (the Committee), under which both qualified and non-qualified stock options may be granted periodically to certain employees. Compensation cost has been measured using the fair value of an award on the grant date and is recognized over the service period, which is usually the vesting period.

Stock-based compensation expense was $25,000 and $27,000 for the three months ended March 31, 2020 and 2019, respectively. As of March 31, 2020, there was approximately $152,000 of unrecognized compensation cost related to unvested share-based compensation award grants that is expected to be recognized over the next 35 months.

Options are granted to certain employees at prices equal to the market value of the stock on the date the options are granted. The 2005 Plan authorized the issuance of 200,000 shares. The time period during which any option is exercisable under the 2005 Plan is determined by the Committee but shall not commence before the expiration of nine months after the date of grant or continue beyond the expiration of five years after the date the option is awarded. The granted options vest after a three-year period. As of March 31, 2020, there were 184,200 options granted, 65,850 options forfeited, 118,350 options exercised, and no options outstanding under this Plan. The 2005 Plan expired on March 15, 2015.

The 2015 Plan authorizes the issuance of 300,000 shares. The terms of the 2015 Plan are identical to the 2005 Plan. There were 123,200 options granted, 2,600 options forfeited, 1,800 options exercised and 118,800 options outstanding under the 2015 Plan as of March 31, 2020. The 2015 Plan expires on February 24, 2025.

The fair value of each option is amortized into compensation expense on a straight-line basis between the grant date for the option and each vesting date. QNB estimated the fair value of stock options on the date of the grant using the Black-Scholes option pricing model. The model requires the use of assumptions.

The following assumptions were used in the option pricing model in determining the fair value of options granted during the period:

For the Three Months Ended March 31,	2020	2019
Risk free interest rate	1.52%	2.52%
Dividend yield	3.60%	3.36%
Volatility	13.46%	16.44%
Expected life (years)	4.03	4.17

The risk-free interest rate was selected based upon yields of U.S. Treasury securities with a term approximating the expected life of the option being valued. Historical information was the basis for the selection of the expected dividend yield, expected volatility and expected lives of the options.

The fair market value of options granted in the three months ended March 31, 2020 and 2019 was $2.42 and $3.96, respectively.

Stock option activity during the three months ended March 31, 2020 and 2019 is as follows:

	Number of options	Weighted average exercise price	Weighted average remaining contractual term (in years)	Aggregate intrinsic value
Outstanding at December 31, 2019	103,350	$ 36.96		
Granted	25,000	36.50		
Exercised	(9,550)	29.39		
Forfeited	—	—		
Outstanding at March 31, 2020	118,800	$ 37.47	2.96	$ -
Exercisable at March 31, 2020	44,600	$ 34.27	1.42	$ -

	Number of options	Weighted average exercise price	Weighted average remaining contractual term (in years)	Aggregate intrinsic value
Outstanding at December 31, 2018	95,075	$ 35.11		
Granted	24,700	38.15		
Exercised	(8,275)	25.38		
Forfeited	—	—		
Outstanding at March 31, 2019	111,500	$ 36.51	3.08	$ 270
Exercisable at March 31, 2019	37,350	$ 29.96	1.48	$ 270

4. EARNINGS PER SHARE & SHARE REPURCHASE PLAN

The following sets forth the computation of basic and diluted earnings per share:

	For the Three Months Ended March 31, 2020	For the Three Months Ended March 31, 2019
Numerator for basic and diluted earnings per share - net income	$ 220	$ 3,379
Denominator for basic earnings per share - weighted average shares outstanding	3,522,667	3,486,786
Effect of dilutive securities - employee stock options	2,788	7,643
Denominator for diluted earnings per share - adjusted weighted average shares outstanding	3,525,455	3,494,429
Earnings per share - basic	$ 0.06	$ 0.97
Earnings per share - diluted	0.06	0.97

There were 98,150 and 74,150 stock options that were anti-dilutive for the three-month periods ended March 31, 2020 and 2019, respectively. These stock options were not included in the above calculation.

QNB's current stock repurchase plan was approved by the Board of Directors on January 21, 2008 and subsequently increased on February 9, 2009 and has authorized the repurchase of up to 100,000 shares of its common stock in open market or privately negotiated transactions. The repurchase authorization has no termination date. There were no shares repurchased during the three months ended March 31, 2020 and 2019. As of March 31, 2020, 57,883 shares were repurchased under this authorization at an average price of $16.97 and a total cost of $982,000.

5. COMPREHENSIVE INCOME (LOSS)

The following shows the components of accumulated other comprehensive income (loss) at March 31, 2020 and December 31, 2019:

	March 31, 2020	December 31, 2019
Unrealized net holding gains (losses) on available-for-sale securities	$ 6,137	$ 325
Unrealized gains (losses) on available-for-sale securities for which a portion of an other-than-temporary impairment loss has been recognized in earnings	—	—
Accumulated other comprehensive income (loss)	6,137	325
Tax effect	(1,289)	(68)
Accumulated other comprehensive gain (loss), net of tax	$ 4,848	$ 257

The following tables present amounts reclassified out of accumulated other comprehensive income (loss) for the three months ended March 31, 2020 and 2019:

For the Three Months Ended March 31,	Amount reclassified from accumulated other comprehensive loss		
Details about accumulated other comprehensive income (loss)	2020	2019	Affected line item in statement of income
Unrealized net holding gains (losses) on available-for-sale securities	$ —	$ (39)	Unrealized net holding gains (losses) on investments available-for-sale
Other-than-temporary impairment gains (losses) on investment securities	—	—	Net other-than-temporary impairment losses on investment securities
	—	(39)	
Tax effect	—	8	Provision for income taxes
Total reclassification out of accumulated other comprehensive income (loss), net of tax	$ —	$ (31)	Net of tax

6. INVESTMENT SECURITIES

Available-For-Sale Securities

The amortized cost and estimated fair values of investment securities available-for-sale at March 31, 2020 and December 31, 2019 were as follows:

March 31, 2020	Fair value	Gross unrealized holding gains	Gross unrealized holding losses	Amortized cost
U.S. Treasury	$ —	$ —	$ —	$ —
U.S. Government agency	31,074	83	(7)	30,998
State and municipal	62,838	935	(478)	62,381
U.S. Government agencies and sponsored enterprises (GSEs):				
Mortgage-backed	140,644	3,257	—	137,387
Collateralized mortgage obligations (CMOs)	84,646	2,315	(1)	82,332
Pooled trust preferred	71	—	(14)	85
Corporate debt	8,052	56	(9)	8,005
Total investment debt securities available-for-sale	$ 327,325	$ 6,646	$ (509)	$ 321,188

December 31, 2019	Fair value	Gross unrealized holding gains	Gross unrealized holding losses	Amortized cost
U.S. Government agency	$ 69,298	$ 8	$ (213)	$ 69,503
State and municipal	50,781	860	(19)	49,940
U.S. Government agencies and sponsored enterprises (GSEs):				
Mortgage-backed	134,829	371	(504)	134,962
Collateralized mortgage obligations (CMOs)	86,610	260	(535)	86,885
Pooled trust preferred	79	—	(6)	85
Corporate debt	8,113	103	—	8,010
Total investment debt securities available-for-sale	$ 349,710	$ 1,602	$ (1,277)	$ 349,385

The amortized cost and estimated fair value of securities available-for-sale by contractual maturity at March 31, 2020 are shown in the following table. Expected maturities will differ from contractual maturities because borrowers may have the right to call or prepay obligations with or without call or prepayment penalties. Securities are assigned to categories based on contractual maturity except for mortgage-backed securities and CMOs which are based on the estimated average life of these securities and municipal securities that have been pre-refunded.

March 31, 2020	Fair value	Amortized cost
Due in one year or less	$ 14,413	$ 14,202
Due after one year through five years	238,936	233,534
Due after five years through ten years	40,467	39,996
Due after ten years	33,509	33,456
Total investment debt securities available-for-sale	$ 327,325	$ 321,188

Proceeds from sales of investment securities available-for-sale were approximately $5,975,000 and $11,192,000 for the three months ended March 31, 2020 and 2019, respectively.

At March 31, 2020 and December 31, 2019, investment securities available-for-sale totaling approximately $190,462,000 and $205,016,000, respectively, were pledged as collateral for repurchase agreements and deposits of public funds.

The following table presents information related to the Company's gains and losses on the sales of securities available-for-sale, and losses recognized for the other-than-temporary impairment ("OTTI") of these investments. Gains and losses on available-for-sale securities are computed on the specific identification method and included in non-interest income. Gross realized losses on debt securities are net of other-than-temporary impairment charges:

	For the Three Months Ended March 31,	
	2020	2019
Gross realized gains	$ —	$ 20
Gross realized losses	—	(59)
Other-than-temporary impairment	—	—
Total net gains (losses) on AFS securities	$ —	$ (39)

The tax benefit applicable to the net realized (losses)/gains for the three-month periods ended March 31, 2020 and 2019 was $0 and $8,000, respectively.

QNB recognizes OTTI for debt securities classified as available-for-sale in accordance with FASB ASC 320, Investments – Debt and Equity Securities, which requires that we assess whether we intend to sell or it is more likely than not that the Company will be required to sell a security before recovery of its amortized cost basis less any current-period credit losses. For debt securities that are considered other-than-temporarily impaired and that we do not intend to sell and will not be required to sell prior to recovery of our amortized cost basis, the amount of the impairment is separated into the amount that is credit related (credit loss component) and the amount due to all other factors. The credit loss component is recognized in earnings and is the difference between the security's amortized cost basis and the present value of its expected future cash flows discounted at the security's effective yield. The remaining difference between the security's fair value and the present value of future expected cash flows is due to factors that are not credit related and, therefore, is not required to be recognized as a loss in the statement of income but is recognized in other comprehensive income. QNB believes that we will fully collect the carrying value of securities on which we have recorded a non-credit related impairment in other comprehensive income. No credit impairments were recognized on debt securities during the three months ended March 31, 2020 and 2019, respectively.

The following table indicates the length of time individual debt securities have been in a continuous unrealized loss position at March 31, 2020 and December 31, 2019:

March 31, 2020	No. of securities	Less than 12 months Fair value	Less than 12 months Unrealized losses	12 months or longer Fair value	12 months or longer Unrealized losses	Total Fair value	Total Unrealized losses
U.S. Treasury	—	$ —	$ —	$ —	$ —	$ —	$ —
U.S. Government agency	1	993	(7)	—	—	993	(7)
State and municipal	30	16,138	(478)	—	—	16,138	(478)
U.S. Government agencies and sponsored enterprises (GSEs):							
Mortgage-backed	—	—	—	—	—	—	—
Collateralized mortgage obligations (CMOs)	1	—	—	742	(1)	742	(1)
Pooled trust preferred	1	—	—	71	(14)	71	(14)
Corporate debt	3	2,994	(9)	—	—	2,994	(9)
Total	36	$ 20,125	$ (494)	$ 813	$ (15)	$ 20,938	$ (509)

December 31, 2019	No. of securities	Less than 12 months Fair value	Less than 12 months Unrealized losses	12 months or longer Fair value	12 months or longer Unrealized losses	Total Fair value	Total Unrealized losses
U.S. Government agency	36	$ 28,857	$ (141)	$ 20,427	$ (72)	$ 49,284	$ (213)
State and municipal	7	2,431	(14)	515	(5)	2,946	(19)
U.S. Government agencies and sponsored enterprises (GSEs):							
Mortgage-backed	66	28,482	(50)	52,398	(454)	80,880	(504)
Collateralized mortgage obligations (CMOs)	64	24,412	(82)	27,625	(453)	52,037	(535)
Pooled trust preferred	1	—	—	79	(6)	79	(6)
Corporate debt	—	—	—	—	—	—	—
Total	174	$ 84,182	$ (287)	$ 101,044	$ (990)	$ 185,226	$ (1,277)

Management evaluates debt securities, which are comprised of U.S Treasury securities, U.S. Government agencies, state and municipalities, mortgage-backed securities, CMOs and corporate debt securities, for other-than-temporary impairment and considers the current economic conditions, the length of time and the extent to which the fair value has been less than cost, interest rates and the bond rating of each security. The unrealized losses at March 31, 2020 in U.S. Government agency securities, state and municipal securities, mortgage-backed securities, CMOs and corporate debt securities are primarily the result of interest rate fluctuations. If held to maturity, these bonds will mature at par, and QNB will not realize a loss. The Company has the intent to hold the securities and does not believe it will be required to sell the securities before recovery occurs.

QNB holds one pooled trust preferred security as of March 31, 2020. This security has a total amortized cost of approximately $85,000 and a fair value of $71,000.   The pooled trust preferred security is available-for-sale and is carried at fair value.

Marketable Equity Securities

The Company's investment in marketable equity securities primarily consists of investments with readily determinable fair values in large cap stock companies. Changes in fair value is recorded in unrealized gain/(losses) in non-interest income.

At March 31, 2020 and December 31, 2019, the Company had $9,417,000 and $9,164,000, respectively, in equity securities recorded at fair value. The following is a summary of unrealized and realized gains and losses recognized in net income on equity securities during the three months ended March 30, 2020 and 2019:

	For the Three Months Ended March 31,	
	2020	2019
Net (loss) gains recognized during the period on equity securities	$ (2,940)	$ 1,021
Less: Net gains recognized during the period on equity securities sold during the period	—	45
Net unrealized (losses) gains recognized during the reporting period on equity securities still held at the reporting date	$ (2,940)	$ 976

Tax benefit applicable to the net losses recognized for the three months ended March 31, 2020 as $849,000. Tax expense applicable to the net gains recognized for the three months ended March 31, 2019 was $295,000. Proceeds from sales of investment equity securities were approximately $0 and $358,000 for the three months ended March 31, 2020 and 2019, respectively.

7. RESTRICTED INVESTMENT IN STOCKS

Restricted investment in stocks includes Federal Home Loan Bank of Pittsburgh (FHLB) with a carrying cost of $988,000, Atlantic Community Bankers Bank (ACBB) stock with a carrying cost of $12,000 and VISA Class B stock with a carrying cost of $0 at March 31, 2020. FHLB and ACBB stock was issued to the Bank as a requirement to facilitate the Bank's participation in borrowing and other banking services. The Bank's investment in FHLB stock may fluctuate, as it is based on the member banks' use of FHLB's services.

The Bank owns 6,502 shares of Visa Class B stock, which was necessary to participate in Visa services in support of the Bank's credit card, debit card, and related payment programs (permissible activities under banking regulations) as a member institution. Following the resolution of Visa's covered litigation, shares of Visa's Class B stock will be converted to Visa Class A shares using a conversion factor (1.6298 as of June 28, 2018), which is periodically adjusted to reflect VISA's ongoing litigation costs. There is a very limited market for this stock, as only current owners of Class B shares are permitted to transact in Class B. Due to the lack of orderly trades and public information of such trades, Visa Class B does not have a readily determinable fair value.

These restricted investments are carried at cost and evaluated for OTTI periodically. As of March 31, 2020, there was no OTTI associated with these shares.

8. LOANS & ALLOWANCE FOR LOAN LOSSES

Loans that management has the intent and ability to hold for the foreseeable future or until maturity or pay-off are stated at the principal amount outstanding, net of deferred loan fees and costs. Interest income is accrued on the principal amount outstanding. Loan origination and commitment fees and related direct costs are deferred and amortized to income over the term of the respective loan and loan commitment period as a yield adjustment.

Loans held-for-sale consists of residential mortgage loans that are carried at the lower of aggregate cost or fair value. Net unrealized losses, if any, are recognized through a valuation allowance charged to income. Gains and losses on residential mortgages held-for-sale are included in non-interest income.

QNB maintains an allowance for loan losses, which is intended to absorb probable known and inherent losses in the outstanding loan portfolio. The allowance is reduced by actual credit losses and is increased by the provision for loan losses and recoveries of previous losses. The provisions for loan losses are charged to earnings to bring the total allowance for loan losses to a level considered necessary by management.

The allowance for loan losses is based on management’s continuing review and evaluation of the loan portfolio. The level of the allowance is determined by assigning specific reserves to individually identified problem credits and general reserves to all other loans. For such loans that are also classified as impaired, an allowance is established when the discounted cash flows (or collateral value) of the impaired loan is lower than the carrying value of that loan. The portion of the allowance that is allocated to internally criticized and non-accrual loans is determined by estimating the inherent loss on each credit after giving consideration to the value of underlying collateral. The general component covers pools of loans by loan class including commercial loans not considered impaired, as well as smaller balance homogeneous loans, such as residential real estate, home equity and other consumer loans. These pools of loans are evaluated for loss exposure based upon historical loss rates. These loss rates are based on a three year history of charge-offs and are more heavily weighted for recent experience for each of these categories of loans, adjusted for qualitative factors. These qualitative risk factors include:

1. Lending policies and procedures, including underwriting standards and collection, charge-off and recovery practices.
2. Effect of external factors, such as legal and regulatory requirements.
3. National, regional, and local economic and business conditions as well as the condition of various market segments, including the value of underlying collateral for collateral dependent loans.
4. Nature and volume of the portfolio including growth.
5. Experience, ability, and depth of lending management and staff.
6. Volume and severity of past due, classified and nonaccrual loans.
7. Quality of the Company’s loan review system, and the degree of oversight by the Company’s Board of Directors.
8. Existence and effect of any concentrations of credit and changes in the level of such concentrations.

Each factor is assigned a value to reflect improving, stable or declining conditions based on management’s best judgment using relevant information available at the time of the evaluation.

An unallocated component is maintained to cover uncertainties that could affect management’s estimate of probable losses. The unallocated component of the allowance reflects the margin of imprecision inherent in the underlying assumptions used in the methodologies for estimating specific and general losses in the portfolio.

Management emphasizes loan quality and close monitoring of potential problem credits. Credit risk identification and review processes are utilized in order to assess and monitor the degree of risk in the loan portfolio. QNB’s lending and credit administration staff are charged with reviewing the loan portfolio and identifying changes in the economy or in a borrower’s circumstances which may affect the ability to repay debt or the value of pledged collateral. A loan classification and review system exists that identifies those loans with a higher than normal risk of uncollectibility. Each commercial loan is assigned a grade based upon an assessment of the borrower’s financial capacity to service the debt and the presence and value of collateral for the loan. An independent firm reviews risk assessment and evaluates the adequacy of the allowance for loan losses. Management meets monthly to review the credit quality of the loan portfolio and quarterly to review the allowance for loan losses.

In addition, various regulatory agencies, as an integral part of their examination process, periodically review QNB’s allowance for loan losses. Such agencies may require QNB to recognize additions to the allowance based on their judgments using information available to them at the time of their examination.

Management believes that it uses the best information available to make determinations about the adequacy of the allowance and that it has established its existing allowance for loan losses in accordance with U.S. GAAP. If circumstances differ substantially from the assumptions used in making determinations, future adjustments to the allowance for loan losses may be necessary and results of operations could be affected. Because future events affecting borrowers and collateral cannot be predicted with certainty, there can be no assurance that increases to the allowance will not be necessary should the quality of any loans deteriorate as a result of the factors discussed above.

Major classes of loans are as follows:

	March 31, 2020	December 31, 2019
Commercial:		
Commercial and industrial	$ 164,071	$ 168,031
Construction	47,634	56,209
Secured by commercial real estate	351,550	336,050
Secured by residential real estate	70,652	72,443
State and political subdivisions	38,248	38,376
Retail:		
1-4 family residential mortgages	70,284	69,469
Home equity loans and lines	72,458	73,311
Consumer	6,232	6,530
Total loans	821,129	820,419
Net unearned costs	154	197
Loans receivable	$ 821,283	$ 820,616

Loans secured by commercial real estate include all loans collateralized at least in part by commercial real estate. These loans may not be for the expressed purpose of conducting commercial real estate transactions.

Overdrafts are reclassified as loans and are included in consumer loans above and total loans receivable on the Consolidated Balance Sheets. At March 31, 2020 and December 31, 2019, overdrafts were approximately $238,000 and $224,000, respectively.

QNB generally lends in its trade area which is comprised of Quakertown and the surrounding communities. To a large extent, QNB makes loans collateralized at least in part by real estate. Its lending activities could be affected by changes in the general economy, the regional economy, or real estate values. Other than disclosed in the table above, at March 31, 2020, there was a concentration of loans to lessors of residential buildings and dwellings of 15.6% of total loans and to lessors of nonresidential buildings of 19.6% of total loans, compared with 16.6% and 18.3% of total loans, respectively, at December 31, 2019. These concentrations were primarily within the commercial real estate categories.

The Company engages in a variety of lending activities, including commercial, residential real estate and consumer transactions. The Company focuses its lending activities on individuals, professionals and small to medium sized businesses. Risks associated with lending activities include economic conditions and changes in interest rates, which can adversely impact both the ability of borrowers to repay their loans and the value of the associated collateral.

Commercial and industrial loans, commercial real estate loans, construction loans and residential real estate loans with a business purpose are generally perceived as having more risk of default than residential real estate loans with a personal purpose and consumer loans. These types of loans involve larger loan balances to a single borrower or groups of related borrowers and are more susceptible to a risk of loss during a downturn in the business cycle. These loans may involve greater risk because the availability of funds to repay these loans depends on the successful operation of the borrower's business. The assets financed are used within the business for its ongoing operation. Repayment of these kinds of loans generally comes from the cash flow of the business or the ongoing conversions of assets, such as accounts receivable and inventory, to cash. Typical collateral for commercial and industrial loans includes the borrower's accounts receivable, inventory and machinery and equipment. Commercial real estate and residential real estate loans secured for a business purpose are originated primarily within the eastern Pennsylvania market area at conservative loan-to-value ratios and often backed by the individual guarantees of the borrowers or owners. Repayment of this kind of loan is dependent upon either the ongoing cash flow of the borrowing entity or the resale or lease of the subject property. Commercial real estate loans may be affected to a greater extent than residential loans by adverse conditions in real estate markets or the economy because commercial real estate borrowers' ability to repay their loans depends on successful development of their properties, as well as the factors affecting residential real estate borrowers.

Loans to state and political subdivisions are tax-exempt or taxable loans to municipalities, school districts and housing and industrial development authorities. These loans can be general obligations of the municipality or school district repaid through their taxing authority, revenue obligations repaid through the income generated by the operations of the authority, such as a water or sewer authority, or loans issued to a housing and industrial development agency, for which a private corporation is responsible for payments on the loans.

The Company originates fixed-rate and adjustable-rate real estate-residential mortgage loans for personal purposes that are secured by first liens on the underlying 1-4 family residential properties. Credit risk exposure in this area of lending is minimized by the evaluation of the credit worthiness of the borrower, including debt-to-income ratios, credit scores and adherence to underwriting policies that emphasize conservative loan-to-value ratios of generally no more than 80%. Residential mortgage loans granted in excess of the 80% loan-to-value ratio criterion are generally insured by private mortgage insurance.

The real estate-home equity portfolio consists of fixed-rate home equity loans and variable-rate home equity lines of credit. Risks associated with loans secured by residential properties are generally lower than commercial loans and include general economic risks, such as the strength of the job market, employment stability and the strength of the housing market. Since most loans are secured by a primary or secondary residence, the borrower's continued employment is the greatest risk to repayment.

The Company offers a variety of loans to individuals for personal and household purposes. Consumer loans are generally considered to have greater risk than first or second mortgages on real estate because they may be unsecured, or, if they are secured, the value of the collateral may be difficult to assess and is more likely to decrease in value than real estate. Credit risk in this portfolio is controlled by conservative underwriting standards that consider debt-to-income levels and the creditworthiness of the borrower and, if secured, collateral values.

The Company employs a ten-grade risk rating system related to the credit quality of commercial loans and loans to state and political subdivisions of which the first six categories are pass categories (credits not adversely rated). The following is a description of the internal risk ratings and the likelihood of loss related to each risk rating.

1 Excellent - no apparent risk

2 Good - minimal risk

3 Acceptable - lower risk

4 Acceptable - average risk

5 Acceptable – higher risk

6 Pass watch

7 Special Mention - potential weaknesses

8 Substandard - well defined weaknesses

9 Doubtful - full collection unlikely

10 Loss - considered uncollectible

The Company maintains a loan review system, which allows for a periodic review of our loan portfolio and the early identification of potential problem loans. Each loan officer assigns a rating to all loans in the portfolio at the time the loan is originated. Loans with risk ratings of one through five are reviewed annually based on the borrower's fiscal year. Loans with risk ratings of six are reviewed every six to twelve months based on the dollar amount of the relationship with the borrower. Loans with risk ratings of seven through ten are reviewed at least quarterly, and as often as monthly, at management's discretion. The Company also utilizes an outside loan review firm to review the portfolio on a semi-annual basis to provide the Board of Directors and senior management an independent review of the Company's loan portfolio on an ongoing basis. These reviews are designed to recognize deteriorating credits in their earliest stages in an effort to reduce and control risk in the lending function as well as identifying potential shifts in the quality of the loan portfolio. The examinations by the outside loan review firm include the review of lending activities with respect to underwriting and processing new loans, monitoring the risk of existing loans and to provide timely follow-up and corrective action for loans showing signs of deterioration in quality. In addition, the outside firm reviews the methodology for the allowance for loan losses to determine compliance to policy and regulatory guidance.

The following tables present the classes of the loan portfolio summarized by the aggregate pass rating and the classified ratings of special mention, substandard and doubtful within the Company's internal risk rating system as of March 31, 2020 and December 31, 2019:

March 31, 2020	Pass	Special mention	Substandard	Doubtful	Total
Commercial:					
Commercial and industrial	$ 154,860	$ 3,610	$ 5,601	$ —	$ 164,071
Construction	47,634	—	—	—	47,634
Secured by commercial real estate	340,594	2,992	7,964	—	351,550
Secured by residential real estate	69,044	—	1,608	—	70,652
State and political subdivisions	38,248	—	—	—	38,248
Total	$ 650,380	$ 6,602	$ 15,173	$ —	$ 672,155

December 31, 2019	Pass	Special mention	Substandard	Doubtful	Total
Commercial:					
Commercial and industrial	$ 158,247	$ 3,665	$ 6,119	$ —	$ 168,031
Construction	56,209	—	—	—	56,209
Secured by commercial real estate	324,936	2,995	8,119	—	336,050
Secured by residential real estate	70,759	-	1,684	—	72,443
State and political subdivisions	38,376	—	—	—	38,376
Total	$ 648,527	$ 6,660	$ 15,922	$ —	$ 671,109

For retail loans, the Company evaluates credit quality based on the performance of the individual credits. The following tables present the recorded investment in the retail classes of the loan portfolio based on payment activity as of March 31, 2020 and December 31, 2019:

March 31, 2020	Performing	Non-performing	Total
Retail:			
1-4 family residential mortgages	$ 69,720	$ 564	$ 70,284
Home equity loans and lines	71,783	675	72,458
Consumer	6,061	171	6,232
Total	$ 147,564	$ 1,410	$ 148,974

December 31, 2019	Performing	Non-performing	Total
Retail:			
1-4 family residential mortgages	$ 68,833	$ 636	$ 69,469
Home equity loans and lines	72,774	537	73,311
Consumer	6,391	139	6,530
Total	$ 147,998	$ 1,312	$ 149,310

The performance and credit quality of the loan portfolio is also monitored by analyzing the age of the loans receivable as determined by the length of time a recorded payment is past due. The following table presents the classes of the loan portfolio summarized by the past due status as of March 31, 2020 and December 31, 2019:

March 31, 2020	30-59 days past due	60-89 days past due	90 days or more past due	Total past due loans	Current	Total loans receivable
Commercial:						
Commercial and industrial	$ 2,630	$ 100	$ 1,743	$ 4,473	$ 159,598	$ 164,071
Construction	—	—	—	—	47,634	47,634
Secured by commercial real estate	332	1,121	1,520	2,973	348,577	351,550
Secured by residential real estate	252	12	79	343	70,309	70,652
State and political subdivisions	—	—	—	—	38,248	38,248
Retail:						
1-4 family residential mortgages	2,108	—	458	2,566	67,718	70,284
Home equity loans and lines	26	47	155	228	72,230	72,458
Consumer	121	31	87	239	5,993	6,232
Total	$ 5,469	$ 1,311	$ 4,042	$ 10,822	$ 810,307	$ 821,129

December 31, 2019	30-59 days past due	60-89 days past due	90 days or more past due	Total past due loans	Current	Total loans receivable
Commercial:						
Commercial and industrial	$ —	$ 58	$ 2,006	$ 2,064	$ 165,967	$ 168,031
Construction	—	—	—	—	56,209	56,209
Secured by commercial real estate	—	—	1,527	1,527	334,523	336,050
Secured by residential real estate	208	79	142	429	72,014	72,443
State and political subdivisions	—	—	—	—	38,376	38,376
Retail:						
1-4 family residential mortgages	1,486	573	432	2,491	66,978	69,469
Home equity loans and lines	271	23	55	349	72,962	73,311
Consumer	29	71	—	100	6,430	6,530
Total	$ 1,994	$ 804	$ 4,162	$ 6,960	$ 813,459	$ 820,419

The following tables disclose the recorded investment in loans receivable that are either on non-accrual status or past due 90 days or more and still accruing interest as of March 31, 2020 and December 31, 2019:

March 31, 2020	90 days or more past due (still accruing)	Non-accrual
Commercial:		
Commercial and industrial	$ —	$ 5,379
Construction	—	—
Secured by commercial real estate	—	3,556
Secured by residential real estate	—	789
State and political subdivisions	—	—
Retail:		
1-4 family residential mortgages	—	564
Home equity loans and lines	—	675
Consumer	—	171
Total	$ —	$ 11,134

December 31, 2019	90 days or more past due (still accruing)	Non-accrual
Commercial:		
Commercial and industrial	$ —	$ 5,901
Construction	—	—
Secured by commercial real estate	—	3,640
Secured by residential real estate	—	851
State and political subdivisions	—	—
Retail:		
1-4 family residential mortgages	—	636
Home equity loans and lines	—	537
Consumer	—	139
Total	$ —	$ 11,704

Activity in the allowance for loan losses for the three months ended March 31, 2020 and 2019 are as follows:

For the Three Months Ended March 31, 2020	Balance, beginning of period	Provision for (credit to) loan losses	Charge-offs	Recoveries	Balance, end of period
Commercial:					
Commercial and industrial	$ 4,689	$ (41)	$ —	$ 9	$ 4,657
Construction	590	(304)	—	—	286
Secured by commercial real estate	2,519	767	—	—	3,286
Secured by residential real estate	629	(40)	—	19	608
State and political subdivisions	115	19	—	—	134
Retail:					
1-4 family residential mortgages	549	111	—	—	660
Home equity loans and lines	310	22	—	1	333
Consumer	230	130	(92)	10	278
Unallocated	256	(164)	N/A	N/A	92
Total	$ 9,887	$ 500	$ (92)	$ 39	$ 10,334

Three months ended March 31, 2019	Balance, beginning of period	Provision for (credit to) loan losses	Charge-offs	Recoveries	Balance, end of period
Commercial:					
Commercial and industrial	$ 3,092	$ (16)	$ —	$ 7	$ 3,083
Construction	551	51	—	—	602
Secured by commercial real estate	2,824	5	—	—	2,829
Secured by residential real estate	754	(1)	(31)	21	743
State and political subdivisions	153	37	—	—	190
Retail:					
1-4 family residential mortgages	497	3	—	—	500
Home equity loans and lines	338	18	(16)	1	341
Consumer	164	28	(35)	9	166
Unallocated	461	100	N/A	N/A	561
Total	$ 8,834	$ 225	$ (82)	$ 38	$ 9,015

As previously discussed, the Company maintains a loan review system, which includes a continuous review of the loan portfolio by internal and external parties to aid in the early identification of potential impaired loans. A loan is considered impaired when, based on current information and events, it is probable that the Company will be unable to collect the scheduled payments of principal or interest when due according to the contractual terms of the loan agreement. Factors considered by management in determining impairment include payment status, collateral value and the probability of collecting scheduled principal and interest payments when due. Loans that experience insignificant payment delays and payment shortfalls generally are not classified as impaired. Management determines the significance of payment delays and payment shortfalls on a case-by-case basis, taking into consideration all of the circumstances surrounding the loan and the borrower, including the length of the delay, the reasons for the delay, the borrower’s prior payment record and the amount of the shortfall in relation to the principal and interest owed. Impairment is measured on a loan by loan basis for commercial loans and loans to state and political subdivisions by using either the present value of expected future cash flows discounted at the loan’s effective interest rate or the fair value of the collateral if the loan is collateral dependent.

Large groups of smaller balance homogeneous loans are collectively evaluated for impairment. Accordingly, the Company does not separately identify individual consumer and residential mortgage loans for impairment disclosures, unless such loans are part of a larger relationship that is impaired or are classified as a troubled debt restructuring or on non-accrual.

An allowance for loan losses is established for an impaired loan if its carrying value exceeds its estimated fair value. The estimated fair values of the majority of the Company’s impaired loans are measured based on the estimated fair value of the loan’s collateral.

For commercial loans secured by real estate, estimated fair values are determined primarily through third-party appraisals. When a real estate secured loan becomes impaired, a decision is made regarding whether an updated certified appraisal of the real estate is necessary. This decision is based on various considerations, including the age of the most recent appraisal, the loan-to-value ratio based on the original appraisal and the condition of the property. Appraised values are discounted to arrive at the estimated selling price of the collateral, which is considered to be the estimated fair value. The discounts also include estimated costs to sell the property.

For commercial loans secured by non-real estate collateral, such as accounts receivable, inventory and equipment, estimated fair values are determined based on the borrower’s financial statements, inventory reports, accounts receivable agings or equipment appraisals or invoices. Indications of value from these sources are generally discounted based on the age of the financial information or the quality of the assets.

From time to time, QNB may extend, restructure, or otherwise modify the terms of existing loans, on a case-by-case basis, to remain competitive and retain certain customers, as well as assist other customers that may be experiencing financial difficulties. A loan is considered to be a troubled debt restructuring (“TDR”) loan when the Company grants a concession to the borrower because of the borrower’s financial condition that it would not otherwise consider. Such concessions include the reduction of interest rates, forgiveness of principal or interest, or other modifications of interest rates to less than the current market rate for new obligations with similar risk. Loans classified as TDRs are considered non-performing and are also designated as impaired.

The concessions made for TDRs involve lowering the monthly payments on loans through periods of interest only payments, a reduction in interest rate below a market rate or an extension of the term of the loan without a corresponding adjustment to the risk premium reflected in the interest rate, or a combination of these three methods. The restructurings rarely result in the forgiveness of principal or accrued interest. If the borrower has demonstrated performance under the previous terms and our underwriting process shows the borrower has the capacity to continue to perform under the restructured terms, the loan will continue to accrue interest. Non-accruing restructured loans may be returned to accrual status when there has been a sustained period of repayment performance (generally six consecutive months of payments) and both principal and interest are deemed collectible. TDR loans that are in compliance with their modified terms and that yield a market rate may be removed from the TDR status after a period of performance.

Performing TDRs (not reported as non-accrual or past due 90 days or more and still accruing) totaled $4,727,000 and $4,760,000 as of March 31, 2020 and December 31, 2019, respectively. Non-performing TDRs totaled $1,044,000 and $1,131,000 as of March 31, 2020 and December 31, 2019, respectively. All TDRs are included in impaired loans.

The following table illustrates the specific reserve for loan losses allocated to loans modified as TDRs. These specific reserves are included in the allowance for loan losses for loans individually evaluated for impairment.

There were no newly identified TDR during the three months ended March 31, 2020. As of March 31, 2020, QNB had $13,000 in commitments to lend additional funds to customers with loans whose terms have been modified in troubled debt restructurings compared and no commitments at December 31, 2019. There were no charge-offs during the three months ended March 31, 2020 and 2019, resulting from loans previously modified as TDRs.

The following tables present loans, by loan class, modified as TDRs and remodified TDRs during the three months ended March 31, 2020 and 2019. The pre-modification and post-modification outstanding recorded investments disclosed in the tables below, represent carrying amounts immediately prior to the modification or re-modification and as of the period end indicated.

For the Three Months Ended March 31,	**2020**			**2019**		
	Number of contracts	**Pre-modification outstanding recorded investment**	**Post-modification outstanding recorded investment**	**Number of contracts**	**Pre-modification outstanding recorded investment**	**Post-modification outstanding recorded investment**
Commercial:						
Secured by commercial real estate	—	$ —	$ —	—	$ —	$ —
Retail:						
Consumer	—	—	—	1	12	12
Total	—	$ —	$ —	1	$ 12	$ 12

There were no loans modified as TDRs within 12 months prior to March 31, 2020 and 2019 for which there was a payment default (60 days or more past due) during the three months ended March 31, 2020 and 2019.

The Company has four loans secured by residential real estate for which foreclosure proceedings are in process at March 31, 2020. The total recorded investment is $454,000.

The following tables present the balance in the allowance for loan losses at March 31, 2020 and December 31, 2019 disaggregated on the basis of the Company's impairment method by class of loans receivable along with the balance of loans receivable by class, excluding unearned fees and costs, disaggregated on the basis of the Company's impairment methodology:

	Allowance for Loan Losses			Loans Receivable		
March 31, 2020	**Balance**	**Balance related to loans individually evaluated for impairment**	**Balance related to loans collectively evaluated for impairment**	**Balance**	**Balance individually evaluated for impairment**	**Balance collectively evaluated for impairment**
Commercial:						
Commercial and industrial	$ 4,657	$ 3,143	$ 1,514	$164,071	$ 5,516	$ 158,555
Construction	286	—	286	47,634	—	47,634
Secured by commercial real estate	3,286	358	2,928	351,550	7,061	344,489
Secured by residential real estate	608	25	583	70,652	2,003	68,649
State and political subdivisions	134	—	134	38,248	—	38,248
Retail:						
1-4 family residential mortgages	660	—	660	70,284	883	69,401
Home equity loans and lines	333	13	320	72,458	691	71,767
Consumer	278	9	269	6,232	67	6,165
Unallocated	92	N/A	N/A	N/A	N/A	N/A
Total	$ 10,334	$ 3,548	$ 6,694	$821,129	$ 16,221	$ 804,908

	Allowance for Loan Losses			Loans Receivable		
December 31, 2019	**Balance**	**Balance related to loans individually evaluated for impairment**	**Balance related to loans collectively evaluated for impairment**	**Balance**	**Balance individually evaluated for impairment**	**Balance collectively evaluated for impairment**
Commercial:						
Commercial and industrial	$ 4,689	$ 3,307	$ 1,382	$168,031	$ 6,027	$ 162,004
Construction	590	—	590	56,209	—	56,209
Secured by commercial real estate	2,519	217	2,302	336,050	7,172	328,878
Secured by residential real estate	629	31	598	72,443	2,082	70,361
State and political subdivisions	115	—	115	38,376	—	38,376
Retail:						
1-4 family residential mortgages	549	—	549	69,469	955	68,514
Home equity loans and lines	310	—	310	73,311	555	72,756
Consumer	230	11	219	6,530	69	6,461
Unallocated	256	N/A	N/A	N/A	N/A	N/A
Total	$ 9,887	$ 3,566	$ 6,065	$820,419	$ 16,860	$ 803,559

The following table summarize additional information, in regards to impaired loans by loan portfolio class, as of March 31, 2020 and December 31, 2019:

	March 31, 2020			December 31, 2019		
	Recorded investment (after charge-offs)	Unpaid principal balance	Related allowance	Recorded investment (after charge-offs)	Unpaid principal balance	Related allowance
With no specific allowance recorded:						
Commercial:						
Commercial and industrial	$ 643	$ 921		$ 901	$ 1,258	
Construction	—	—		—	—	
Secured by commercial real estate	3,631	4,285		3,735	4,362	
Secured by residential real estate	1,879	2,082		1,936	2,110	
Retail:						
1-4 family residential mortgages	883	945		—	—	
Home equity loans and lines	504	562		955	1,010	
Consumer	—	—		555	612	
Total	$ 7,540	$ 8,795		$ 8,082	$ 9,352	
With an allowance recorded:						
Commercial:						
Commercial and industrial	$ 4,873	$ 6,372	$ 3,143	$ 5,126	$ 6,577	$ 3,307
Construction	—	—	—	—	—	—
Secured by commercial real estate	3,430	3,492	358	3,437	3,495	217
Secured by residential real estate	124	153	25	146	193	31
Retail:						
1-4 family residential mortgages	—	—	—	—	—	—
Home equity loans and lines	187	194	13	—	—	—
Consumer	67	78	9	69	79	11
Total	$ 8,681	$ 10,289	$ 3,548	$ 8,778	$ 10,344	$ 3,566
Total:						
Commercial:						
Commercial and industrial	$ 5,516	$ 7,293	$ 3,143	$ 6,027	$ 7,835	$ 3,307
Construction	—	—	—	—	—	—
Secured by commercial real estate	7,061	7,777	358	7,172	7,857	217
Secured by residential real estate	2,003	2,235	25	2,082	2,303	31
Retail:						
1-4 family residential mortgages	883	945	—	—	—	—
Home equity loans and lines	691	756	13	955	1,010	—
Consumer	67	78	9	624	691	11
Total	$ 16,221	$ 19,084	$ 3,548	$ 16,860	$ 19,696	$ 3,566

The following table presents additional information regarding the average recorded investment and interest income recognized on impaired loans:

For the Three Months Ended March 31,	2020		2019	
	Average recorded investment	Interest income recognized	Average recorded investment	Interest income recognized
Commercial:				
Commercial and industrial	$ 5,710	$ 2	$ 4,298	$ 3
Construction	—	—	—	—
Secured by commercial real estate	7,124	43	6,011	48
Secured by residential real estate	2,039	18	1,749	10
Retail:				
1-4 family residential mortgages	885	3	1,257	3
Home equity loans and lines	586	—	176	—
Consumer	68	—	76	—
Total	$ 16,412	$ 66	$ 13,567	$ 64

9. FAIR VALUE MEASUREMENTS AND DISCLOSURES

FASB ASC 820, *Fair Value Measurements and Disclosures*, defines fair value as an exit price, representing the amount that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants (fair values are not adjusted for transaction costs). ASC 820 also establishes a framework (fair value hierarchy) for measuring fair value under U.S. GAAP and expands disclosures about fair value measurements.

ASC 820 establishes a fair value hierarchy that prioritizes the inputs to valuation methods used to measure fair value. The hierarchy gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1 measurements) and the lowest priority to unobservable inputs (Level 3 measurements). The three levels of the fair value hierarchy are as follows:

Level 1: Unadjusted quoted prices in active markets that are accessible at the measurement date for identical, unrestricted assets or liabilities.

Level 2: Quoted prices in markets that are not active, or inputs that are observable either directly or indirectly, for substantially the full term of the asset or liability.

Level 3: Prices or valuation techniques that require inputs that are both significant to the fair value measurement and unobservable (i.e., supported with little or no market activity).

An asset's or liability's level within the fair value hierarchy is based on the lowest level of input that is significant to the fair value measurement.

The measurement of fair value should be consistent with one of the following valuation techniques: market approach, income approach, and/or cost approach. The market approach uses prices and other relevant information generated by market transactions involving identical or comparable assets or liabilities (including a business). For example, valuation techniques consistent with the market approach often use market multiples derived from a set of comparables. Multiples might lie in ranges with a different multiple for each comparable. The selection of where within the range the appropriate multiple falls requires judgment, considering factors specific to the measurement (qualitative and quantitative). Valuation techniques consistent with the market approach include matrix pricing. Matrix pricing is a mathematical technique used principally to value debt securities without relying exclusively on quoted prices for the specific securities, but rather by relying on the security's relationship to other benchmark quoted securities.

The following table sets forth QNB's financial assets measured at fair value on a recurring and nonrecurring basis and the fair value measurements by level within the fair value hierarchy as of March 31, 2020:

March 31, 2020	Quoted prices in active markets for identical assets (Level 1)	Significant other observable input (Level 2)	Significant unobservable inputs (Level 3)	Balance at end of period
Recurring fair value measurements				
Available-for-sale securities:				
U.S. Treasury securities	$ —	$ —	$ —	$ —
U.S. Government agency securities	—	31,074	—	31,074
State and municipal securities	—	62,838	—	62,838
U.S. Government agencies and sponsored enterprises (GSEs):				
Mortgage-backed securities	—	140,644	—	140,644
Collateralized mortgage obligations (CMOs)	—	84,646	—	84,646
Pooled trust preferred securities	—	—	71	71
Corporate debt securities	—	8,052	—	8,052
Total debt securities available-for-sale	—	327,254	71	327,325
Equity securities	9,417	—	—	9,417
Total recurring fair value measurements	$ 9,417	$ 327,254	$ 71	$ 336,742
Nonrecurring fair value measurements				
Impaired loans	$ —	$ —	$ 5,133	$ 5,133
Mortgage servicing rights	—	—	160	160
Total nonrecurring fair value measurements	$ —	$ —	$ 5,293	$ 5,293

There were no transfers in and out of Level 1 and Level 2 fair value measurements during the three months ended March 31, 2020. There were also no transfers in or out of Level 3 for the same period. There were no losses included in earnings attributable to the change in unrealized gains or losses relating to the available-for-sale securities above with fair value measurements utilizing significant unobservable inputs for the three-month period ended March 31, 2020.

The following table sets forth QNB's financial assets measured at fair value on a recurring and nonrecurring basis, the fair value measurements by level within the fair value hierarchy as of December 31, 2019:

December 31, 2019	Quoted prices in active markets for identical assets (Level 1)	Significant other observable input (Level 2)	Significant unobservable inputs (Level 3)	Balance at end of period
Recurring fair value measurements				
Debt securities available-for-sale				
U.S. Government agency securities	$ -	$ 69,298	$ —	$ 69,298
State and municipal securities	—	50,781	—	50,781
U.S. Government agencies and sponsored enterprises (GSEs):				
Mortgage-backed securities	—	134,829	—	134,829
Collateralized mortgage obligations (CMOs)	—	86,610	—	86,610
Pooled trust preferred securities	—	—	79	79
Corporate debt securities	—	8,113	—	8,113
Total debt securities available-for-sale	—	349,631	79	349,710
Equity securities	9,164	—	—	9,164
Total recurring fair value measurements	$ 9,164	$ 349,631	$ 79	$ 358,874
Nonrecurring fair value measurements				
Impaired loans	$ —	$ —	$ 5,212	$ 5,212
Mortgage servicing rights	—	—	7	7
Total nonrecurring fair value measurements	$ —	$ —	$ 5,219	$ 5,219

The following table presents additional quantitative information about assets measured at fair value on a nonrecurring basis and for which QNB has utilized Level 3 inputs to determine fair value:

	Quantitative information about Level 3 fair value measurements			
March 31, 2020	Fair value	Valuation techniques	Unobservable input	Value or range of values
Impaired loans	$ 3,628	Appraisal of collateral (1)	Appraisal adjustments (2)	-5% to -40%
			Liquidation expenses (3)	-10%
Impaired loans	1,469	Financial statement values for UCC collateral	Financial statement value discounts (5)	-20% to -100%
Impaired loans	36	Used commercial vehicle guides	Guide value discounts (4)	-30%
Mortgage servicing rights	160	Discounted cash flow	Remaining term	2 to 26 years
			Discount rate	12.00%

	Quantitative information about Level 3 fair value measurements			
December 31, 2019	Fair value	Valuation techniques	Unobservable input	Value or range of values
Impaired loans	$ 4,655	Appraisal of collateral (1)	Appraisal adjustments (2)	-5% to -40%
			Liquidation expenses (3)	-10%
Impaired loans	521	Financial statement values for UCC collateral	Financial statement value discounts (5)	-30% to -100%
Impaired loans	36	Used commercial vehicle guides	Guide value discounts (4)	-30%
Mortgage servicing rights	7	Discounted cash flow	Remaining term	2 to 27 years
			Discount rate	12.0% to 12.5%

(1) Fair value is primarily determined through appraisals of the underlying collateral by independent parties, which generally includes various level 3 inputs which are not always identifiable.

(2) Appraisals may be adjusted by management for qualitative factors such as economic conditions and the age of the appraisal. The range is presented as a percent of the initial appraised value.

(3) Appraisals and pending agreements of sale are adjusted by management for estimated liquidation expenses. The range is presented as a percent of the initial appraised value.

(4) If lendable value (lower than wholesale) is utilized then no additional discounts are taken. If lendable value is not provided, additional discounts are applied.

(5) Values obtained from financial statements for UCC collateral (fixed assets and inventory) are discounted to estimated realizable liquidation value.

The following table presents additional information about the available-for-sale securities measured at fair value on a recurring basis and for which QNB utilized significant unobservable inputs (Level 3 inputs) to determine fair value for the three months ended March 31, 2020 and 2019:

	Fair value measurements using significant unobservable inputs (Level 3)	
	2020	2019
Balance, January 1,	$ 79	$ 116
Payments received	—	—
Total gains or losses (realized/unrealized)		
Included in earnings	—	—
Included in other comprehensive (loss) income	(8)	(4)
Transfers in and/or out of Level 3	—	—
Balance, March 31,	$ 71	$ 112

The Level 3 securities consist of one collateralized debt obligation security, the PreTSL security, which is backed by trust preferred securities issued by banks. The market for this security at March 31, 2020 was not active and markets for similar securities also are not active. The new issue market is also inactive and there are currently very few market participants who are willing and or able to transact for these securities.

Given conditions in the debt markets today and the absence of observable transactions in the secondary and new issue markets, we determined:

- The few observable transactions and market quotations that are available are not reliable for purposes of determining fair value at March 31, 2020;
- An income valuation approach technique (present value technique) that maximizes the use of relevant observable inputs and minimizes the use of unobservable inputs will be equally or more representative of fair value than the market approach valuation technique used at prior measurement dates; and
- The PreTSL will be classified within Level 3 of the fair value hierarchy because significant adjustments are required to determine fair value at the measurement date.

QNB used an independent third party to value this security using a discounted cash flow analysis. Based on management's review of the bond's three underlying issuers, there are no expected credit losses or prepayments; cashflows used were contractual based on the Bloomberg YA screen. The assumed cashflows have been discounted using and estimated market discount rate based on the 30-year swap rate. The 30-year is used as the reference rate since it is indicative of market expectation for short-term rates in the future. This is consistent with the 30-year nature of the PreTSL security, which is priced using the 3-month LIBOR as a reference rate. The discount rate of 5.09% includes the risk-free rate, a credit component and a spread for illiquidity.

The following information should not be interpreted as an estimate of the fair value of the entire Company since a fair value calculation is only provided for a limited portion of QNB's assets and liabilities. Due to a wide range of valuation techniques and the degree of subjectivity used in making the estimates, comparisons between QNB's disclosures and those of other companies may not be meaningful.

The following methods and assumptions were used to estimate the fair values of each major classification of financial instrument and non-financial asset at March 31, 2020 and December 31, 2019:

Cash and cash equivalents, accrued interest receivable and accrued interest payable (carried at cost): The carrying amounts reported in the balance sheet approximate those assets' fair value.

Investment securities (carried at fair value): The fair value of securities are primarily determined by obtaining quoted market prices on nationally recognized securities exchanges (Level 1), or matrix pricing (Level 2), which is a mathematical technique used widely in the industry to value debt securities without relying exclusively on quoted market prices for the specific securities but rather by relying on the securities' relationship to other benchmark quoted prices. Level 2 debt securities are valued by a third-party pricing service commonly used in the banking industry. Level 2 fair value measurements consider observable data that may include dealer quotes, market spreads, cash flows, the U.S. Treasury yield curve, live trading levels, trade execution date, market consensus prepayment speeds, credit information and the security's terms and conditions, among other things. For certain securities which are not traded in active markets or are subject to transfer restrictions, valuations are adjusted to reflect illiquidity and/or non-transferability, and such adjustments are generally based on available market evidence (Level 3). In the absence of such evidence, management's best estimate is used. Management's best estimate consists of both internal and external support on certain Level 3 investments. Cash flow models using a present value formula that includes assumptions market participants would use along with indicative exit pricing obtained from broker/dealers (where available) were used to support fair values of certain Level 3 investments.

Restricted investment in stocks (carried at cost): The fair value of stock in Atlantic Community Bankers Bank, the Federal Home Loan Bank and VISA Class B is the carrying amount, based on redemption provisions, and considers the limited marketability of and restrictions on such securities.

Loans Held for Sale (carried at lower of cost or fair value): The fair value of loans held for sale is determined, when possible, using quoted secondary market prices. If no such quoted prices exist, the fair value of a loan is determined using quoted prices for a similar loan or loans, adjusted for the specific attributes of that loan.

Loans Receivable (carried at cost): The fair values of loans are estimated using discounted cash flow analyses, using market rates at the balance sheet date that reflect the liquidity, credit and interest rate-risk inherent in the loans. Projected future cash flows are calculated based upon contractual maturity or call dates, projected repayments and prepayments of principal. Generally, for variable rate loans that reprice frequently and with no significant change in credit risk, fair values are based on carrying values.

Impaired Loans (generally carried at fair value): Impaired loans are loans, in which the Company has measured impairment generally based on the fair value of the loan's collateral. Fair value is generally determined based upon independent third-party appraisals of the properties, or discounted cash flows based upon the expected proceeds. These assets are included as Level 3 fair values, based upon the lowest level of input that is significant to the fair value measurements.

Mortgage Servicing Rights (carried at lower of cost or fair value): The fair value of mortgage servicing rights is based on a valuation model that calculates the present value of estimated net servicing income. The mortgage servicing rights are stratified into tranches based on predominant characteristics, such as interest rate, loan type and investor type. The valuation incorporates assumptions that market participants would use in estimating future net servicing income.

Deposit liabilities (carried at cost): The fair value of deposits with no stated maturity (e.g. demand deposits, interest-bearing demand accounts, money market accounts and savings accounts) are by definition, equal to the amount payable on demand at the reporting date (i.e. their carrying amounts). This approach to estimating fair value excludes the significant benefit that results from the low-cost funding provided by such deposit liabilities, as compared to alternative sources of funding. Deposits with a stated maturity (time deposits) have been valued using the present value of cash flows discounted at rates approximating the current market for similar deposits.

Short-term borrowings (carried at cost): The carrying amount of short-term borrowings approximates their fair values.

Long-term debt (carried at cost): Long-term debt has stated maturities and have been valued using the present value of cash flows discounted at rates approximating the current market for similar debt instruments.

Off-balance-sheet instruments (disclosed at cost): The fair values for QNB's off-balance sheet instruments (lending commitments and letters of credit) are based on fees currently charged in the market to enter into similar agreements, taking into account the remaining terms of the agreements and the counterparties' credit standing.

Management uses its best judgment in estimating the fair value of the Company's financial instruments; however, there are inherent weaknesses in any estimation technique. Therefore, for substantially all financial instruments, the fair value estimates herein are not necessarily indicative of the amounts the Company could have realized in sales transaction on the dates indicated. The estimated fair value amounts have been measured as of the respective period ends and have not been re-evaluated or updated for purposes of these financial statements subsequent to those respective dates. As such, the estimated fair values of these financial instruments subsequent to the respective reporting dates may be different than the amounts reported at each period end.

The estimated fair values and carrying amounts of the Company's financial and off-balance sheet instruments are summarized as follows:

			Fair value measurements		
March 31, 2020	**Carrying amount**	**Fair value**	**Quoted prices in active markets for identical assets (Level 1)**	**Significant other observable inputs (Level 2)**	**Significant unobservable inputs (Level 3)**
Financial assets					
Cash and cash equivalents	$ 46,489	$ 46,489	$ 46,489	$ —	$ —
Investment securities:					
Equities	9,417	9,417	9,417	—	—
Available-for-sale	327,325	327,325	—	327,254	71
Restricted investment in stocks	1,000	1,000	—	1,000	—
Loans held-for-sale	216	224	—	224	—
Net loans	810,949	847,848	—	—	847,848
Mortgage servicing rights	438	458	—	—	458
Accrued interest receivable	3,023	3,023	—	3,023	—
Financial liabilities					
Deposits with no stated maturities	$ 828,446	$ 828,446	$ 828,446	$ —	$ —
Deposits with stated maturities	215,075	217,689	—	217,689	—
Short-term borrowings	43,265	43,265	43,265	—	—
Long-term debt	10,000	10,225	—	10,225	—
Accrued interest payable	507	507	—	507	—
Off-balance sheet instruments					
Commitments to extend credit	$ —	$ —	$ —	$ —	$ —
Standby letters of credit	—	42	—	42	—

			Fair value measurements		
December 31, 2019	Carrying amount	Fair value	Quoted prices in active markets for identical assets (Level 1)	Significant other observable inputs (Level 2)	Significant unobservable inputs (Level 3)
Financial assets					
Cash and cash equivalents	$ 17,608	$ 17,608	$ 17,608	$ —	$ —
Investment securities:					
Equities	9,164	9,164	9,164	—	—
Available-for-sale	349,710	349,710	—	349,631	79
Restricted investment in stocks	1,073	1,073	—	1,073	—
Loans held-for-sale	977	997	—	997	—
Net loans	810,729	825,295	—	—	825,295
Mortgage servicing rights	441	551	—	—	551
Accrued interest receivable	2,828	2,828	—	2,828	—
Financial liabilities					
Deposits with no stated maturities	$ 802,284	$ 802,284	$ 802,284	$ —	$ —
Deposits with stated maturities	235,576	235,557	—	235,557	—
Short-term borrowings	55,931	55,931	55,931	—	—
Accrued interest payable	909	909	—	909	—
Off-balance sheet instruments					
Commitments to extend credit	$ —	$ —	$ —	$ —	$ —
Standby letters of credit	—	47	—	47	—

10. COMMITMENTS AND CONTINGENCIES

Financial Instruments with off-balance sheet risk:

In the normal course of business there are various legal proceedings, commitments, and contingent liabilities which are not reflected in the consolidated financial statements. Management does not anticipate any material losses as a result of these transactions and activities. They include, among other things, commitments to extend credit and standby letters of credit. The maximum exposure to credit loss, which represents the possibility of sustaining a loss due to the failure of the other parties to a financial instrument to perform according to the terms of the contract, is represented by the contractual amount of these instruments. QNB uses the same lending standards and policies in making credit commitments as it does for on-balance sheet instruments. The activity is controlled through credit approvals, control limits, and monitoring procedures.

A summary of the Company's financial instrument commitments is as follows:

	March 31, 2020	December 31, 2019
Commitments to extend credit and unused lines of credit	$ 299,530	$ 273,088
Standby letters of credit	11,291	11,704
Total financial instrument commitments	$ 310,821	$ 284,792

Commitments to extend credit are agreements to lend to a customer as long as there is no violation of any condition established in the contract. Commitments generally have fixed expiration dates or other termination clauses and may require the payment of a fee. Since many of the commitments are expected to expire without being drawn upon, the total commitment amounts do not necessarily represent future cash requirements. QNB evaluates each customer’s creditworthiness on a case-by-case basis.

Standby letters of credit are conditional commitments issued by the Company to guarantee the financial or performance obligation of a customer to a third party. QNB's exposure to credit loss in the event of nonperformance by the other party to the financial instrument for standby letters of credit is represented by the contractual amount of those instruments. The Company uses the same credit policies in making conditional obligations as it does for on-balance sheet instruments. Standby letters of credit of $10,009,000 will expire within one year. The credit risk involved in issuing letters of credit is essentially the same as that involved in extending other loan commitments. The Company requires collateral and personal guarantees supporting these letters of credit as deemed necessary. Management believes that the proceeds obtained through a liquidation of such collateral and the enforcement of personal guarantees would be sufficient to cover the maximum potential amount of future payments required under the corresponding guarantees. The amount of the liability as of March 31, 2020 and December 31, 2019 for guarantees under standby letters of credit issued is not material.

The amount of collateral obtained for letters of credit and commitments to extend credit is based on management's credit evaluation of the customer. Collateral varies, but may include real estate, accounts receivable, marketable securities, pledged deposits, inventory or equipment.

<u>Other commitments</u>:

QNB has committed to various operating leases for several of their branch and office facilities. Some of these leases include specific provisions relating to rent increases. Some of the leases contain renewal options to extend the initial terms of the lease for periods ranging from five to ten years and certain leases allow for multiple extensions. During the three months ended March 31, 2020, QNB renewed one lease and recorded an additional right-of-use asset in exchange for an operating lease liability of $1,086,000.

11. REGULATORY RESTRICTIONS

Dividends payable by QNB Corp. and the Bank are subject to various limitations imposed by statutes, regulations and policies adopted by bank regulatory agencies. Under Federal and Pennsylvania banking law, the Bank is subject to certain restrictions on the amount of dividends that it may declare without prior regulatory approval. Under Federal Reserve regulations, the Bank is limited as to the amount it may lend affiliates, including QNB Corp., unless such loans are collateralized by specific obligations.

Both the Company and the Bank are subject to regulatory capital requirements administered by Federal banking agencies. Failure to meet minimum capital requirements can initiate actions by regulators that could have an effect on the financial statements. Under the framework for prompt corrective action, both the Company and the Bank must meet capital guidelines that involve quantitative measures of their assets, liabilities, and certain off-balance-sheet items.

The capital amounts and classification are also subject to qualitative judgments by the regulators. Management believes, as of March 31, 2020, that the Company and the Bank met capital adequacy requirements to which they were subject.

As of the most recent notification, the primary regulator of the Bank considered it to be "well capitalized" under the regulatory framework. There are no conditions or events since that notification that management believes have changed the classification. To be categorized as well capitalized, the Company and the Bank must maintain minimum ratios as set forth in the following table below.

The Company and the Bank's actual capital amounts and ratios are presented as follows:

	Capital levels					
	Actual		Adequately capitalized		Well capitalized	
March 31, 2020	**Amount**	**Ratio**	**Amount**	**Ratio**	**Amount**	**Ratio**
Total risk-based capital (to risk-weighted assets):						
The Company	$ 130,164	13.87%	$ 75,059	8.00%	$ 93,823	10.00%
Bank	120,148	13.20	72,816	8.00	91,019	10.00
Tier I capital (to risk-weighted assets):						
The Company	119,757	12.76	56,294	6.00	56,294	6.00
Bank	109,741	12.06	54,612	6.00	72,816	8.00
Common equity tier 1 capital (to risk-weighted assets):						
The Company	119,757	12.76	42,220	4.50	N/A	N/A
Bank	109,741	12.06	40,959	4.50	59,163	6.50
Tier I capital (to average assets):						
The Company	119,757	9.80	48,859	4.00	N/A	N/A
Bank	109,741	9.07	48,372	4.00	60,465	5.00

	Capital levels					
	Actual		Adequately capitalized		Well capitalized	
As of December 31, 2019	**Amount**	**Ratio**	**Amount**	**Ratio**	**Amount**	**Ratio**
Total risk-based capital (to risk-weighted assets):						
The Company	$ 130,412	13.82%	$ 75,498	8.00%	$ 94,373	10.00%
Bank	118,389	12.93	73,270	8.00	91,587	10.00
Tier I capital (to risk-weighted assets):						
The Company	120,452	12.76	56,624	6.00	56,624	6.00
Bank	108,429	11.84	54,952	6.00	73,270	8.00
Common equity tier 1 capital (to risk-weighted assets):						
The Company	120,452	12.76	42,468	4.50	N/A	N/A
Bank	108,429	11.84	41,241	4.50	59,532	6.50
Tier I capital (to average assets):						
The Company	120,452	9.78	49,283	4.00	N/A	N/A
Bank	108,429	8.89	48,804	4.00	61,005	5.00

12. REVENUE RECOGNITION FROM CONTRACTS WITH CUSTOMERS

The Company generally fully satisfies its performance obligations on its contracts with customers as services are rendered and the transaction prices are typically fixed; charged either on a periodic basis or based on activity. Because performance obligations are satisfied as services are rendered and the transaction prices are fixed, there is little judgment involved in applying Topic 606 that significantly affects the determination of the amount and timing of revenue from contracts with customers. The main types of revenue contracts included in non-interest income within the consolidated statements of operations are as follows:

- Fees for services to customers—fees include service charges on deposits which are included as liabilities in the consolidated statement of financial position and consist of transaction-based fees, stop payment fees, Automated Clearing House (ACH) fees, account maintenance fees, and overdraft services fees for various retail and business checking customers. These fees are charged as earned on the day of the transaction or within the month of the service, with the exception of Enhanced Account Analysis Fees, which are calculated on the previous month’s activity and assessed on the following month. The Enhanced Account Analysis Fees are currently being accrued; the revenue is currently being recorded in the month it is earned. Service charges on deposits are withdrawn directly from the customer’s account balance.
- ATM and debit card – fees are recognized at the time the transaction is executed as that is the point in time the Company fulfills the customer’s request.
- Retail brokerage and advisory—fee income and related expenses are accrued monthly to properly record the revenues in the month they are earned. Advisory fees are collected in advance on a quarterly basis. These advisory fees are recorded in the first month of the quarter for which the service is being performed. Fees that are transaction based are recognized at the point in time that the transaction is executed (i.e. trade date).
- Merchant – QNB earns interchange fees from credit/debit cardholder transactions conducted through VISA/MasterCard payment networks. Interchange fees from cardholder transactions represent a percentage of the underlying transaction value and are recognized monthly, concurrently with the transaction processing services provided to the cardholder within the month.
- Other—includes credit card fees, sales of checks to depositors, miscellaneous fees and gain/losses on sale of OREO.
    - Credit card fees are recognized monthly, concurrently with the transaction processing services provided to the cardholder within the month.
    - Sales of checks to depositors are commissions earned from a third-party who provides checks to QNB’s customers. There is a pre-paid incentive with the third party which is recognized over the term of the contract. Other commissions on the sales of checks are recorded weekly.
    - Miscellaneous fees, such as wire, cashier check and garnishment fees, are charged as earned on the day of the transaction.
    - Gain (loss) on sales of OREO – QNB records a gain or loss from the sale of OREO when control of the property transfers to the buyer, which generally occurs at the time of an executed deed. When the QNB finances the sale of OREO to the buyer, QNB assesses whether the buyer is committed to perform their obligations under the contract and whether collectability of the transaction price is probable. Once these criteria are met, the OREO asset is derecognized and the gain or loss on sale is recorded upon the transfer of control of the property to the buyer. In determining the gain or loss on the sale, QNB adjusts the transaction prices and related gain (loss) on sale if a significant financing component is present.

ITEM 2. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

QNB Corp. is a bank holding company headquartered in Quakertown, Pennsylvania. QNB Corp., through its wholly-owned subsidiary, the Bank, has been serving the residents and businesses of upper Bucks, northern Montgomery and southern Lehigh counties in Pennsylvania since 1877. Due to its limited geographic area, growth is pursued through expansion of existing customer relationships and building new relationships by stressing a consistent high level of service at all points of contact. The Bank is a locally managed community bank that provides a full range of commercial and retail banking and retail brokerage services. The consolidated entity is referred to herein as “QNB” or the “Company”.

Tabular information presented throughout management’s discussion and analysis, other than share and per share data, is presented in thousands of dollars.

FORWARD-LOOKING STATEMENTS

In addition to historical information, this document contains forward-looking statements. Forward-looking statements are typically identified by words or phrases such as “believe,” “expect,” “anticipate,” “intend,” “estimate,” “project” and variations of such words and similar expressions, or future or conditional verbs such as “will,” “would,” “should,” “could,” “may” or similar expressions. The U.S. Private Securities Litigation Reform Act of 1995 provides safe harbor in regard to the inclusion of forward-looking statements in this document and documents incorporated by reference.

Shareholders should note that many factors, some of which are discussed elsewhere in this document and in the documents that are incorporated by reference, and including the risk factors identified in Item 1A of QNB’s 2018 Form 10-K, could affect the future financial results of QNB Corp. and its subsidiary and could cause those results to differ materially from those expressed in the forward-looking statements contained or incorporated by reference in this document. These factors include, but are not limited, to the following:

- Volatility in interest rates and shape of the yield curve;
- Credit risk;
- Liquidity risk;
- Operating, legal and regulatory risks;
- Economic, political and competitive forces affecting QNB’s business;
- The effects of unforeseen external events, including acts of terrorism, natural disasters, and pandemics, including the COVID-19 Pandemic; and
- The risk that the analysis of these risks and forces could be incorrect, and/or that the strategies developed to address them could be unsuccessful.

QNB cautions that these forward-looking statements are subject to numerous assumptions, risks and uncertainties, all of which change over time, and QNB assumes no duty to update forward-looking statements. Management cautions readers not to place undue reliance on any forward-looking statements. These statements speak only as of the date of this report on Form 10-Q, even if subsequently made available by QNB on its website or otherwise, and they advise readers that various factors, including those described above, could affect QNB’s financial performance and could cause actual results or circumstances for future periods to differ materially from those anticipated or projected. Except as required by law, QNB does not undertake, and specifically disclaims any obligation, to publicly release any revisions to any forward-looking statements to reflect the occurrence of anticipated or unanticipated events or circumstances after the date of such statements.

CRITICAL ACCOUNTING POLICIES AND ESTIMATES

The discussion and analysis of the financial condition and results of operations are based on the consolidated financial statements of QNB, which are prepared in accordance with U.S. generally accepted accounting principles (U.S. GAAP) and predominant practices within the banking industry. The preparation of these consolidated financial statements requires QNB to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses, and related disclosure of contingent assets and liabilities. QNB evaluates estimates on an on-going basis, including those related to the determination of the allowance for loan losses, the determination of the valuation of other real estate owned and foreclosed assets, other-than-temporary impairments on investment securities, the valuation of deferred tax assets, stock-based compensation and income taxes. QNB bases its estimates on historical experience and various other factors and assumptions that are believed to be reasonable under the circumstances, the results of which form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

Other-Than-Temporary Investment Security Impairment

Securities are evaluated periodically to determine whether a decline in their value is other-than-temporary. Management utilizes criteria such as the magnitude and duration of the decline, in addition to the reasons underlying the decline, to determine whether the loss in value is other-than-temporary. The term "other-than-temporary" is not intended to indicate that the decline is permanent, it indicates that the prospect for a near-term recovery of value is not necessarily favorable, or that there is a lack of evidence to support a realizable value equal to or greater than the carrying value of the investment. For equity securities that do not have readily-determinable fair values, once a decline in value is determined to be other-than-temporary, the value of the equity security is reduced and a corresponding charge to earnings is recognized. There were no other-than-temporary impairment charges recorded during the three months ended March 31, 2020 and 2019, respectively.

The Company follows accounting guidance related to the recognition and presentation of other-than-temporary impairment that specifies (a) if a company does not have the intent to sell a debt security prior to recovery and (b) it is more likely than not that it will not have to sell the debt security prior to recovery, the security would not be considered other-than-temporarily impaired unless there is a credit loss. When an entity does not intend to sell the security, and it is more likely than not the entity will not have to sell the security before recovery of its cost basis, it will recognize the credit component of an other-than-temporary impairment of a debt security in earnings and the remaining portion in other comprehensive income. There were no credit-related other-than-temporary impairment charges in the three months ended March 31, 2020 or 2019, respectively.

Allowance for Loan Losses

The determination of the allowance for loan losses involves a higher degree of judgment and complexity than the Company's other significant accounting policies. The allowance for loan losses is calculated with the objective of maintaining a level believed by management to be sufficient to absorb probable known and inherent losses in the outstanding loan portfolio. The allowance is reduced by actual credit losses and is increased by the provision for loan losses and recoveries of previous losses. The provisions for loan losses are charged to earnings to bring the total allowance for loan losses to a level considered necessary by management.

The allowance for loan losses is based on management's continual review and evaluation of the loan portfolio. The level of the allowance is determined by assigning specific reserves to individually identified problem credits and general reserves to all other loans. The portion of the allowance that is allocated to impaired loans is determined by estimating the inherent loss on each credit after giving consideration to the value of underlying collateral or present value of future estimated cash flows. The general reserves are based on the composition and risk characteristics of the loan portfolio, including the nature of the loan portfolio, credit concentration trends, delinquency and loss experience, as well as other qualitative factors such as current economic trends.

Management emphasizes loan quality and close monitoring of potential problem credits. Credit risk identification and review processes are utilized to assess and monitor the degree of risk in the loan portfolio. QNB's lending and credit administration staff are charged with reviewing the loan portfolio and identifying changes in the economy or in a borrower's circumstances which may affect the ability to repay debt or the value of pledged collateral. A loan classification and review system exists that identifies those loans with a higher than normal risk of collection. Each commercial loan is assigned a grade based upon an assessment of the borrower's financial capacity to service the debt and the presence and value of collateral for the loan. An independent loan review group tests risk assessments and evaluates the adequacy of the allowance for loan losses. Management meets monthly to review the credit quality of the loan portfolio and quarterly to review the allowance for loan losses.

In addition, various regulatory agencies, as an integral part of their examination process, periodically review QNB's allowance for loan losses. Such agencies may require QNB to recognize additions to the allowance based on their judgments about information available to them at the time of their examination.

Management believes that it uses the best information available to make determinations about the adequacy of the allowance and that it has established its existing allowance for loan losses in accordance with U.S. GAAP. If circumstances differ substantially from the assumptions used in making determinations, future adjustments to the allowance for loan losses may be necessary and results of operations could be affected. Because future events affecting borrowers and collateral cannot be predicted with certainty, increases to the allowance may be necessary should the quality of any loans deteriorate as a result of the factors discussed above.

Foreclosed Assets

Assets acquired through, or in lieu of, loan foreclosure are held-for-sale and are initially recorded at fair value less cost to sell at the date of foreclosure, establishing a new cost basis. Subsequent to foreclosure, valuations are periodically performed by management and the assets are carried at the lower of carrying amount or fair value less cost to sell. Revenue and expenses and changes in the valuation allowance are included in net expenses from foreclosed assets.

Stock-Based Compensation

QNB sponsors stock-based compensation plans, administered by a Board committee, under which both qualified and non-qualified stock options may be granted periodically to certain employees. QNB accounts for all awards granted under stock-based compensation plans in accordance with ASC 718, *Compensation-Stock Compensation*. Compensation cost has been measured using the fair value of an award on the grant date and is recognized over the service period, which is usually the vesting period. The fair value of each option is amortized into compensation expense on a straight-line basis between the grant date for the option and each vesting date. QNB estimates the fair value of stock options on the date of the grant using the Black-Scholes option pricing model. The model requires the use of numerous assumptions, many of which are highly subjective in nature.

Income Taxes

QNB accounts for income taxes under the asset/liability method in accordance with income tax accounting guidance, ASC 740, *Income Taxes*. Deferred tax assets and liabilities are recognized for the future tax consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases, as well as operating loss and tax credit carryforwards. Deferred tax assets and liabilities are measured using enacted tax rates expected to apply to taxable income in the years in which those temporary differences are expected to be recovered or settled. The effect on deferred tax assets and liabilities of a change in tax rates is recognized in income in the period that includes the enactment date. A valuation allowance is established against deferred tax assets when, in the judgment of management, it is more likely than not that such deferred tax assets will not become available. Because the judgment about the level of future taxable income is dependent on matters that may, at least in part, be beyond QNB’s control, it is at least reasonably possible that management’s judgment about the need for a valuation allowance for deferred tax assets could change in the near term.

RESULTS OF OPERATIONS - OVERVIEW

QNB reported net income for the first quarter of 2020 of $220,000, or $0.06 per share on a diluted basis, compared to net income of $3,379,000, or $0.97 per share on a diluted basis, for the same period in 2019. The Bank contributed $2,316,000 to net income for the first quarter of 2020 compared to $2,676,000 for the first quarter of 2019; whereas the holding company contributed a net loss of $2,096,000 to the first quarter of 2020 compared to net income of $703,000 for the first quarter of 2019. The net loss at the holding company resulted primarily from a decrease in the fair value of the equity portfolio during the first quarter of 2020.

Net income expressed as an annualized rate of return on average assets and average shareholders’ equity was 0.07% and 0.73%, respectively, for the quarter ended March 31, 2020 compared with 1.15% and 12.09%, respectively, for the quarter ended March 31, 2019.

Total assets as of March 31, 2020 were $1,232,010,000, compared with $1,225,023,000 at December 31, 2019. Loans receivable at March 31, 2020 were $821,283,000, compared with $820,616,000 at December 31, 2019, an increase of $667,000, or 0.1%, with commercial lending as the largest contributor to the growth. Total deposits of $1,043,521,000 at March 31, 2020 increased $5,661,000, or 0.5%, compared with total deposits of $1,037,860,000 at December 31, 2019.

Results for the three months ended March 31, 2020 include the following significant components:

- Net interest income increased $327,000, or 3.7%, to $9,163,000 for the three months ended March 31, 2020.
- Net interest margin on a tax-equivalent basis remained level for the quarter at 3.18%.
- QNB recorded $500,000 in provision for loan losses for the quarter ended March 31, 2020, compared with $225,000 and for the same period in 2019, respectively.

- Non-interest income decreased $3,880,000, to a net loss of $1,571,000 for the first quarter of 2020 compared with the same period in 2019. Excluding unrealized gains (losses) on equity securities, non-interest income increased $36,000, or 2.7%, to $1,369,000 for the first quarter of 2020 compared with the same period in 2019.
- Non-interest expense increased $554,000, or 8.2%, to $7,278,000 for the first quarter of 2020 compared to the same period in 2019.
- Total non-performing loans were $15,761,000, or 1.93% of loans receivable at March 31, 2020, compared to $16,464,000, or 2.01% of loans receivable at December 31, 2019. Loans on non-accrual status were $11,134,000 at March 31, 2020 compared with $11,704,000 at December 31, 2019. Net charge-offs for the three months ended March 31, 2020 were $53,000, compared with $44,000 for the same period in 2019.

These items, as well as others, will be explained more thoroughly in the next sections.

NET INTEREST INCOME

QNB earns its net income primarily through the Bank. Net interest income, or the spread between the interest, dividends and fees earned on loans and investment securities and the expense incurred on deposits and other interest-bearing liabilities, is the primary source of operating income for QNB. Management seeks to achieve sustainable and consistent earnings growth while maintaining adequate levels of capital and liquidity and limiting its exposure to credit and interest rate risk levels approved by the Board of Directors.

The following table presents the adjustment to convert net interest income to net interest income on a fully taxable-equivalent basis for the three-month periods ended March 31, 2020 and 2019.

	For the Three Months Ended March 31,	
	2020	2019
Total interest income	$ 11,331	$ 11,289
Total interest expense	2,168	2,453
Net interest income	9,163	8,836
Tax-equivalent adjustment	176	197
Net interest income (fully taxable-equivalent)	$ 9,339	$ 9,033

Net interest income is the primary source of operating income for QNB. Net interest income is interest income, dividends, and fees on earning assets, less interest expense incurred for funding sources. Earning assets primarily include loans, investment securities, interest bearing balances at the Federal Reserve Bank (Fed) and Federal funds sold. Sources used to fund these assets include deposits and borrowed funds. Net interest income is affected by changes in interest rates, the volume and mix of earning assets and interest-bearing liabilities, and the amount of earning assets funded by non-interest-bearing deposits.

For purposes of this discussion, interest income and the average yield earned on loans and investment securities are adjusted to a tax-equivalent basis as detailed in the tables that appear above. This adjustment to interest income is made for analysis purposes only. Interest income is increased by the amount of savings of Federal income taxes, which QNB realizes by investing in certain tax-exempt state and municipal securities and by making loans to certain tax-exempt organizations. In this way, the ultimate economic impact of earnings from various assets can be more easily compared.

The net interest rate spread is the difference between average rates received on earning assets and average rates paid on interest-bearing liabilities, while the net interest rate margin, which includes interest-free sources of funds, is net interest income expressed as a percentage of average interest-earning assets. The Asset/Liability and Investment Management Committee works to manage and maximize the net interest margin for the Company.

Average Balances, Rate, and Interest Income and Expense Summary (Tax-Equivalent Basis)

	Three Months Ended					
	March 31, 2020			March 31, 2019		
	Average Balance	Average Rate	Interest	Average Balance	Average Rate	Interest
Assets						
Investment securities (AFS & Equity):						
U.S. Government agencies	$ 56,163	1.86%	$ 261	$ 70,482	1.80%	$ 317
State and municipal	54,445	3.43	467	63,210	3.42	540
Mortgage-backed and CMOs	217,020	2.07	1,125	208,694	2.21	1,153
Pooled trust preferred securities	85	4.15	1	122	5.13	2
Corporate debt securities	8,007	3.65	73	8,024	3.78	76
Equities	11,352	3.26	92	10,108	2.97	74
Total investment securities	347,072	2.33	2,019	360,640	2.40	2,162
Loans:						
Commercial real estate	478,146	4.76	5,661	444,119	4.79	5,247
Residential real estate	69,858	3.95	690	67,533	3.71	660
Home equity loans	64,222	4.18	667	69,363	4.73	810
Commercial and industrial	165,171	4.87	2,000	158,861	5.42	2,122
Consumer loans	6,440	5.57	89	6,916	6.20	106
Tax-exempt loans	38,003	3.60	341	42,982	3.32	352
Total loans, net of unearned income*	821,840	4.62	9,448	789,774	4.77	9,297
Other earning assets	11,461	1.41	40	2,242	4.85	27
Total earning assets	1,180,373	3.92	11,507	1,152,656	4.04	11,486
Cash and due from banks	13,769			11,648		
Allowance for loan losses	(9,951)			(8,915)		
Other assets	37,296			31,985		
Total assets	$ 1,221,487			$ 1,187,374		
Liabilities and Shareholders' Equity						
Interest-bearing deposits:						
Interest-bearing demand	$ 226,307	0.41%	231	$ 208,417	0.45%	232
Municipals	105,725	1.33	349	92,950	2.01	461
Money market	79,567	0.74	147	107,658	1.07	285
Savings	251,445	0.59	368	247,815	0.67	408
Time	118,921	1.56	463	117,358	1.45	419
Time of $100,000 or more	113,231	1.78	501	103,337	1.80	458
Total interest-bearing deposits	895,196	0.93	2,059	877,535	1.05	2,263
Short-term borrowings	47,683	0.78	92	59,185	1.30	190
Long-term debt	4,231	1.57	17	—	—	—
Total interest-bearing liabilities	947,110	0.92	2,168	936,720	1.06	2,453
Non-interest-bearing deposits	142,398			130,525		
Other liabilities	10,295			6,825		
Shareholders' equity	121,684			113,304		
Total liabilities and shareholders' equity	$ 1,221,487			$ 1,187,374		
Net interest rate spread		3.00%			2.98%	
Margin/net interest income		3.18%	$ 9,339		3.18%	$ 9,033

Tax-exempt securities and loans were adjusted to a tax-equivalent basis and are based on the marginal Federal corporate tax rate of 21 percent for three months ended March 31, 2020 and 2019.

Non-accrual loans are included in earning assets.

* Includes loans held-for-sale

Rate/Volume Analysis. The following table shows the fully taxable equivalent effect of changes in volumes and rates on interest income and interest expense. Changes in net interest income that could not be specifically identified as either a rate or volume change were allocated to changes in volume.

	Three months ended March 31, 2020 compared to March 31, 2019		
	Total	Due to change in:	
	Change	Volume	Rate
Interest income:			
Investment securities (AFS & Equity):			
U.S. Government agencies	$ (56)	$ (64)	$ 8
State and municipal	(73)	(75)	2
Mortgage-backed and CMOs	(28)	47	(75)
Pooled trust preferred securities	(1)	(1)	—
Corporate debt securities	(3)	—	(3)
Equities	18	10	8
Total Investment securities (AFS & Equity)	(143)	(83)	(60)
Loans:			
Commercial real estate	414	450	(36)
Residential real estate	30	23	7
Home equity loans	(143)	(54)	(89)
Commercial and industrial	(122)	103	(225)
Consumer loans	(17)	(7)	(10)
Tax-exempt loans	(11)	(38)	27
Total Loans	151	477	(326)
Other earning assets	13	111	(98)
Total interest income	21	505	(484)
Interest expense:			
Interest-bearing deposits:			
Interest-bearing demand	(1)	22	(23)
Municipals	(112)	68	(180)
Money market	(138)	(73)	(65)
Savings	(40)	10	(50)
Time	44	10	34
Time of $100,000 or more	43	48	(5)
Total interest-bearing deposits	(204)	85	(289)
Short-term borrowings	(98)	(36)	(62)
Long-term debt	17	1	16
Total interest expense	(285)	50	(335)
Net interest income	$ 306	$ 455	$ (149)

Net Interest Income and Net Interest Margin – Quarterly Comparison

Average earning assets for the first quarter of 2020 were $1,180,373,000, an increase of $27,717,000, or 2.4%, from the first quarter of 2019, with average loans increasing $32,066,000, or 4.1%, and average investment securities decreasing $13,568,000, or 3.8%, over the same period. Growth in the loan portfolio supports interest income and the net interest margin as loans generally earn a higher yield than investment securities. Average loans as a percent of average earning assets were 69.6% for the first quarter of 2020, compared with 68.5% for the first quarter of 2019. On the funding side, average deposits increased $29,534,000, or 2.9%, to $1,037,594,000 for the first quarter of 2020 primarily due to growth in municipal deposits, interest bearing demand and time deposits. Yields on time deposits became more favorable than money markets accounts and customers continue to reinvest funds into more liquid accounts. Average short-term borrowed funds for the first quarter of 2020 decreased $11,502,000, to $47,683,000, which consisted of average commercial repurchase agreements of $40,695,000 and average overnight borrowings of $6,988,000. For the same period in 2019, borrowings consisted of average commercial repurchase agreements of $41,795,000 and average overnight borrowings of $17,390,000.

The net interest margin for the first quarter of 2020 remained flat at 3.18% compared to the same period in 2019. While competition for quality loans in our local market continues to exert pressure on the net interest margin, prime rate fluctuations during 2019 and 2020 have provided increased competitive pricing pressure on deposits.

The Rate-Volume Analysis tables, as presented on a tax-equivalent basis, highlight the impact of changing rates and volumes on interest income and interest expense. Total interest income on a tax-equivalent basis increased $21,000, or 0.2%, to $11,507,000 for the first quarter of 2020; total interest expense decreased $285,000, or 11.6%, to $2,168,000. Growth in earning assets contributed to the increase in interest income. All categories of interest-bearing deposits, except time less than $100,000, experienced lower rates in the first quarter of 2020 compared to first quarter of 2019, due to rate decreases for municipal deposits indexed to Fed Funds, and a 35-basis point rate decrease to the eSavings and Rewards products and a ten-basis point decrease in the top tiers of the Money Market product since March 31, 2019.

The yield on earning assets on a tax-equivalent basis decreased 12 basis points from 4.04% for the first quarter of 2019, to 3.92% for the first quarter of 2020. The cost of interest-bearing liabilities was 0.92% for the first quarter ended March 31, 2020, compared with 1.06% for the same period in 2019.

Interest income on investment securities (available-for-sale and equity) decreased $7,000 when comparing the quarters ended March 31, 2020 and 2019. The average yield on the investment portfolio was 2.33% for the first quarter of 2020 compared with 2.40% for the first quarter of 2019. Proceeds from sales, payments, calls and maturities, net of purchases, were utilized to grow the loan portfolio at higher yields than the investment portfolio with any excess funds reinvested in higher yielding investments or interest-earning deposit accounts.

Income on U.S. Government agency securities decreased $56,000 as the volume decreased $14,319,000.

Interest income on municipal securities, which are primarily tax-exempt, declined due to a $8,326,000 decrease in average balances. Proceeds from matured, called and sold municipal securities were invested back into the municipal and mortgage-backed securities portfolios and used to grow the loan portfolio. Typically, QNB purchases municipal bonds with 10-20-year maturities and could have call dates between 2-10 years.

Interest income on mortgage-backed securities and CMOs decreased $28,000 due to a 14-basis point decline in yield partially offset by an $8,326,000 increase in average balances. This portfolio generally provides higher yields relative to agency bonds and also provides monthly cash flow which can be used for liquidity purposes or can be reinvested as interest rates increase. Since most of these securities were purchased at a premium, any prepayments result in a shorter amortization period of this premium and therefore a reduction in income.

Income on loans increased $151,000 to $9,448,000 when comparing the first quarters of 2020 and 2019, with a 4.1% growth in average balances contributing an increase in interest income of 477,000. The yield on loans, at 4.62%, was 15 basis points lower than the first quarter of 2019, contributing to a $326,000 decrease in interest income. Competitive pressures compressed the yields on new loans being originated.

The largest category of the loan portfolio is commercial real estate loans. This category of loans includes commercial purpose loans secured by either commercial properties such as office buildings, factories, warehouses, medical facilities and retail establishments, or residential real estate, usually the residence of the business owner. The category also includes construction and land development loans. Income on commercial real estate loans increased $414,000 when comparing the first quarters of 2020 and 2019, primarily due to the 7.7% increase in average balances. Average balances increased $34,027,000, to $478,146,000 for the quarter ended March 31, 2010 compared with the same quarter in 2019. The yield on commercial real estate loans decreased three basis points from 4.79% in 2019 to 4.76% in 2020.

Income on commercial and industrial loans decreased $122,000 when comparing the first quarters of 2020 and 2019. The average yield on these loans decreased 55 basis points to 4.87% resulting in a decrease in income of $225,000; average balances increased $6,310,000, to $165,171,000 for the first quarter of 2020 resulting in a $103,000 increase in interest income. Many of the loans in this category are indexed to the prime interest rate, which decreased 25 basis points in August 2019 with an additional decrease of 25 basis points in September 2019, 25 basis points in October and a total of 150 basis points in March 2020.

Tax-exempt loan income was $341,000 for the first quarter of 2020, a decrease of $11,000 from the same period in 2019. Average balances decreased $4,979,000, or 4.1%, to $38,003,000 for the first quarter of 2020, resulting in a decrease of $38,000 in income. The yield on municipal loans increased 28 basis points, to 3.60% for the first quarter of 2020, compared with the same period in 2019, resulting in an increase of $27,000 in interest income.

QNB desires to become the "local consumer lender of choice" and to effect this QNB refocused its retail lending efforts, adding new product offerings and increasing marketing and promotion. The positive impact of this focus has been year-over-year growth in balances in overall retail lending: residential mortgage, home equity and consumer loans. Average residential mortgage loans secured by first lien 1-4 family residential mortgages increased by $2,325,000, or 3.4%, to $69,858,000 for the first quarter of 2020 compared to the same period in 2019. Over this same timeframe, the average yield on the portfolio increased four basis points to 3.95% for the first quarter of 2020. The combined result was an increase in interest income of $30,000. Average home equity loans decreased by $5,141,000, or 7.4%, to $64,222,000 and the average yield decreased 56 basis points to 4.18% resulting in a combined decrease in interest income of $143,000. The yield on the consumer portfolio decreased 63 basis points to 5.57% for the first quarter of 2020 and there was a slight decrease in average balances resulting in a combined $17,000 decrease in interest income.

Earning assets are funded by deposits and borrowed funds. Interest expense decreased $285,000, when comparing the first quarter of 2020 to the same period in 2019. The growth in average deposits continues to be centered in accounts with greater liquidity, such as non-interest and interest-bearing demand deposits. Average non-interest-bearing demand accounts increased $11,873,000, or 9.1%, to $142,398,000 for the first quarter of 2020. QNB has been successful in increasing both personal and business checking accounts. Average interest-bearing demand accounts increased $17,890,000, or 8.6%, to $226,307,000 for the first quarter of 2020. Interest expense on interest-bearing demand accounts decreased slightly to $231,000 for the same period, as the average rate paid decreased four basis points to 0.41% for the first quarter 2020. Included in this category is QNB-Rewards checking, a higher-rate checking account product that pays 1.00% on balances up to $25,000 and 0.25% for balances over $25,000. In order to receive the high rate a customer must receive an electronic statement, have one direct deposit or other ACH transaction and have at least 12 check card purchase transactions post and clear per statement cycle. For the first quarter of 2020, the average balance in this product was $65,926,000 and the related interest expense was $98,000 for an average yield of 0.59%. In comparison, the average balance of the QNB-Rewards accounts for the first quarter of 2019 was $58,256,000 and the related interest expense was $94,000 for an average yield of 0.65%. This product also generates fee income through the use of the check card.

Interest expense on municipal interest-bearing demand accounts decreased $112,000 to $349,000 for the first quarter of 2020. The average interest rate paid on municipal interest-bearing demand accounts decreased 68 basis points to 1.33% for the first quarter of 2020 and average balances increased $12,775,000, or 13.7%, to $105,725,000. Many of these accounts are indexed to the Federal funds rate with rate floors between 0.25% and 0.50%; therefore the decreases in the Federal funds rate affected the yield of these deposits. Municipal deposits are seasonal in nature and are received during the second and third quarters as tax receipts are collected and are withdrawn over the course of the year.

Average money market accounts decreased $28,091,000, or 26.1%, to $79,567,000 for the first quarter of 2020 compared with the same period in 2019. Interest expense on money market accounts decreased $138,000 to $147,000, and the average interest rate paid on money market accounts decreased 33 basis points to 0.74% for the first quarter of 2020. Most of the balances in this category are in a product that pays a tiered rate based on account balances. A portion of these funds moved to higher yielding time deposits.

Interest expense on savings accounts decreased $40,000 when comparing the first quarter of 2020 to the first quarter of 2019. The average interest rate paid on savings accounts decreased eight basis points to 0.59% for the first quarter of 2020. When comparing these same periods, average savings accounts increased $3,630,000, or 1.5%, to $251,445,000 for the first quarter of 2020 primarily due to increases in the e-Savings product. QNB's online e-Savings product is the largest category of savings deposits, with average balances for the first quarter of 2020 of $179,741,000 compared to $176,819,000 in the same period of 2019. The average yield paid on these accounts was 0.75% for the first quarter of 2020 and 0.86% for the same period in 2019. Traditional statement savings accounts, passbook savings and club accounts are also included in the savings category and average balances in these types of savings accounts increased $862,000 when comparing the first quarter of 2020 average to the same period in 2019.

Interest expense on time deposits totaled $964,000 for the first quarter of 2020 compared to $877,000 in 2019. Average total time deposits increased $11,457,000 to $232,152,000 for the first quarter of 2020. As with fixed-rate loans and investment securities, these deposits reprice over time and, therefore, have less of an immediate impact on costs in either a rising or falling rate environment, however, the maturity and repricing characteristics of time deposits tend to be shorter. The average rate paid on total time deposits increased six basis points from 1.59% to 1.65% when comparing the first quarter of 2019 to the same period in 2020.

Approximately $139,789,000, or 65%, of time deposits at March 31, 2020 will mature over the next 12 months. The average rate paid on these time deposits is approximately 1.51%. The yield on the time deposit portfolio may change slightly in the next quarter as short-term time deposits reprice. However, given the short-term nature of these deposits, interest expense may increase if short-term time deposit rates were to increase suddenly or if customers select higher paying time deposits.

Short-term borrowings are primarily comprised of sweep accounts structured as repurchase agreements with our commercial customers and overnight FHLB borrowings. Interest expense on short-term borrowings decreased $98,000 for the first quarter of 2020 to $92,000 when compared to the same period in 2019. When comparing these same periods, average balances decreased from $59,185,000 to $47,683,000 due to a decrease in average FHLB borrowings of $10,689, with a rate decrease of 77 basis points, to 1.88% for the first quarter of 2020, and a decrease in average repurchase agreement balances of $1,100,000, with a 12-basis point decrease in rate. During the first quarter of 2020, QNB borrowed long-term debt of $10,000,000 to lock in at a low yield. Average long-term debt was $4,231,000 with an average yield of 1.57%; 31 basis points lower than the average rate paid on FHLB short-term borrowings.

PROVISION FOR LOAN LOSSES AND ALLOWANCE FOR LOAN LOSSES

The provision for loan losses represents management's determination of the amount necessary to be charged to operations to bring the allowance for loan losses to a level that represents management’s best estimate of the known and inherent losses in the existing loan portfolio. Management believes that it uses the best information available to make determinations about the adequacy of the allowance and that it has established its existing allowance for loan losses in accordance with U.S. GAAP. The determination of an appropriate level for the allowance for loan losses is based upon an analysis of the risks inherent in QNB’s loan portfolio. Management, in determining the allowance for loan losses, makes significant estimates and assumptions. Since the allowance for loan losses is dependent, to a great extent, on conditions that may be beyond QNB’s control, it is at least reasonably possible that management’s estimates of the allowance for loan losses and actual results could differ. In addition, various regulatory agencies, as an integral part of their examination process, periodically review QNB’s allowance for losses on loans. Such agencies may require QNB to recognize changes to the allowance based on their judgments about information available to them at the time of their examination. Actual loan losses, net of recoveries, serve to reduce the allowance.

Management closely monitors the quality of its loan portfolio and performs a quarterly analysis of the appropriateness of the allowance for loan losses. This analysis considers several relevant factors including: specific impairment reserves, historical loan loss experience, general economic conditions, levels of and trends in delinquent and non-performing loans, levels of classified loans, trends in the growth rate of loans and concentrations of credit.

Based on this analysis, QNB recorded $500,000 in provision for loan losses in the three months ended March 31, 2020 compared with $225,000 for the same period in 2019. The additional loan loss provision was recorded for the three months ended March 31, 2020 due to the decline in economic activity resulting from the COVID-19 Pandemic. QNB's allowance for loan losses of $10,334,000 represents 1.26% of loans receivable at March 31, 2020 compared with an allowance for loan losses of $9,887,000, or 1.20% of loans receivable, at December 31, 2019, and $9,015,000, or 1.12% of loans receivable at March 31, 2019. Management believes the allowance for loan losses at March 31, 2020 is adequate as of that date based on its analysis of known and inherent losses in the portfolio.

Net charge-offs were $53,000 for the three months ended March 31, 2020 compared to net charge-offs of $44,000 for the same period in 2019. Charge-offs of approximately $92,000 during the three months ended March 31, 2020 consisted of overdraft charge-offs of $29,000, student loans of $58,000 and other consumer loans of $5,000. These were partially offset by $39,000 in recoveries comprising $29,000 in repayments from borrowers of previously charged-off credits, and $10,000 related to overdraft recoveries. Annualized net charge-offs as a percentage of average loans receivable were 0.03% for the three months ended March 31, 2020 compared with annualized charge-offs as a percentage of average loans receivable of 0.02% for the same period in 2019.

Non-performing assets were $15,861,000 at March 31, 2020 compared to $16,464,000 as of December 31, 2019 and $9,753,000 at March 31, 2019. Total non-performing loans, which represent loans on non-accrual status, loans past due 90 days or more and still accruing interest and restructured loans, were 1.93% of loans receivable at March 31, 2010 compared with 2.01% of loans receivable at December 31, 2019 and 1.21% of loans receivable at March 31, 2019. In cases where there is a collateral shortfall on non-accrual loans, specific impairment reserves have been established based on updated collateral values even if the borrower continues to pay in accordance with the terms of the agreement. At March 31, 2020, $4,172,000, or approximately 37% of the loans classified as non-accrual are current or past due less than 30 days. Loans classified as substandard or doubtful totaled $15,173,000, a decrease of $749,000, or 4.7%, from the $15,922,000 reported at December 31, 2019 and an increase of $452,000, or 3.1%, from the $14,721,000 reported at March 31, 2019.

QNB had no loans past due 90 days or more and still accruing interest at March 31, 2020, December 31, 2019, or March 31, 2019. Total loans 30 days or more past due, which includes non-accrual loans by actual number of days delinquent, represented 1.32% of loans receivable at March 31, 2020 compared with 0.85% at December 31, 2019 and 0.99% at March 31, 2019.

Troubled debt restructured loans, not classified as non-accrual loans or loans past due 90 days or more and accruing, were $4,727,000 at March 31, 2020, compared with $4,760,000 at December 31, 2019, and $2,047,000 at March 31, 2019. There were no newly identified troubled debt restructuring during the three months ended March 31, 2020. QNB had no other real estate owned or repossessed assets at March 31, 2019, December 31, 2019, or March 31, 2019.

A loan is considered impaired, based on current information and events, if it is probable that QNB will be unable to collect the scheduled payments of principal or interest when due according to the contractual terms of the loan agreement. Factors considered by management in determining impairment include payment status, collateral value and the probability of collecting scheduled principal and interest payments when due. Loans that experience insignificant payment delays and payment shortfalls generally are not classified as impaired. Management determines the significance of payment delays and shortfalls on a case-by-case basis, taking into consideration all the circumstances surrounding the loan and the borrower, including length of the delay, the reasons for the delay, the borrower’s prior payment record and the amount of the shortfall in relation to the principal and interest owed. Impairment is measured on a loan by loan basis for commercial loans by either the present value of expected future cash flows discounted at the loan’s effective interest rate or the fair value of the collateral, if the loan is collateral dependent.

The following table shows detailed information and ratios pertaining to the Company’s loan and asset quality:

	March 31, 2019	December 31, 2019	March 31, 2019
Non-accrual loans	$ 11,134	$ 11,704	$ 7,706
Loans past due 90 days or more and still accruing interest	—	—	—
Troubled debt restructured loans (not already included above)	4,727	4,760	2,047
Total non-performing loans	15,861	16,464	9,753
Total non-performing assets	$ 15,861	$ 16,464	$ 9,753
Total loans (excluding loans held-for-sale):			
Average total loans (YTD)	$ 821,695	$ 811,413	$ 789,737
Total loans	821,283	820,616	804,528
Allowance for loan losses	10,334	9,887	9,015
Allowance for loan losses to:			
Non-performing loans	65.15%	60.05%	92.43%
Total loans (excluding held-for-sale)	1.26%	1.20%	1.12%
Average total loans (excluding held-for-sale)	1.26%	1.22%	1.14%
Non-performing loans / total loans (excluding held-for-sale)	1.93%	2.01%	1.21%
Non-performing assets / total assets	1.29%	1.34%	0.81%

An analysis of net loan charge-offs for the three months ended March 31, 2020 compared to 2019 is as follows:

	For the Three Months Ended March 31, 2020	For the Three Months Ended March 31, 2019
Net charge-offs	$ 53	$ 44
Net annualized charge-offs to:		
Total loans	0.03%	0.02%
Average total loans excluding held-for-sale	0.03%	0.02%
Allowance for loan losses	2.06%	1.98%

At March 31, 2020 and December 31, 2019, the recorded investment in loans for which impairment has been identified totaled $16,221,000 and $16,860,000 of which $7,540,000 and $8,082,000, respectively, required no specific allowance for loan loss. The recorded investment in impaired loans requiring an allowance for loan losses was $8,681,000 and $8,778,000 at March 31, 2020 and December 31, 2019, respectively, and the related allowance for loan losses associated with these loans was $3,548,000 and $3,556,000, respectively. Most of the loans that have been identified as impaired are collateral-dependent. See Note 8 to the Notes to Consolidated Financial Statements for additional detail of impaired loans.

NON-INTEREST INCOME

Non-Interest Income Comparison

	For the Three Months Ended March 31, 2020	For the Three Months Ended March 31, 2019	Change from prior year Amount	Change from prior year Percent
Net gain on sales of investment securities	$ -	$ 6	$ (6)	(100.0)%
Unrealized (loss) gain on investment equity securities	(2,940)	976	(3,916)	(401.2)
Fees for services to customers	411	393	18	4.6
ATM and debit card	488	470	18	3.8
Retail brokerage and advisory	113	141	(28)	(19.9)
Bank-owned life insurance	68	68	-	-
Merchant	91	75	16	21.3
Net gain on sale of loans	81	21	60	285.7
Other	117	159	(42)	(26.4)
Total	$ (1,571)	$ 2,309	$ (3,880)	(168.0)%

Quarter to Quarter Comparison

Total non-interest income for the first quarter of 2020 was a net loss of $1,571,000, a decrease of $3,880,000, compared to income of $2,309,000 for the first quarter of 2019. Excluding net unrealized gains (losses) on investment securities for both periods, total non-interest income was $1,369,000 and $1,333,000 for the quarters ended March 31, 2020 and 2019, respectively, an increase of $36,000 or 2.7%.

During the first quarter of 2020, unrealized losses of $2,940,000 were recorded compared to unrealized gains of $976,000 in the same period of 2019. The unrealized losses for the three months ended March 31, 2020 resulted from the decline in the fair value of the equity portfolio, the performance of which was consistent with the overall performance of the U.S. stock market for the period. The equities portfolio comprises blue-chip large-capitalized stocks, providing a taxable equivalent dividend yield of 3.26%. The estimated cumulative contribution (realized and unrealized net gains, plus dividends) of the equities portfolio to earnings per share from January 1, 2008 through March 31, 2020 is $1.10 per share.

QNB originates residential mortgage loans for sale in the secondary market. Net gain on sale of loans increased $60,000 when comparing the two periods. The net gain on residential mortgage sales is directly related to the volume of mortgages sold and the timing of the sales relative to the interest rate environment. Residential mortgage loans to be sold are identified at origination. Proceeds from the sale of residential mortgages were $2,498,000 and $675,000 for the first quarters of 2020 and 2019, respectively.

Fees for services to customers increased $18,000, or 4.6%, to $411,000 for the first quarter of 2020, due primarily to an increase in net overdraft income. ATM and debit card income increased $18,000, or 3.8%, to $488,000 for the first quarter of 2020, compared to the same period in 2019, due to increases in card-based transactions and expansion of checking account households.

QNB provides securities and advisory services under the name QNB Financial Services. Retail brokerage and advisory fees decreased $28,000, or 19.9%, to $113,000 for the first quarter of 2020 compared to the same period in 2019. During 2019, there was a continued transition to move toward advanced advisory fees based on assets under management in lieu of fees per transaction. Advisory fees remained level with 2019. Transactional fees declined are the primary reason for the decrease when comparing first quarters of 2020 and 2019.

Merchant income increased $16,000, or 21.3%, when comparing the two periods. Other non-interest income decreased $42,000, or 26.4%. Other non-interest income includes broker-dealer conversion cost reimbursements of $17,000 and $29,000 in the first quarter of 2020 and 2019, respectively, contributing $12,000 to the decline. There were declines in checks sale income of $12,000 and mortgage serving fee income of $9,000 when comparing the two quarters.

NON-INTEREST EXPENSE

Non-Interest Expense Comparison

	For the Three Months Ended March 31,		Change from prior year	
	2020	2019	Amount	Percent
Salaries and employee benefits	$ 4,072	$ 3,781	$ 291	7.7%
Net occupancy	523	505	18	3.6
Furniture and equipment	675	557	118	21.2
Marketing	322	237	85	35.9
Third-party services	454	440	14	3.2
Telephone, postage and supplies	195	199	(4)	(2.0)
State taxes	243	171	72	42.1
FDIC insurance premiums	137	130	7	5.4
Other	657	704	(47)	(6.7)
Total	$ 7,278	$ 6,724	$ 554	8.2%

Quarter to Quarter Comparison

Total non-interest expense was $7,278,000 for the first quarter of 2020, an increase of $554,000, or 8.2%, compared to the first quarter of 2019.

Salaries and benefits comprise the largest component of non-interest expense. QNB monitors, through the use of various surveys, the competitive salary and benefit information in its markets and makes adjustments when appropriate. Salaries and benefits expense increased $291,000, or 7.7%, to $4,072,000 when comparing the two quarters, in part due to the addition of branch staff in our new Allentown, Pennsylvania location. Salary expense and related payroll taxes increased $305,000, or 9.8%, to $3,431,000 during the first quarter of 2020 compared to the same period in 2019. Medical premiums, net of employee contributions decreased $26,000 to $358,000 when comparing the two quarters due to a decrease in medical claims. Retirement plan and post retirement life expense increased $8,000 during the same period.

Net occupancy and furniture and equipment expenses increased $18,000, or 3.6%, and $118,000, or 21.2%, respectively. This is due primarily to increased rent, depreciation of furniture and equipment and software maintenance expense of $46,000, $69,000 and $39,000, respectively, when comparing the two periods. Marketing expense increased $85,000, or 35.9%, to $322,000 for the quarter ended March 31, 2020 due to the timing of sponsorships and donations and the promotion of the new Allentown location.

Third party services are comprised of professional services, including legal, accounting, auditing and consulting services, as well as fees paid to outside vendors for support services of day-to-day operations. These support services include correspondent banking services, IT services, statement printing and mailing, investment security safekeeping and supply management services. Third party services expense increased $14,000 when comparing the two periods, due primarily to fees paid to outside vendors for support services. State taxes increased $72,000 due to timing of tax credits received in 2020 versus 2019 and increase bank shares tax expense. FDIC insurance premiums increased $7,000. Other expense included the write-off of a receivable of $452,000 in 2019.

INCOME TAXES

QNB utilizes an asset and liability approach for financial accounting and reporting of income taxes. As of March 31, 2020, QNB's net deferred tax asset was $1,007,000. The primary components of deferred taxes are deferred tax assets of which $2,170,000 relates to the allowance for loan losses. As of December 31, 2019, QNB's net deferred tax asset was $1,441,000. The decrease in the balance of net deferred tax assets when comparing March 31, 2020 to December 31, 2019 is due to the increase in unrealized gains on available for sale securities at March 31, 2020 compared to December 31, 2019, contributing to $1,221,000 of the decline. This decline was partially offset by the deferred tax on unrealized losses at March 31, 2020 compared to gains at December 31, 2019 on equity securities, resulting in an increase of $756,000.

The realizability of deferred tax assets is dependent upon a variety of factors, including the generation of future taxable income, the existence of taxes paid and recoverable, the reversal of deferred tax liabilities and tax planning strategies. Based upon these and other factors, management believes it is more likely than not that QNB will realize the benefits of these remaining deferred tax assets.

Applicable income tax benefit was $406,000 for the quarter ended March 31, 2020, compared to expense $817,000 for the same period in 2019. The effective tax rate for first quarter of 2020 was 218.3%, compared with 19.5% for the same period in 2019. The increase in effective tax rate in 2020 is due to the state income tax benefit at the parent company related to the unrealized losses on the equities portfolio and to the proportion of tax-exempt net interest income to income before taxes.

FINANCIAL CONDITION ANALYSIS

Financial service organizations are challenged to demonstrate they can generate sustainable and consistent earnings growth in a dynamic operating environment. Rate competition for quality loans is anticipated to continue through 2020. It is also anticipated that the rate competition for attracting and retaining deposits may continue in 2020, which could result in a lower net interest margin and a decline in net interest income.

QNB's primary business is accepting deposits and making loans to meet the credit needs of the communities it serves. Loans are the most significant component of earning assets and growth in loans to small businesses and residents of these communities has been a primary focus of QNB. Inherent within the lending function is the evaluation and acceptance of credit risk and interest rate risk. QNB manages credit risk associated with its lending activities through portfolio diversification, underwriting policies and procedures and loan monitoring practices. QNB is committed to make credit available to its customers.

Total assets at March 31, 2020 were $1,232,010,000 compared with $1,225,023,000 at December 31, 2019. Cash and cash equivalents increased $28,881,000 from $17,608,000 at December 31, 2019 to $46,489,000 at March 31, 2020, due primarily to calls of investment securities during the three months ended March 31, 2020.

The composition of the investment portfolio changed since December 31, 2019 as U.S. Government Agencies decreased from 19.5% of the overall available-for-sale portfolio to 9.5% at March 31, 2020; State and Municipals increased from 14.5% to 19.2% and U.S. Government agencies and sponsored enterprises increased from 63.3% to 68.9% over the same period. The fixed-income securities portfolio represents a significant portion of QNB's earning assets and is also a primary tool in liquidity and asset/liability management. QNB actively manages its fixed income portfolio to take advantage of changes in the shape of the yield curve and changes in spread relationships in different sectors and for liquidity purposes. Management continually reviews strategies that will result in an increase in the yield or improvement in the structure of the investment portfolio, including monitoring credit and concentration risk in the portfolio. QNB owns one CDO in the form of a pooled trust preferred security, with a fair value of $71,000. PreTSL IV represents the senior-most obligation of the trust.

Loans receivable grew $667,000, or 0.1%, with commercial loans increasing $1,046,000, or 0.2%, to $672,155,000 at March 31, 2020, compared with $671,109,000 at year-end 2019. Retail loan balances declined $336,000 comparing March 31, 2020 to December 31, 2019.

Deposits grew $5,661,000, or 0.5%, from December 31, 2019 to March 31, 2020. Non-interest-bearing demand deposits remained fairly level with balances of $146,143,000 at March 31, 2020 compared with $146,270,000 at year-end 2019. Interest-bearing demand balances, excluding municipal deposits, increased $14,289,000, or 6.5%, to $235,290,000, with increases in all personal checking products and in the business checking product. The $14,228,000 increase in savings and $5,930,000 increase in money markets was offset by the decline in time deposits as balances were moved to higher-yielding or more liquid accounts. Total time deposits declined $20,501,000 from December 31, 2019 to March 31, 2020. Municipal deposit balances declined $8,158,000, or 7.3%, to $103,759,000. Municipal deposits can be volatile depending on the timing of deposits and withdrawals, and the cash flow needs of the school districts or municipalities. Municipal deposits increase as tax money received from the local school districts during second and third quarters and it is anticipated that these funds will flow out for the subsequent twelve months as the schools use the funds for operations. These deposits provide incremental income as they are invested in short-term investment securities but will further reduce the net interest margin as the spread earned is significantly less than the current net interest margin.

Short-term borrowings decreased 22.6%, from $55,931,000 at December 31, 2019 to $43,265,000 at March 31, 2020. Commercial sweep accounts decreased $849,000, as these funds may be volatile based on businesses' receipt and disbursement of funds and is offset by increases in business non-interest-bearing demand accounts. Overnight borrowings from FHLB decreased $11,817,000. During the first quarter of 2020, QNB borrowed long-term debt from the FHLB of $10,000,000 to lock in at a low yield, the average yield of 1.57% for the quarter was 31 basis points lower than the average rate paid on FHLB short-term borrowings.

LIQUIDITY

Liquidity represents an institution's ability to generate cash or otherwise obtain funds at reasonable rates to satisfy demand for loans and deposit withdrawals. QNB attempts to manage its mix of cash and interest-bearing balances, Federal funds sold and investment securities to match the volatility, seasonality, interest sensitivity and growth trends of its loans and deposits. The Company manages its liquidity risk by measuring and monitoring its liquidity sources and estimated funding needs. Liquidity is provided from asset sources through repayments and maturities of loans and investment securities. The portfolio of investment securities classified as available for sale and QNB's policy of selling certain residential mortgage originations in the secondary market also provide sources of liquidity. Core deposits and cash management repurchase agreements have historically been the most significant funding source for QNB. These deposits and repurchase agreements are generated from a base of consumers, businesses and public funds primarily located in the Company's market area.

Additional sources of liquidity are provided by the Bank's membership in the FHLB. At March 31, 2020, the Bank had a maximum borrowing capacity with the FHLB of approximately $321,621,000, net of the $10,000,000 in long-term borrowings and a $350,000 letter of credit at March 31, 2020. The maximum borrowing depends upon qualifying collateral assets and the Bank's asset quality and capital adequacy. In addition, the Bank maintains unsecured Federal funds lines with five correspondent banks totaling $61,000,000. At March 31, 2020 there were no outstanding borrowings under these lines. During the three months ended March 31, 2020, the Bank borrowed from the FHLB to fund short-term and long-term liquidity needs. Future availability under these lines is subject to the policies of the granting banks and may be withdrawn.

Liquid sources of funds, including cash, available-for-sale and equity investment securities, and loans held-for-sale have increased $5,988,000 since December 31, 2019, totaling $383,447,000 at March 31, 2020. Growth in deposits since year-end 2019 has been used to fund loans and cover operating expenses. Management expects these liquid sources will be adequate to meet normal fluctuations in loan demand or deposit withdrawals. The investment portfolio is expected to continue to provide sufficient liquidity, as municipal bonds are called or mature and cash flow on mortgage-backed and CMO securities continues to be steady.

Approximately $190,462,000 and $205,016,000 of available-for-sale debt securities at March 31, 2020 and December 31, 2019, respectively, were pledged as collateral for repurchase agreements and deposits of public funds. The level of pledged securities corresponds with the municipal deposit and repurchase agreement balances.

QNB is a member of the Certificate of Deposit Account Registry Services (CDARS) program offered by the Promontory Interfinancial Network, LLC. CDARS is a funding and liquidity management tool used by banks to access funds and manage their balance sheet. It enables financial institutions to provide customers with full FDIC insurance on time deposits over $250,000 that are placed in the program. QNB also has available Insured Cash Sweep (ICS), another program through Promontory Interfinancial Network, LLC, which is a product similar to CDARS, but one that provides liquidity like a money market or savings account.

CAPITAL ADEQUACY

A strong capital position is fundamental to support continued growth and profitability and to serve the needs of depositors. QNB's shareholders' equity at March 31, 2020 was $124,613,000, or 10.11% of total assets, compared with shareholders' equity of

$120,717,000, or 9.85% of total assets, at December 31, 2019. Shareholders' equity at March 31, 2020 and December 31, 2019 included a positive adjustment of $4,848,000 and positive adjustment $257,000, respectively, related to unrealized holding gains (losses), net of taxes, on investment securities available-for-sale. Without these adjustments, shareholders' equity to total assets would have been 9.76% and 9.84% at March 31, 2020 and December 31, 2019, respectively.

Average shareholders' equity and average total assets were $121,684,000 and $1,221,487,000 for the three months ended March 31, 2020, an increase of 7.4% and 2.9%, respectively, from the averages for the three months ended March 31, 2019. The ratio of average total equity to average total assets was 9.96% for the three months ended March 31, 2020 compared to 9.54% for the same period in 2019.

Retained earnings at March 31, 2020 were impacted by three months of net income totaling $220,000 offset by dividends declared and paid of $1,197,000 for the same period. QNB offers a Dividend Reinvestment and Stock Purchase Plan (the "Plan") to provide participants a convenient and economical method for investing cash dividends paid on the Company's common stock in additional shares at a discount. The Plan also allows participants to make additional cash purchases of stock at a discount. Stock purchases under the Plan contributed $220,000 to capital during the three months ended March 31, 2020.

The Board of Directors has authorized the repurchase of up to 100,000 shares of QNB common stock in open market or privately negotiated transactions. The repurchase authorization does not bear a termination date. As of March 31, 2020, 57,883 shares were repurchased under this authorization at an average price of $16.97 and a total cost of $982,000. There have been no additional shares repurchased under the plan since the first quarter of 2009.

QNB and the Bank are subject to various regulatory capital requirements as issued by Federal regulatory authorities. Regulatory capital is defined in terms of Tier 1 capital and Tier 2 capital. Risk-based capital ratios are expressed as a percentage of risk-weighted assets. Risk-weighted assets are determined by assigning various weights to all assets and off-balance sheet arrangements, such as letters of credit and loan commitments, based on associated risk. The final rules implementing the Basel Committee on Banking Supervision's capital guidelines for U.S. banks (Basel III) were fully phased-in January 1, 2019.

Minimum requirements increased for both the quantity and quality of capital. The rules included a new common equity Tier 1 capital to risk-weighted assets minimum ratio of 4.5%, raised the minimum ratio of Tier 1 capital to risk-weighted assets from 4.0% to 6.0%, required a minimum ratio of Total Capital to risk-weighted assets of 8.0%, and required a minimum Tier 1 leverage ratio of 4.0%. A new capital conservation buffer of 2.5%. QNB and the Bank have sufficient capital to meet minimum regulatory capital requirements plus the fully phased-in capital conservation buffer.

The following table sets forth consolidated information for QNB:

Capital Analysis	March 31, 2020	December 31, 2019
Regulatory Capital		
Shareholders' equity	$ 124,613	$ 120,717
Net unrealized securities losses, net of tax	(4,848)	(257)
Deferred tax assets on net operating loss	—	—
Disallowed intangible assets	(8)	(8)
Common equity tier I capital	119,757	120,452
Tier I capital	119,757	120,452
Allowable portion: Allowance for loan losses and reserve for unfunded commitments	10,407	9,960
Total regulatory capital	$ 130,164	$ 130,412
Risk-weighted assets	$ 938,232	$ 943,725
Quarterly average assets for leverage capital purposes	$ 1,221,479	$ 1,232,064

Capital Ratios	March 31, 2020	December 31, 2019
Common equity tier I capital / risk-weighted assets	12.76%	12.76%
Tier I capital / risk-weighted assets	12.76	12.76
Total regulatory capital / risk-weighted assets	13.87	13.82
Tier I capital / average assets (leverage ratio)	9.80	9.78

At March 31, 2020, common equity Tier I, Tier I capital, and total regulatory capital ratios remained level compared with December 31, 2019. The Company remains well-capitalized by all applicable regulatory requirements as of March 31, 2020.

MARKET RISK MANAGEMENT

Market risk reflects the risk of economic loss resulting from changes in interest rates and market prices. QNB’s primary market risk exposure is interest rate risk and liquidity risk. QNB’s liquidity position was discussed in a prior section.

QNB’s largest source of revenue is net interest income, which is subject to changes in market interest rates. Interest rate risk management seeks to minimize the effect of interest rate changes on net interest margins and interest rate spreads and to provide growth in net interest income through periods of changing interest rates. QNB’s Asset/Liability and Investment Management Committee (ALCO) is responsible for managing interest rate risk and for evaluating the impact of changing interest rate conditions on net interest income.

QNB uses computer simulation analysis to measure the sensitivity of projected earnings to changes in interest rates. Simulation considers current balance sheet volumes and the scheduled repricing dates, instrument level optionality, and maturities of assets and liabilities. It incorporates assumptions for growth, changes in the mix of assets and liabilities, prepayments, and average rates earned and paid. Based on this information, management uses the model to project net interest income under multiple interest rate scenarios.

A balance sheet is considered liability sensitive when its liabilities (deposits and borrowings) reprice faster or than its earning assets (loans and securities). A liability sensitive balance sheet will produce relatively less net interest income when interest rates rise and more net interest income when they decline. Based on our simulation analysis, management believes QNB’s interest sensitivity position at March 31, 2020 is liability sensitive. Management expects that market interest rates will remain level over the next 12 months, based on the economic environment and policy of the Board of Governors of the Federal Reserve System.

The following table shows the estimated impact of changes in interest rates on net interest income as of March 31, 2020 and 2019 assuming instantaneous rate shocks, and consistent levels of assets and liabilities. Net interest income for the subsequent twelve months is projected to increase when interest rates are higher than current rates, except for the +300 basis point scenario.

Estimated Change in Net Interest Income

Changes in Interest rates	March 31,	
(in basis points)	2020	2019
+300	-0.37%	-4.86%
+200	0.58%	-3.11%
+100	1.05%	-1.42%
-100	-5.06%	-0.71%

Computations of future effects of hypothetical interest rate changes are based on numerous assumptions and should not be relied upon as indicative of actual results. Assets and liabilities may react differently than projected to changes in market interest rates. The interest rates on certain types of assets and liabilities may fluctuate in advance of changes in market interest rates, while rates on other types of assets and liabilities may lag changes in market interest rates. Interest rate shifts may not be parallel.

Changes in interest rates can cause substantial changes in the amount of prepayments of loans and mortgage-backed securities, which may in turn affect QNB’s interest rate sensitivity position. Additionally, credit risk may rise if an interest rate increase adversely affects the ability of borrowers to service their debt.

QNB is not subject to foreign currency exchange or commodity price risk. At March 31, 2020, QNB did not have any hedging transactions in place such as interest rate swaps, caps or floors.

ITEM 3. QUANTITATIVE AND QUALITATIVE DISCLOSURE ABOUT MARKET RISK

The information required in response to this item is set forth in Item 2, above.

ITEM 4. CONTROLS AND PROCEDURES

We maintain a system of controls and procedures designed to provide reasonable assurance as to the reliability of the consolidated financial statements and other disclosures included in this report, as well as to safeguard assets from unauthorized use or disposition. We evaluated the effectiveness of the design and operation of our disclosure controls and procedures under the supervision and with the participation of management, including our Chief Executive Officer and Chief Financial Officer. Based upon that evaluation, our Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures are effective as of the end of the period covered by this report. No changes were made to our internal control over financial reporting during the fiscal quarter covered by this report that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

Item 1. Legal Proceedings

No material proceedings.

Item 1A. Risk Factors

The outbreak of the recent coronavirus ("COVID-19"), or an outbreak of another highly infectious or contagious disease, could adversely affect the Company's business, financial condition and results of operations.

QNB's business is dependent upon the willingness and ability of its customers to conduct banking and other financial transactions. The spread of a highly infectious or contagious disease, such as COVID-19, could cause severe disruptions in the U.S. economy, which could in turn disrupt the business, activities, and operations of QNB's customers, as well the business and operations of QNB. Moreover, since the beginning of January 2020, the coronavirus outbreak has caused significant disruption in the financial markets both globally and in the United States. The spread of COVID-19, or an outbreak of another highly infectious or contagious disease, may result in a significant decrease in business and/or cause QNB's customers to be unable to meet existing payment or other obligations to QNB, particularly in the event of a spread of COVID-19 or an outbreak of an infectious disease in the QNB's market area. Although the Company maintains contingency plans for pandemic outbreaks, a spread of COVID-19, or an outbreak of another contagious disease, could also negatively impact the availability of key personnel of QNB necessary to conduct the business of QNB. Such a spread or outbreak could also negatively impact the business and operations of third-party service providers who perform critical services for QNB's business. If COVID-19, or another highly infectious or contagious disease, spreads or the response to contain COVID-19 is unsuccessful, QNB could experience a material adverse effect on its business, financial condition, and results of operations.

There were no other material changes to the Risk Factors described in Item 1A in QNB's Annual Report on Form 10-K for the period ended December 31, 2019.

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

QNB did not repurchase any shares of its common stock during the quarter ended March 31, 2020. The following provides certain information relating to QNB's stock repurchase plan.

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 that may yet be Purchased Under the Plan
January 1, 2020 through January 31, 2020	—	—	—	42,117
February 1, 2020 through February 29, 2020	—	—	—	42,117
March 1, 2020 through March 31, 2020	—	—	—	42,117
Total	—	—	—	42,117

(1) Transactions are reported as of settlement dates.

(2) QNB's current stock repurchase plan was approved by its Board of Directors and announced on January 24, 2008 and subsequently increased on February 9, 2009.

(3) The total number of shares approved for repurchase under QNB's current stock repurchase plan is 100,000.

(4) QNB's current stock repurchase plan has no expiration date.

(5) QNB has no stock repurchase plan that it has determined to terminate or under which it does not intend to make further purchases.

Item 3. Default Upon Senior Securities

None.

Item 4. Mine Safety Disclosures

None.

Item 5. Other Information

None.

Item 6. Exhibits

Exhibit 3.1	Articles of Incorporation of Registrant, as amended. (Incorporated by reference to Exhibit 3(i) of Registrant's Annual Report on Form 10-K, SEC File No. 0-17706, filed with the Commission on March 13, 2015).
Exhibit 3.2	Bylaws of Registrant, as amended. (Incorporated by reference to Exhibit 3(ii) of Registrant's Annual Report on Form 10-K, SEC File No. 0-17706, filed with the Commission on March 13, 2015).
Exhibit 31.1	Section 302 Certification of Chief Executive Officer
Exhibit 31.2	Section 302 Certification of Chief Financial Officer
Exhibit 32.1	Section 906 Certification of Chief Executive Officer
Exhibit 32.2	Section 906 Certification of Chief Financial Officer

The following Exhibits are being furnished* as part of this report:

No.	Description
101.INS	XBRL Instance Document.*
101.SCH	XBRL Taxonomy Extension Schema Document.*
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document.*
101.LAB	XBRL Taxonomy Extension Label Linkbase Document.*
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document.*
101.DEF	XBRL Taxonomy Extension Definitions Linkbase Document.*

* These interactive data files are being furnished as part of this Quarterly Report, and, in accordance with Rule 402 of Regulation S-T, shall not be deemed filed for purposes of Section 11 or 12 of the Securities Act of 1933, as amended, or Section 18 of the Securities Exchange Act of 1934, as amended, or otherwise subject to liability under those sections.

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.

QNB Corp.

Date: May 7, 2020

By: /s/ David W. Freeman
David W. Freeman
Chief Executive Officer

Date: May 7, 2020

By: /s/ Janice McCracken Erkes
Janice McCracken Erkes
Chief Financial Officer

Date: May 7, 2020

By: /s/ Mary E. Liddle
Mary E. Liddle
Chief Accounting Officer, QNB Bank

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Section 2: EX-31.1 (EX-31.1)

Exhibit 31.1

CERTIFICATION

I, David W. Freeman, certify that:

1. I have reviewed this quarterly report on Form 10-Q of QNB Corp.
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 U.S. 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 function):
   (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.

Date: May 7, 2020

By: /s/ David W. Freeman

David W. Freeman
Chief Executive Officer

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Section 3: EX-31.2 (EX-31.2)

Exhibit 31.2

CERTIFICATION

I, Janice McCracken Erkes, certify that:

1. I have reviewed this quarterly report on Form 10-Q of QNB Corp.
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 U.S. 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 function):
   (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.

Date: May 7, 2020

By: /s/ Janice McCracken Erkes
Janice McCracken Erkes
Chief Financial Officer

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Section 4: EX-32.1 (EX-32.1)

Exhibit 32.1

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350
AS ADDED BY
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report on Form 10-Q of QNB Corp. (the Company) for the period ended March 31, 2020, as filed with the Securities and Exchange Commission (the Report), I, David W. Freeman, Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. §1350, as added by § 906 of the Sarbanes-Oxley Act of 2002, that this periodic report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and that information contained in this report fairly presents, in all material respects, the financial condition and results of operations of the issuer.

Date: May 7, 2020

By: /s/ David W. Freeman
David W. Freeman
Chief Executive Officer

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Section 5: EX-32.2 (EX-32.2)

Exhibit 32.2

CERTIFICATION PURSUANT TO
18 U.S.C. SECTION 1350
AS ADDED BY
SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002

In connection with the Quarterly Report on Form 10-Q of QNB Corp. (the Company) for the period ended March 31, 2020, as filed with the Securities and Exchange Commission (the Report), I, Janice McCracken Erkes, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. §1350, as added by § 906 of the Sarbanes-Oxley Act of 2002, that this periodic report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 and that information contained in this report fairly presents, in all material respects, the financial condition and results of operations of the issuer.

Date: May 7, 2020

By: /s/ Janice McCracken Erkes
Janice McCracken Erkes
Chief Financial Officer

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