UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 10-K

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

For the fiscal year ended December 31, 2019

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

For the transition period from _____ to _____

Commission file number: 001-34292

ORRSTOWN FINANCIAL SERVICES, INC.

(Exact Name of Registrant as Specified in its Charter)

Pennsylvania	**23-2530374**
(State or Other Jurisdiction of Incorporation or Organization)	**(I.R.S. Employer Identification No.)**
77 East King Street, P. O. Box 250, Shippensburg, Pennsylvania	**17257**
(Address of Principal Executive Offices)	**(Zip Code)**

Registrant's Telephone Number, Including Area Code: (717) 532-6114

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

Title of Each Class	Trading symbol(s)	Name of Each Exchange on Which Registered
Common Stock, no par value	**ORRF**	**NASDAQ Stock Market**

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

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes ☐ No ☒

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes ☐ No ☒

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 the definitions of "large accelerated filer," "accelerated filer," "smaller reporting company," and "emerging growth company" in Rule 12b-2 of the Exchange Act.

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

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

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

Securities registered pursuant to Section 12(b) of the Act: No ☒

The aggregate market value of the voting stock held by non-affiliates computed by reference to the price at which the common stock was last sold as of the last business day of the Registrant's most recently completed second fiscal quarter, was approximately $238.3 million. For purposes of this calculation, the term "affiliate" refers to all directors and executive officers of the registrant, and all persons beneficially owning more than 5% of the registrant's common stock.

Number of shares outstanding of the Registrant's common stock as of February 28, 2020: 11,256,603.

DOCUMENTS INCORPORATED BY REFERENCE

Portions of the Proxy Statement for the 2020 Annual Meeting of Shareholders are incorporated by reference in Part III of this Form 10-K.

ORRSTOWN FINANCIAL SERVICES, INC.

FORM 10-K

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Glossary of Defined Terms

The following terms may be used throughout this Report, including the consolidated financial statements and related notes.

Term	Definition
ALL	Allowance for loan losses
AFS	Available for sale
AOCI	Accumulated other comprehensive income (loss)
ASC	Accounting Standards Codification
ASU	Accounting Standards Update
Bank	Orrstown Bank, the commercial banking subsidiary of Orrstown Financial Services, Inc.
BHC Act	Bank Holding Company Act of 1965
CDI	Core deposit intangible
CET1	Common Equity Tier 1
CMO	Collateralized mortgage obligation
Company	Orrstown Financial Services, Inc. and subsidiaries (interchangeable with "Orrstown" below)
CFPB	Consumer Financial Protection Bureau
CRA	Community Reinvestment Act
Dodd-Frank Act	Dodd-Frank Wall Street Reform and Consumer Protection Act
EPS	Earnings per common share
ERM	Enterprise risk management
Exchange Act	Securities Exchange Act of 1934, as amended
FASB	Financial Accounting Standards Board
FDIA	Federal Deposit Insurance Act
FDIC	Federal Deposit Insurance Corporation
FHC	Financial holding company
FHLB	Federal Home Loan Bank
FRB	Board of Governors of the Federal Reserve System
GAAP	Accounting principles generally accepted in the United States of America
GLB Act	Gramm-Leach-Bliley Act
GSE	United States government-sponsored enterprise
Hamilton	Hamilton Bancorp, Inc., and its wholly-owned banking subsidiary, Hamilton Bank (acquired May 1, 2019)
IRC	Internal Revenue Code of 1986, as amended
LHFS	Loans held for sale
MBS	Mortgage-backed securities
Mercersburg	Mercersburg Financial Corporation and its wholly-owned banking subsidiary, First Community Bank of Mercersburg (acquired October 1, 2018)
MPF Program	Mortgage Partnership Finance Program
MSR	Mortgage servicing right
NIM	Net interest margin
OCI	Other comprehensive income (loss)
OFA	Orrstown Financial Advisors, a division of the Bank that provides investment and brokerage services
OREO	Other real estate owned (foreclosed real estate)
Orrstown	Orrstown Financial Services, Inc. and subsidiaries
OTTI	Other-than-temporary impairment
Parent Company	Orrstown Financial Services, Inc., the parent company of Orrstown Bank and Wheatland Advisors, Inc.
2011 Plan	2011 Orrstown Financial Services, Inc. Stock Incentive Plan
PCI loans	Purchased credit impaired loans
Repurchase Agreements	Securities sold under agreements to repurchase
SEC	Securities and Exchange Commission
Securities Act	Securities Act of 1933, as amended
TDR	Troubled debt restructuring
U.S.	United States of America
Wheatland	Wheatland Advisors, Inc., the Registered Investment Advisor subsidiary of Orrstown Financial Services, Inc.

Unless the context otherwise requires, the terms “Orrstown,” “we,” “us,” “our,” and “Company” refer to Orrstown Financial Services, Inc. and its subsidiaries.

PART I

Caution About Forward-Looking Statements:

Certain statements appearing herein, which are not historical in nature, are forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. In addition, we may make other written and oral communications, from time to time, that contain such statements. Forward-looking statements reflect the current views of the Company's management with respect to, among other things, future events and the Company's financial performance. These statements are often, but not always, made through the use of words or phrases such as "may," "should," "could," "predict," "potential," "believe," "will likely result," "expect," "continue," "will," "anticipate," "seek," "estimate," "intend," "plan," "project," "forecast," "goal," "target," "would" and "outlook," or the negative variations of those words or other comparable words of a future or forward-looking nature. These forward-looking statements are not historical facts, and are based on current expectations, estimates and projections about the Company's industry, management's beliefs and certain assumptions made by management, many of which, by their nature, are inherently uncertain and beyond the Company's control. Accordingly, the Company cautions you that any such forward-looking statements are not guarantees of future performance and are subject to risks, assumptions and uncertainties that are difficult to predict. Although the Company believes that the expectations reflected in these forward-looking statements are reasonable as of the date made, actual results may prove to be materially different from the results expressed or implied by the forward-looking statements and there can be no assurances that the Company will be able to continue to successfully execute on our strategic growth plan into Dauphin, Lancaster, York and Berks counties, Pennsylvania, and the greater Baltimore market in Maryland, with newer markets continuing to be receptive to our community banking model; to take advantage of market disruption; to experience sustained growth in loans and deposits or maintain the momentum experienced to date from these actions; and to realize cost savings from our branch consolidation efforts. Factors which could cause the actual results of the Company's operations to differ materially from expectations include, but are not limited to: ineffectiveness of the Company's strategic growth plan due to changes in current or future market conditions; the effects of competition and how it may impact our community banking model, including industry consolidation and development of competing financial products and services; the integration of the Company's strategic acquisitions; the inability to fully achieve expected savings, efficiencies or synergies from mergers and acquisitions, or taking longer than estimated for such savings, efficiencies and synergies to be realized; changes in laws and regulations; interest rate movements; changes in credit quality; inability to raise capital, if necessary, under favorable conditions; volatilities in the securities markets; deteriorating economic conditions; expenses associated with pending litigation and legal proceedings; and other risks and uncertainties. The foregoing list of factors is not exhaustive.

For a description of factors that we believe could cause actual results to differ materially from such forward-looking statements, you should review our Risk Factors discussion in Item 1A, our Critical Accounting Policies section included in Item 7, and Note 22, Contingencies, in the Notes To Consolidated Financial Statements included in Item 8 of this Annual Report on Form 10-K. We encourage readers of this report to understand forward-looking statements to be strategic objectives rather than absolute targets of future performance. If one or more events related to these or other risks or uncertainties materialize, or if the Company's underlying assumptions prove to be incorrect, actual results may differ materially from what the Company anticipates. Accordingly, you should not place undue reliance on any such forward-looking statements. Any forward-looking statement speaks only as of the date on which it is made, and the Company does not undertake any obligation to publicly update or review any forward-looking statement, whether as a result of new information, future developments or otherwise. New risks and uncertainties arise from time to time, and it is not possible for the Company to predict those events or how they may affect it. In addition, the Company cannot assess the impact of each factor on its business or the extent to which any factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statements. All forward-looking statements, expressed or implied, included in this Annual report on Form 10-K are expressly qualified in their entirety by this cautionary statement. This cautionary statement should also be considered in connection with any subsequent written or oral forward-looking statements that the Company or persons acting on the Company's behalf may issue.

ITEM 1 – BUSINESS

Orrstown Financial Services, Inc., a Pennsylvania corporation, is the holding company for its wholly-owned subsidiaries Orrstown Bank and Wheatland Advisors, Inc. The Company's principal executive offices are located at 77 East King Street, Shippensburg, Pennsylvania, with additional executive and administrative offices at 4750 Lindle Road, Harrisburg, Pennsylvania. The Parent Company was organized on November 17, 1987, for the purpose of acquiring the Bank and such other banks and bank-related activities as are permitted by law and desirable. The Company provides banking and bank-related services through branches located in south central Pennsylvania, principally in Berks, Cumberland, Dauphin, Franklin, Lancaster, Perry and York Counties, Pennsylvania, and in Anne Arundel, Baltimore, Howard and Washington Counties, Maryland, as well as Baltimore City, Maryland. Wheatland was acquired in December 2016 and provides services as a registered investment advisor through its office in Lancaster County, Pennsylvania.

The Company files periodic reports with the SEC in the form of quarterly reports on Form 10-Q, annual reports on Form 10-K, annual proxy statements and current reports on Form 8-K for any significant events that may arise during the year. Copies of these reports, and any amendments to such reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), may be obtained free of charge through the SEC's Internet site at www.sec.gov or by accessing the Company's website at www.orrstown.com as soon as reasonably practicable after such reports are electronically filed with, or furnished to, the SEC. Information on our website shall not be considered a part of this Annual Report on Form 10-K.

Recent Merger and Acquisition Activity

On October 1, 2018, Orrstown expanded its presence in Franklin County, Pennsylvania, with the completion of its acquisition of Mercersburg Financial Corporation and the merger of its banking subsidiary, First Community Bank of Mercersburg, with and into Orrstown Bank.

On May 1, 2019, Orrstown expanded its presence into the greater Baltimore, Maryland, market with the completion of its acquisition of Hamilton Bancorp, Inc., and the merger of its banking subsidiary, Hamilton Bank, with and into Orrstown Bank.

Business

The Bank was organized in 1919 as a state-chartered bank. On March 8, 1988, in a bank holding company reorganization transaction, the Parent Company acquired 100% ownership of the Bank.

The Parent Company's primary activity consists of owning and supervising its subsidiaries, the Bank and Wheatland. Day-to-day management is conducted by its officers, who are also Bank officers. The Parent Company has historically derived most of its income through dividends from the Bank. At December 31, 2019, the Company had total assets of $2.4 billion, total deposits of $1.9 billion and total shareholders' equity of $223.2 million.

The Parent Company has no employees. Its 12 officers are employees of the Bank. On December 31, 2019, the Bank and Wheatland combined had 439 full-time and 21 part-time employees.

The Bank is engaged in the commercial banking and trust business as authorized by the Pennsylvania Banking Code of 1965. This involves accepting demand, time and savings deposits, and granting loans. The Bank holds commercial, residential, consumer and agribusiness loans primarily in its market areas of in south central Pennsylvania, in the greater Baltimore region, and in Washington County, Maryland, and in contiguous counties. The concentrations of credit by type of loan are included in Note 4, Loans and Allowance for Loan Losses, to the Consolidated Financial Statements under Part II, Item 8, "Financial Statements and Supplementary Data." The Bank maintains a diversified loan portfolio and evaluates each client's creditworthiness on a case-by-case basis. The amount of collateral obtained, if deemed necessary by the Bank upon the extension of credit, is based on management's credit evaluation of the client pursuant to collateral standards established in the Bank's credit policies and procedures.

Wheatland supplements the Bank's trust and wealth management group and is anticipated to provide opportunities for future growth in these areas.

Lending

Federal bank regulatory agencies have adopted uniform regulations prescribing standards for extensions of credit that are secured by liens or interests in real estate or made for the purpose of financing permanent improvements to real estate. Under these regulations, all insured depository institutions, such as the Bank, must adopt and maintain written policies establishing appropriate limits and standards for extensions of credit that are secured by liens or interests in real estate or are made for the purpose of financing permanent improvements to real estate. These policies must establish loan portfolio diversification

standards, prudent underwriting standards (including loan-to-value limits) that are clear and measurable, loan administration procedures, and documentation, approval and reporting requirements. The real estate lending policies must reflect consideration of the federal bank regulatory agencies' Interagency Guidelines for Real Estate Lending Policies.

All secured loans are supported with appraisals or evaluations of collateral. Business equipment and machinery, inventories, accounts receivable, and farm equipment are considered appropriate security, provided borrowers meet acceptable standards for liquidity and marketability. Loans secured by real estate generally do not exceed 90% of the appraised value of the property. Loan to collateral values are monitored as part of the loan review process, and appraisals are updated as deemed appropriate under the circumstances.

Commercial Lending

The Bank makes commercial real estate, equipment, construction, working capital and other commercial purpose loans as required by commercial customers throughout the Bank's various markets. The Bank has significant market share in south central Pennsylvania and has been expanding its presence geographically in recent years. Currently, growth markets include the Harrisburg region, Lancaster County and Maryland markets. The Bank's commercial lending is focused in these geographic regions or with borrowers headquartered in these geographic regions.

The Bank's credit policy dictates the underwriting requirements for the various types of commercial loans the Bank makes available to borrowers. The policy covers such requirements as debt coverage ratios, advance rates against different forms of collateral, loan-to-value ratios and maximum term.

A majority of the Company's loan assets are loans for business purposes. At December 31, 2019, approximately 63% of the loan portfolio was comprised of commercial loans.

Consumer Lending

The Bank provides home equity loans, home equity lines of credit and other consumer loans primarily through its branch network and client call center. A large majority of the consumer loans are secured by either a first or second lien position on the borrower's primary residential real estate. The Bank requires a loan-to-value ratio of no greater than 90% of the value of the real estate being taken as collateral. The Bank also, at times, purchases consumer loans to help diversify credit risk in our loan portfolio.

Residential Lending

The Bank provides residential mortgages throughout its various markets referred from retail branches and through a network of mortgage loan officers. A majority of the residential mortgages originated are sold to secondary market investors, primarily Wells Fargo and Fannie Mae. All mortgages, regardless of being sold or held in the Bank's portfolio, are generally underwritten to secondary market industry standards for prime mortgages. The Bank generally requires a loan-to-value ratio of no greater than 80% of the value of the real estate being taken as collateral, without the borrower obtaining private mortgage insurance.

Loan Review

The Company has a loan review policy and program which is designed to identify and monitor risk in the lending function. The Management ERM Committee, comprised of executive officers and loan department personnel, is charged with the oversight of overall credit quality and risk exposure of the Company's loan portfolio. This includes the monitoring of the lending activities of all Company personnel with respect to underwriting and processing new loans and the timely follow-up and corrective action for loans showing signs of deterioration in quality. A loan review program provides the Company with an independent review of the commercial loan portfolio on an ongoing basis. Generally, consumer and residential mortgage loans are included in the Pass categories unless a specific action, such as extended delinquencies, bankruptcy, repossession or death of the borrower occurs, which heightens awareness as to a possible credit event.

Internal loan reviews are completed annually on all commercial relationships with a committed loan balance in excess of $500 thousand, which includes confirmation of risk rating by an independent credit officer. Credit Administration also reviews loans in excess of $1.0 million. In addition, all commercial relationships greater than $500 thousand rated substandard, doubtful or loss are reviewed quarterly and corresponding risk ratings are reaffirmed by the Company's Problem Loan Committee, with subsequent reporting to the Management ERM Committee and the Board of Directors.

The Bank outsources its independent loan review to a third-party provider, which monitors and evaluates loan clients on a quarterly basis utilizing risk-rating criteria established in the credit policy in order to identify deteriorating trends and detect conditions which might indicate potential problem loans. The results of the third-party loan review are reported quarterly to the Management and Board ERM Committees for review. The loan ratings provide the basis for evaluating the adequacy of the ALL.

Deposit Products

The Bank offers deposit products to retail, commercial, non-profit and government clients through its retail branch network. Product offerings for retail clients include checking accounts, money market, savings and certificates of deposit. The Company offers numerous products and treasury management solutions for commercial clients, including account analysis for demand deposit accounts, certificates of deposit, sweep accounts, money market accounts and other treasury services such as merchant banking, foreign exchange, remote deposit capture, lockbox and others. The Bank further provides various deposit solutions for government agencies and non-profits, such as demand deposit accounts, sweeps and certificates of deposit.

Investment Services

Through its trust department, the Bank renders services as trustee, executor, administrator, guardian, managing agent, custodian, investment advisor, and other fiduciary activities authorized by law under the trade name Orrstown Financial Advisors. OFA offers retail brokerage services through a third-party broker/dealer arrangement with Cetera Advisor Networks LLC. Wheatland also offers investment advisor services as a registered investment advisor. At December 31, 2019, assets under management by OFA and Wheatland totaled $1.6 billion.

Competition

The Bank’s principal market area consists of south central Pennsylvania, the greater Baltimore region, and Washington County, Maryland. The Bank serves a substantial number of depositors in this market area and its contiguous counties.

We compete with other banks and less heavily regulated financial services companies such as credit unions and finance and trust companies, as well as mortgage banking companies, mutual funds, investment advisors, and brokerage firms, both within and outside of our primary market areas. Financial technology companies, or FinTechs, are also providing nontraditional, but increasingly strong, competition for our borrowers, depositors, and other clients.

We compete for loans primarily on the basis of a combination of value and service by building client relationships as a result of addressing our clients’ banking needs, demonstrating expertise, and providing convenience to our clients.

We compete for deposits similarly on the basis of a combination of value and service and by providing convenience through a banking network of branches and ATMs within our markets and our website at www.orrstown.com.

We implement strategic initiatives focused on expanding our core businesses and explore, on an ongoing basis, acquisition, divestiture, and joint venture opportunities to the extent permitted by our regulators. We analyze each of our products and businesses in the context of shareholder return, client demands, competitive advantages, industry dynamics, and growth potential. We believe our market area will support growth in assets and deposits in the future, which we expect to contribute to our ability to maintain or grow profitability.

Regulation and Supervision

The Parent Company is a bank holding company registered with the FRB and has elected status as a financial holding company. The Bank is a Pennsylvania-chartered commercial bank and a member of the FRB. Wheatland is a registered investment advisor.

Regulatory Environment

The banking industry is highly regulated. Orrstown is subject to supervision, regulation, and examination by various federal and state regulators, including the FRB, SEC, CFPB, FDIC, and various state regulatory agencies. The statutory and regulatory framework that governs us is generally intended to protect depositors and clients, the FDIC's Deposit Insurance Fund, the U.S. banking and financial system, and financial markets as a whole by ensuring the safety and soundness of Bank Holding Companies ("BHCs") and banks. Bank regulators regularly examine the operations of BHCs and banks. Regulators have broad supervisory and enforcement authority over BHCs and banks, including the power to impose nonpublic supervisory agreements, issue cease and desist orders, impose fines and other civil and criminal penalties, terminate deposit insurance, and appoint a conservator or receiver.

Engaging in unsafe or unsound practices or failing to comply with applicable laws, regulations, and supervisory agreements could subject Orrstown, its subsidiaries, and their respective officers, directors, and institution-affiliated parties to the remedies described above, and other sanctions. In addition, the FDIC may terminate a bank's deposit insurance upon a finding that the bank's financial condition is unsafe or unsound or that the bank has engaged in unsafe or unsound practices or has violated an applicable rule, regulation, order, or condition enacted or imposed by the bank's regulatory agency.

Banking statutes, regulations, and policies are continually under review by Congress, state legislatures, and federal and state regulatory agencies. In addition to laws and regulations, state and federal bank regulatory agencies may issue policy statements, interpretive letters, and similar written guidance applicable to Orrstown. Any change in statutes, regulations, or regulatory policies applicable to us, including changes in their interpretation or implementation, could have a material effect on our business or organization.

In May 2018, the Economic Growth Act was signed into law. Among other regulatory changes, the Economic Growth Act amended various sections of the Dodd-Frank Act, including section 165 of the Dodd-Frank Act, which was revised to raise the asset thresholds for determining the application of enhanced prudential standards for BHCs. Under the Economic Growth Act, BHCs with consolidated assets below $100.0 billion were immediately exempted from all of the enhanced prudential standards, except risk committee requirements, which now apply to publicly-traded BHCs with $50.0 billion or more of consolidated assets.

In October 2019, the Federal Reserve adopted the EPS Tailoring Rule pursuant to the Economic Growth Act, which adjusted the thresholds at which certain enhanced prudential standards apply to U.S. BHCs with $100.0 billion or more in total consolidated assets. Also in October 2019, the Federal Reserve and FDIC adopted the Capital and Liquidity Tailoring Rule, which similarly adjusted the thresholds at which certain other capital and liquidity standards apply to U.S. BHCs and banks with $100.0 billion or more in total consolidated assets.

We are also subject to the disclosure and regulatory requirements of the Securities Act of 1933, as amended, and the Securities Exchange Act of 1934, as amended, both as administered by the SEC, as well as the rules of Nasdaq that apply to companies with securities listed on the Nasdaq Capital Market. Wheatland is subject to periodic examination by the SEC.

Several of the more significant regulatory provisions applicable to bank holding companies and banks to which Orrstown and the Bank are subject are discussed below, along with certain regulatory matters concerning Orrstown and the Bank. To the extent that the following information describes statutory or regulatory provisions, such information is qualified in its entirety by reference to the particular statutes or regulations. Any change in applicable law or regulation may have a material effect on the business and prospects of the Company and the Bank.

Financial and Bank Holding Company Activities

As an FHC, we are permitted to engage, directly or through subsidiaries, in a wide variety of activities that are financial in nature or are incidental or complementary to a financial activity, in addition to all of the activities otherwise allowed to us.

As an FHC, Orrstown is generally subject to the same regulation as other bank holding companies, including the reporting, examination, supervision and consolidated capital requirements of the FRB. To preserve our FHC status, we must remain well-capitalized and well-managed and ensure that the Bank remains well-capitalized and well-managed for regulatory purposes and earns "satisfactory" or better ratings on our periodic Community Reinvestment Act examinations. An FHC ceasing to meet these standards is subject to a variety of restrictions, depending on the circumstances.

If the Parent Company or the Bank are either not well-capitalized or not well-managed, the Parent Company or the Bank must promptly notify the FRB. Until compliance is restored, the FRB has broad discretion to impose appropriate limitations on an FHC's activities. If compliance is not restored within 180 days, the FRB may ultimately require the FHC to divest its depository institutions or in the alternative, to discontinue or divest any activities that are permitted only to non-FHC bank holding companies.

If the FRB determines that an FHC or its subsidiaries do not satisfy the CRA requirements, the potential restrictions are different. In that case, until all the subsidiary institutions are restored to at least "satisfactory" CRA rating status, the FHC may not engage, directly or through a subsidiary, in any of the additional activities permissible under the BHC Act nor make additional acquisitions of companies engaged in the additional activities. However, completed acquisitions and additional activities and affiliations previously begun are left undisturbed, as the BHC Act does not require divestiture for this type of situation.

Federal Deposit Insurance

The FDIC's Deposit Insurance Fund provides insurance coverage for certain deposits, up to a standard maximum deposit insurance amount of $250,000 per depositor and is funded through assessments on insured depository institutions, based on the risk each institution poses to the Deposit Insurance Fund. The Bank accepts client deposits that are insured by the Deposit Insurance Fund and, therefore, must pay insurance premiums. The FDIC may increase the Bank’s insurance premiums based on various factors, including the FDIC’s assessment of its risk profile.

If the FDIC is appointed conservator or receiver of a bank upon the bank’s insolvency or the occurrence of other events, the FDIC may sell some, part or all of a bank’s assets and liabilities to another bank or repudiate or disaffirm most types of contracts to which the bank was a party if the FDIC believes such contracts are burdensome. In resolving the estate of a failed bank, the FDIC as receiver will first satisfy its own administrative expenses, and the claims of holders of U.S. deposit liabilities also have priority over those of other general unsecured creditors.

Liability for Banking Subsidiaries

Orrstown is required to serve as a source of financial and managerial strength to the Bank and, under appropriate conditions, to commit resources to support the Bank. This support may be required by the Federal Reserve at times when we might otherwise determine not to provide it or when doing so is not otherwise in the interests of Orrstown or our shareholders or creditors. The Federal Reserve may require a BHC to make capital injections into a troubled subsidiary bank and may charge the BHC with engaging in unsafe and unsound practices if the BHC fails to commit resources to such a subsidiary bank or if it undertakes actions that the Federal Reserve believes might jeopardize the BHC’s ability to commit resources to such subsidiary bank.

Under these requirements, Orrstown may in the future be required to provide financial assistance to the Bank should it experience financial distress. Capital loans by Orrstown to the Bank would be subordinate in right of payment to deposits and certain other debts of the Bank. In the event of Orrstown's bankruptcy, any commitment by Orrstown to a federal bank regulatory agency to maintain the capital of the Bank would be assumed by the bankruptcy trustee and entitled to a priority of payment.

Pennsylvania Banking Law

The Pennsylvania Banking Code contains detailed provisions governing the organization, location of offices, rights and responsibilities of directors, officers, and employees, as well as corporate powers, savings and investment operations and other aspects of the Bank and its affairs. The Pennsylvania Banking Code delegates extensive rule-making power and administrative discretion to the Pennsylvania Department of Banking so that the supervision and regulation of state chartered banks may be flexible and readily responsive to changes in economic conditions and in savings and lending practices.

The FDIA, however, prohibits state chartered banks from making new investments, loans, or becoming involved in activities as principal and equity investments which are not permitted for national banks unless the FDIC determines the activity or investment does not pose a significant risk of loss to the Deposit Insurance Fund, and the bank meets all applicable capital requirements. Accordingly, the additional operating authority provided to the Bank by the Pennsylvania Banking Code is significantly restricted by the FDIA.

Dividend Restrictions

The Parent Company is a legal entity separate and distinct from its banking and non-banking subsidiaries. Since our consolidated net income consists largely of net income of Orrstown's subsidiaries, our ability to make capital distributions, including paying dividends and repurchasing shares, depends upon our receipt of dividends from these subsidiaries. Under federal law, there are various limitations on the extent to which the Bank can declare and pay dividends to the Parent Company, including those related to regulatory capital requirements, general regulatory oversight to prevent unsafe or unsound practices, and federal banking law requirements concerning the payment of dividends out of net profits, surplus, and available earnings. Certain contractual restrictions also may limit the ability of the Bank to pay dividends to the Parent Company. No assurances can be given that the Bank will, in any circumstances, pay dividends to the Parent Company.

Orrstown's ability to declare and pay dividends to our shareholders is similarly limited by federal banking law and Federal Reserve regulations and policy. The Bank must maintain the applicable CET1 Capital Conservation Buffer to avoid becoming subject to restrictions on capital distributions, including dividends. As of January 1, 2019, the fully phased in Capital Conservation Buffer was 2.5%.

Federal Reserve policy provides that a BHC should not pay dividends unless (1) the BHC's net income over the last four quarters (net of dividends paid) is sufficient to fully fund the dividends, (2) the prospective rate of earnings retention appears consistent with the capital needs, asset quality, and overall financial condition of the BHC and its subsidiaries, and (3) the BHC will continue to meet minimum required capital adequacy ratios. Accordingly, a BHC should not pay cash dividends that can only be funded in ways that weaken the BHC's financial health, such as by borrowing. The policy also provides that a BHC should inform the Federal Reserve reasonably in advance of declaring or paying a dividend that exceeds earnings for the period for which the dividend is being paid or that could result in a material adverse change to the BHC's capital structure. BHCs also are required to consult with the Federal Reserve before increasing dividends or redeeming or repurchasing capital instruments. Additionally, the Federal Reserve could prohibit or limit the payment of dividends by a BHC if it determines that payment of the dividend would constitute an unsafe or unsound practice.

Transactions between a Bank and its Affiliates

Federal banking laws and regulations impose qualitative standards and quantitative limitations upon certain transactions between a bank and its affiliates, including between a bank and its holding company and companies that the BHC may be deemed to control for these purposes. Transactions covered by these provisions must be on arm's-length terms and cannot exceed certain amounts which are determined with reference to the bank's regulatory capital. Moreover, if the transaction is a loan or other extension of credit, it must be secured by collateral in an amount and quality expressly prescribed by statute, and if the affiliate is unable to pledge sufficient collateral, the BHC may be required to provide it. The Dodd-Frank Act expanded the coverage and scope of these regulations, including by applying them to the credit exposure arising under derivative transactions, repurchase and reverse repurchase agreements, and securities borrowing and lending transactions. Federal banking laws also place similar restrictions on loans and other extensions of credit by FDIC-insured banks, such as the Bank, and their subsidiaries to their directors, executive officers, and principal shareholders.

Regulatory Capital Requirements

Compliance with respect to capital requirements is incorporated by reference from Note 16, Shareholders' Equity and Regulatory Capital, to the Consolidated Financial Statements under Part II, Item 8, "Financial Statements and Supplementary Data," and from the Capital Adequacy and Regulatory Matters section of Item 7, "Management's Discussion and Analysis of Consolidated Financial Condition and Results of Operations."

The Bank is subject to certain risk-based capital and leverage ratio requirements under the U.S. Basel III capital rules adopted by the Federal Reserve. These rules implement the Basel III international regulatory capital standards in the U.S., as well as certain provisions of the Dodd-Frank Act. These quantitative calculations are minimums, and the Federal Reserve may determine that a banking organization, based on its size, complexity, or risk profile, must maintain a higher level of capital in order to operate in a safe and sound manner. In May 2018, the Federal Reserve raised the asset-sized reporting threshold for a BHC to $3.0 billion and a company with consolidated assets under the revised limit is not subject to the FRB consolidated capital rules. A company with consolidated assets under the revised limits may continue to file reports that include capital amounts and ratios. Orrstown has elected to continue to file those reports.

Under the U.S. Basel III capital rules, Orrstown's and the Bank's assets, exposures, and certain off-balance sheet items are subject to risk weights used to determine the institutions' risk-weighted assets. These risk-weighted assets are used to calculate the following minimum capital ratios for Orrstown and the Bank:

- CET1 Risk-Based Capital Ratio, equal to the ratio of CET1 capital to risk-weighted assets. CET1 capital primarily includes common shareholders' equity subject to certain regulatory adjustments and deductions, including goodwill, intangible assets, certain deferred tax assets, and AOCI.

- Tier 1 Risk-Based Capital Ratio, equal to the ratio of Tier 1 capital to risk-weighted assets. Tier 1 capital is primarily comprised of CET1 capital, perpetual preferred stock, and certain qualifying capital instruments.

- Total Risk-Based Capital Ratio, equal to the ratio of total capital, including CET1 capital, Tier 1 capital, and Tier 2 capital, to risk-weighted assets. Tier 2 capital primarily includes qualifying subordinated debt and qualifying ALL.

- Tier 1 Leverage Ratio, equal to the ratio of Tier 1 capital to quarterly average assets (net of goodwill, certain other intangible assets, and certain other deductions).

Failure to be well-capitalized or to meet minimum capital requirements could result in certain mandatory and possible additional discretionary actions by regulators that, if undertaken, could have an adverse material effect on our operations or

financial condition. Failure to be well-capitalized or to meet minimum capital requirements could also result in restrictions on the Bank’s ability to pay dividends or otherwise distribute capital or to receive regulatory approval of applications.

In addition to meeting the minimum capital requirements, under the U.S. Basel III capital rules, the Bank must also maintain the required Capital Conservation Buffer to avoid becoming subject to restrictions on capital distributions and certain discretionary bonus payments to management. The Capital Conservation Buffer is calculated as a ratio of CET1 capital to risk-weighted assets, and it effectively increases the required minimum risk-based capital ratios. The Capital Conservation Buffer requirement was phased in over a three-year period that began on January 1, 2016. The phase-in period ended on January 1, 2019, and the Capital Conservation Buffer was at its fully phased-in level of 2.5% throughout 2019. The Tier 1 Leverage Ratio is not impacted by the Capital Conservation Buffer, and a banking institution may be considered well-capitalized while remaining out of compliance with the Capital Conservation Buffer.

Orrstown has the ability to provide additional capital to the Bank to maintain the Bank’s risk-based capital ratios at levels which would be considered well-capitalized.

At December 31, 2019, Orrstown's and the Bank’s regulatory capital ratios were above the well-capitalized standards and met the Capital Conservation Buffer on a fully phased-in basis.

Bank Acquisitions by Orrstown

BHCs must obtain prior approval of the Federal Reserve in connection with any acquisition that results in the BHC owning or controlling 5% or more of any class of voting securities of a bank or another BHC.

Acquisitions of Ownership of Orrstown

Acquisitions of Orrstown's voting stock above certain thresholds are subject to prior regulatory notice or approval under federal banking laws, including the BHC Act and the Change in Bank Control Act of 1978. Under the Change in Bank Control Act, a person or entity generally must provide prior notice to the Federal Reserve before acquiring the power to vote 10% or more of our outstanding common stock. Investors should be aware of these requirements when acquiring shares in our stock.

Data Privacy

Federal and state law contains extensive consumer privacy protection provisions. The GLB Act requires financial institutions to periodically disclose their privacy policies and practices relating to sharing such information and enables retail clients to opt out of our ability to share information with unaffiliated third parties under certain circumstances. Other federal and state laws and regulations impact our ability to share certain information with affiliates and non-affiliates for marketing and/or non-marketing purposes, or to contact clients with marketing offers. These security and privacy policies and procedures for the protection of personal and confidential information are in effect across all businesses and geographic locations as applicable. Federal law also makes it a criminal offense, except in limited circumstances, to obtain or attempt to obtain client information of a financial nature by fraudulent or deceptive means. Data privacy and data protection are areas of increasing federal and state legislative focus.

Like other lenders, the Bank uses credit bureau data in its underwriting activities. Use of such data is regulated under the Fair Credit Reporting Act, which also regulates reporting information to credit bureaus, prescreening individuals for credit offers, sharing of information between affiliates, and using affiliate data for marketing purposes. Similar state laws may impose additional requirements on us.

Cybersecurity

The GLB Act requires financial institutions to implement a comprehensive information security program that includes administrative, technical, and physical safeguards to ensure the security and confidentiality of client records and information.

The Cybersecurity Information Sharing Act is intended to improve cybersecurity in the U.S. by enhanced sharing of information about security threats among the U.S. government and private sector entities, including financial institutions. The Cybersecurity Information Sharing Act also authorizes companies to monitor their own systems notwithstanding any other provision of law and allows companies to carry out defensive measures on their own systems from cyber attacks. The law includes liability protections for companies that share cyber threat information with third parties so long as such sharing activity is conducted in accordance with Cybersecurity Information Sharing Act.

In October 2016, the federal bank regulatory agencies issued an Advanced Notice of Proposed Rulemaking regarding enhanced cyber risk management standards which would apply to a wide range of large financial institutions and their third-party service providers. The proposed rules would expand existing cybersecurity regulations and guidance to focus on cyber risk governance and management, management of internal and external dependencies, and incident response, cyber resilience, and situational awareness. In addition, the proposal contemplates more stringent standards for institutions with systems that are critical to the financial sector. The Federal Reserve announced in May 2019 that it would revisit the Advanced Notice of Proposed Rulemaking in the future.

Community Reinvestment Act

The CRA is intended to encourage banks to help meet the credit needs of their service areas, including low- and moderate-income neighborhoods, consistent with safe and soundness practices. The relevant federal bank regulatory agency, the FRB in the Bank's case, examines each bank and assigns it a public CRA rating. A bank's record of fair lending compliance is part of the resulting CRA examination report.

The CRA requires the relevant federal bank regulatory agency to consider a bank's CRA assessment when considering the bank's application to conduct certain mergers or acquisitions or to open or relocate a branch office. The Federal Reserve also must consider the CRA record of each subsidiary bank of a BHC in connection with any acquisition or merger application filed by the BHC. An unsatisfactory CRA record could substantially delay or result in the denial of an approval or application by Orrstown or the Bank. The Bank received a CRA rating of "Satisfactory" in its most recent examination.

Leaders of the federal banking agencies recently have indicated their support for modernizing the CRA regulatory framework to address changing delivery systems and consumer preferences, and, in December 2019, the Office of the Comptroller of the Currency and FDIC issued a joint proposed rule that would amend the CRA regulatory framework. It is too early to tell whether and to what extent any changes will be made to applicable CRA requirements.

Anti-Money Laundering

The Bank Secrecy Act and the PATRIOT Act contain anti-money laundering and financial transparency provisions intended to detect and prevent the use of the U.S. financial system for money laundering and terrorist financing activities. The Bank Secrecy Act, as amended by the PATRIOT Act, requires depository institutions and their holding companies to undertake activities including maintaining an anti-money laundering program, verifying the identity of clients, verifying the identity of certain beneficial owners for legal entity clients, monitoring for and reporting suspicious transactions, reporting on cash transactions exceeding specified thresholds, and responding to requests for information by regulatory authorities and law enforcement agencies. The Bank is subject to the Bank Secrecy Act and, therefore, is required to provide its employees with anti-money laundering training, designate an anti-money laundering compliance officer, and undergo an annual, independent audit to assess the effectiveness of its anti-money laundering program. The Bank has implemented policies, procedures, and internal controls that are designed to comply with these anti-money laundering requirements. Bank regulators are focusing their examinations on anti-money laundering compliance, and we will continue to monitor and augment, where necessary, our anti-money laundering compliance programs. The federal banking agencies are required, when reviewing bank and BHC acquisition or merger applications, to take into account the effectiveness of the anti-money laundering activities of the applicant.

Office of Foreign Assets Control Regulation

The Office of Foreign Assets Control is responsible for administering economic sanctions that affect transactions with designated foreign countries, nationals, and others, as defined by various Executive Orders and in various legislation. Office of Foreign Assets Control-administered sanctions take many different forms. For example, sanctions may include: (1) restrictions on trade with or investment in a sanctioned country, including prohibitions against direct or indirect imports from and exports to a sanctioned country and prohibitions on U.S. persons engaging in financial transactions relating to, making investments in, or providing investment-related advice or assistance to, a sanctioned country; and (2) a blocking of assets in which the government or "specially designated nationals" of the sanctioned country have an interest, by prohibiting transfers of property subject to U.S. jurisdiction, including property in the possession or control of U.S. persons. The Office of Foreign Assets Control also publishes lists of persons, organizations, and countries suspected of aiding, harboring, or engaging in terrorist acts, known as Specially Designated Nationals and Blocked Persons. Blocked assets, for example property and bank deposits, cannot be paid out, withdrawn, set off, or transferred in any manner without a license from the Office of Foreign Assets Control. Failure to comply with these sanctions could have serious legal and reputational consequences.

Transaction Account Reserves

Federal Reserve rules require depository institutions to maintain reserves against their transaction accounts, primarily NOW and regular checking accounts. For 2020, the first $16.9 million of covered balances are exempt from the reserve requirement, aggregate balances between $16.9 million and $127.5 million are subject to a 3% reserve requirement, and aggregate balances above $127.5 million are subject to a 10% reserve requirement. These reserve requirements are subject to annual adjustment by the Federal Reserve. The Bank was in compliance with these requirements as of December 31, 2019.

Consumer Protection Regulation and Supervision

We are subject to supervision and regulation by the CFPB with respect to federal consumer protection laws. We are also subject to certain state consumer protection laws, and under the Dodd-Frank Act, state attorneys general and other state officials are empowered to enforce certain federal consumer protection laws and regulations. State authorities have increased their focus on and enforcement of consumer protection rules. These federal and state consumer protection laws apply to a broad range of our activities and to various aspects of our business and include laws relating to interest rates, fair lending, disclosures of credit terms and estimated transaction costs to consumer borrowers, debt collection practices, the use of and the provision of information to consumer reporting agencies, and the prohibition of unfair, deceptive, or abusive acts or practices in connection with the offer, sale, or provision of consumer financial products and services.

The CFPB has promulgated many mortgage-related final rules since it was established under the Dodd-Frank Act, including rules related to the ability to repay and qualified mortgage standards, mortgage servicing standards, loan originator compensation standards, high-cost mortgage requirements, Home Mortgage Disclosure Act requirements, and appraisal and escrow standards for higher priced mortgages. The mortgage-related final rules issued by the CFPB have materially restructured the origination, servicing, and securitization of residential mortgages in the U.S. These rules have impacted, and will continue to impact, the business practices of mortgage lenders, including the Bank.

Future Legislation and Regulation

Changes in federal laws and regulations, as well as laws and regulations in states where the Parent Company, the Bank, and Wheatland do business, can affect the operating environment of Orrstown in substantial ways. We cannot predict whether those changes in laws and regulations will occur, and, if they occur, the ultimate effect they would have upon the financial condition or results of operations of the Company.

Nasdaq Capital Market

The Company’s common stock is listed on the Nasdaq Capital Market under the trading symbol “ORRF” and is subject to Nasdaq’s rules for listed companies.

Available Information

We are subject to the informational requirements of the Exchange Act and, in accordance with the Exchange Act, we file annual, quarterly, and current reports, proxy statements, and other information with the SEC. The SEC maintains an Internet web site that contains reports, proxy statements, and other information about issuers, like us, who file electronically with the SEC. The address of the site is www.sec.gov. The reports and other information, including any related amendments, filed by us with, or furnished by us to, the SEC are also available free of charge at our Internet web site as soon as reasonably practicable after such material is electronically filed with, or furnished to, the SEC. The address of the site is www.orrstown.com. Except as specifically incorporated by reference into this Annual Report on Form 10-K, information on those web sites is not part of this report.

ITEM 1A – RISK FACTORS

An investment in our common stock is subject to risks inherent in our business. The material risks and uncertainties that management believes affect us are described below. Before making an investment decision, you should carefully consider the risks and uncertainties described below together with all of the other information included or incorporated by reference in this report. The risks and uncertainties described below are not the only ones facing us. Additional risks and uncertainties that management is not aware of or focused on or that management currently deems immaterial may also impair our business operations. This report is qualified in its entirety by these risk factors.

If any of the following risks actually occur, our business, financial condition and results of operations could be materially and adversely affected. If this were to happen, the market price of our common stock could decline significantly, and you could lose all or part of your investment.

Risks Related to Credit

If our allowance for loan losses is not sufficient to cover actual losses, our earnings would decrease.

There is no precise method of predicting loan losses. The required level of reserves, and the related provision for loan losses, can fluctuate from year to year, based on charge-offs and/or recoveries, loan volume, credit administration practices, and local and national economic conditions, among other factors. The ALL, which is a reserve established through a provision for loan losses charged to expense, represents management's best estimate of probable incurred losses within the existing portfolio of loans. The level of the allowance reflects management's evaluation of, among other factors, the status of specific impaired loans, historical loss experience, delinquency, credit concentrations and economic conditions within our market area. The determination of the appropriate level of the ALL inherently involves a high degree of subjectivity and judgment and requires us to make significant estimates of current credit risks and future trends, all of which may undergo material changes. Changes in economic conditions affecting borrowers, new information regarding existing loans, identification of additional problem loans and other factors, both within and outside of our control, may require us to increase our ALL.

In addition, bank regulatory agencies periodically review our ALL and may require us to increase the provision for loan losses or to recognize further loan charge-offs, based on judgments that differ from those of, or information not available to, management. If loan charge-offs in future periods exceed the ALL, there would be a need to record additional provisions to increase our ALL. Furthermore, growth in the loan portfolio would generally lead to an increase in the provision for loan losses. Generally, increases in our ALL will result in a decrease in net income and stockholders' equity, and may have a material adverse effect on our financial condition and results of operations.

The deterioration of one or more of our significant lending relationships could result in a significant increase in the nonperforming loans and the provisions for loan losses, which would negatively impact our results of operations.

Further, as a "smaller reporting company" as defined by the FASB, we have elected to delay implementation of ASU 2016-13, Measurement of Credit Losses on Financial Instruments, under the three year delay permitted by the FASB in 2019. For a more complete description of the potential impact ASU 2016-13 may have on our financial statements and ALL, please refer to the "*Changes in our accounting policies or in accounting standards could materially affect how we report our financial results and condition"* risk factor below and Note 1, Summary of Significant Accounting Policies, to the Consolidated Financial Statements under Part II, Item 8, "Financial Statements and Supplementary Data" appearing elsewhere in this Form 10-K.

Commercial real estate lending may expose us to a greater risk of loss and impact our earnings and profitability.

Our business strategy includes making loans secured by commercial real estate. These types of loans generally have higher risk-adjusted returns and shorter maturities than other loans. Loans secured by commercial real estate properties are generally for larger amounts and may involve a greater degree of risk than other loans. Payments on loans secured by these properties are often dependent on the income produced by the underlying properties which, in turn, depends on the successful operation and management of the properties. Accordingly, repayment of these loans is subject to conditions in the real estate market or the local economy. In challenging economic conditions, these loans represent higher risk and could result in an increase in our total net charge-offs, requiring us to increase our ALL, which could have a material adverse effect on our financial condition or results of operations. While we seek to minimize these risks in a variety of ways, there can be no assurance that these measures will protect against credit-related losses.

The credit risk related to commercial and industrial loans is greater than the risk related to residential loans.

Commercial and industrial loans generally carry larger loan balances and involve a greater degree of risk of nonpayment or late payment than home equity loans or residential mortgage loans.

Commercial and industrial loans include advances to local and regional businesses for general commercial purposes and include permanent and short-term working capital, machinery and equipment financing, and may be either in the form of lines of credit or term loans. Although commercial and industrial loans may be unsecured to our highest rated borrowers, the majority of these loans are secured by the borrower's accounts receivable, inventory and machinery and equipment. In a significant number of these loans, the collateral also includes the business real estate or the business owner's personal real estate or assets. Commercial and industrial loans are more susceptible to risk of loss during a downturn in the economy, as borrowers may have greater difficulty in meeting their debt service requirements and the value of the collateral may decline. We attempt to mitigate this risk through our underwriting standards, including evaluating the creditworthiness of the borrower

and, to the extent available, credit ratings on the business. Additionally, monitoring of the loans through annual renewals and meetings with the borrowers are typical. However, these procedures cannot eliminate the risk of loss associated with commercial and industrial lending.

Our commercial and industrial lending operations are located c Our borrowers' ability to repay these loans depends largely on economic conditions in these and surrounding areas. A deterioration in the economic conditions in these market areas could materially adversely affect our operations and increase loan delinquencies, increase problem assets and foreclosures, increase claims and lawsuits, decrease the demand for our products and services and decrease the value of collateral securing loans.

Risks Related to Interest Rates and Investments

Changes in interest rates could adversely impact the Company's financial condition and results of operations.

Our operations are subject to risks and uncertainties surrounding our exposure to changes in the interest rate environment. Operating income, net income and liquidity depend to a great extent on our net interest margin, i.e., the difference between the interest yields we receive on interest-earning assets, such as loans and securities, and the interest rates we pay on interest-bearing liabilities, such as deposits and borrowings. These rates are highly sensitive to many factors beyond our control, including competition, general economic conditions, and monetary and fiscal policies of various governmental and regulatory authorities, including the FRB. If the rate of interest we pay on our interest-bearing liabilities increases more than the rate of interest we receive on our interest-earning assets, our net interest income, and therefore our earnings and liquidity could be materially adversely affected. Our earnings and liquidity could also be materially adversely affected if the rates on interest-earning assets fall more quickly than those on our interest-bearing liabilities.

Changes in interest rates also can affect our ability to originate loans; the ability of borrowers to repay adjustable or variable rate loans; our ability to obtain and retain deposits in competition with other available investment alternatives; and the value of interest-earning assets, which would negatively impact stockholders' equity, and the ability to realize gains from the sale of such assets. Based on our interest rate sensitivity analyses, an increase in the general level of interest rates will negatively affect the market value of the investment portfolio because of the relatively higher duration of certain securities included in the investment portfolio.

Our subordinated notes, issued in December 2018, have a 6.0% fixed interest rate through December 2023, after which the interest rate will convert to a variable rate of the London Interbank Offered Rate ("LIBOR") plus 3.16% through maturity in December 2028. Depending on our financial condition at the time of the rate changing from fixed to variable, an increase in the interest rate on our subordinated debt could have a material adverse effect on our liquidity and results of operations.

The expected discontinuance of LIBOR presents risks to the financial instruments originated, issued or held by us that use LIBOR as a reference rate.

LIBOR is used as a reference rate for many of our transactions, which means it is the base on which relevant interest rates are determined. Transactions include those in which we lend and borrow money and issue, purchase and sell securities. LIBOR is the subject of recent national and international regulatory guidance and proposals for reform. The United Kingdom Financial Conduct Authority, which regulates the process for setting LIBOR, announced in July 2017 that it intends to stop persuading or compelling banks to submit rates for the calculation of LIBOR to the administrator of LIBOR after 2021.

While there are ongoing efforts to establish an alternative reference rate to LIBOR, such as the Secured Overnight Financing Rate or SOFR, as of the date of this report, no such rate has been accepted or is considered ready to be widely implemented.

If another rate does not achieve wide acceptance as the alternative to LIBOR, there likely will be disruption to all of the markets relying on the availability of a broadly accepted reference rate. Even if another reference rate ultimately replaces LIBOR, risks will remain for us with respect to outstanding loans, or other instruments using LIBOR. Those risks arise in connection with transitioning those instruments to a new reference rate and the corresponding value transfer that may occur in connection with that transition. Risks related to transitioning instruments to a new reference rate or to how LIBOR is calculated and its availability include impacts on the yield on loans or securities held by us and amounts paid on securities we have issued. The value of loans, securities, or borrowings tied to LIBOR and the trading market for LIBOR-based securities could also be impacted upon its discontinuance or if it is limited.

Further, it is possible that LIBOR quotes will become unavailable prior to 2021 if a sufficient number of banks decline to make submissions to the LIBOR administrator. In that case, the risks associated with the transition to an alternative reference rate would be accelerated and magnified. These risks may also be increased due to the shorter time frame for preparing for the transition.

Risks Related to Competition and to Our Business Strategy

Difficult economic and market conditions can adversely affect the financial services industry and may materially and adversely affect the Company.

Our operations are sensitive to general business and economic conditions in the U.S. If the growth of the U.S. economy slows, or if the economy worsens or enters into a recession, our growth and profitability could be constrained. In addition, economic conditions in foreign countries can affect the stability of global financial markets, which could impact the U.S. economy and financial markets. Weak economic conditions are characterized by deflation, fluctuations in debt and equity capital markets, including a lack of liquidity and/or depressed prices in the secondary market for mortgage loans, increased delinquencies on mortgage, consumer and commercial loans, residential and commercial real estate price declines and lower home sales and commercial activity. All of these factors are detrimental to our business. Our business is significantly affected by monetary and related policies of the U.S. federal government, its agencies and government-sponsored entities. Changes in any of these policies could have a material adverse effect on our business, financial position, results of operations and cash flows.

In particular, we may face the following risks in connection with volatility in the economic environment:

- Loan delinquencies could increase;
- Problem assets and foreclosures could increase;
- Demand for our products and services could decline; and
- Collateral for loans made by us, especially real estate, could decline in value, reducing client borrowing power, and reducing the value of the assets and collateral associated with our loans.

Because our business is concentrated in south central Pennsylvania, in the greater Baltimore region, and Washington County, Maryland, our financial performance could be materially adversely affected by economic conditions and real estate values in these market areas.

Our operations and the properties securing our loans are primarily located in south central Pennsylvania, in the greater Baltimore region, and Washington County, Maryland. Our operating results depend largely on economic conditions and real estate valuations in these and surrounding areas. A deterioration in the economic conditions in these market areas could materially adversely affect our operations and increase loan delinquencies, increase problem assets and foreclosures, increase claims and lawsuits, decrease the demand for our products and services and decrease the value of collateral securing loans, especially real estate, in turn reducing clients' borrowing power, the value of assets associated with nonperforming loans and collateral coverage.

Competition from other banks and financial institutions in originating loans, attracting deposits and providing other financial services may adversely affect our profitability and liquidity.

We experience substantial competition in originating both commercial and consumer loans in our market area. This competition comes principally from other banks, savings institutions, credit unions, mortgage banking companies and other lenders. Some of our competitors enjoy advantages, including greater financial resources, and higher lending limits, a wider geographic presence, more accessible branch office locations, the ability to offer a wider array of services or more favorable pricing alternatives, as well as lower origination and operating costs. This competition could reduce our net income and liquidity by decreasing the number and size of loans that we originate and the interest rates we are able to charge on these loans.

As we expand our on-line lending capabilities, we will face competition, particularly in residential mortgage lending, from non-bank lenders (financial institutions that only make loans and do not offer deposit accounts such as a savings account or checking account) and financial technology companies that use new technology and innovation with available resources in order to compete in the marketplace of traditional financial institutions and intermediaries in the delivery of financial services. This competition could similarly reduce our net income and liquidity.

In attracting business and consumer deposits, we face substantial competition from other insured depository institutions such as banks, savings institutions and credit unions, as well as institutions offering uninsured investment alternatives, including money market funds. Some of our competitors enjoy advantages, including more expansive marketing campaigns, better brand recognition and more branch locations. These competitors may offer higher interest rates than we do, which could decrease the deposits that we attract or require us to increase our rates to retain existing deposits or attract new deposits. Increased deposit competition could materially adversely affect our ability to generate the funds necessary for lending operations. As a result, we may need to seek other sources of funds that may be more expensive to obtain and could increase our cost of funds.

The Company's business strategy includes the continuation of moderate growth plans, and our financial condition and results of operations could be negatively affected if we fail to grow or fail to manage our growth effectively.

Over the long term, we expect to continue to experience organic growth in loans and total assets, the level of our deposits and the scale of our operations. Achieving our growth targets requires us to successfully execute our business strategies, which includes continuing to grow our loan portfolio. Our ability to successfully grow will also depend on the continued availability of loan opportunities that meet underwriting standards. In addition, we may consider the acquisition of other financial institutions and branches within or outside of our market area to the extent permitted by our regulators. The success of any such acquisition will depend on a number of factors, including our ability to integrate the acquired institutions or branches into the current operations of the Company; our ability to limit the outflow of deposits held by clients of the acquired institution or branch locations; our ability to control the incremental increase in noninterest expense arising from any acquisition; and our ability to retain and integrate the appropriate personnel of the acquired institution or branches. We believe we have the resources and internal systems in place to successfully achieve and manage our future growth. If we do not manage our growth effectively, we may not be able to achieve our business plan goals and our business and prospects could be harmed.

The Company may be adversely affected by technological advances.

Technological advances impact our business. The banking industry undergoes technological change with frequent introductions of new technology-driven products and services. In addition to improving client services, the effective use of technology increases efficiency and enables financial institutions to reduce costs. Our future success may depend, in part, on our ability to address the needs of our current and prospective clients by using technology to provide products and services that will satisfy demands for convenience, as well as to create additional efficiencies in operations.

The Company may not be able to attract and retain skilled people.

Competition for the best people in most activities engaged in by us can be intense, and we may not be able to attract and hire sufficiently skilled people to fill open and newly created positions or to retain current or future employees. An inability to attract and retain individuals with the necessary skills to fill open positions, or the unexpected loss of services of one or more of our key personnel, could have a material adverse impact on our business due to the loss of their skills, knowledge of our markets, years of industry experience or the difficulty of promptly finding qualified replacement personnel.

We believe that our continued growth and future success will depend in large part on the skills of our management team and our ability to motivate and retain these individuals and other key personnel. The loss of service of one or more of our executive officers or key personnel could reduce our ability to successfully implement our long-term business strategy, our business could suffer, and the value of our stock could be materially adversely affected. Leadership changes will occur from time to time, and we cannot predict whether significant resignations will occur or whether we will be able to recruit additional qualified personnel. We believe our management team possesses valuable knowledge about the banking industry and that their knowledge and relationships could be very difficult to replicate. Our success also depends on the experience of our branch managers and lending officers and on their relationships with the clients and communities they serve. The loss of these key personnel could negatively impact our banking operations. The loss of key personnel, or the inability to recruit and retain qualified personnel in the future, could have an adverse effect on our business, financial condition, or operating results.

We face security risks, including denial of service attacks, hacking, social engineering attacks targeting our colleagues and clients, malware intrusion or data corruption attempts, and identity theft that could result in the disclosure of confidential information, adversely affect our business or reputation, and create significant legal and financial exposure.

Our computer systems and network infrastructure and those of third parties, on which we are highly dependent, are subject to security risks and could be susceptible to cyber attacks, such as denial of service attacks, hacking, terrorist activities, or identity theft. Our business relies on the secure processing, transmission, storage, and retrieval of confidential, proprietary, and other information in our computer and data management systems and networks, and in the computer and data management systems and networks of third parties. In addition, to access our network, products, and services, our clients and other third parties may use personal mobile devices or computing devices that are outside of our network environment and are subject to their own cybersecurity risks.

We, our clients, regulators, and other third parties, including other financial services institutions and companies engaged in data processing, have been subject to, and are likely to continue to be the target of, cyber attacks. These cyber attacks include computer viruses, malicious or destructive code, phishing attacks, denial of service or information, ransomware, improper access by employees or vendors, attacks on personal email of employees, ransom demands to not expose security vulnerabilities in our systems or the systems of third parties or other security breaches that could result in the unauthorized release, gathering, monitoring, misuse, loss, or destruction of confidential, proprietary, and other information of ours, our employees, our clients,

or of third parties, damage our systems or otherwise materially disrupt our or our clients' or other third parties' network access or business operations. As cyber threats continue to evolve, we may be required to expend significant additional resources to continue to modify or enhance our protective measures or to investigate and remediate any information security vulnerabilities or incidents. Despite efforts to ensure the integrity of our systems and implement controls, processes, policies, and other protective measures, we may not be able to anticipate all security breaches, nor may we be able to implement sufficient preventive measures against such security breaches, which may result in material losses or consequences for us.

Cybersecurity risks for banking organizations have significantly increased in recent years in part because of the proliferation of new technologies, and the use of the internet and telecommunications technologies to conduct financial transactions. For example, cybersecurity risks may increase in the future as we continue to increase our mobile-payment and other internet-based product offerings and expand our internal usage of web-based products and applications. In addition, cybersecurity risks have significantly increased in recent years in part due to the increased sophistication and activities of organized crime affiliates, terrorist organizations, hostile foreign governments, disgruntled employees or vendors, activists, and other external parties, including those involved in corporate espionage. Even the most advanced internal control environment may be vulnerable to compromise. Due to increasing geopolitical tensions, nation state cyber attacks and ransomware are both increasing in sophistication and prevalence. Targeted social engineering and email attacks (i.e. "spear phishing" attacks) are becoming more sophisticated and are extremely difficult to prevent. In such an attack, an attacker will attempt to fraudulently induce colleagues, clients, or other users of our systems to disclose sensitive information in order to gain access to its data or that of its clients. Persistent attackers may succeed in penetrating defenses given enough resources, time, and motive. The techniques used by cyber criminals change frequently, may not be recognized until launched, and may not be recognized until well after a breach has occurred. The speed at which new vulnerabilities are discovered and exploited often before security patches are published continues to rise. The risk of a security breach caused by a cyber attack at a vendor or by unauthorized vendor access has also increased in recent years. Additionally, the existence of cyber attacks or security breaches at third-party vendors with access to our data may not be disclosed to us in a timely manner.

We also face indirect technology, cybersecurity, and operational risks relating to the clients and other third parties with whom we do business or upon whom we rely to facilitate or enable our business activities, including, for example, financial counterparties, regulators, and providers of critical infrastructure such as internet access and electrical power. As a result of increasing consolidation, interdependence, and complexity of financial entities and technology systems, a technology failure, cyber attack, or other information or security breach that significantly degrades, deletes, or compromises the systems or data of one or more financial entities could have a material impact on counterparties or other market participants, including us. This consolidation, interconnectivity, and complexity increases the risk of operational failure, on both individual and industry-wide bases, as disparate systems need to be integrated, often on an accelerated basis. Any third-party technology failure, cyber attack, or other information or security breach, termination, or constraint could, among other things, adversely affect our ability to effect transactions, service our clients, manage our exposure to risk, or expand our business.

Cyber attacks or other information or security breaches, whether directed at us or third parties, may result in a material loss or have material consequences. Furthermore, the public perception that a cyber attack on our systems has been successful, whether or not this perception is correct, may damage our reputation with clients and third parties with whom we do business. Hacking of personal information and identity theft risks, in particular, could cause serious reputational harm. A successful penetration or circumvention of system security could cause us serious negative consequences, including our loss of clients and business opportunities, costs associated with maintaining business relationships after an attack or breach; significant business disruption to our operations and business, misappropriation, exposure, or destruction of our confidential information, intellectual property, funds, and/or those of our clients; or damage to our or our clients' and/or third parties' computers or systems, and could result in a violation of applicable privacy laws and other laws, litigation exposure, regulatory fines, penalties or intervention, loss of confidence in our security measures, reputational damage, reimbursement or other compensatory costs, additional compliance costs, and could adversely impact our results of operations, liquidity and financial condition. In addition, we may not have adequate insurance coverage to compensate for losses from a cybersecurity event.

Cybersecurity and data privacy are areas of heightened legislative and regulatory focus.

As cybersecurity and data privacy risks for banking organizations and the broader financial system have significantly increased in recent years, cybersecurity and data privacy issues have become the subject of increasing legislative and regulatory focus. The federal bank regulatory agencies have proposed regulations that would enhance cyber risk management standards, which would apply to a wide range of large financial institutions and their third-party service providers and would focus on cyber risk governance and management, management of internal and external dependencies, and incident response, cyber resilience, and situational awareness. Several states have also proposed or adopted cybersecurity legislation and regulations, which require, among other things, notification to affected individuals when there has been a security breach of their personal data.

We receive, maintain, and store non-public personal information of our clients and counterparties, including, but not limited to, personally identifiable information and personal financial information. The sharing, use, disclosure, and protection of these types of information are governed by federal and state law. Both personally identifiable information and personal financial information are increasingly subject to legislation and regulation, the intent of which is to protect the privacy of personal information and personal financial information that is collected and handled.

We may become subject to new legislation or regulation concerning cybersecurity or the privacy of personally identifiable information and personal financial information or of any other information we may store or maintain. We could be adversely affected if new legislation or regulations are adopted or if existing legislation or regulations are modified such that we are required to alter our systems or require changes to our business practices or privacy policies. If cybersecurity, data privacy, data protection, data transfer, or data retention laws are implemented, interpreted, or applied in a manner inconsistent with our current practices, we may be subject to fines, litigation, or regulatory enforcement actions or ordered to change our business practices, policies, or systems in a manner that adversely impacts our operating results.

We could be adversely affected by a failure in our internal controls.

We rely on our employees to design, manage, and operate our systems and controls to assure that we properly enter into, record and manage processes, transactions and other relationships with clients, suppliers and other parties with whom we do business. In some cases, we rely on employees of third parties to perform these tasks. We also depend on employees and the systems and controls for which they are responsible to assure that we identify and mitigate the risks that are inherent in our relationships and activities. These concerns are increased when we change processes or procedures, introduce new products or services, or implement new technologies, as we may fail to adequately identify or manage operational risks resulting from such changes.

As a result of our necessary reliance on employees, whether ours or those of third parties, to perform these tasks and manage resulting risks, we are subject to human vulnerabilities. These range from innocent human error to misconduct or malfeasance, potentially leading to operational breakdowns or other failures. Our controls may not be adequate to prevent problems resulting from human involvement in our business, including risks associated with the design, operation and monitoring of automated systems.

Errors by our employees or others responsible for systems and controls on which we depend and any resulting failures of those systems and controls could result in significant harm to us. This could include client remediation costs, regulatory fines or penalties, litigation or enforcement actions, or limitations on our business activities. We could also suffer damage to our reputation, impacting our ability to attract and retain clients and employees.

We continue to devote a significant amount of effort and resources to constantly strengthening our controls and ensuring compliance with complex accounting standards and regulations. However, these efforts may not be effective in preventing a breach in or failure of our controls.

Negative public opinion could damage our reputation and adversely affect our earnings.

Reputational risk, or the risk to the Company's earnings and capital from negative public opinion, is inherent in our business. Negative public opinion can result from the actual or perceived manner in which we conduct our business activities, including banking operations and trust and investment operations, our management of actual or potential conflicts of interest and ethical issues, and our protection of confidential client information. Negative public opinion can adversely affect the Company's ability to keep and attract clients and can expose the Company to litigation and regulatory action. Although we take steps to minimize reputation risk in the way we conduct our business activities and deal with our clients, communities and vendors, these steps may not be effective.

We may become subject to claims and litigation pertaining to fiduciary responsibility.

We provide fiduciary services through OFA and Wheatland. From time to time, clients may make claims and take legal action with regard to the performance of our fiduciary responsibilities. Whether such claims and legal actions are founded or unfounded, if such claims or legal actions are not resolved in a manner favorable to us, the claims or related actions may result in significant financial expense and liability to us and/or adversely affect our reputation in the marketplace, as well as adversely impact client demand for our products and services. Any financial liability or reputation damage could have a material adverse effect on our business, which, in turn, could have a material adverse effect on our financial condition and results of operations.

Acts of terrorism, natural disasters, global climate change, pandemics and global conflicts may have a negative impact on our business and operations.

Acts of terrorism, natural disasters, global climate change, pandemics, global conflicts or other similar events could have a negative impact on our business and operations. While we have in place business continuity plans, such events could still damage our facilities, disrupt or delay the normal operations of our business (including communications and technology), result in harm to or cause travel limitations on our employees, and have a similar impact on our clients, suppliers, third-party vendors and counterparties. These events also could impact us negatively to the extent that they result in reduced capital markets activity, lower asset price levels, or disruptions in general economic activity in the U.S. or abroad, or in financial market settlement functions. In addition, these or similar events may impact economic growth negatively, which could have an adverse effect on our business and operations, and may have other adverse effects on us in ways that we are unable to predict.

Risks Related to Mergers and Acquisitions

On October 1, 2018, we completed the acquisition of Mercersburg, and on May 1, 2019, we completed the acquisition of Hamilton Bancorp, Inc.

Growing by acquisition involves risks.

We intend to pursue a growth plan consistent with our business strategy, including growth by acquisition, as well as leveraging our existing branch network and adding new branch locations in current and future markets we choose to serve.

Our ability to manage growth successfully will depend on our ability to attract qualified personnel and maintain cost controls and asset quality while attracting additional loans and deposits on favorable terms, as well as on factors beyond our control, such as economic conditions and competition. If we grow too quickly and are not able to attract qualified personnel, control costs and maintain asset quality, this continued rapid growth could materially adversely affect our financial performance.

Goodwill incurred in acquisitions may negatively affect our financial condition.

To the extent that merger consideration, consisting of cash and shares of our common stock, exceeds the fair value of the net assets acquired, including identifiable intangibles, that amount will be reported as goodwill by us. In accordance with current accounting guidance, goodwill will not be amortized but will be evaluated for impairment annually or more frequently if events or circumstances warrant. A failure to realize expected benefits of the mergers could adversely impact the carrying value of the goodwill recognized in the mergers and, in turn, negatively affect our financial results.

We may be unable to successfully integrate the operations of acquired entities over time.

Acquisitions involve the integration with Orrstown of companies that previously operated independently. The difficulties of combining the operations of the acquired companies with Orrstown include:

- integrating personnel with diverse business backgrounds;
- integrating departments, systems, operating procedures and information technologies;
- combining different corporate cultures;
- retaining existing clients and attracting new clients; and
- retaining key employees.

The process of integrating operations could cause an interruption of, or loss of momentum in, the activities of the combined company and the loss of key personnel. The diversion of management's attention and any delays or difficulties encountered in connection with the merger and the integration process could have a material adverse effect on the business and results of operations of the combined company.

The success of acquisitions depends, in part, on our ability to realize the anticipated benefits and cost savings from combining the businesses acquired with Orrstown. If we are unable to successfully execute on integration, the anticipated earnings and cost savings to be derived from acquisitions may not be realized fully or may take longer to realize than expected. In addition, as with regard to any acquisition, a significant change in interest rates or economic conditions or decline in asset valuations may also cause us not to realize expected benefits and result in the acquisitions not meeting expectations.

The market price of our common stock after acquisitions may be affected by factors different from those affecting our shares currently.

The businesses of the Company and acquired entities may differ and, accordingly, the results of operations of the combined company and the market price of the shares of common stock of the combined company may be affected by factors different from those currently affecting the independent results of operations and market prices of common stock of each separate entity. The market value of our common stock fluctuates based upon various factors, including changes in our business, operations or prospects, market assessments of the merger, regulatory considerations, market and economic considerations, and other factors. Further, the market price of our common stock after an acquisition may be affected by factors different from those currently affecting our common stock.

Additionally, future business acquisitions may result in the issuance and payment of additional shares of stock, which would dilute current shareholders' ownership interests, and may involve the payment of a premium over book and market values. Therefore, dilution of our tangible book value and net income per common share could occur in connection with any future transaction.

Risks Related to Regulatory Compliance and Legal Matters

Governmental regulation and regulatory actions against us may impair our operations or restrict our growth.

The Company is subject to regulation and supervision under federal and state laws and regulations. The requirements and limitations imposed by such laws and regulations limit the manner in which we conduct our business, undertake new investments and activities and obtain financing. These regulations are designed primarily for the promotion of the safety and soundness of financial institutions and the protection of the deposit insurance funds and consumers, and not to benefit our shareholders.

Applicable laws and regulations impose capital adequacy requirements and restrict our ability to repurchase stock or to receive dividends from our subsidiaries. Our ability to service our obligations and pay dividends to shareholders is largely dependent on the receipt of dividends from our subsidiaries, primarily the Bank. The Federal Reserve requires a BHC to act as a source of financial and managerial strength for its subsidiary banks. The Federal Reserve could require us to commit resources to the Bank when doing so is not otherwise in the interests of our shareholders or creditors.

We are subject to supervision and examination by numerous governmental bodies. The results of these supervisory or examination activities could result in limitations on our ability to engage in new activities or expand geographically. These activities also could result in significant fines, penalties, or required corrective actions, some of which could be expensive and difficult to implement. As we expand our product and service offerings into additional states, there could be an increase in state regulation affecting our operations. Different approaches to regulation by different jurisdictions could increase our compliance costs or risks of non-compliance.

Financial institution regulation has been the subject of significant legislation in recent years and may be the subject of further significant legislation in the future, none of which is within our control. Federal and state regulatory agencies also frequently adopt changes to their regulations or change the manner in which existing regulations are applied or enforced. The Company cannot predict the substance or impact of pending or future legislation, regulation or the application thereof.

Compliance with such current and potential regulation and scrutiny may significantly increase our costs, impede the efficiency of our internal business processes, require us to increase our regulatory capital and limit our ability to pursue business opportunities in an efficient manner. Bank regulations can hinder our ability to compete with financial services companies that are not regulated in the same manner or are subject to less regulation. A failure to comply, or to have adequate policies and procedures designed to comply, with regulatory requirements and expectations could expose us to damages, fines and regulatory penalties and other regulatory or enforcement actions or consequences, such as limitations on activities otherwise permissible for us or additional requirements for engaging in new activities, and could also injure our reputation with clients and others with whom we do business.

Increases in FDIC insurance premiums may have a material adverse effect on our results of operations.

We are generally unable to control the amount of premiums that are required to be paid for FDIC insurance. If there are bank or financial institution failures, the Company may be required to pay significantly higher premiums than the levels currently imposed or additional special assessments or taxes that could adversely affect earnings. Any future increases or required prepayments in FDIC insurance premiums may materially adversely affect the results of operations.

Legislative, regulatory and legal developments involving income and other taxes could materially adversely affect the Company's results of operations and cash flows.

The Company is subject to U.S. federal and U.S. state income, payroll, property, sales and use, and other types of taxes including the Pennsylvania Bank Shares Tax. Significant judgment is required in determining the Company's provisions for income taxes. Changes in tax rates, enactments of new tax laws, revisions of tax regulations, and claims or litigation with taxing authorities could result in substantially higher taxes, and therefore, could have a significant adverse effect on the Company's results of operations, financial condition and liquidity. Increases in the assessment rate for the Pennsylvania Bank Shares Tax, which is calculated on the outstanding equity of the Bank, may also materially adversely affect results of operations.

The Company is required to use judgment in applying accounting policies and different estimates and assumptions in the application of these policies could result in a decrease in capital and/or other material changes to the reports of financial condition and results of operations.

Material estimates that are particularly susceptible to significant change relate to the determination of the ALL, the fair value of certain financial instruments, particularly securities, and goodwill and purchase accounting associated with acquisitions. While we have identified those accounting policies that we consider critical and have procedures in place to facilitate the associated judgments, different assumptions in the application of these policies could have a material adverse effect on our financial condition and results of operations.

Changes in our accounting policies or in accounting standards could materially affect how we report our financial results and condition.

From time to time, the FASB, SEC and other regulatory bodies change the financial accounting and reporting standards that govern the preparation of our consolidated financial statements. These changes can be operationally complex to implement and can materially impact how we record and report our financial condition and results of operations.

For example, in June 2016, the FASB issued Accounting Standards Update 2016-13, Measurement of Credit Losses on Financial Instruments, that will, upon adoption, substantially change the accounting for credit losses on loans and other financial assets held by banks, financial institutions and other organizations. The update replaces existing incurred loss impairment guidance and establishes a single allowance framework for financial assets carried at amortized cost. Upon adoption of ASU 2016-13, companies must recognize credit losses on these assets equal to management's estimate of credit losses over the full remaining expected life. Companies must consider all relevant information when estimating expected credit losses, including details about past events, current conditions, and reasonable and supportable forecasts.

The changes were effective for most publicly-held companies on January 1, 2020. However, in July 2019, the FASB approved permitting "smaller reporting companies", such as Orrstown, up to an additional 3 years to adopt ASU 2016-13. We elected not to adopt ASU 2016-13 on January 1, 2020, and have not yet determined if we will adopt its provisions prior to the extended implementation date of January 1, 2023.

In December 2018, the Federal Reserve, OCC and FDIC released a final rule to revise their regulatory capital rules, in part to address the upcoming change to the treatment of credit expense and allowances under ASC 2016-13. The final rule provides an optional three year phase-in period for the day-one adverse regulatory capital effects upon adopting the standard. The impact of this final rule on the Company will depend on whether we elect to phase in the impact of ASU 2016-13 over a three year period. The standard is likely to have a negative impact, potentially materially, to the ALL and our capital position at adoption. When we adopt ASU 2016-13, we will also determine whether we will elect the phase-in provisions for regulatory capital. It is possible that our ongoing reported earnings and lending activity will be negatively impacted in periods following adoption of ASU 2016-13.

The short-term and long-term impact of changing regulatory capital requirements and new capital rules is uncertain.

The Basel III Capital Rules have targeted higher levels of base capital, certain capital buffers, and a migration toward common equity as the key source of regulatory capital, as domestic and international bank regulatory agencies have sought to require financial institutions, including depository institutions, to maintain generally higher levels of capital. The application of more stringent capital requirements to the Company and the Bank could, among other things, result in lower returns on invested capital, result in the need for additional capital, and result in regulatory actions if we were to be unable to comply with such requirements, including limitations on our ability to make distributions, including paying out dividends or buying back shares. Furthermore, the imposition of liquidity requirements in connection with the implementation of Basel III could result in our having to lengthen the term of our funding, restructure our business models, and/or increase our holdings of liquid assets.

Noncompliance with the Bank Secrecy Act and other anti-money laundering statutes and regulations could cause us material financial loss.

The Bank Secrecy Act and the PATRIOT Act contain anti-money laundering and financial transparency provisions intended to detect and prevent the use of the U.S. financial system for money laundering and terrorist financing activities. The Bank Secrecy Act, as amended by the PATRIOT Act, requires depository institutions and their holding companies to undertake activities including maintaining an anti-money laundering program, verifying the identity of clients, monitoring for and reporting suspicious transactions, reporting on cash transactions exceeding specified thresholds, and responding to requests for information by regulatory authorities and law enforcement agencies. FinCEN, a unit of the Treasury Department that administers the Bank Secrecy Act, is authorized to impose significant civil money penalties for violations of those requirements and has recently engaged in coordinated enforcement efforts with the federal bank regulatory agencies, as well as the U.S. Department of Justice, Drug Enforcement Administration, and IRS.

There is also increased scrutiny of compliance with the rules enforced by the Office of Foreign Assets Control. If our policies, procedures, and systems are deemed deficient or the policies, procedures, and systems of the financial institutions that we have already acquired or may acquire in the future are deficient, we would be subject to liability, including fines and regulatory actions such as restrictions on our ability to pay dividends and the necessity to obtain regulatory approvals to proceed with certain planned business activities, including acquisition plans, which would negatively impact our business, financial condition, and results of operations. Failure to maintain and implement adequate programs to combat money laundering and terrorist financing could also have serious reputational consequences for us.

Pending litigation and legal proceedings and the impact of any finding of liability or damages could adversely impact the Company and its financial condition and results of operations.

As more fully described in Note 22, Contingencies, to the Consolidated Financial Statements under Part II, Item 8, "Financial Statement and Supplementary Data," of this Annual Report on Form 10-K, the Company believes that the allegations of the Southeastern Pennsylvania Transportation Authority's third amended complaint are without merit and it intends to vigorously defend itself against those claims. It is not possible at this time to estimate reasonably possible losses, or even a range of reasonably possible losses, in connection with the litigation. There can be no assurances, however, that the Company will not incur any losses associated with this litigation or that any losses that are incurred will not be material.

Indemnification costs associated with litigation and legal proceedings could adversely impact the Company and its financial condition and results of operations.

We are generally required, to the extent permitted by Pennsylvania law, to indemnify our current and former directors and officers who are named as defendants in lawsuits. We also have certain contractual indemnification obligations to third parties regarding litigation. Generally, insurance coverage is not available for such indemnification costs we could incur to third parties. Current or future litigation could result in indemnification expenses that could have a materially adverse impact on our financial condition and results of operations.

Risks Related to Liquidity

The Parent Company is a holding company dependent for liquidity on payments from its bank subsidiary, which is subject to restrictions.

The Parent Company is a holding company and depends on dividends, distributions and other payments from the Bank to fund dividend payments and stock repurchases, if permitted, and to fund all payments on obligations. The Bank is subject to laws that restrict dividend payments or authorize regulatory bodies to prohibit or reduce the flow of funds from it to us. In addition, our right to participate in a distribution of assets upon the Bank’s liquidation or reorganization is subject to the prior claims of the Bank’s creditors, including its depositors.

The soundness of other financial institutions could adversely affect the Company.

Our ability to engage in routine funding and other transactions could be adversely affected by the actions and commercial soundness of other financial institutions. Financial services institutions are interrelated as a result of trading, clearing, counterparty or other relationships. As a result, defaults by, or even rumors or questions about, one or more financial services institutions, or the financial services industry generally, have historically led to market-wide liquidity problems, losses of depositor, creditor and counterparty confidence and could lead to losses or defaults by us or by other institutions. We could experience increases in deposits and assets as a result of other banks’ difficulties or failure, which would increase the capital we are required to maintain to support such growth.

Risks Related to Owning our Stock

If the Company wants, or is compelled, to raise additional capital in the future, that capital may not be available when it is needed or on terms favorable to current shareholders.

Federal banking regulators require us and our banking subsidiary to maintain adequate levels of capital to support our operations. These capital levels are determined and dictated by law, regulation and banking regulatory agencies. In addition, capital levels are also determined by our management and board of directors based on capital levels that they believe are necessary to support our business operations. At December 31, 2019, all four capital ratios for us and our banking subsidiary were above regulatory minimum levels to be deemed “well capitalized” under current bank regulatory guidelines. To be “well capitalized,” banks generally must maintain a tier 1 leverage ratio of at least 5.0%, CET1 capital ratio of 6.5%, Tier 1 risk-based capital ratio of at least 8.0%, and a total risk-based capital ratio of at least 10.0%.

The Company’s ability to raise additional capital will depend on conditions in the capital markets at that time, which are outside of our control, and on our financial performance. Accordingly, we cannot provide assurance of our ability to raise additional capital on terms and time frames acceptable to us or to raise additional capital at all. Additionally, the inability to raise capital in sufficient amounts may adversely affect our operations, financial condition and results of operations. Our ability to borrow could also be impaired by factors that are nonspecific to us, such as severe disruption of the financial markets or negative news and expectations about the prospects for the financial services industry as a whole. If we raise capital through the issuance of additional shares of our common stock or other securities, we would likely dilute the ownership interests of current investors by diluting earnings per share of our common stock and potentially dilute book value per share, depending on the issuance price. The price at which we issue additional shares of stock could be less than the current market price of our common stock. Furthermore, a capital raise through the issuance of additional shares may have an adverse impact on our stock price.

The market price of our common stock is subject to volatility.

The market price of the Company’s common stock has been subject to fluctuations in response to numerous factors, many of which are beyond our control. These factors include actual or anticipated variations in our operational results and cash flows, changes in financial estimates by securities analysts, trading volume, large purchases or sales of our common stock, market conditions within the banking industry, the general state of the securities markets and the market for stocks of financial institutions, as well as general economic conditions.

A reduction in our credit rating could adversely affect our access to capital and could increase our cost of funds.

A credit rating agency regularly evaluates Orrstown and the Bank, and credit ratings are based on a number of factors, including our financial strength and ability to generate earnings, as well as factors not entirely within our control, including conditions affecting the financial services industry, the economy, and changes in rating methodologies. There can be no assurance that we will maintain our current credit ratings. A downgrade of the credit ratings of Orrstown or the Bank could adversely affect our access to liquidity and capital, and could significantly increase our cost of funds, trigger additional collateral or funding requirements, and decrease the number of investors and counterparties willing to lend to us or purchase our securities. This could affect our growth, profitability, and financial condition, including liquidity.

The Parent Company's primary source of income is dividends received from its bank subsidiary.

The Parent Company is a separate legal entity from the Bank and must provide for its own liquidity. In addition to its operating expenses, the Company is responsible for paying any dividends declared to its shareholders. The Company also has repurchased shares of its common stock. The Company’s primary source of income is dividends received from the Bank. Banking regulations limit the amount of dividends that may be paid from the Bank to the Company without prior approval of regulatory agencies. Restrictions on the Bank’s ability to dividend funds to the Company are included in Note 16, Shareholders' Equity and Regulatory Capital, to the Consolidated Financial Statements under Part II, Item 8, "Financial Statements and Supplementary Data."

ITEM 1B – UNRESOLVED STAFF COMMENTS

None.

ITEM 2 – PROPERTIES

Our principal executive offices are located at 77 East King Street, Shippensburg, Pennsylvania, with additional executive and administrative offices at 4750 Lindle Road, Harrisburg, Pennsylvania. These facilities are owned by the Bank, which also maintains its principal and additional executive and administrative offices at those locations.

We own or lease other premises for use in conducting our business activities, including bank branches, an operations center, and offices in Berks, Cumberland, Dauphin, Franklin, Lancaster, Perry, and York Counties, Pennsylvania and Anne Arundel, Baltimore, Howard, and Washington Counties, Maryland, as well as Baltimore City, Maryland. We believe that the properties currently owned and leased are adequate for present levels of operation. We are constantly evaluating the best and most efficient mix of branch locations to service our clients due to evolving trends in our industry and increased engagement through digital channels.

In October 2019, we announced the consolidation of five Pennsylvania branches in Franklin and Perry Counties, that average less than $20.0 million in deposits per location, into other, larger Orrstown Bank branches, as well as the sale of an operations center facility. We expect that these efforts will improve the profitability of the remaining branch locations and eliminate close to 50,000 square feet of excess back office space. The branch consolidations were completed in January 2020, and the sale of the operations center facility is anticipated to be completed in the second quarter of 2020.

ITEM 3 – LEGAL PROCEEDINGS

Information regarding legal proceedings is included in Note 22, Contingencies, to the Consolidated Financial Statements under Part II, Item 8, "Financial Statement and Supplementary Data."

On March 5, 2019, Paul Parshall, a purported individual stockholder of Hamilton, filed, on behalf of himself and all of Hamilton’s stockholders other than the named defendants and their affiliates (the “Purported Class”), a derivative and putative class action complaint in the Circuit Court for Baltimore City, Maryland, captioned Paul Parshall v. Carol Coughlin et. al., naming each Hamilton director, Orrstown, and Hamilton as defendants (the “Action”). The Action alleges, among other things, that Hamilton’s directors breached their fiduciary duties to the Purported Class in connection with the merger, and that the Proxy Statement/Prospectus omitted certain material information regarding the merger. Orrstown is alleged to have aided and abetted the Hamilton directors’ alleged breaches of their fiduciary duties. The Action seeks, among other remedies, to enjoin the merger or, in the event the merger is completed, rescission of the merger or rescissory damages; unspecified damages; and costs of the lawsuit, including attorneys’ and experts’ fees. Orrstown believes that the lawsuit is without merit as there are substantial legal and factual defenses to the claims asserted and intends to vigorously defend the lawsuit. It is not possible at this time to estimate reasonably possible losses, or even a range of reasonably possible losses, in connection with the litigation.

ITEM 4 – MINE SAFETY DISCLOSURES

Not applicable.

PART II

ITEM 5 – MARKET FOR REGISTRANT'S COMMON EQUITY, RELATED STOCKHOLDER MATTERS AND ISSUER PURCHASES OF EQUITY SECURITIES

Market Information

Our common stock is traded on the NASDAQ Capital Market under the symbol "ORRF." At the close of business on February 28, 2020, there were 2,984 shareholders of record.

The Board declared cash dividends of $0.60 and $0.51 per common share in 2019 and 2018, respectively. Our management is currently committed to continuing to pay regular cash dividends; however, there can be no assurance as to future dividends because they are dependent on our future earnings, capital requirements and financial condition. Restrictions on the payment of dividends are discussed in Note 16, Shareholders' Equity and Regulatory Capital, to the Consolidated Financial Statements under Part II, Item 8, "Financial Statements and Supplementary Data." On January 21, 2020, the Board declared a cash dividend of $0.17 per common share, which was paid on February 10, 2020, to shareholders of record as of February 3, 2020.

Securities Authorized for Issuance under Equity Compensation Plans

Information regarding the Company's equity compensation plans is included in Part III, Item 12, Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters.

Issuer Purchases of Equity Securities

In September 2015, the Board of Directors of the Company authorized a share repurchase program under which the Company may repurchase up to 5% of the Company's outstanding shares of common stock, or approximately 416,000 shares, in accordance with all applicable securities laws and regulations, including Rule 10b-18 of the Securities Exchange Act of 1934, as amended. When and if appropriate, repurchases may be made in open market or privately negotiated transactions, depending on market conditions, regulatory requirements and other corporate considerations, as determined by management. Share repurchases may not occur and the share repurchase program may be discontinued at any time.

No shares were repurchased from October 1, 2019 to December 31, 2019. As of December 31, 2019, 82,725 shares had been repurchased under the program at a total cost of $1.4 million, or $17.38 per share and the maximum number of shares that may yet be purchased under the plan is 333,275 shares.

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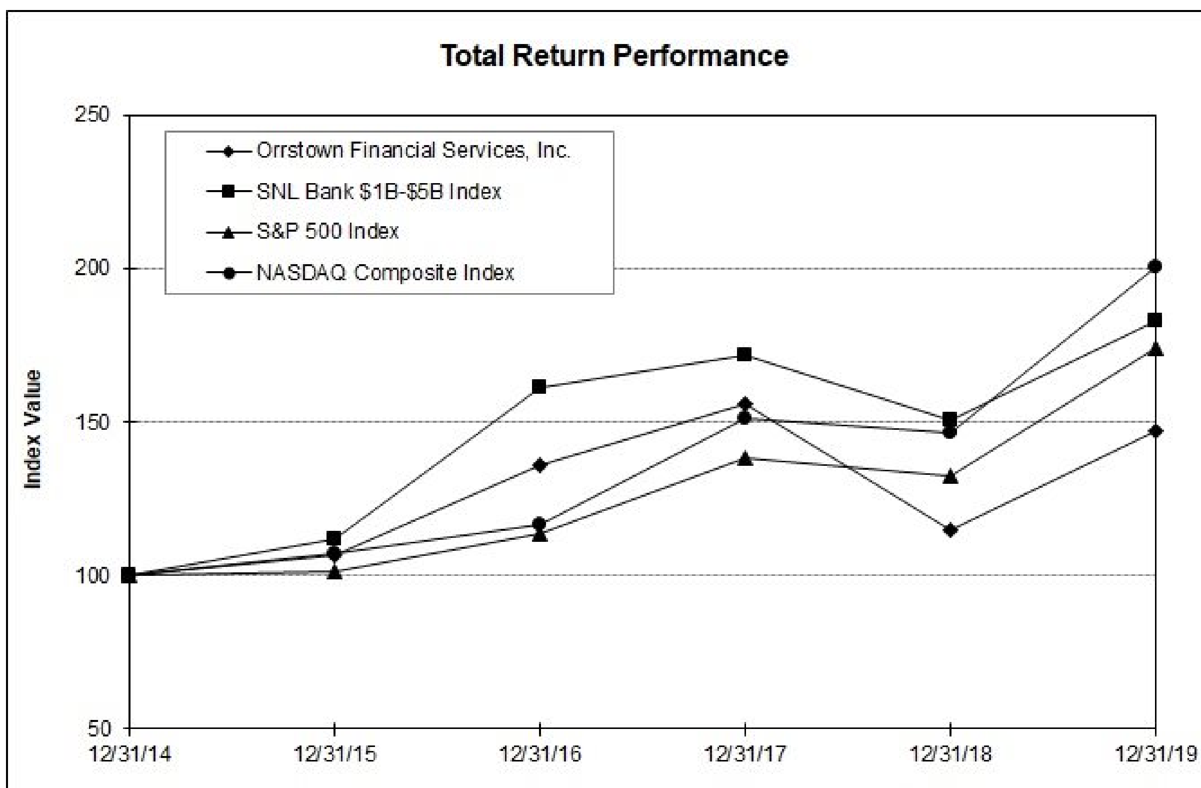
PERFORMANCE GRAPH

The performance graph below compares the cumulative total shareholder return on our common stock with other indexes: the SNL index of banks with assets between $1.0 billion and $5.0 billion, the S&P 500 Index, and the NASDAQ Composite index. The graph assumes an investment of $100 on December 31, 2014 and reinvestment of dividends on the date of payment without commissions. Shareholder returns on our common stock are based on trades on the NASDAQ Stock Market. The performance graph represents past performance and should not be considered to be an indication of future performance.



	Period Ending					
Index	**12/31/14**	**12/31/15**	**12/31/16**	**12/31/17**	**12/31/18**	**12/31/19**
Orrstown Financial Services, Inc.	100.00	106.28	135.98	156.03	114.89	146.90
SNL Bank $1B-$5B Index	100.00	111.94	161.04	171.69	150.42	182.85
S&P 500 Index	100.00	101.38	113.51	138.29	132.23	173.86
NASDAQ Composite Index	100.00	106.96	116.45	150.96	146.67	200.49

Source : S&P Global Market Intelligence © 2020

In accordance with the rules of the SEC, this section captioned “Performance Graph” shall not be incorporated by reference into any of our future filings made under the Exchange Act or the Securities Act. The Performance Graph and its accompanying table are not deemed to be soliciting material or to be filed under the Exchange Act or the Securities Act.

Recent Sales of Unregistered Securities

The Company has not sold any equity securities within the past three years which were not registered under the Securities Act.

ITEM 6 – SELECTED FINANCIAL DATA

	At or For The Year Ended December 31,				
	2019	2018	2017	2016	2015
Summary of Operations					
Interest income	$ **92,994**	$ 65,667	$ 51,453	$ 42,276	$ 39,013
Interest expense	**23,699**	13,511	7,644	5,417	4,301
Net interest income	**69,295**	52,156	43,809	36,859	34,712
Provision for loan losses	**900**	800	1,000	250	(603)
Net interest income after provision for loan losses	**68,395**	51,356	42,809	36,609	35,315
Investment securities gains	**4,749**	1,006	1,190	1,420	1,924
Noninterest income	**23,792**	20,018	18,759	18,005	16,876
Noninterest expenses	**77,302**	57,935	50,330	48,140	44,607
Income before income tax expense	**19,634**	14,445	12,428	7,894	9,508
Income tax expense	**2,710**	1,640	4,338	1,266	1,634
Net income	$ **16,924**	$ 12,805	$ 8,090	$ 6,628	$ 7,874
Per Share Information					
Basic earning per share	$ **1.63**	$ 1.53	$ 1.00	$ 0.82	$ 0.97
Diluted earnings per share	**1.61**	1.50	0.98	0.81	0.97
Dividends paid per share	**0.60**	0.51	0.42	0.35	0.22
Book value per share	**19.93**	18.39	17.34	16.28	16.08
Weighted average shares outstanding – basic	**10,362**	8,360	8,070	8,059	8,106
Weighted average shares outstanding – diluted	**10,514**	8,537	8,226	8,145	8,142
Stock Price Statistics					
Close	$ **22.62**	$ 18.21	$ 25.25	$ 22.40	$ 17.84
High	**23.48**	27.05	26.95	23.75	18.45
Low	**17.30**	18.10	19.05	16.60	15.10
Price earnings ratio at close	**13.9**	11.9	25.3	27.3	18.4
Diluted price earnings ratio at close	**14.0**	12.1	25.8	27.7	18.4
Price to book at close	**1.1**	1.0	1.5	1.4	1.1
Year-End Information					
Total assets	$ **2,383,274**	$ 1,934,388	$ 1,558,849	$ 1,414,504	$ 1,292,816
Loans	**1,644,330**	1,247,657	1,010,012	883,391	781,713
Total investment securities	**506,570**	476,686	425,305	408,124	402,844
Deposits – noninterest-bearing	**249,450**	204,843	162,343	150,747	131,390
Deposits – interest-bearing	**1,626,072**	1,353,913	1,057,172	1,001,705	900,777
Total deposits	**1,875,522**	1,558,756	1,219,515	1,152,452	1,032,167
Repurchase agreements	**8,269**	9,069	43,576	35,864	29,156
Borrowed money	**241,514**	170,309	133,815	76,163	84,495
Total shareholders' equity	**223,249**	173,433	144,765	134,859	133,061
Assets under management – market value	**1,613,223**	1,330,595	1,370,950	1,174,143	966,362
Financial Ratios					
Average equity / average assets	**9.26 %**	8.75 %	9.49 %	10.41 %	10.66 %
Return on average equity	**8.21 %**	8.56 %	5.73 %	4.80 %	5.99 %
Return on average assets	**0.76 %**	0.75 %	0.54 %	0.50 %	0.64 %

ITEM 7 – MANAGEMENT’S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

The following discussion and analysis is intended to assist readers in understanding the consolidated financial condition and results of operations of Orrstown and should be read in conjunction with our Consolidated Financial Statements and notes thereto included in this Annual Report on Form 10-K. Certain prior period amounts presented in this discussion and analysis have been reclassified to conform to current period classifications.

Overview

The results of our operations are highly dependent on economic conditions and market interest rates. Our profitability for the years ended December 31, 2019, 2018 and 2017 was influenced by our continued organic growth and ongoing expansion into targeted markets, the acquisitions of Mercersburg and Hamilton, and a continued focus on maintaining strong asset quality. These and other matters are discussed more fully below.

Critical Accounting Estimates

The Company's consolidated financial statements are prepared in accordance with GAAP, and follow general practices within the financial services industry. The most significant accounting policies followed by the Company are presented in Note 1, Summary of Significant Accounting Policies, to the Consolidated Financial Statements under Part II, Item 8, "Financial Statements and Supplementary Data." In applying those accounting policies, the Company's management is required to exercise judgment in determining many of the methodologies, assumptions and estimates to be utilized. Certain of the critical accounting estimates are more dependent on such judgment and, in some cases, may contribute to volatility in our reported financial performance should the assumptions and estimates used change over time due to changes in circumstances. Some of the more significant areas in which the Company's management applies critical assumptions and estimates include the following.

Accounting for credit losses — The loan portfolio is the largest asset on the Company's consolidated balance sheets. The allowance for loan losses represents the amount that, in management’s judgment, appropriately reflects credit losses inherent in the loan portfolio at the balance sheet date. A provision for credit losses is recorded to adjust the level of the ALL as deemed necessary by management. In estimating losses inherent in the loan portfolio, assumptions and judgment are applied to measure amounts and timing of expected future cash flows, collateral values and other factors used to determine the borrowers’ abilities to repay obligations. Historical loss trends are also considered, as are economic conditions, industry trends, portfolio trends and borrower-specific financial data. Loans acquired at a discount, that is, in part, attributable to credit quality, are initially recorded at fair value with no carry-over of an acquired entity’s previously established ALL. Cash flows expected at acquisition, in excess of estimated fair value, are recognized as interest income over the remaining lives of the loans. Subsequent decreases in the expected principal cash flows require the Company to evaluate the need for additions to the ALL. Subsequent improvements in expected cash flows result, first, in the recovery of any applicable ALL and, then, in the recognition of additional interest income over the remaining lives of the loans. Changes in the circumstances considered when determining management’s estimates and assumptions, could result in changes to those estimates and assumptions, and also in adjustment of the ALL, or, in the case of loans acquired at a discount, increases in interest income in future periods.

Valuation methodologies — Management applies various valuation methodologies to assets and liabilities which often involve a significant degree of judgment, particularly when liquid markets do not exist for the particular items being valued. Quoted market prices are referred to when estimating fair values for certain assets, such as most investment securities. However, for those items for which an observable liquid market does not exist, management utilizes significant estimates and assumptions to value such items. Examples of these items include loans, deposits, borrowings, goodwill, core deposit and other intangible assets, other assets and liabilities obtained or assumed in business combinations, and capitalized servicing assets. These valuations require the use of various assumptions, including, among others, discount rates, rates of return on assets, repayment rates, cash flows, default rates, costs of servicing and liquidation values. The use of different assumptions could produce significantly different results, which could have material positive or negative effects on our results of operations, financial condition or disclosures of fair value information. In addition to valuation, we must assess whether there are any declines in value below the carrying value of assets that should be considered other than temporary or otherwise require an adjustment in carrying value and recognition of a loss in the consolidated statements of income. Examples include investment securities, loan servicing rights, goodwill and core deposit and other intangible assets, among others.

Readers of our consolidated financial statements should be aware that the estimates and assumptions used in our current financial statements may need to be updated in future financial presentations for changes in circumstances, business or economic conditions, in order to fairly represent the condition of the Company at that time.

Economic Climate, Inflation and Interest Rates

Preliminary annual real GDP growth for 2019 was 2.3%. The pace of U.S. economic growth weakened somewhat in 2019 versus 2018 and inflation pressures declined. In response, the Federal Reserve reduced the Fed Funds rate three times in 2019 to the rate of 1.75%. Early in 2020, a novel coronavirus emerged and spread, first in China and more recently, around the globe. The fast spread of the virus and the fear that has occurred has created a high level of uncertainty about the near and intermediate future economic outlook. Because of this uncertainty, markets are pricing in a wide range of potential outcomes by buying sovereign government bonds, especially U.S. Treasuries, and selling stocks. In reaction to the increase in uncertainty, the Federal Reserve took the step of cutting the Fed Funds rates by 50 basis points between regularly scheduled meetings. Despite this action by the Federal Reserve, the outlook remains uncertain at this time.

The majority of the assets and liabilities of a financial institution are monetary in nature, and therefore, differ greatly from most commercial and industrial companies that have significant investments in fixed assets or inventories. However, inflation does have an impact on the growth of total assets and on noninterest expenses, which tend to rise during periods of general inflation. Inflationary pressures remain modest and there is great uncertainty about when, or if, inflation will increase and pressure interest rates to move higher.

As the Company's balance sheet consists primarily of financial instruments, interest income and interest expense are greatly influenced by the level of interest rates and the slope of the yield curve. The Company has been able to grow its net interest income by $17.1 million from 2018 to 2019, through a combination of organic growth and merger acquisitions. Competition for quality lending opportunities and deposits remains intense, which, together with a flattening yield curve, will continue to challenge our ability to grow our net interest margin and to leverage our overhead expenses.

Results of Operations

Summary

Earnings in 2019 reflected continuing increased interest income from expanding loan and investment portfolios, partially offset by the impact of decreasing interest rates and an overall increase in interest expense. In addition, the comparability of operating results for 2019 with 2018 has been impacted by the Mercersburg and Hamilton acquisitions, which were completed on October 1, 2018 and May 1, 2019, respectively. Mercersburg added loans and deposits totaling $141.1 million and $160.4 million, respectively, and Hamilton added loans and deposits totaling $347.4 million and $388.2 million, respectively.

The Company recorded net income of $16.9 million, $12.8 million and $8.1 million for 2019, 2018 and 2017, respectively. Diluted earnings per share totaled $1.61, $1.50 and $0.98 for 2019, 2018 and 2017.

Net interest income totaled $69.3 million, $52.2 million and $43.8 million for 2019, 2018 and 2017, respectively, principally reflecting our expanded geographic footprint, as well as organic growth in loans from an expanded sales force as we continued to take advantage of market opportunities. As previously noted, interest rates increased throughout 2017 and 2018 and decreased throughout 2019, contributing to fluctuations in yields on loans and investments, and, to a lesser extent, costs of interest-bearing liabilities.

Asset quality trends continue to exhibit low levels of charge-offs and non-performing loans. The provision for loan losses totaled $900 thousand, $800 thousand and $1.0 million in 2019, 2018 and 2017, respectively.

Noninterest expenses totaled $77.3 million, $57.9 million and $50.3 million for 2019, 2018 and 2017, respectively. The changes in certain components of noninterest expenses between years reflect the Mercersburg and Hamilton acquisitions, and our continued focus on investing in additional talent and locations to better serve the needs of our clients, particularly in Lancaster and Dauphin Counties, Pennsylvania, and in Maryland. Salaries and employee benefits expense increased $2.4 million from 2017 to 2018 and $7.0 million from 2018 to 2019. Occupancy and furniture and fixture costs increased $923 thousand from 2017 to 2018 and $1.9 million from 2018 to 2019 as new and acquired branch locations were brought on line. In 2019, we incurred $9.0 million in pretax merger related and branch consolidation expenses, with $3.2 million incurred in 2018 for pretax expense for merger related activity.

Income tax expense totaled $2.7 million, $1.6 million and $4.3 million for 2019, 2018 and 2017, or an effective tax rate of 13.8%, 11.4% and 34.9% respectively. In 2017, we remeasured our net deferred tax asset due to the enactment of the Tax Act in December 2017. The Tax Act lowered our statutory tax rate from 34% to 21% effective January 1, 2018. Remeasurement of our net deferred tax asset at the lower rate resulted in an expense of $2.6 million, which is included in income tax expense for the year ended December 31, 2017.

Net Interest Income

Net interest income is the primary component of Orrstown's revenue. Interest-earning assets include loans, securities and federal funds sold. Interest-bearing liabilities include deposits and borrowed funds.

Net interest income is affected by changes in interest rates, volumes of interest-earning assets and interest-bearing liabilities, and the composition of those assets and liabilities. “Net interest spread” and “net interest margin” are two common statistics related to changes in net interest income. Net interest spread represents the difference between the yields earned on interest-earning assets and the rates paid for interest-bearing liabilities. Net interest margin is the ratio of net interest income to average earning asset balances. Through the use of noninterest-bearing demand deposits and shareholders' equity, the net interest margin exceeds the net interest spread, as these funding sources are noninterest-bearing.

The Federal Reserve influences the general market rates of interest, including the deposit and loan rates offered by many financial institutions. Our loan portfolio is affected by changes in the prime interest rate. During 2017, the prime rate increased 25 basis points in each of March, June and December to end the year at 4.50%. In 2018, the prime rate continued to rise with 25 point increases in each of March, June, September and December, ending the year at 5.50%. And in 2019, 25 basis point reductions occurred in August, September and October and the prime rate ended the year at 4.75%.

Core deposits are deposits that are stable, lower cost and generally reprice more slowly than other deposits when interest rates change. Core deposits are typically funds of local clients who also have a borrowing or other relationship with the Bank. We are primarily funded by core deposits, with noninterest-bearing demand deposits historically being a significant source of funds. This lower-cost funding base is expected to have a positive impact on our net interest income and net interest margin in a rising interest rate environment.

Net interest income totaled $69.3 million, $52.2 million and $43.8 million in 2019, 2018 and 2017, respectively. The following table presents net interest income, net interest spread and net interest margin on a taxable-equivalent basis for 2019, 2018 and 2017. Taxable-equivalent adjustments are the result of increasing income from tax-free loans and investments by an amount equal to the taxes that would be paid if the income were fully taxable based on a 21% federal corporate tax rate for 2019 and 2018 and 34% for 2017, reflecting our statutory tax rates for those years.

	2019			2018			2017		
	Average Balance	**Taxable-Equivalent Interest**	**Taxable-Equivalent Rate**	**Average Balance**	**Taxable-Equivalent Interest**	**Taxable-Equivalent Rate**	**Average Balance**	**Taxable-Equivalent Interest**	**Taxable-Equivalent Rate**
Assets									
Federal funds sold and interest-bearing bank balances	**$ 58,100**	**$ 1,339**	**2.30 %**	$ 16,442	$ 327	1.99 %	$ 15,487	$ 218	1.41 %
Taxable securities	**435,839**	**14,530**	**3.33**	359,852	10,858	3.02	326,900	7,478	2.29
Tax-exempt securities [(1)]	**63,443**	**2,600**	**4.10**	119,665	4,873	4.07	93,683	4,748	5.07
Total securities	**499,282**	**17,130**	**3.43**	479,517	15,731	3.28	420,583	12,226	2.91
Taxable loans [(2)(3)]	**1,432,951**	**73,201**	**5.11**	1,053,308	49,151	4.67	893,555	39,006	4.37
Tax-exempt loans [(1)(2)(3)]	**59,864**	**2,367**	**3.95**	47,318	1,875	3.96	50,797	2,450	4.82
Total loans	**1,492,815**	**75,568**	**5.06**	1,100,626	51,026	4.64	944,352	41,456	4.39
Total interest-earning assets	**2,050,197**	**94,037**	**4.59**	1,596,585	67,084	4.20	1,380,422	53,900	3.90
Cash and due from banks	**25,046**			18,951			20,391		
Bank premises and equipment	**40,982**			35,399			35,055		
Other assets	**123,362**			72,960			65,293		
Allowance for loan losses	**(14,466)**			(13,298)			(12,738)		
Total	**$ 2,225,121**			$ 1,710,597			$ 1,488,423		
Liabilities and Shareholders' Equity									
Interest-bearing demand deposits	**$ 920,025**	**8,253**	**0.90**	$ 767,863	4,968	0.65	$ 648,174	2,148	0.33
Savings deposits	**138,761**	**261**	**0.19**	102,189	159	0.16	94,815	150	0.16
Time deposits [(4)]	**549,937**	**10,796**	**1.96**	324,118	5,102	1.57	292,616	3,836	1.31
Short-term borrowings	**32,001**	**623**	**1.95**	81,172	1,577	1.94	97,814	784	0.80
Long-term debt	**80,636**	**1,779**	**2.21**	83,640	1,632	1.95	36,336	726	2.00
Subordinated notes	**31,842**	**1,987**	**6.24**	1,139	73	6.41	—	—	—
Total interest-bearing liabilities	**1,753,202**	**23,699**	**1.35**	1,360,121	13,511	0.99	1,169,755	7,644	0.65
Noninterest-bearing demand deposits	**234,354**			183,387			161,917		
Other	**31,544**			17,427			15,450		
Total Liabilities	**2,019,100**			1,560,935			1,347,122		
Shareholders' Equity	**206,021**			149,662			141,301		
Total	**$ 2,225,121**			$ 1,710,597			$ 1,488,423		
Taxable-equivalent net interest income / net interest spread		**70,338**	**3.24 %**		53,573	3.21 %		46,256	3.25 %
Taxable-equivalent net interest margin			**3.43 %**			3.36 %			3.35 %
Taxable-equivalent adjustment		**(1,043)**			(1,417)			(2,447)	
Net interest income		**$ 69,295**			$ 52,156			$ 43,809	
Ratio of average interest-earning assets to average interest-bearing liabilities			**117 %**			**117 %**			**118 %**

NOTES TO ANALYSIS OF NET INTEREST INCOME:

(1) Yields and interest income on tax-exempt assets have been computed on a taxable-equivalent basis assuming a 21% tax rate in 2019 and 2018, and 34% in 2017. For yield calculation purposes, nonaccruing loans are included in the average loan balance.

(2) Average balances include nonaccrual loans.

(3) Interest income on loans includes prepayment and late fees. Where applicable, prior periods have been conformed to include these fees.

(4) In 2019, expenses associated with the early redemption of brokered time deposits totaled $215 thousand and increased the cost of funds by 3 basis points.

The following table presents changes in net interest income on a taxable-equivalent basis for 2019, 2018 and 2017 by rate and volume components.

	2019 Versus 2018 Increase (Decrease) Due to Change in			2018 Versus 2017 Increase (Decrease) Due to Change in		
	Average Volume	Average Rate	Total	Average Volume	Average Rate	Total
Interest Income						
Federal funds sold and interest-bearing bank balances	**$ 828**	**$ 184**	**$ 1,012**	$ 13	$ 96	$ 109
Taxable securities	**2,292**	**1,380**	**3,672**	754	2,626	3,380
Tax-exempt securities	**(2,289)**	**16**	**(2,273)**	1,317	(1,192)	125
Taxable loans	**17,715**	**6,335**	**24,050**	6,974	3,171	10,145
Tax-exempt loans	**497**	**(5)**	**492**	(168)	(407)	(575)
Total interest income	**19,043**	**7,910**	**26,953**	8,890	4,294	13,184
Interest Expense						
Interest-bearing demand deposits	**984**	**2,301**	**3,285**	397	2,423	2,820
Savings deposits	**57**	**45**	**102**	12	(3)	9
Time deposits	**3,555**	**2,139**	**5,694**	413	853	1,266
Short-term borrowings	**(955)**	**1**	**(954)**	(133)	926	793
Long-term debt	**(59)**	**206**	**147**	945	(39)	906
Subordinated notes	**1,968**	**(54)**	**1,914**	73	—	73
Total interest expense	**5,550**	**4,638**	**10,188**	1,707	4,160	5,867
Taxable-Equivalent Net Interest Income	**$ 13,493**	**$ 3,272**	**$ 16,765**	$ 7,183	$ 134	$ 7,317

Note: The change attributed to volume is calculated by taking the average change in average balance times the prior year's average rate and the remainder is attributable to rate.

2019 versus 2018

In 2019, net interest income increased $17.1 million, or 32.9%, compared with 2018. Net interest income for 2019 on a taxable-equivalent basis increased $16.8 million, or 31.3%, compared with 2018. The Company’s net interest spread increased three basis points to 3.24% for 2019 compared with 2018. Taxable-equivalent yields on interest-earning assets and costs of interest-bearing liabilities both increased from 2018 to 2019, reflecting increased average balances from organic growth and acquisitions, partially offset by changes in the interest rate environment between years. Other factors impacting the comparison of taxable-equivalent yields between 2018 and 2019 include the effect of purchase accounting related to the Mercersburg and Hamilton acquisitions and the timing of our adjustments to rates paid on interest-bearing deposits in response to market demand.

Interest income on a taxable-equivalent basis on loans increased $24.5 million, or 48.1%, from 2018 to 2019. The increase resulted from an increase in both average loan volume and yield, with average loans increasing $392.2 million, or 35.6%, and yield increasing 42 basis points from 4.64% in 2018 to 5.06% in 2019. The Company's geographic expansion and sales efforts with additional loan officers continued to drive loan growth in 2019 across most loan classes. Increases in prime lending rates in 2018 contributed to an increased yield in the first half of 2019, but were partially offset by rate decreases in the second half. In addition, the middle of the yield curve inverted for much of 2019, which lowered the rate on new loans more than the rate on new deposits, which pressured net interest margin. Accretion of purchase accounting adjustments in connection with the acquisitions increased 2019 interest income by $3.8 million compared with $335 thousand in 2018.

Interest income earned on a taxable-equivalent basis on securities increased $1.4 million, or 8.9%, from 2018 to 2019, with both average volume and yield increasing. Average securities increased $19.8 million, or 4.1%, and the taxable-equivalent yield increased from 3.28% in 2018 to 3.43% in 2019. Contributing to the overall increase in interest income on securities was the purchase of higher yielding, longer maturity, tax-free state and political subdivisions investments in the third quarter of 2018, that were subsequently sold in the third quarter of 2019. This was partially offset by declines in the yield of floating rate securities, which fell as the Federal Reserve reduced short-term rates by 75 basis points in the second half of 2019.

Interest expense on deposits and borrowings increased $10.2 million from 2018 to 2019, as the average balance of interest-bearing liabilities increased $393.1 million, or 28.9%. Interest expense on interest-bearing deposits declined less than the decline in market rates due to competitive factors in the marketplace.

Our ability to attract new deposits in all categories, but in particular interest-bearing demand deposits, resulted in an increase in average interest-bearing deposits totaling $152.2 million, or 19.8% in 2019, of which approximately $51.0 million was acquired in the Hamilton acquisition. Interest expense for these deposits increased $3.3 million, with the cost of funds increasing from 0.65% in 2018 to 0.90% in 2019. The increase was driven by increasing market rates throughout 2018, followed by falling short-term rates once the Fed began to ease in the second half of 2019. As noted, yields on interest-bearing deposits did not fall as much as market rates due to competitive factors. As a result, interest was paid at higher rates on interest-bearing deposits in 2019 than in 2018.

We also decreased our average short-term borrowings in 2019 in favor of brokered deposits at more attractive rates in early 2019. In late 2018, we issued $32.5 million in aggregate principal amount of subordinated notes, the proceeds of which were designated for the cash portion of merger and acquisition activity and for general corporate purposes. Borrowings generally have higher interest rates associated with them than interest-bearing deposits. Interest expense on all borrowings increased $1.1 million in 2019, with average balances decreasing $49.2 million for short-term borrowings while long-term borrowings also decreased $3.0 million. The average rate paid on short-term borrowings increased from 1.94% in 2018 to 1.95% in 2019 and the average rate paid on long-term borrowings increased from 1.95% in 2018 to 2.21% in 2019.

2018 versus 2017

In 2018, net interest income increased $8.0 million, or 18.4%, compared with 2017. Net interest income for 2018 on a taxable-equivalent basis increased $7.0 million, or 15.2%, compared with 2017. The Company’s net interest spread decreased six basis point to 3.16% for 2018 compared with 2017. Taxable-equivalent yields on interest-earning assets and costs of interest-bearing liabilities both increased from 2017 to 2018, reflecting the increased interest rate environment between years. Other factors impacting the comparison of taxable-equivalent yields between 2017 and 2018 included the effect of purchase accounting related to the Mercersburg acquisition; the Company's gradual increase in rates paid on interest-bearing deposits in response to market demand; and the change in our statutory tax rate.

Interest income on a taxable-equivalent basis on loans increased $9.2 million, or 22.4%, from 2017 to 2018. The increase resulted from an increase in both average loan volume and yield, with average loans increasing $156.3 million, or 16.5%, and yield increasing 22 basis points from 4.34% in 2017 to 4.56% in 2018. The Company's geographic expansion and sales efforts with additional loan officers continued to drive loan growth in 2018 across most loan classes. Increases in prime lending rates during the year contributed to the increased yield, but a flattened yield curve partially offset the benefit of the rate increases. Accretion of purchase accounting adjustments in connection with the Mercersburg acquisition increased 2018 interest income by $335 thousand.

Interest income earned on a taxable-equivalent basis on securities increased $3.5 million, or 28.7%, from 2017 to 2018, with both average volume and yield increasing. Average securities increased $58.9 million, or 14.0%, and yield increased from 2.91% in 2017 to 3.28% in 2018. Contributing to the increase in interest income on securities was the higher rate environment in 2018 and strategic moves within the portfolio as the interest rate environment changed.

Interest expense on deposits and borrowings increased $5.8 million from 2017 to 2018, as the average balance of interest-bearing liabilities increased $190.4 million, or 16.3%.

Our ability to attract and acquire new deposits in all categories, but in particular interest-bearing demand deposits, resulted in an increase in average interest-bearing deposits totaling $119.7 million, or 18.5%, in 2018. Interest expense for these deposits increased $2.8 million, with the cost of funds increasing from 0.33% in 2017 to 0.64% in 2018. Generally, the Company increased rates paid on interest-bearing deposits in 2018 in response to market conditions, but at a slower pace than yields earned on interest-earning assets.

We also increased our short-term and long-term borrowings in 2018 to partially fund loan and investment portfolio growth. In late 2018, we issued $32.5 million in aggregate principal amount of subordinated notes, the proceeds of which were designated for the cash portion of merger and acquisition activity and for general corporate purposes. Borrowings generally have higher interest rates associated with them than interest-bearing deposits. Interest expense on all borrowings increased $1.8 million in 2018, with average balances decreasing $16.6 million for short-term borrowings while long-term borrowings increased $47.3 million as the Company responded to the changing interest rate environment. The average rate paid on short-term borrowings increased from 0.80% in 2017 to 1.94% in 2018 and the average rate paid on long-term borrowings decreased from 2.00% in 2017 to 1.95% in 2018.

Provision for Loan Losses

The Company recorded a provision for loan losses of $900 thousand, $800 thousand and $1.0 million in 2019, 2018, and 2017, respectively. In calculating the provision for loan losses, both quantitative and qualitative factors, including the Company's favorable historical charge-off data and stable economic and market conditions, were considered in the determination of the adequacy of the ALL. Net charge-offs and loan growth resulted in the determination that a provision expense was required in 2019, 2018 and 2017.

See further discussion in the “Asset Quality” and “Credit Risk Management” sections of this Management’s Discussion and Analysis of Financial Condition and Results of Operations.

Noninterest Income

The following table compares noninterest income for 2019, 2018 and 2017.

				$ Change		% Change	
	2019	2018	2017	2019-2018	2018-2017	2019-2018	2018-2017
Service charges on deposit accounts	**$ 3,404**	$ 3,233	$ 3,057	**$ 171**	$ 176	**5.3 %**	5.8 %
Interchange income	**3,281**	2,821	2,618	**460**	203	**16.3 %**	7.8 %
Other service charges, commissions and fees	**805**	907	570	**(102)**	337	**(11.2)%**	59.1 %
Loan swap referral fees	**1,197**	—	—	**1,197**	—	**— %**	— %
Trust and investment management income	**7,255**	6,576	6,400	**679**	176	**10.3 %**	2.8 %
Brokerage income	**2,426**	2,035	1,896	**391**	139	**19.2 %**	7.3 %
Mortgage banking activities	**3,049**	2,663	2,919	**386**	(256)	**14.5 %**	(8.8)%
Income from life insurance	**2,044**	1,463	1,109	**581**	354	**39.7 %**	31.9 %
Other income	**331**	320	190	**11**	130	**3.4 %**	68.4 %
Subtotal before securities gains	**23,792**	20,018	18,759	**3,774**	1,259	**18.9 %**	6.7 %
Investment securities gains	**4,749**	1,006	1,190	**3,743**	(184)	**372.1 %**	(15.5)%
Total noninterest income	**$ 28,541**	$ 21,024	$ 19,949	**$ 7,517**	$ 1,075	**35.8 %**	5.4 %

<u>2019 versus 2018</u>

Noninterest income increased $7.5 million from 2018 to 2019. We continue to focus on growth in relationship fee-based revenue for commercial and retail clients. In addition to the impact of the Mercersburg and Hamilton acquisitions, the following were significant factors in that net increase.

- Service charges on deposit accounts and interchange on debit card income reflected an overall increase in our clients' activity and card usage from our organic growth as well as the expanded client base from the acquisitions. These stable sources of fee revenue should grow over time as we add retail and commercial clients.
- Gains on SBA loan sales, which are included in other service charges, commissions and fees, decreased approximately $300 thousand from 2018 to 2019.
- We began offering interest rate hedging products through a third party in the second half of 2019, whereby we receive a fee at loan closing; this is primarily used by commercial real estate borrowers. With our market expansion efforts and building of our experienced relationship manager team, we added this product to better serve our clients. This fee revenue will fluctuate from quarter to quarter, but we continue to see client demand to fix loan interest rates in the current rate environment.
- Trust and brokerage income reflected increased revenue from generally improved market conditions, additional advisors and increased estate fees in 2019. We continue to look to build this business over the coming years and have recently begun efforts to offer wealth management products in our acquired Baltimore market area.
- The increase in mortgage banking activities reflects the increase in loans sold from $93.1 million in 2018 to $106.7 million in 2019. With interest rates currently at low levels and recent market expansion efforts, we see opportunities to increase our market share with existing clients by increasing our focus on branch referrals and local market outreach efforts.

- Income from life insurance included death benefit proceeds in both 2019 and 2018, with the increase between years principally attributable to life insurance assets obtained through acquisitions.
- In both 2019 and 2018, asset/liability management strategies resulted in net gains on sales of securities, as market conditions presented opportunities to improve responsiveness of the portfolio to interest rate conditions, while also considering funding requirements of anticipated lending activity.

2018 versus 2017

Noninterest income increased $1.1 million from 2017 to 2018. In addition to the impact of the Mercersburg acquisition, the following were significant factors in that net increase.

- Service charges on deposit accounts continued to increase in 2018 as a result of new product offerings and increased activity associated with deposit growth.
- Other service charges, commissions and fees in 2018 included additional gains on SBA loan sales and an increase in loan transaction fees.
- Trust department income increased more modestly in 2018 than in 2017, reflecting a reduction in fee income in the latter part of 2018 as financial markets declined.
- The decrease in mortgage banking activities reflects a combination of overall decreased refinance activity as interest rates increased and a shortage of available housing inventory during the year.
- Income from life insurance increased principally due to death benefit proceeds.
- In both 2018 and 2017, asset/liability management strategies resulted in net gains on sales of securities, as market conditions presented opportunities to improve responsiveness of the portfolio to interest rate conditions, while also considering funding requirements of anticipated lending activity.

Noninterest Expenses

The following table compares noninterest expenses for 2019, 2018 and 2017.

				$ Change		% Change	
	2019	2018	2017	2019-2018	2018-2017	2019-2018	2018-2017
Salaries and employee benefits	**$ 39,495**	$ 32,524	$ 30,145	**$ 6,971**	$ 2,379	**21.4 %**	7.9 %
Occupancy	**4,325**	3,084	2,806	**1,241**	278	**40.2 %**	9.9 %
Furniture and equipment	**4,723**	4,079	3,434	**644**	645	**15.8 %**	18.8 %
Data processing	**3,599**	2,674	2,271	**925**	403	**34.6 %**	17.7 %
Automated teller machine and interchange fees	**1,015**	806	767	**209**	39	**25.9 %**	5.1 %
Advertising and bank promotions	**1,967**	1,592	1,600	**375**	(8)	**23.6 %**	(0.5) %
FDIC insurance	**367**	681	606	**(314)**	75	**(46.1) %**	12.4 %
Legal fees	**585**	413	802	**172**	(389)	**41.6 %**	(48.5) %
Other professional services	**2,369**	1,434	1,571	**935**	(137)	**65.2 %**	(8.7) %
Directors' compensation	**1,003**	984	996	**19**	(12)	**1.9 %**	(1.2) %
Taxes other than income	**1,018**	1,012	866	**6**	146	**0.6 %**	16.9 %
Intangible asset amortization	**1,570**	286	102	**1,284**	184	**449.0 %**	180.4 %
Merger related and branch consolidation expenses	**8,964**	3,197	—	**5,767**	3,197	**180.4 %**	— %
Insurance claim receivable write off	**615**	—	—	**615**	—	**— %**	— %
Other operating expenses	**5,687**	5,169	4,364	**518**	805	**10.0 %**	18.4 %
Total noninterest expenses	**$ 77,302**	$ 57,935	$ 50,330	**$ 19,367**	$ 7,605	**33.4 %**	15.1 %

2019 versus 2018

Noninterest expenses increased $19.4 million from 2018 to 2019. In addition to the impact of the Mercersburg and Hamilton acquisitions, the following were significant factors in that net increase.

- The salaries and employee benefits increase includes the impact in 2019 of additional employees, including new client-facing employees in new branches in targeted expansion markets and others that were hired throughout 2018 and 2019, as well as additional new relationship managers. Higher costs in 2019 also include annual merit and incentive compensation increases in 2019, increased stock compensation expense from additional share-based awards granted in 2019, and higher medical costs for claims activity and the expanded workforce.
- Occupancy and furniture and equipment expenses in 2019 reflect a full period of expense for our expanded presence in Lancaster County, Pennsylvania, with two branch banking locations added in the third and fourth quarters of 2018 and two in the first quarter of 2019.
- Increases in data processing reflect volume increases and physical growth and costs associated with more sophisticated product and service offerings.
- Advertising and bank promotions expense includes additional costs incurred in 2019 for the celebration of the Bank's 100th anniversary year, as well as marketing associated with the acquisitions.
- FDIC insurance expense reflects credits received in the second half of 2019 under the FDIC's regulations to provide credits, when the reserve ratio reaches 1.38%, to banks with consolidated assets below $10 billion. We expect FDIC insurance expense to increase after remaining credits are used to partially offset first quarter 2020 expense.
- Intangible asset amortization increased due to the core deposit intangibles recorded in the acquisitions.
- Merger related costs incurred in 2019 totaled $8.0 million and represented principally data processing contract termination costs, employee contract termination costs and legal and consulting fees for the Hamilton acquisition and system conversion expenses for both the Mercersburg and Hamilton acquisitions. In the fourth quarter of 2019, we recorded $988 thousand in expenses associated with the announced consolidation of five branches into other, larger Bank branches, which was completed in January 2020. The expenses principally represented owned real estate write downs, lease termination costs, severance benefits for impacted employees and other branch exit related expenses.
- The insurance claim receivable write off relates to an expense recorded in 2019 to write off an insurance claim receivable from a 2018 cyber security incident. In 2019, we received reimbursement totaling $59 thousand for the write off. In February 2020, we received an additional $486 thousand reimbursement in a final settlement of the matter.
- Other line items within noninterest expenses are generally attributable to normal fluctuations in the ordinary course of business.

2018 versus 2017

Noninterest expenses increased $7.6 million from 2017 to 2018. In addition to the impact of the Mercersburg acquisition, the following were significant factors to that net increase.

- The salaries and employee benefits increase includes the impact in 2018 of additional employees, including new client-facing employees in new branches in targeted expansion markets and others that were hired throughout 2017 and 2018. Higher costs in 2018 also include annual merit increases awarded in 2018 and incentive compensation increases, additional share-based awards granted in 2017, net of the benefit of forfeitures, and increased medical costs for the expanded workforce. Medical costs in 2018 benefited from reduced claim activity from that experienced in 2017.
- Occupancy and furniture and equipment expenses reflect a full period of expense for new facilities opened in 2017 and 2018, principally in Lancaster County, Pennsylvania.
- The Company incurred certain indemnification costs totaling $645 thousand, which are included in legal fees, to several professional service providers in 2017 in connection with previously disclosed outstanding litigation. Indemnification costs incurred in 2018 were not material. Additional costs may be incurred as the litigation progresses.
- Intangible asset amortization increased due to the core deposit intangible recorded in the Mercersburg acquisition.
- Merger related costs were principally for investment banking and legal and consulting fees for the Mercersburg acquisition.

- Other line items within noninterest expenses are generally attributable to normal fluctuations in the conduct of business.

Income Taxes

Income tax expense totaled $2.7 million, $1.6 million and $4.3 million for 2019, 2018 and 2017, respectively. The effective tax rate for 2019 was 13.8% compared with 11.4% for 2018 and 34.9% for 2017. Generally, our effective tax rate is lower than the federal statutory tax rate principally due to nontaxable interest income earned on tax-free loans and securities and income from life insurance policies, offset partially by nondeductible expenses. In 2019, our effective tax rate increased principally due to increased profitability, offset partially by benefits realized from a $185 thousand expense reduction related to a favorable tax law clarification on the treatment of life insurance assets of an acquired entity, as well as a $334 thousand expense reduction related to an increase in deferred state income taxes due to a state tax rate change resulting from the Hamilton acquisition. In 2017, our higher effective tax rate was principally impacted by the tax expense incurred due to enacted tax reform. We were required to remeasure our net deferred tax asset and incurred a tax expense of $2.6 million, which was included in income tax expense for the year ended December 31, 2017.

Our statutory federal tax rate was 21% in 2019 and 2018 and 34% in 2017. Note 8, Income Taxes, to the Consolidated Financial Statements under Part II, Item 8, "Financial Statements and Supplementary Data," includes a reconciliation of our federal statutory tax rate to our effective tax rate, which is a meaningful comparison between years and measures income tax expense as a percentage of pretax income.

Financial Condition

Management devotes substantial time to overseeing the investment of funds in loans and securities and the formulation of policies directed toward the profitability and management of the risks associated with these investments.

Securities Available for Sale

The Company utilizes securities available for sale to manage interest rate risk, to enhance income through interest and dividend income, to provide liquidity and to provide collateral for certain deposits and borrowings.

We have established investment policies and an asset management policy to assist in administering our investment portfolio. Decisions to purchase or sell these securities are based on economic conditions and management’s strategy to respond to changes in interest rates, liquidity, pledges to secure deposits and repurchase agreements and other factors while trying to maximize return on the investments. We may segregate our investment portfolio into three categories: “securities held to maturity,” “trading securities” and “securities available for sale.” At December 31, 2019, management has classified the entire securities portfolio as available for sale, which is accounted for at current market value with unrealized gains and losses excluded from earnings and reported in OCI, net of income taxes.

Our securities available for sale portfolio includes debt investments that are subject to varying degrees of credit and market risks, which arise from general market conditions, and factors impacting specific industries, as well as news that may impact specific issues. Management monitors its debt securities, using various indicators in determining whether a debt security is other-than-temporarily impaired, including the amount of time the security has been in an unrealized loss position, and the extent of the unrealized loss. In addition, management assesses whether it is likely we will have to sell the security prior to recovery, or if we are able to hold the security until the price recovers. For those debt securities in which management concludes the security is other-than-temporarily impaired, it recognizes the credit component of an OTTI impairment in earnings and the remaining portion in OCI. Given the strong asset quality of our debt security portfolio, we did not record any OTTI expense in 2019, 2018 or 2017.

The following table summarizes the fair value of securities available for sale at December 31, 2019, 2018 and 2017.

	2019	2018	2017
States and political subdivisions	**$ 87,863**	$ 145,004	$ 159,458
GSE residential mortgage-backed securities	**—**	—	49,530
GSE residential CMOs	**68,154**	108,064	111,119
Non-agency CMOs	**17,087**	—	—
Private label residential CMOs	**—**	143	1,003
Private label commercial CMOs	**86,629**	75,045	7,653
Asset-backed and other	**230,653**	137,588	86,545
Total debt securities	**$ 490,386**	$ 465,844	$ 415,308

We modestly increased our investment portfolio in 2019, with the average balance of securities increasing from $479.5 million for the year ended December 31, 2018 to $499.3 million for the year ended December 31, 2019.

In late 2018, we increased our holdings of longer maturity state and political subdivisions in anticipation of falling interest rates. In 2019, interest rates fell and the attractiveness of tax-free state and political subdivisions declined. In response, we reduced our holdings of longer maturity tax-free state and political subdivisions at a gain. We replaced these securities with additional asset-backed and private label commercial CMOs that were either floating rate or had shorter average lives than the state and political subdivision investments.

Asset-backed securities and CMOs provide monthly cash flows that may be used, in part, to meet anticipated loan demand in 2020, as management anticipates the loan portfolio will continue to grow.

The following table shows the maturities of investment securities at book value at December 31, 2019, and weighted average yields of such securities. Yields are shown on a tax equivalent basis, assuming a 21% federal income tax rate.

	Within 1 year	After 1 year but within 5 years	After 5 years but within 10 years	After 10 years	Total
States and political subdivisions					
Book value	$ 230	$ —	$ 26,346	$ 57,031	$ 83,607
Yield	2.00 %	— %	3.16 %	4.11 %	3.80 %
Average maturity (years)	0.4	—	8.5	16.7	14.0
GSE residential CMOs					
Book value	$ —	$ —	$ —	$ 67,928	$ 67,928
Yield	— %	— %	— %	2.82 %	2.82 %
Average maturity (years)	—	—	—	23.8	23.8
Non-agency CMOs					
Book value	$ —	$ —	$ —	$ 17,210	$ 17,210
Yield	— %	— %	— %	3.22 %	3.22 %
Average maturity (years)	—	—	—	29.9	29.9
Private label commercial CMOs					
Book value	$ —	$ —	$ 3,950	$ 82,754	$ 86,704
Yield	— %	— %	2.51 %	3.03 %	3.00 %
Average maturity (years)	—	—	5.5	17.5	16.9
Asset-backed and other					
Book value	$ —	$ —	$ 9,874	$ 225,670	$ 235,544
Yield	— %	— %	4.18 %	2.67 %	2.73 %
Average maturity (years)	—	—	5.8	22.3	21.6
Total					
Book value	$ 230	$ —	$ 40,170	$ 450,593	$ 490,993
Yield	2.00 %	— %	3.35 %	2.96 %	2.99 %
Average maturity (years)	0.4	—	7.5	21.2	20.1

The average maturity is based on the contractual terms of the debt or mortgage-backed securities, and does not factor in required repayments or anticipated prepayments. At December 31, 2019, the weighted average estimated life is 3.4 years for mortgage-backed and CMO securities, and 6.9 years for asset-backed securities, based on current interest rates and anticipated prepayment speeds.

Loan Portfolio

The Company offers a variety of products to meet the credit needs of its borrowers, principally commercial real estate loans, commercial and industrial loans, and retail loans consisting of loans secured by residential properties, and to a lesser extent, installment loans. No loans are extended to non-domestic borrowers or governments.

Generally, we are permitted under applicable law to make loans to single borrowers (including certain related persons and entities) in aggregate amounts of up to 15% of the sum of total capital and the ALL. The Company’s legal lending limit to one borrower was $34.0 million at December 31, 2019. No borrower had an outstanding exposure exceeding the limit at year-end.

The risks associated with lending activities differ among loan classes and are subject to the impact of changes in interest rates, market conditions of collateral securing the loans and general economic conditions. Any of these factors may adversely impact a borrower’s ability to repay loans, and also impact the associated collateral. A further discussion on the classes of loans the Company makes and related risks is included in Note 1, Summary of Significant Accounting Policies, and Note 4, Loans and Allowance for Loan Losses, to the Consolidated Financial Statements under Part II, Item 8, "Financial Statements and Supplementary Data."

The following table presents the loan portfolio, excluding residential LHFS, by segments and classes at December 31.

	2019	2018	2017	2016	2015
Commercial real estate:					
Owner-occupied	**$ 170,884**	$ 129,650	$ 116,811	$ 112,295	$ 103,578
Non-owner occupied	**361,050**	252,794	244,491	206,358	145,401
Multi-family	**106,893**	78,933	53,634	47,681	35,109
Non-owner occupied residential	**120,038**	100,367	77,980	62,533	54,175
Acquisition and development:					
1-4 family residential construction	**15,865**	7,385	11,730	4,663	9,364
Commercial and land development	**41,538**	42,051	19,251	26,085	41,339
Commercial and industrial	**214,554**	160,964	115,663	88,465	73,625
Municipal	**47,057**	50,982	42,065	53,741	57,511
Residential mortgage:					
First lien	**336,372**	235,296	162,509	139,851	126,022
Home equity – term	**14,030**	12,208	11,784	14,248	17,337
Home equity – lines of credit	**165,314**	143,616	132,192	120,353	110,731
Installment and other loans	**50,735**	33,411	21,902	7,118	7,521
Total loans (1)	**$ 1,644,330**	$ 1,247,657	$ 1,010,012	$ 883,391	$ 781,713

(1) Includes $395.9 million and $135.0 million of acquired loans as of December 31, 2019 and 2018, respectively.

The loan portfolio at December 31, 2019 increased $396.7 million, or 31.8%, from December 31, 2018, with approximately 75% of the increase attributable to loans acquired in the Hamilton transaction. The Mercersburg acquisition in 2018 and Hamilton acquisition in 2019 increased the loan portfolio, principally in the residential mortgage - first lien and commercial real estate - owner and non-owner occupied classes. The Company's organic growth has occurred in both core and newer markets, such as Lancaster County, Pennsylvania, principally in commercial real estate; and in commercial and industrial loans and installment and other loans as we focused on increasing diversification in the portfolio. The growth in installment and other loans in 2017 through 2019 was principally attributable to purchased automobile financing loans at higher returns than comparable cash flows in the investment portfolio.

Competition for new business opportunities remains strong, which may temper loan growth in future quarters.

In addition to monitoring our loan portfolio by loan class as noted above, we also monitor concentrations by segment. The Bank’s lending policy reports segment concentrations that exceeds 20% of the Bank’s total risk-based capital ("RBC"). The following segments met this criteria at December 31, 2019.

	Balance	% of Total Loans	% of Total RBC
Office space	**$ 147,945**	**9.0%**	**63.8%**
Strip retail shopping centers	**51,119**	**3.1%**	**22.1%**
Multi-family commercial real estate	**111,227**	**6.8%**	**48.0%**

The following table presents expected maturities of certain loan classes by fixed rate or adjustable rate categories at December 31, 2019.

	Due In			
	One Year or Less	One Year Through Five Years	After Five Years	Total
Acquisition and development:				
1-4 family residential construction				
Fixed rate	$ 1,098	$ —	$ 6,305	$ 7,403
Adjustable and floating rate	4,684	—	3,778	8,462
	5,782	—	10,083	15,865
Commercial and land development				
Fixed rate	64	8,243	7,559	15,866
Adjustable and floating rate	1,697	1,930	22,045	25,672
	1,761	10,173	29,604	41,538
Commercial and industrial				
Fixed rate	2,581	66,550	36,589	105,720
Adjustable and floating rate	57,866	18,125	32,843	108,834
	60,447	84,675	69,432	214,554
	$ 67,990	$ 94,848	$ 109,119	$ 271,957

The final maturity is used in the determination of maturity of acquisition and development loans that convert from construction to permanent status. Variable rate loans shown above include semi-fixed loans that contractually will adjust with prime or LIBOR after the interest lock period, which may be up to 10 years. At December 31, 2019, these semi-fixed loans totaled $31.4 million.

Asset Quality

Risk Elements

The Company’s loan portfolio is subject to varying degrees of credit risk. Credit risk is managed through our underwriting standards, on-going credit reviews, and monitoring of asset quality measures. Additionally, loan portfolio diversification, which limits exposure to a single industry or borrower, and collateral requirements also mitigate our risk of credit loss.

The following table presents the Company's risk elements and relevant asset quality ratios at December 31.

	2019	2018	2017	2016	2015
Nonaccrual loans [1]	$ **10,657**	$ 5,165	$ 9,843	$ 7,043	$ 16,557
OREO	**197**	130	961	346	710
Total nonperforming assets	**10,854**	5,295	10,804	7,389	17,267
Restructured loans still accruing	**979**	1,132	1,183	930	793
Loans past due 90 days or more and still accruing [2]	**2,232**	57	—	—	24
Total nonperforming and other risk assets	$ **14,065**	$ 6,484	$ 11,987	$ 8,319	$ 18,084
Loans 30-89 days past due	$ **17,527**	$ 5,186	$ 5,277	$ 1,218	$ 2,532
Asset quality ratios:					
Total nonperforming loans to total loans	**0.65 %**	0.41 %	0.97 %	0.80 %	2.12 %
Total nonperforming assets to total assets	**0.46 %**	0.27 %	0.69 %	0.52 %	1.34 %
Total nonperforming assets to total loans and OREO	**0.66 %**	0.42 %	1.07 %	0.84 %	2.21 %
Total risk assets to total loans and OREO	**0.86 %**	0.52 %	1.19 %	0.94 %	2.31 %
Total risk assets to total assets	**0.59 %**	0.34 %	0.77 %	0.59 %	1.40 %
Allowance for loan losses to total loans	**0.89 %**	1.12 %	1.27 %	1.45 %	1.74 %
Allowance for loan losses to nonperforming loans	**137.52 %**	271.33 %	130.00 %	181.39 %	81.95 %
Allowance for loan losses to nonperforming loans and restructured loans still accruing	**125.95 %**	222.55 %	116.05 %	160.23 %	78.20 %

[1] Includes $5.3 million of purchased credit impaired loans at December 31, 2019.
[2] Includes $2.1 million of purchased credit impaired loans at December 31, 2019.

The following table provides detail of impaired loans at December 31, 2019 and 2018.

	2019			2018		
	Nonaccrual Loans	Restructured Loans Still Accruing	Total	Nonaccrual Loans	Restructured Loans Still Accruing	Total
Commercial real estate:						
Owner occupied	$ **5,842**	$ **30**	$ **5,872**	$ 1,841	$ 39	$ 1,880
Multi-family	**345**	—	**345**	131	—	131
Non-owner occupied residential	**235**	—	**235**	309	—	309
Commercial and industrial	**1,763**	—	**1,763**	286	—	286
Residential mortgage:						
First lien	**1,659**	**931**	**2,590**	1,808	1,069	2,877
Home equity – term	**13**	—	**13**	16	—	16
Home equity – lines of credit	**715**	**18**	**733**	774	24	798
Installment and other loans	**85**	—	**85**	—	—	—
	$ **10,657**	$ **979**	$ **11,636**	$ 5,165	$ 1,132	$ 6,297

Nonperforming assets include nonaccrual loans and foreclosed real estate. Risk assets, which include nonperforming assets and restructured and loans past due 90 days or more and still accruing, totaled $14.1 million at December 31, 2019, an increase of $7.6 million or 116.9%, from $6.5 million at December 31, 2018. Nonaccrual loans totaled $10.7 million at December 31, 2019, an increase of $5.5 million from December 31, 2018. One commercial loan, downgraded to nonaccrual status in the fourth quarter of 2019 was the principal driver of the net increase. The change in nonaccrual loan amounts also impacted other asset quality ratios detailed above. The net reduction of risk assets and nonaccrual loans from December 31, 2015 to December 31, 2016 was due principally to the sale of a loan with a carrying balance of $5.9 million to a third party. Cash proceeds totaled $5.1 million with the $846 thousand difference recorded as a charge-off to the ALL in 2016.

The ALL totaled $14.7 million at December 31, 2019, a $641 thousand increase from $14.0 million at December 31, 2018, resulting from net chargeoffs of $259 thousand and a provision for loan losses of $900 thousand for 2019. The ALL is lower as a percentage of the total loan portfolio at December 31, 2019 than in prior years, reflecting purchase accounting adjustments for impaired loans acquired from Mercersburg and Hamilton. Management believes its coverage ratios are

adequate for the risk profile of the loan portfolio given ongoing monitoring of the portfolio and its quantitative and qualitative analysis performed at December 31, 2019. As new information is learned about borrowers or updated appraisals on real estate with lower fair values are obtained, the Company may experience an increase in impaired loans.

For the years ended December 31, 2019, 2018, and 2017, recoveries of $606 thousand, $882 thousand and $287 thousand, respectively, were credited to the ALL. These recoveries on previously charged-off relationships are the result of successful loan monitoring and workout solutions. Recoveries are difficult to predict, and any additional recoveries that the Company receives will be used to replenish the ALL. Recoveries favorably impact historical charge-off factors, and contribute to changes in the quantitative and qualitative factors used in our allowance adequacy analysis. However, as the loan portfolio continues to grow, future provisions for loan losses may result.

The Company takes partial charge-offs on collateral-dependent loans when carrying value exceeds estimated fair value, as determined by the most recent appraisal adjusted for current (within the quarter) conditions, less costs to dispose. Impairment reserves remain in place if updated appraisals are pending, and represent management's estimate of potential loss.

The following table presents exposure to relationships with an impaired loan balance, partial charge-offs taken to date and specific reserves established on the relationships at December 31, 2019 and 2018.

	# of Relationships	Recorded Investment	Partial Charge-offs to Date	Specific Reserves
December 31, 2019				
Relationships greater than $1 million	**2**	**$ 5,218**	**$ —**	**$ —**
Relationships greater than $500 thousand but less than $1 million	**2**	**1,516**	**17**	**—**
Relationships greater than $250 thousand but less than $500 thousand	**3**	**980**	**—**	**—**
Relationships less than $250 thousand	**68**	**3,922**	**781**	**36**
	75	**$ 11,636**	**$ 798**	**$ 36**
December 31, 2018				
Relationships greater than $500 thousand but less than $1 million	1	$ 810	$ 17	$ —
Relationships greater than $250 thousand but less than $500 thousand	2	673	—	—
Relationships less than $250 thousand	64	4,814	873	38
	67	$ 6,297	$ 890	$ 38

Internal loan reviews are completed annually on all commercial relationships with a committed loan balance in excess of $500 thousand, which includes confirmation of risk rating by an independent credit officer. Credit Administration also reviews loans in excess of $1.0 million. In addition, all relationships greater than $500 thousand rated Substandard, Doubtful or Loss are reviewed and corresponding risk ratings are reaffirmed by the Bank's Problem Loan Committee, with subsequent reporting to the Management ERM Committee and the Board of Directors.

In its individual loan impairment analysis, the Company determines the extent of any full or partial charge-offs that may be required, or any reserves that may be needed. The determination of the Company's charge-offs or impairment reserve include an evaluation of the outstanding loan balance and the related collateral securing the credit. Through a combination of collateral securing the loans and partial charge-offs taken to date, the Company believes that it has adequately provided for the potential losses that it may incur on these relationships at December 31, 2019. However, over time, additional information may result in increased reserve allocations or, alternatively, it may be deemed that the reserve allocations exceed those that are needed.

The Company's foreclosed real estate balance consisted of one commercial property totaling $180 thousand and one residential property totaling $17 thousand at December 31, 2019. The Company believes the value of foreclosed real estate represents its fair value, but if the real estate values decline, additional charges may be needed. During 2019, no expense was recorded for writedown of other real estate owned properties.

Credit Risk Management

Allowance for Loan Losses

The Company maintains the ALL at a level deemed adequate by management for probable incurred credit losses. The ALL is established and maintained through a provision for loan losses which is charged to earnings. On a quarterly basis, management assesses the adequacy of the ALL utilizing a defined methodology which considers specific credit evaluation of impaired loans, historical loss experience and qualitative factors. Management addresses the requirements for loans individually identified as impaired, loans collectively evaluated for impairment, and other bank regulatory guidance in its assessment.

The ALL is evaluated based on review of the collectability of loans in light of historical experience; the nature and volume of the loan portfolio; adverse situations that may affect a borrower's ability to repay; estimated value of any underlying collateral; and prevailing economic conditions. This evaluation is inherently subjective as it requires estimates that are susceptible to significant revision as more information becomes available. A description of the methodology for establishing the allowance and provision for loan losses and related procedures in establishing the appropriate level of reserve is included in Note 4, Loans and Allowance for Loan Losses, to the Consolidated Financial Statements under Part II, Item 8, "Financial Statements and Supplementary Data."

The following table summarizes the Company's internal risk ratings at December 31, 2019 and 2018.

	Pass	Special Mention	Non-Impaired Substandard	Impaired - Substandard	Doubtful	PCI Loans	Total
December 31, 2019							
Commercial real estate:							
Owner-occupied	$ 151,161	$ 4,513	$ 3,163	$ 5,872	$ —	$ 6,175	$ 170,884
Non-owner occupied	342,753	17,152	—	—	—	1,145	361,050
Multi-family	100,361	4,822	682	345	—	683	106,893
Non-owner occupied residential	111,697	4,534	1,115	235	—	2,457	120,038
Acquisition and development:							
1-4 family residential construction	15,865	—	—	—	—	—	15,865
Commercial and land development	39,939	206	1,393	—	—	—	41,538
Commercial and industrial	198,951	1,133	8,899	1,763	—	3,808	214,554
Municipal	42,649	4,408	—	—	—	—	47,057
Residential mortgage:							
First lien	323,040	978	—	2,590	—	9,764	336,372
Home equity – term	13,774	74	149	13	—	20	14,030
Home equity – lines of credit	164,469	74	38	733	—	—	165,314
Installment and other loans	50,497	—	—	85	—	153	50,735
	$ 1,555,156	$ 37,894	$ 15,439	$ 11,636	$ —	$ 24,205	$ 1,644,330

	Pass	Special Mention	Non-Impaired Substandard	Impaired - Substandard	Doubtful	PCI Loans	Total
December 31, 2018							
Commercial real estate:							
Owner-occupied	$ 121,903	$ 3,024	$ 987	$ 1,880	$ —	$ 1,856	$ 129,650
Non-owner occupied	242,136	10,008	—	—	—	650	252,794
Multi-family	71,482	5,886	717	131	—	717	78,933
Non-owner occupied residential	97,590	736	1,197	309	—	535	100,367
Acquisition and development:							
1-4 family residential construction	7,385	—	—	—	—	—	7,385
Commercial and land development	41,251	25	583	—	—	192	42,051
Commercial and industrial	150,286	2,278	2,940	286	—	5,174	160,964
Municipal	50,982	—	—	—	—	—	50,982
Residential mortgage:							
First lien	229,971	—	—	2,877	—	2,448	235,296
Home equity – term	12,170	—	—	16	—	22	12,208
Home equity – lines of credit	142,638	165	15	798	—	—	143,616
Installment and other loans	33,229	15	1	—	—	166	33,411
	$ 1,201,023	$ 22,137	$ 6,440	$ 6,297	$ —	$ 11,760	$ 1,247,657

Non-Impaired Substandard loans are performing loans which have characteristics that cause management concern over the ability of the borrower to perform under present loan repayment terms and which may result in the reporting of these loans as nonperforming, or impaired, loans in the future. Generally, management feels that substandard loans that are currently performing and not considered impaired result in some doubt as to the borrower's ability to continue to perform under the terms of the loan, and represent potential problem loans. Non-Impaired Substandard loans totaled $15.4 million at December 31, 2019.

Additionally, the Special Mention classification is intended to be a temporary classification reflective of loans that have potential weaknesses that may, if not monitored or corrected, weaken the asset or inadequately protect the Company's position at some future date. Special mention loans represent an elevated risk, but their weakness does not yet justify a more severe, or classified, rating. These loans require inquiry by lenders on the cause of the potential weakness and, once analyzed, the loan classification may be downgraded to Substandard or, alternatively, could be upgraded to Pass.

The following tables summarize the average recorded investment in impaired loans and interest income recognized, on a cash basis, and interest income earned but not recognized for years ended December 31, 2019, 2018, 2017, 2016 and 2015.

	Average Impaired Balance	Interest Income Recognized	Interest Earned But Not Recognized
December 31, 2019			
Commercial real estate:			
Owner-occupied	**$ 2,455**	**$ 2**	**$ 387**
Non-owner occupied	**46**	**—**	**—**
Multi-family	**152**	**—**	**24**
Non-owner occupied residential	**217**	**—**	**21**
Acquisition and development:			
Commercial and land development	**21**	**—**	**—**
Commercial and industrial	**683**	**—**	**130**
Residential mortgage:			
First lien	**2,582**	**50**	**91**
Home equity – term	**13**	**—**	**1**
Home equity – lines of credit	**750**	**2**	**64**
Installment and other loans	**13**	**—**	**2**
	$ 6,932	**$ 54**	**$ 720**
December 31, 2018			
Commercial real estate:			
Owner-occupied	$ 1,495	$ 2	$ 156
Non-owner occupied	1,842	—	236
Multi-family	148	—	20
Non-owner occupied residential	346	—	36
Acquisition and development:			
1-4 family residential construction	181	—	—
Commercial and land development	1	—	1
Commercial and industrial	322	—	29
Residential mortgage:			
First lien	3,234	59	130
Home equity – term	19	—	2
Home equity – lines of credit	657	2	52
Installment and other loans	4	—	5
	$ 8,249	$ 63	$ 667

	Average Impaired Balance	Interest Income Recognized	Interest Earned But Not Recognized
December 31, 2017			
Commercial real estate:			
Owner-occupied	$ 1,000	$ 6	$ 114
Non-owner occupied	392	—	10
Multi-family	182	—	19
Non-owner occupied residential	418	—	35
Acquisition and development:			
1-4 family residential construction	154	—	7
Commercial and industrial	413	—	25
Residential mortgage:			
First lien	4,012	58	136
Home equity – term	61	—	1
Home equity – lines of credit	488	2	26
Installment and other loans	10	—	3
	$ 7,130	$ 66	$ 376
December 31, 2016			
Commercial real estate:			
Owner-occupied	$ 1,758	$ —	$ 124
Non-owner occupied	6,831	—	326
Multi-family	216	—	17
Non-owner occupied residential	645	—	35
Acquisition and development:			
Commercial and land development	3	—	1
Commercial and industrial	575	—	25
Residential mortgage:			
First lien	4,525	33	175
Home equity – term	98	—	6
Home equity – lines of credit	455	—	19
Installment and other loans	12	—	3
	$ 15,118	$ 33	$ 731
December 31, 2015			
Commercial real estate:			
Owner-occupied	$ 2,613	$ —	$ 177
Non-owner occupied	3,470	—	256
Multi-family	402	—	15
Non-owner occupied residential	1,020	—	56
Acquisition and development:			
Commercial and land development	266	137	2
Commercial and industrial	1,208	—	28
Residential mortgage:			
First lien	4,644	37	167
Home equity – term	130	—	3
Home equity – lines of credit	571	—	29
Installment and other loans	22	—	3
	$ 14,346	$ 174	$ 736

The following table summarizes activity in the ALL for years ended December 31, 2019, 2018, 2017, 2016 and 2015.

	Commercial					Consumer				
	Commercial Real Estate	Acquisition and Development	Commercial and Industrial	Municipal	Total	Residential Mortgage	Installment and Other	Total	Unallocated	Total
December 31, 2019										
Balance, beginning of year	**$ 6,876**	**$ 817**	**$ 1,656**	**$ 98**	**$ 9,447**	**$ 3,753**	**$ 244**	**$ 3,997**	**$ 570**	**$ 14,014**
Provision for loan losses	**515**	**139**	**841**	**2**	**1,497**	**(347)**	**180**	**(167)**	**(430)**	**900**
Charge-offs	**(25)**	**—**	**(299)**	**—**	**(324)**	**(386)**	**(155)**	**(541)**	**—**	**(865)**
Recoveries	**268**	**3**	**158**	**—**	**429**	**127**	**50**	**177**	**—**	**606**
Balance, end of year	**$ 7,634**	**$ 959**	**$ 2,356**	**$ 100**	**$ 11,049**	**$ 3,147**	**$ 319**	**$ 3,466**	**$ 140**	**$ 14,655**
December 31, 2018										
Balance, beginning of year	$ 6,763	$ 417	$ 1,446	$ 84	$ 8,710	$ 3,400	$ 211	$ 3,611	$ 475	$ 12,796
Provision for loan losses	(442)	396	209	14	177	363	165	528	95	800
Charge-offs	(17)	(7)	—	—	(24)	(148)	(292)	(440)	—	(464)
Recoveries	572	11	1	—	584	138	160	298	—	882
Balance, end of year	$ 6,876	$ 817	$ 1,656	$ 98	$ 9,447	$ 3,753	$ 244	$ 3,997	$ 570	$ 14,014
December 31, 2017										
Balance, beginning of year	$ 7,530	$ 580	$ 1,074	$ 54	$ 9,238	$ 2,979	$ 144	$ 3,123	$ 414	$ 12,775
Provision for loan losses	38	(167)	333	30	234	531	174	705	61	1,000
Charge-offs	(835)	—	(85)	—	(920)	(180)	(166)	(346)	—	(1,266)
Recoveries	30	4	124	—	158	70	59	129	—	287
Balance, end of year	$ 6,763	$ 417	$ 1,446	$ 84	$ 8,710	$ 3,400	$ 211	$ 3,611	$ 475	$ 12,796
December 31, 2016										
Balance, beginning of year	$ 7,883	$ 850	$ 1,012	$ 58	$ 9,803	$ 2,870	$ 121	$ 2,991	$ 774	$ 13,568
Provision for loan losses	107	(270)	129	(4)	(38)	532	116	648	(360)	250
Charge-offs	(872)	—	(79)	—	(951)	(577)	(194)	(771)	—	(1,722)
Recoveries	412	—	12	—	424	154	101	255	—	679
Balance, end of year	$ 7,530	$ 580	$ 1,074	$ 54	$ 9,238	$ 2,979	$ 144	$ 3,123	$ 414	$ 12,775
December 31, 2015										
Balance, beginning of year	$ 9,462	$ 697	$ 806	$ 183	$ 11,148	$ 2,262	$ 119	$ 2,381	$ 1,218	$ 14,747
Provision for loan losses	(1,020)	(440)	249	(125)	(1,336)	1,122	55	1,177	(444)	(603)
Charge-offs	(711)	(22)	(115)	—	(848)	(592)	(62)	(654)	—	(1,502)
Recoveries	152	615	72	—	839	78	9	87	—	926
Balance, end of year	$ 7,883	$ 850	$ 1,012	$ 58	$ 9,803	$ 2,870	$ 121	$ 2,991	$ 774	$ 13,568

The following table summarizes asset quality ratios for years ended December 31, 2019, 2018, 2017, 2016 and 2015.

	2019	2018	2017	2016	2015
Ratio of net charge-offs (recoveries) to average loans outstanding	**0.02 %**	(0.04)%	0.10 %	0.13 %	0.08 %
Provision for loan losses to net charge-offs (recoveries)	**347.49 %**	(191.39)%	102.15 %	23.97 %	(104.69)%
Ratio of ALL to total loans outstanding at December 31	**0.89 %**	1.12 %	1.27 %	1.45 %	1.74 %

The Company recorded a provision for loan losses expense of $900 thousand, $800 thousand, $1.0 million, and $250 thousand for 2019, 2018, 2017, and 2016, respectively, and a negative provision of $603 thousand for 2015. The negative provision in 2015 was due to recovery of loans with prior charge-offs. In addition, in certain cases, loans were successfully worked out with smaller charge-offs than the reserve established on them. The Company has benefited from organic loan

portfolio growth and favorable historical charge-off data combined with relatively stable economic conditions over the periods presented above. This was a principal factor in management's determination that a negative or modest provision could be recorded despite net charge-offs recorded in 2015 and 2016. In 2017, management determined that a provision expense that offset net charge-offs for the year would maintain an adequate ALL, principally due to a charge-off in connection with one commercial credit downgraded to nonaccrual status during the year. In 2018 and 2019, our continued organic loan portfolio growth was a key factor in the quantitative and qualitative considerations used by management in the determination of the provision expense required to maintain an adequate allowance for loan losses. These variations in net charge-offs (recoveries) and provision expense (recovery) resulted in the fluctuations in the ratios presented in the tables above.

See further discussion in the “Provision for Loan Losses” section of this Management’s Discussion and Analysis of Financial Condition and Results of Operations.

The following table shows the allocation of the ALL by loan class, as well as the percent of each loan class in relation to the total loan balance at December 31, 2019, 2018, 2017, 2016 and 2015.

	2019		2018		2017		2016		2015	
	Amount	**% of Loan Type to Total Loans**	**Amount**	**% of Loan Type to Total Loans**	**Amount**	**% of Loan Type to Total Loans**	**Amount**	**% of Loan Type to Total Loans**	**Amount**	**% of Loan Type to Total Loans**
Commercial real estate:										
Owner-occupied	**$ 1,539**	**10 %**	$ 1,491	10 %	$ 1,488	12 %	$ 1,591	13 %	$ 1,998	13 %
Non-owner occupied	**3,965**	**22 %**	3,683	20 %	4,059	24 %	4,380	23 %	4,033	19 %
Multi-family	**974**	**7 %**	792	6 %	444	5 %	604	5 %	709	5 %
Non-owner occupied residential	**1,156**	**7 %**	910	8 %	772	8 %	955	7 %	1,143	7 %
Acquisition and development:										
1-4 family residential construction	**239**	**1 %**	104	1 %	169	1 %	102	1 %	236	1 %
Commercial and land development	**720**	**3 %**	713	3 %	248	2 %	478	3 %	614	5 %
Commercial and industrial	**2,356**	**13 %**	1,656	13 %	1,446	12 %	1,074	10 %	1,012	10 %
Municipal	**100**	**3 %**	98	4 %	84	4 %	54	6 %	58	7 %
Residential mortgage:										
First lien	**1,635**	**20 %**	2,002	19 %	1,855	16 %	1,624	16 %	1,667	16 %
Home equity - term	**59**	**1 %**	109	1 %	119	1 %	151	1 %	184	2 %
Home equity - lines of credit	**1,453**	**10 %**	1,642	12 %	1,426	13 %	1,204	14 %	1,019	14 %
Installment and other loans	**319**	**3 %**	244	3 %	211	2 %	144	1 %	121	1 %
Unallocated	**140**		570		475		414		774	
	$ 14,655	**100 %**	$ 14,014	100 %	$ 12,796	100 %	$ 12,775	100 %	$ 13,568	100 %

The following table summarizes the ending loan balance individually or collectively evaluated for impairment by loan class and the ALL allocation for each at December 31, 2019 and 2018.

	Commercial					Consumer				
	Commercial Real Estate	Acquisition and Development	Commercial and Industrial	Municipal	Total	Residential Mortgage	Installment and Other	Total	Unallocated	Total
December 31, 2019										
Loans allocated by:										
Individually evaluated for impairment	**$ 6,452**	**$ —**	**$ 1,763**	**$ —**	**$ 8,215**	**$ 3,336**	**$ 85**	**$ 3,421**	**$ —**	**$ 11,636**
Collectively evaluated for impairment	**752,413**	**57,403**	**212,791**	**47,057**	**1,069,664**	**512,380**	**50,650**	**563,030**	**—**	**1,632,694**
	$ 758,865	**$ 57,403**	**$ 214,554**	**$ 47,057**	**$ 1,077,879**	**$ 515,716**	**$ 50,735**	**$ 566,451**	**$ —**	**$ 1,644,330**
Allowance for loan losses allocated by:										
Individually evaluated for impairment	**$ —**	**$ —**	**$ —**	**$ —**	**$ —**	**$ 36**	**$ —**	**$ 36**	**$ —**	**$ 36**
Collectively evaluated for impairment	**7,634**	**959**	**2,356**	**100**	**11,049**	**3,111**	**319**	**3,430**	**140**	**14,619**
	$ 7,634	**$ 959**	**$ 2,356**	**$ 100**	**$ 11,049**	**$ 3,147**	**$ 319**	**$ 3,466**	**$ 140**	**$ 14,655**
December 31, 2018										
Loans allocated by:										
Individually evaluated for impairment	$ 2,320	$ —	$ 286	$ —	$ 2,606	$ 3,691	$ —	$ 3,691	$ —	$ 6,297
Collectively evaluated for impairment	559,424	49,436	160,678	50,982	820,520	387,429	33,411	420,840	—	1,241,360
	$ 561,744	$ 49,436	$ 160,964	$ 50,982	$ 823,126	$ 391,120	$ 33,411	$ 424,531	$ —	$ 1,247,657
Allowance for loan losses allocated by:										
Individually evaluated for impairment	$ —	$ —	$ —	$ —	$ —	$ 38	$ —	$ 38	$ —	$ 38
Collectively evaluated for impairment	6,876	817	1,656	98	9,447	3,715	244	3,959	570	13,976
	$ 6,876	$ 817	$ 1,656	$ 98	$ 9,447	$ 3,753	$ 244	$ 3,997	$ 570	$ 14,014

In addition to the reserve allocations on impaired loans noted above, 17 loans, with aggregate outstanding principal balances of $3.4 million, have had cumulative partial charge-offs to the ALL totaling $798 thousand. As updated appraisals were received on collateral-dependent loans, partial charge-offs were taken to the extent the loans' principal balance exceeded their fair value.

Management believes the allocation of the ALL between the various loan classes adequately reflects the probable incurred credit losses in each portfolio and is based on the methodology outlined in Note 4, Loans and Allowance for Loan Losses, to the Consolidated Financial Statements under Part II, Item 8, "Financial Statements and Supplementary Data." Management re-evaluates and makes certain enhancements to its methodology used to establish a reserve to better reflect the risks inherent in the different segments of the portfolio, particularly in light of increased charge-offs, with noticeable differences between the different loan classes. Management believes these enhancements to the ALL methodology improve the accuracy of quantifying probable incurred credit losses inherent in the portfolio. Management charges actual loan losses to the reserve and bases the provision for loan losses on its overall analysis.

The largest component of the ALL for the years presented has been allocated to the commercial real estate segment, particularly the non-owner occupied loan classes. The higher allocations in these classes as compared with the other classes is consistent with the inherent risk associated with these loans, as well as generally higher levels of impaired and criticized loans for the periods presented. There has generally been a decrease in the ALL allocated to the commercial real estate portfolio, as the level of classified assets has declined, and historical loss rates have improved as a result of improving economic and market conditions.

The unallocated portion of the ALL reflects estimated inherent losses within the portfolio that have not been detected, as well as the risk of error in the specific and general reserve allocation, other potential exposure in the loan portfolio, variances in management's assessment of national and local economic conditions and other factors management believes appropriate at the time. The unallocated portion of the allowance decreased from $570 thousand at December 31, 2018 to $140 thousand at December 31, 2019 and represents 1.0% of the ALL at December 31, 2019, compared with 4.1% at December 31, 2018. Changes in qualitative factors of certain loan categories were made during 2019 to reflect limited credit losses since loan underwriting improvements were made subsequent to 2012. The Company monitors the unallocated portion of the ALL, and by

policy, has determined it should not exceed 6% of the total reserve. Future negative provisions for loan losses may result if the unallocated portion was to increase, and management determined the reserves were not required for the anticipated risk in the portfolio.

Management believes the Company's ALL is adequate based on information currently available. Future adjustments to the ALL and enhancements to the methodology may be necessary due to changes in economic conditions, regulatory guidance, or management's assumptions as to future delinquencies or loss rates.

Deposits

Total deposits grew $316.8 million, or 20.3%, from $1.6 billion at December 31, 2018 to $1.9 billion at December 31, 2019. In 2019, we acquired $388.2 million in deposits from Hamilton. At December 31, 2019, those acquired accounts totaled approximately $332.0 million. During 2019, we reduced brokered deposits by $110.6 million and reduced subscription service CDs by $21.9 million. Organic growth totaled approximately $147.7 million in 2019.

The following table presents average deposits for years ended December 31, 2019, 2018, and 2017.

	2019	2018	2017
Demand deposits	**$ 234,354**	$ 183,387	$ 161,917
Interest-bearing demand deposits	**920,025**	767,863	648,174
Savings deposits	**138,761**	102,189	94,815
Time deposits	**549,937**	324,118	292,616
Total deposits	**$ 1,843,077**	$ 1,377,557	$ 1,197,522

Average total deposits increased $465.5 million, or 33.8%, from 2018 to 2019. Interest-bearing demand deposit account balances were the principal driver, increasing $152.2 million, or 19.8%. Average time deposits less than $250 thousand grew from $287.9 million in 2018 to $483.9 million in 2019 and average time deposits in excess of $250 thousand increased from $36.3 million in 2018 to $66.0 million in 2019.

In addition to deposits from acquisitions, the Company has been able to garner organic growth in both interest-bearing and noninterest-bearing deposit relationships from enhanced cash management offerings as we continued to develop commercial relationships. We also continued to grow core funding deposits through marketing campaigns and improvement in our product delivery with investments in technology and increased sales efforts. We have also been able to increase interest-free funds as we expanded our commercial and industrial loan portfolio.

In 2019, the Company used deposit growth principally to fund loan growth. An additional funding source the Company uses is brokered deposits, which totaled $16.1 million at December 31, 2019 compared with $126.6 million at December 31, 2018, and averaged $100.8 million for 2019 compared with $112.3 million for 2018. Given interest rate conditions and asset/liability strategies, we borrowed additional funds from FHLB of Pittsburgh to replace called brokered deposits in the second half of 2019.

Management evaluates its utilization of brokered deposits, taking into consideration the interest rate curve and regulatory views on non-core funding sources, and balances this funding source with its funding needs based on growth initiatives. The Company anticipates that as loan growth increases, it will be able to generate core deposit funding by offering competitive rates.

The following table presents maturities of time deposits of $250,000 or more at December 31, 2019.

	Total
Three months or less	**$ 18,738**
Over three months through six months	**12,734**
Over six months through one year	**19,204**
Over one year	**18,402**
Total	**$ 69,078**

Borrowings

In addition to deposit products, the Company uses short-term borrowing sources to meet liquidity needs and for temporary funding. Sources of short-term borrowings include the FHLB of Pittsburgh, federal funds purchased, and to a lesser extent, the FRB discount window. Short-term borrowings also include securities sold under agreements to repurchase with deposit clients, in which a client sweeps a portion of a deposit balance into a repurchase agreement, which is a secured borrowing with a pool of securities pledged against the balance.

The Company also utilizes long-term debt, consisting principally of FHLB fixed and amortizing advances to fund its balance sheet with original maturities greater than one year. The Company evaluates its funding needs, interest rate movements, the cost of options, and the availability of attractive structures when considering the timing and extent of when it enters into long-term borrowings.

In December 2018, we issued unsecured subordinated notes payable totaling $32.5 million, the proceeds of which were designated for general corporate use, including funding of cash consideration for mergers and acquisitions.

For additional information about borrowings, refer to Note 13, Short-Term Borrowings, Note 14, Long-Term Debt, and Note 15, Subordinated Notes, to the Consolidated Financial Statements appearing in Part II, Item 8, "Financial Statements and Supplementary Data."

Shareholders' Equity

In 2019, total shareholders’ equity increased $49.8 million, or 28.7%. The principal factor in the increase was the issuance of 1,765,704 shares of common stock, valued at $36.6 million, in the Hamilton acquisition. Net income increased equity by $16.9 million. AOCI benefited by $2.5 million from a change in unrealized gains and losses during the year. Dividends paid to shareholders decreased equity by $6.1 million.

In September, 2015, the Board of Directors authorized a stock repurchase program which is more fully described in Item 5 under Issuer Purchases of Equity Securities. The maximum number of shares that may yet be purchased under the plan is 333,275 shares at December 31, 2019.

The following table includes additional information for shareholders’ equity for years ended December 31, 2019, 2018, and 2017.

	2019	2018	2017
Average shareholders’ equity	**$ 206,021**	$ 149,662	$ 141,301
Net income	**16,924**	12,805	8,090
Cash dividends paid	**6,150**	4,375	3,488
Average equity to average assets ratio	**9.26 %**	8.75 %	9.49 %
Dividend payout ratio	**36.81 %**	33.33 %	42.00 %
Return on average equity	**8.21 %**	8.56 %	5.73 %

Capital Adequacy and Regulatory Matters

Capital management in a regulated financial services industry must properly balance return on equity to its shareholders while maintaining sufficient levels of capital and related risk-based regulatory capital ratios to satisfy statutory regulatory requirements. The Company’s capital management strategies have been developed to provide attractive rates of returns to its shareholders, while maintaining a “well capitalized” position of regulatory strength.

Effective with the third quarter of 2018, the FRB raised the consolidated asset limit on small bank holding companies from $1 billion to $3 billion, and a company with assets under the revised limits is not subject to the FRB consolidated capital rules. A company with consolidated assets under the revised limit may continue to file reports that include capital amounts and ratios. The Company has elected to continue to file those reports.

Management believes the Company and the Bank met all capital adequacy requirements to which they are subject at December 31, 2019 and December 31, 2018. At December 31, 2019, the Bank was considered well capitalized under applicable banking regulations.

Tables presenting the Company's and the Bank's capital amounts and ratios at December 31, 2019 and 2018 are included in Note 16 Shareholders' Equity and Regulatory Capital, to the Consolidated Financial Statements appearing in Part II, Item 8, "Financial Statements and Supplementary Data."

Tier 1 and total capital increases reflected the Hamilton acquisition and results of operations for 2019. Risk-weighted assets increased from $1.3 billion at December 31, 2018 to $1.7 billion at December 31, 2019 for the Company and from $1.3 billion at December 31, 2018 to $1.7 billion at December 31, 2019 for the Bank, reflecting the Hamilton acquisition and growth in the loan and investment portfolios.

The Company routinely evaluates its capital levels in light of its risk profile to assess its capital needs. In addition to the minimum capital ratio requirement and minimum capital ratio to be well capitalized presented in the tables in Note 16, we must maintain a capital conservation buffer as noted in Item 1 - Business under the topic Basel III Capital Rules. At December 31, 2019, the Company's and the Bank's capital conservation buffer, based on the most restrictive capital ratio, was 5.3% and 5.4%, which is above the phase in requirement of 2.50% at December 31, 2019.

Liquidity and Rate Sensitivity

Liquidity. The primary function of asset/liability management is to ensure adequate liquidity and manage the Company's sensitivity to changing interest rates. Liquidity management involves the ability to meet the cash flow requirements of clients who may be either depositors wanting to withdraw funds or borrowers needing assurance that sufficient funds will be available to meet their credit needs. Our primary sources of funds consist of deposit inflows, loan repayments, maturities and sales of investment securities, the sale of mortgage loans and borrowings from the FHLB of Pittsburgh. While maturities and scheduled amortization of loans and securities are predictable sources of funds, deposit flows and mortgage prepayments are greatly influenced by general interest rates, economic conditions and competition.

We regularly adjust our investments in liquid assets based upon our assessment of expected loan demand, expected deposit flows, yields available on interest-earning deposits and securities and the objectives of our asset/liability management policy.

At December 31, 2019, outstanding loan commitments totaled $477.2 million, which included $38.8 million in undisbursed loans, $205.5 million in unused home equity lines of credit, $222.3 million in commercial lines of credit, and $10.6 million in standby letters of credit. Time deposits due within one year after December 31, 2019 totaled $375.8 million, or 72% of time deposits. The large percentage of time deposits that mature within one year reflects clients' preference not to invest funds for long periods in the current interest rate environment. If these maturing deposits do not remain with us, we will be required to seek other sources of funds, including other time deposits and lines of credit. Depending on market conditions, we may be required to pay higher rates on such deposits or other borrowings than we currently pay on time deposits outstanding at December 31, 2019. We believe, however, based on past experience that a significant portion of our time deposits will remain with us. We have the ability to attract and retain deposits by adjusting the interest rates we offer.

Our most liquid assets are cash and cash equivalents. The levels of these assets depend on our operating, financing, lending and investing activities during any given period. At December 31, 2019, cash and cash equivalents totaled $56.5 million, compared with $88.8 million at December 31, 2018. Securities classified as available for sale, net of pledging requirements, provide additional sources of liquidity, and totaled $331.7 million at December 31, 2019. Also at December 31, 2019, we had the ability to borrow up to a total of $836.7 million from the FHLB of Pittsburgh, of which $296.0 million in advances and letters of credit were outstanding. The Company's ability to borrow from the FHLB is dependent on having sufficient qualifying collateral, which generally consists of mortgage loans. In addition, we had $35.0 million in available unsecured lines of credit with other banks at December 31, 2019.

The Company is a separate legal entity from the Bank and must provide for its own liquidity. In addition to its operating expenses, the Company is responsible for paying any dividends declared to its shareholders and interest on its borrowings. The Company also has repurchased shares of its common stock. The Company's primary source of income is dividends received from the Bank. Restrictions on the Bank's ability to dividend funds to the Company are included in Note 16, Shareholders' Equity and Regulatory Capital, to the Consolidated Financial Statements under Part II, Item 8, "Financial Statements and Supplementary Data."

Interest Rate Sensitivity. Interest rate sensitivity management requires the maintenance of an appropriate balance between interest sensitive assets and liabilities. Management, through its asset/liability management process, attempts to manage the level of repricing and maturity mismatch so that fluctuations in net interest income are maintained within policy limits in current and expected market conditions. For further discussion, see Part II, Item 7A, "Quantitative and Qualitative Disclosures About Market Risk."

Contractual Obligations

The Company enters into contractual obligations in the normal course of business to fund loan growth, for asset/liability management purposes, to meet required capital needs and for other corporate purposes. The following table presents significant fixed and determinable contractual obligations of principal by payment date at December 31, 2019. Further discussion of the nature of each obligation is included in the referenced Note to the Consolidated Financial Statements under Part II, Item 8, "Financial Statements and Supplementary Data" referenced in the following table.

		Payments Due				
	Note Reference	Less than 1 year	2-3 years	4-5 years	More than 5 years	Total
Time deposits	11	$ 375,795	$ 116,580	$ 24,375	$ 2,818	$ 519,568
Short-term borrowings	13	154,869	—	—	—	154,869
Long-term debt	14	40,751	20,862	946	508	63,067
Subordinated notes	15	—	—	—	32,500	32,500
Operating lease obligations	6	1,279	1,874	1,486	10,549	15,188
Total		$ 572,694	$ 139,316	$ 26,807	$ 46,375	$ 785,192

The contractual obligations table above does not include off-balance sheet commitments to extend credit that are detailed in the following section. These commitments generally have fixed expiration dates and many will expire without being drawn upon, therefore the total commitment does not necessarily represent future cash requirements and is excluded from the contractual obligations table.

Off-Balance Sheet Arrangements

The Company is party to financial instruments with off-balance sheet risk in the normal course of business to meet the financing needs of its clients. These financial instruments include commitments to extend credit and standby letters of credit.

The following table details significant commitments at December 31, 2019.

	Contract or Notional Amount
Commitments to fund:	
Home equity lines of credit	$ 205,502
1-4 family residential construction loans	19,812
Commercial real estate, construction and land development loans	19,018
Commercial, industrial and other loans	222,288
Standby letters of credit	10,588

A discussion of the nature, business purpose, and guarantees that result from the Company's off-balance sheet arrangements is included in Note 18, Financial Instruments with Off-Balance Sheet Risk, to the Consolidated Financial Statements under Part II, Item 8, "Financial Statements and Supplementary Data."

Recently Adopted and Recently Issued Accounting Standards

Recently adopted and recently issued accounting standards are included in Note 1, Summary of Significant Accounting Policies, to the Consolidated Financial Statements under Part II, Item 8, "Financial Statements and Supplementary Data."

Supplemental Reporting of Non-GAAP Measures

As a result of prior acquisitions, the Company had intangible assets consisting of goodwill and core deposit and other intangible assets totaling $27.1 million and $16.5 million at December 31, 2019 and 2018, respectively.

Management believes providing certain "non-GAAP" information will assist investors in their understanding of the effect of acquisition activity on reported results, particularly to overcome comparability issues related to the influence of intangibles (principally goodwill) created in acquisitions.

Tangible book value per share and net interest margin excluding the impact of purchase accounting, as used by the Company in this supplemental reporting, are not GAAP measures. While we believe this information is a useful supplement to

the GAAP based measures presented in Item 6, Selected Financial Data and Section 7, Management's Discussion and Analysis of Financial Condition and Results of Operations, readers are cautioned that this non-GAAP disclosure has limitations as an analytical tool, should not be viewed as a substitute for financial measures determined in accordance with GAAP, and should not be considered in isolation or as a substitute for analysis of our results and financial condition as reported under GAAP, nor are such measures necessarily comparable to non-GAAP performance measures that may be presented by other companies. This supplemental presentation should not be construed as an inference that our future results will be unaffected by similar adjustments to be determined in accordance with GAAP.

The following table presents the computation of each non-GAAP based measure shown together with its most directly comparable GAAP based measure.

	2019	2018	2017
Tangible book value per common share			
Shareholders' equity	**$ 223,249**	$ 173,433	$ 144,765
Less: Goodwill	**19,925**	12,592	719
Other intangible assets	**7,180**	3,910	356
Related tax effect	**(1,508)**	(804)	(21)
Tangible common equity (non-GAAP)	**$ 197,652**	$ 157,735	$ 143,711
Common shares outstanding	**11,200**	9,430	8,347
Book value per share (most directly comparable GAAP based measure)	**$ 19.93**	$ 18.39	$ 17.34
Intangible assets per share	**2.28**	1.66	0.12
Tangible book value per share)non-GAAP)	**$ 17.65**	$ 16.73	$ 17.22

		2019		2018		2017	
Taxable-Equivalent Net Interest Margin (excluding the effect of purchase accounting)							
Taxable-equivalent net interest income/margin, as reported		**$ 70,338**	**3.43 %**	**$ 53,573**	**3.36 %**	**$ 46,256**	**3.35 %**
Effect of purchase accounting:							
Loans	Income	**(3,758)**	**(0.30) %**	**(335)**	**(0.04) %**	—	— %
Time deposits	Expenses	**83**	**0.02 %**	**(10)**	— %	—	— %
Purchase accounting effect on taxable-equivalent income/ margin		**(3,840)**	**(0.21) %**	**(325)**	**(0.01) %**	—	— %
Taxable-equivalent net interest income/margin (excluding the effect of purchase accounting) (non-GAAP)		**$ 66,497**	**3.22 %**	**$ 53,248**	**3.33 %**	**$ 46,256**	**3.35 %**

ITEM 7A – QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Market risk comprises exposure to interest rate risk, foreign currency exchange rate risk, commodity price risk, and other relevant market rate or price risks. In the banking industry, a major risk exposure is changing interest rates. The primary objective of monitoring our interest rate sensitivity, or risk, is to provide management the tools necessary to manage the balance sheet to minimize adverse changes in net interest income as a result of changes in the direction and level of interest rates. Federal Reserve Board monetary control efforts, the effects of deregulation, economic uncertainty and legislative changes have been significant factors affecting the task of managing interest rate sensitivity positions in recent years.

Interest Rate Risk

Interest rate risk is the exposure to fluctuations in the Company’s future earnings (earnings at risk) and value (value at risk) resulting from changes in interest rates. This exposure results from differences between the amounts of interest-earning assets and interest-bearing liabilities that reprice within a specified time period as a result of scheduled maturities, scheduled and unscheduled repayments, the propensity of borrowers and depositors to react to changes in their economic interests, and loan contractual interest rate changes.

We attempt to manage the level of repricing and maturity mismatch through our asset/liability management process so that fluctuations in net interest income are maintained within policy limits across a range of market conditions, while satisfying liquidity and capital requirements. Management recognizes that a certain amount of interest rate risk is inherent, appropriate and necessary to ensure the Company’s profitability. Thus, the goal of interest rate risk management is to evaluate the amount of reward for taking risk and adjusting both the size and composition of the balance sheet relative to the level of reward available for taking risk.

Management endeavors to control the exposure to changes in interest rates by understanding, reviewing and making decisions based on its risk position. The Company primarily uses its securities portfolio, FHLB advances and brokered deposits to manage its interest rate risk position. Additionally, pricing, promotion and product development activities are directed in an effort to emphasize the loan and deposit term or repricing characteristics that best meet current interest rate risk objectives. At present, we do not use hedging instruments for risk management, but we do evaluate them and may use them in the future.

We use simulation analysis to assess earnings at risk and net present value analysis to assess value at risk. These methods allow management to regularly monitor both the direction and magnitude of our interest rate risk exposure. These analyses require numerous assumptions including, but not limited to, changes in balance sheet mix, prepayment rates on loans and securities, cash flows and repricing of all financial instruments, changes in volumes and pricing, future shapes of the yield curve, relationship of market interest rates to each other (basis risk), credit spread and deposit sensitivity. Assumptions are based on management’s best estimates but may not accurately reflect actual results under certain changes in interest rate due to the timing, magnitude and frequency of rate changes and changes in market conditions and management strategies, among other factors. However, the analyses are useful in quantifying risk and providing a relative gauge of our interest rate risk position over time.

Our asset/liability committee operates under management policies, approved by the Board of Directors, which define guidelines and limits on the level of risk. The committee meets regularly and reviews our interest rate risk position and monitors various liquidity ratios to ensure a satisfactory liquidity position. By utilizing our analyses, we can determine changes that may need to be made to the asset and liability mixes to mitigate the change in net interest income under various interest rate scenarios. Management continually evaluates the condition of the economy, the pattern of market interest rates and other economic data to inform the committee on the selection of investment securities. Regulatory authorities also monitor our interest rate risk position along with other liquidity ratios.

Earnings at Risk

Simulation analysis evaluates the effect of upward and downward changes in market interest rates on future net interest income. The analysis involves changing the interest rates used in determining net interest income over the next twelve months. The resulting percentage change in net interest income in various rate scenarios is an indication of our short-term interest rate risk. The analysis assumes recent trends in new loan and deposit volumes will continue while the amount of investment securities remains constant. Additional assumptions are applied to modify volumes and pricing under the various rate scenarios.

The simulation analysis results are presented in the Earnings at Risk table below. At December 31, 2019, these results indicate the Company would be better positioned, over the next 12 months, in a moderately declining rate environment than it would be if interest rates increased. At December 31, 2018, the results indicated we would be better positioned in a moderately increasing rate environment than if rates decreased moderately or increased more substantially.

Value at Risk

Net present value analysis provides information on the risk inherent in the balance sheet that might not be taken into account in the simulation analysis due to the short time horizon used in that analysis. The net present value of the balance sheet incorporates the discounted present value of expected asset cash flows minus the discounted present value of expected liability cash flows. The analysis involves changing the interest rates used in determining the expected cash flows and in discounting the cash flows. The resulting percentage change in net present value in various rate scenarios is an indication of the longer term repricing risk and options embedded in the balance sheet.

At December 31, 2019, similar to at December 31, 2018, these results indicate the Company would be better positioned in a rising interest rate environment than it would be if interest rates decreased.

Earnings at Risk			Value at Risk		
	% Change in Net Interest Income			% Change in Market Value	
Change in Market Interest Rates	December 31, 2019	December 31, 2018	Change in Market Interest Rates	December 31, 2019	December 31, 2018
(100)	**(0.5) %**	(2.1) %	**(100)**	**(21.7) %**	(14.1) %
100	**(1.3) %**	(0.6) %	**100**	**10.9 %**	6.1 %
200	**(3.8) %**	(2.2) %	**200**	**15.1 %**	7.1 %

Further discussion related to the quantitative and qualitative disclosures about market risk is included under the heading of Liquidity and Rate Sensitivity in Item 7, Management's Discussion and Analysis of Financial Condition and Results of Operations.

ITEM 8 – FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA

SUMMARY OF QUARTERLY FINANCIAL DATA

The following table presents unaudited quarterly results of operations for years ended December 31.

	2019 Quarter Ended				2018 Quarter Ended			
	December	**September**	**June**	**March**	**December**	**September**	**June**	**March**
Interest income	**$ 24,028**	**$ 24,836**	**$ 24,472**	**$ 19,658**	$ 19,152	$ 16,276	$ 15,843	$ 14,396
Interest expense	**6,087**	**6,757**	**5,957**	**4,898**	4,402	3,536	2,982	2,591
Net interest income	**17,941**	**18,079**	**18,515**	**14,760**	14,750	12,740	12,861	11,805
Provision for loan losses	—	**300**	**200**	**400**	200	200	200	200
Net interest income after provision for loan losses	**17,941**	**17,779**	**18,315**	**14,360**	14,550	12,540	12,661	11,605
Investment securities gains	**18**	**2,328**	**2,064**	**339**	115	29	46	816
Other noninterest income	**7,012**	**6,274**	**5,710**	**4,796**	4,900	5,413	4,940	4,765
Merger related and branch consolidation expenses	**988**	**471**	**6,860**	**645**	2,724	319	154	—
Other noninterest expenses	**18,721**	**17,669**	**16,432**	**15,516**	15,559	13,003	13,107	13,069
Income before income tax expense	**5,262**	**8,241**	**2,797**	**3,334**	1,282	4,660	4,386	4,117
Income tax expense	**1,028**	**1,340**	**110**	**232**	130	644	374	492
Net income	**$ 4,234**	**$ 6,901**	**$ 2,687**	**$ 3,102**	$ 1,152	$ 4,016	$ 4,012	$ 3,625
Per share information:								
Basic earnings per share (a)	**$ 0.39**	**$ 0.63**	**$ 0.26**	**$ 0.34**	$ 0.13	$ 0.50	$ 0.50	$ 0.45
Diluted earnings per share (a)	**$ 0.38**	**$ 0.62**	**$ 0.26**	**$ 0.33**	$ 0.12	$ 0.49	$ 0.48	$ 0.44
Dividends paid per share	**$ 0.15**	**$ 0.15**	**$ 0.15**	**$ 0.15**	$ 0.13	$ 0.13	$ 0.13	$ 0.12

(a) Sum of the quarters may not equal the total year due to rounding.

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Management's Report on Internal Control Over Financial Reporting

The management of Orrstown Financial Services, Inc., together with its consolidated subsidiaries (the "Company"), has the responsibility for establishing and maintaining an adequate internal control structure and procedures for financial reporting. Management maintains a comprehensive system of internal control to provide reasonable assurance of the proper authorization of transactions, the safeguarding of assets and the reliability of the financial records. The system of internal control provides for appropriate division of responsibility and is documented by written policies and procedures that are communicated to employees. The Company maintains an internal auditing program, under the supervision of the Audit Committee of the Board of Directors, which independently assesses the effectiveness of the system of internal control and recommends possible improvements.

Under the supervision and with the participation of the Company's management, including its Chief Executive Officer and Chief Financial Officer, the Company has evaluated the effectiveness of its internal control over financial reporting at December 31, 2019, using the *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. As permitted, management excluded from its evaluation of effectiveness of internal control over financial reporting the Hamilton Bancorp, Inc. acquisition made on May 1, 2019, which is described in Note 2, Mergers and Acquisitions, to the Consolidated Financial Statements. Based upon this evaluation, management has concluded that, at December 31, 2019, the Company's internal control over financial reporting is effective based on the criteria established in *Internal Control-Integrated Framework (2013)*.

Crowe LLP has audited the effectiveness of the Company's internal control over financial reporting as of December 31, 2019, as stated in their report dated March 16, 2020.

/s/ Thomas R. Quinn, Jr.	/s/ Thomas R. Brugger
Thomas R. Quinn, Jr.	Thomas R. Brugger
President and Chief Executive Officer	Executive Vice President and Chief Financial Officer
	/s/ Gary A. Manley
	Gary A. Manley
March 16, 2020	Senior Vice President and Principal Accounting Officer

Crowe LLP
Independent Member Crowe Global

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Shareholders and Board of Directors of Orrstown Financial Services, Inc.
Shippensburg, Pennsylvania

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying consolidated balance sheets of Orrstown Financial Services, Inc. (the "Company") as of December 31, 2019 and 2018, the related consolidated statements of income, comprehensive income, changes in shareholders', and cash flows for each of the years in the three-year period ended December 31, 2019, and the related notes (collectively referred to as the "financial statements"). We also have audited the Company's internal control over financial reporting as of December 31, 2019, based on criteria established in Internal Control – Integrated Framework: (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2019 and 2018, and the results of its operations and its cash flows for each of the years in the three-year period ended December 31, 2019 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2019, based on criteria established in Internal Control – Integrated Framework: (2013) issued by COSO.

Basis for Opinions

The Company's management is responsible for these financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Management's Report on Internal Control over Financial Reporting. Our responsibility is to express an opinion on the Company's financial statements and an opinion on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) ("PCAOB") and are required to be independent with respect to the Company in accordance with the U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audits in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the financial statements are free of material misstatement, whether due to error or fraud, and whether effective internal control over financial reporting was maintained in all material respects.

Our audits of the financial statements included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. As permitted, the Company has excluded the operations of Hamilton Bancorp, Inc. and its wholly-owned subsidiary, Hamilton Bank acquired during 2019, which is described in Note 2 of the consolidated financial statements, from the scope of management's report on internal control over financial reporting. As such, it has also been excluded from the scope of our audit of internal control

over financial reporting. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

Definition and Limitations of Internal Control Over Financial Reporting

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (1) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ Crowe LLP

We have served as the Company's auditor since 2014.

Washington, D.C.
March 16, 2020

Consolidated Balance Sheets
ORRSTOWN FINANCIAL SERVICES, INC.

(Dollars in thousands, except per share amounts)	December 31, 2019	2018
Assets		
Cash and due from banks	**$ 25,969**	$ 26,156
Interest-bearing deposits with banks	**30,493**	45,664
Federal funds sold	**—**	16,995
Cash and cash equivalents	**56,462**	88,815
Restricted investments in bank stocks	**16,184**	10,842
Securities available for sale (amortized cost of $490,993 and $469,607 at December 31, 2019 and 2018, respectively)	**490,386**	465,844
Loans held for sale, at fair value	**9,364**	—
Loans held for sale, at cost	**—**	3,340
Loans	**1,644,330**	1,247,657
Less: Allowance for loan losses	**(14,655)**	(14,014)
Net loans	**1,629,675**	1,233,643
Premises and equipment, net	**37,524**	38,201
Cash surrender value of life insurance	**63,613**	41,327
Goodwill	**19,925**	12,592
Other intangible assets, net	**7,180**	3,910
Accrued interest receivable	**6,040**	5,927
Other assets	**46,921**	29,947
Total assets	**$ 2,383,274**	$ 1,934,388
Liabilities		
Deposits:		
Noninterest-bearing	**$ 249,450**	$ 204,843
Interest-bearing	**1,626,072**	1,353,913
Total deposits	**1,875,522**	1,558,756
Short-term borrowings	**154,869**	64,069
Long-term debt	**63,067**	83,450
Subordinated notes	**31,847**	31,859
Other liabilities	**34,720**	22,821
Total liabilities	**2,160,025**	1,760,955
Commitments and contingencies		
Shareholders' Equity		
Preferred stock, $1.25 par value per share; 500,000 shares authorized; no shares issued or outstanding	**—**	—
Common stock, no par value—$0.05205 stated value per share 50,000,000 shares authorized; 11,220,604 shares issued and 11,199,874 outstanding at December 31, 2019; 9,439,255 shares issued and 9,430,224 outstanding at December 31, 2018	**584**	491
Additional paid—in capital	**188,365**	151,678
Retained earnings	**35,246**	24,472
Accumulated other comprehensive loss	**(480)**	(2,972)
Treasury stock— 20,730 and 9,031 shares, at cost, at December 31, 2019 and 2018, respectively	**(466)**	(236)
Total shareholders' equity	**223,249**	173,433
Total liabilities and shareholders' equity	**$ 2,383,274**	$ 1,934,388

The Notes to Consolidated Financial Statements are an integral part of these statements.

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Consolidated Statements of Income
ORRSTOWN FINANCIAL SERVICES, INC.

(Dollars in thousands, except per share amounts)	Years Ended Years Ended December 31, 2019	2018	2017
Interest income			
Loans	**$ 75,071**	$ 50,632	$ 40,623
Investment securities - taxable	**14,530**	10,858	7,478
Investment securities - tax-exempt	**2,054**	3,850	3,134
Short term investments	**1,339**	327	218
Total interest income	**92,994**	65,667	51,453
Interest expense			
Deposits	**19,310**	10,229	6,134
Short-term borrowings	**623**	1,577	784
Long-term debt	**1,779**	1,632	726
Subordinated notes	**1,987**	73	—
Total interest expense	**23,699**	13,511	7,644
Net interest income	**69,295**	52,156	43,809
Provision for loan losses	**900**	800	1,000
Net interest income after provision for loan losses	**68,395**	51,356	42,809
Noninterest income			
Service charges on deposit accounts	**3,404**	3,233	3,057
Interchange income	**3,281**	2,821	2,618
Other service charges, commissions and fees	**805**	907	570
Loan swap referral fees	**1,197**	—	—
Trust and investment management income	**7,255**	6,576	6,400
Brokerage income	**2,426**	2,035	1,896
Mortgage banking activities	**3,049**	2,663	2,919
Income from life insurance	**2,044**	1,463	1,109
Other income	**331**	320	190
Investment securities gains	**4,749**	1,006	1,190
Total noninterest income	**28,541**	21,024	19,949
Noninterest expenses			
Salaries and employee benefits	**39,495**	32,524	30,145
Occupancy	**4,325**	3,084	2,806
Furniture and equipment	**4,723**	4,079	3,434
Data processing	**3,599**	2,674	2,271
Automated teller and interchange fees	**1,015**	806	767
Advertising and bank promotions	**1,967**	1,592	1,600
FDIC insurance	**367**	681	606
Legal fees	**585**	413	802
Other professional services	**2,369**	1,434	1,571
Directors' compensation	**1,003**	984	996
Taxes other than income	**1,018**	1,012	866
Intangible asset amortization	**1,570**	286	102
Merger related and branch consolidation expenses	**8,964**	3,197	—
Insurance claim receivable write off	**615**	—	—
Other operating expenses	**5,687**	5,169	4,364
Total noninterest expenses	**77,302**	57,935	50,330
Income before income tax expense	**19,634**	14,445	12,428
Income tax expense	**2,710**	1,640	4,338
Net income	**$ 16,924**	$ 12,805	$ 8,090
Per share information:			
Basic earnings per share	**$ 1.63**	$ 1.53	$ 1.00

Diluted earnings per share	**1.61**	1.50	0.98
Dividends paid per share	**0.60**	0.51	0.42

The Notes to Consolidated Financial Statements are an integral part of these statements.

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Consolidated Statements of Comprehensive Income
ORRSTOWN FINANCIAL SERVICES, INC.

(Dollars in thousands)	Years Ended December 31, 2019	2018	2017
Net income	**$ 16,924**	$ 12,805	$ 8,090
Other comprehensive income (loss), net of tax:			
Unrealized holding gains (losses) on securities available for sale arising during the period	**7,905**	(6,359)	6,557
Reclassification adjustment for gains realized in net income	**(4,749)**	(1,006)	(1,190)
Net unrealized gains (losses)	**3,156**	(7,365)	5,367
Tax effect	**(664)**	1,548	(1,586)
Total other comprehensive income (loss), net of tax and reclassification adjustments	**2,492**	(5,817)	3,781
Total comprehensive income	**$ 19,416**	$ 6,988	$ 11,871

The Notes to Consolidated Financial Statements are an integral part of these statements.

Consolidated Statements of Changes in Shareholders' Equity
ORRSTOWN FINANCIAL SERVICES, INC.

(Dollars in thousands, except per share amounts)	Common Stock	Additional Paid-In Capital	Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Treasury Stock	Total Shareholders' Equity
	Years Ended December 31, 2019, 2018, and 2017					
Balance, January 1, 2017	$ 437	$ 124,935	$ 11,669	$ (1,165)	$ (1,017)	$ 134,859
Net income	—	—	8,090	—	—	8,090
Reclassification of disproportionate tax effects from accumulated other comprehensive income (loss) to retained earnings	—	—	(229)	229	—	—
Total other comprehensive income, net of taxes	—	—	—	3,781	—	3,781
Cash dividends ($0.42 per share)	—	—	(3,488)	—	—	(3,488)
Share-based compensation plans:						
4,421 net common shares issued and 56,885 net treasury shares issued, including compensation expense totaling $1,386	(2)	523	—	—	1,002	1,523
Balance, December 31, 2017	435	125,458	16,042	2,845	(15)	144,765
Net income	—	—	12,805	—	—	12,805
Total other comprehensive loss, net of taxes	—	—	—	(5,817)	—	(5,817)
Cash dividends ($0.51 per share)	—	—	(4,375)	—	—	(4,375)
Issuance of stock (1,052,635 common shares) to acquire Mercersburg Financial Corporation	55	24,998	—	—	—	25,053
Share-based compensation plans:						
38,764 net common shares issued and 8,214 net treasury shares acquired, including compensation expense totaling $1,493	1	1,222	—	—	(221)	1,002
Balance, December 31, 2018	**491**	**151,678**	**24,472**	**(2,972)**	**(236)**	**173,433**
Net income	**—**	**—**	**16,924**	**—**	**—**	**16,924**
Total other comprehensive income, net of taxes	**—**	**—**	**—**	**2,492**	**—**	**2,492**
Cash dividends ($0.60 per share)	**—**	**—**	**(6,150)**	**—**	**—**	**(6,150)**
Issuance of stock (1,765,704 common shares) to acquire Hamilton Bancorp, Inc.	**92**	**36,530**	**—**	**—**	**—**	**36,622**
Share-based compensation plans:						
15,645 net common shares issued and 11,699 net treasury shares acquired, including compensation expense totaling $1,586	**1**	**157**	**—**	**—**	**(230)**	**(72)**
Balance, December 31, 2019	**$ 584**	**$ 188,365**	**$ 35,246**	**$ (480)**	**$ (466)**	**$ 223,249**

The Notes to Consolidated Financial Statements are an integral part of these statements.

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Consolidated Statements of Cash Flows
ORRSTOWN FINANCIAL SERVICES, INC.

(Dollars in thousands)	Years Ended Years Ended December 31, 2019	2018	2017
Cash flows from operating activities			
Net income	$ **16,924**	$ 12,805	$ 8,090
Adjustments to reconcile net income to net cash provided by operating activities:			
Net premium amortization (discount accretion)	**(2,547)**	1,406	4,034
Depreciation and amortization expense	**5,547**	3,642	3,265
Provision for loan losses	**900**	800	1,000
Share-based compensation	**1,586**	1,493	1,386
Gain on sales of loans originated for sale	**(2,613)**	(2,144)	(2,447)
Mortgage loans originated for sale	**(112,568)**	(90,305)	(104,512)
Proceeds from sales of loans originated for sale	**108,885**	94,727	103,131
Gain on sale of portfolio loans	**—**	(291)	(32)
Net gain on disposal of OREO	**(156)**	(108)	(18)
Writedown of OREO	**—**	24	4
Net loss (gain) on disposal of premises and equipment	**139**	12	(18)
Deferred income taxes	**1,776**	543	3,078
Investment securities gains	**(4,749)**	(1,006)	(1,190)
Income from life insurance	**(2,044)**	(1,463)	(1,109)
Increase in accrued interest receivable	**1,248**	(879)	(376)
Increase in accrued interest payable and other liabilities	**(5,291)**	2,696	2,012
Other, net	**2,053**	535	52
Net cash provided by operating activities	**9,090**	22,487	16,350
Cash flows from investing activities			
Proceeds from sales of AFS securities	**199,928**	156,364	162,320
Maturities, repayments and calls of AFS securities	**33,265**	18,373	28,768
Purchases of AFS securities	**(190,530)**	(226,014)	(203,719)
Net cash and cash equivalents received from acquisitions	**29,442**	12,407	—
Net purchases of restricted investments in bank stocks	**(2,684)**	(592)	(2,027)
Net increase in loans	**(46,157)**	(99,828)	(130,791)
Proceeds from sales of portfolio loans	**—**	3,589	2,195
Purchases of bank premises and equipment	**(2,911)**	(4,791)	(2,653)
Proceeds from disposal of OREO	**1,318**	1,413	541
Purchases of bank owned life insurance	**(3,280)**	(900)	(600)
Death benefit proceeds from life insurance contracts	**571**	576	—
Other	**—**	7	74
Net cash provided by (used in) investing activities	**18,962**	(139,396)	(145,892)
Cash flows from financing activities			
Net (decrease) increase in deposits	**(71,561)**	178,798	67,063
Net increase (decrease) in borrowings with original maturities less than 90 days	**115,800**	(14,507)	(34,288)
Proceeds from other short-term borrowings	**—**	25,000	70,000
Payments on other short-term borrowings	**(25,000)**	(40,000)	(30,000)
Proceeds from long-term debt	**20,000**	—	80,000
Payments on long-term debt	**(91,776)**	(365)	(20,348)
Proceeds from subordinated notes, net of issuance costs	**—**	31,857	—
Payment of subordinated notes issuance costs	**(59)**	—	—
Dividends paid	**(6,150)**	(4,375)	(3,488)
Treasury shares repurchased for employee taxes associated with restricted stock vesting	**(1,772)**	(651)	—
Proceeds from issuance of stock for option exercises and employee stock purchase plan	**113**	160	137
Net cash (used in) provided by financing activities	**(60,405)**	175,917	129,076
Net (decrease) increase in cash and cash equivalents	**(32,353)**	59,008	(466)
Cash and cash equivalents at beginning of year	**88,815**	29,807	30,273
Cash and cash equivalents at end of year	$ **56,462**	$ 88,815	$ 29,807

(Dollars in thousands)	Years Ended Years Ended December 31, 2019	2018	2017
Supplemental disclosure of cash flow information:			
Cash paid during the year for:			
Interest	**$ 24,313**	$ 12,930	$ 7,586
Income taxes	**—**	60	1,638
Supplemental schedule of noncash investing and financing activities:			
Other real estate acquired in settlement of loans	**161**	539	1,007
Premises and equipment transferred to held for sale	**4,894**	1,003	—

The Notes to Consolidated Financial Statements are an integral part of these statements.

Notes to Consolidated Financial Statements

(All dollar amounts presented in the tables, except share and per share amounts, are in thousands)

NOTE 1. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

See the Glossary of Defined Terms at the beginning of this Report for terms used throughout the consolidated financial statements and related notes of this Form 10-K.

Nature of Operations – Orrstown Financial Services, Inc. and subsidiaries is a financial holding company that operates Orrstown Bank, a commercial bank with banking and financial advisory offices in Berks, Cumberland, Dauphin, Franklin, Lancaster, Perry and York Counties, Pennsylvania, and in Anne Arundel, Baltimore, Howard and Washington Counties, Maryland, as well as Baltimore City, Maryland and Wheatland Advisors, Inc., a registered investment advisor non-bank subsidiary, headquartered in Lancaster County, Pennsylvania. The Company operates in the community banking segment and engages in lending activities, including commercial, residential, commercial mortgages, construction, municipal, and various forms of consumer lending, and deposit services, including checking, savings, time, and money market deposits. The Company also provides fiduciary services, investment advisory, insurance and brokerage services. The Company and the Bank are subject to regulation by certain federal and state agencies and undergo periodic examinations by such regulatory authorities.

Basis of Presentation – The accompanying consolidated financial statements include the accounts of Orrstown Financial Services, Inc. and its wholly owned subsidiaries, the Bank and Wheatland. The accounting and reporting policies of the Company conform to GAAP and, where applicable, to accounting and reporting guidelines prescribed by bank regulatory authorities. All significant intercompany transactions and accounts have been eliminated. Certain reclassifications have been made to prior year amounts to conform with current year classifications. In October 2018, the Company acquired Mercersburg Financial Corporation and its wholly-owned subsidiary, First Community Bank of Mercersburg, based in Mercersburg, Pennsylvania. In May 2019, the Company acquired Hamilton Bancorp, Inc., and its wholly-owned subsidiary, Hamilton Bank, based in Towson, Maryland. The results of operations and assets acquired and liabilities assumed from acquired entities are included only from the date of acquisition. The comparability of the Company's results of operations for the years ended December 31, 2019, to 2018 and 2017 have been impacted by these acquisitions.

The Company's management has evaluated all activity of the Company and concluded that subsequent events are properly reflected in the Company's consolidated financial statements and notes as required by GAAP.

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities as of the date of the financial statements and the reported amounts of revenues and expenses during the reporting periods. Actual results could differ from those estimates. Material estimates that are particularly susceptible to significant change include the determination of the ALL and those used in valuation methodologies in areas with no observable market, such as loans, deposits, borrowings, goodwill, core deposit and other intangible assets, other assets and liabilities obtained or assumed in business combinations.

Concentration of Credit Risk – The Company grants commercial, residential, construction, municipal, and various forms of consumer lending to clients primarily in its market area in south central Pennsylvania and in the greater Baltimore region and Washington County, Maryland.. Therefore, the Company's exposure to credit risk is significantly affected by changes in the economy in those areas. Although the Company maintains a diversified loan portfolio, a significant portion of its clients' ability to honor their contracts is dependent upon economic sectors for commercial real estate, including office space, retail strip centers, sales finance, sub-dividers and developers, and multi-family, hospitality, and residential building operators. Management evaluates each clients' creditworthiness on a case-by-case basis. The amount of collateral obtained upon the extension of credit, is based on management's credit evaluation of the client. Collateral held varies, but generally includes real estate and equipment.

The types of securities the Company invests in are included in Note 3, Securities Available for Sale, and the types of lending the Company engages in are included in Note 4, Loans and Allowance for Loan Losses.

Cash and Cash Equivalents – Cash and cash equivalents includes cash, balances due from banks, federal funds sold and interest-bearing deposits due on demand, all of which have original maturities of 90 days or less. Net cash flows are reported for client loan and deposit transactions, loans held for sale, redemption (purchases) of restricted investments in bank stocks, and short-term borrowings.

Cash and cash equivalents includes amounts that the Company is required to maintain on hand or on deposit at the Federal Reserve Bank to meet certain regulatory reserve balance requirements. At December 31, 2019 and 2018, the Company had reserve requirements of $9.2 million and $11.0 million, respectively.

Balances with correspondent banks may, at times, exceed federally insured limits. The Company considers this to be a normal business risk and reviews the financial condition of its correspondent banks on a quarterly basis.

Restricted Investments in Bank Stocks – Restricted investments in bank stocks consist of Federal Reserve Bank of Philadelphia stock, FHLB of Pittsburgh stock and Atlantic Community Bankers Bank stock. Federal law requires a member institution of the district Federal Reserve Bank and FHLB to hold stock according to predetermined formulas. Atlantic Community Bankers Bank requires its correspondent banking institutions to hold stock as a condition of membership. The restricted investment in bank stocks is carried at cost. On a quarterly basis, management evaluates the bank stocks for impairment based on assessment of the ultimate recoverability of cost rather than by recognizing temporary declines in value. The determination of whether a decline affects the ultimate recoverability of cost is influenced by criteria such as operating performance, liquidity, funding and capital positions, stock repurchase history, dividend history, and impact of legislative and regulatory changes.

Securities – The Company typically classifies debt securities as available for sale on the date of purchase. At December 31, 2019 and 2018, the Company had no held to maturity or trading securities. AFS securities are reported at fair value. Interest income and dividends on debt securities are recognized in interest income on an accrual basis. Purchase premiums and discounts on debt securities are amortized to interest income using the interest method over the terms of the securities and approximate the level yield method.

Changes in unrealized gains and losses, net of related deferred taxes, for AFS securities are recorded in AOCI. Realized gains and losses on securities are recorded on the trade date using the specific identification method and are included in noninterest income on the consolidated statements of income.

AFS securities include investments that management intends to use as part of its asset/liability management strategy. Securities may be sold in response to changes in interest rates, changes in prepayment rates and other factors. The Company does not have the intent to sell any of its AFS securities that are in an unrealized loss position and it is more likely than not that the Company will not be required to sell these securities before recovery of their amortized cost.

Management evaluates securities for OTTI on at least a quarterly basis, and more frequently when economic or market conditions warrant such an evaluation. For securities in an unrealized loss position, management considers the extent and duration of the unrealized loss, and the financial condition and near-term prospects of the issuer. Management also assesses whether it intends to sell, or it is more likely than not that it will be required to sell, a security in an unrealized loss position before recovery of its amortized cost basis. If either of the criteria regarding intent or requirement to sell is met, the entire difference between amortized cost and fair value is recognized as an impairment through earnings. For debt securities that do not meet the aforementioned criteria, the amount of impairment is split into two components: OTTI related to other factors, which is recognized in OCI, and the remaining OTTI, which is recognized in earnings. The credit loss is defined as the difference between the present value of the cash flows expected to be collected and the amortized cost basis.

The Company's securities are exposed to various risks, such as interest rate risk, market risk, and credit risk. Due to the level of risk associated with certain investments and the level of uncertainty related to changes in the value of investments, it is at least reasonably possible that changes in risks in the near term would materially affect investment assets reported in the consolidated financial statements.

Loans Held for Sale – Effective October 1, 2019, The Company adopted the fair value option on these loans which allows the Company to record the mortgage loans held for sale portfolio at fair market value as opposed to the lower of cost or market. The Company economically hedges its residential loans held for sale portfolio with forward sale agreements which are reported at fair value. A lower of cost or market accounting treatment would not allow the Company to record the excess of the fair market value over book value but would require the Company to record the corresponding reduction in value on the hedges. Both the loans and related hedges are carried at fair value which reduces earnings volatility as the amounts more closely offset, particularly in environments when interest rates are declining. For loans held for sale for which the fair value option has been elected, the aggregate fair value exceeded the aggregate principal balance by $226 thousand. There were no loans held for sale that were nonaccrual or 90 or more days past due as of December 31, 2019. In previous periods, loans originated and intended for sale in the secondary market were carried at the lower of aggregate cost or fair value. Gains and losses on loan sales (sales proceeds minus carrying value) are recorded in noninterest income. Interest income on these loans is recognized in interest and fees on loans in the consolidated statements of operations.

Loans – Loans that management has the intent and ability to hold for the foreseeable future or until maturity or pay-off are reported at their outstanding unpaid principal balances adjusted for charge-offs, the ALL, and any deferred fees or costs on

originated loans. Interest income is accrued on the unpaid principal balance. Loan origination fees, net of certain direct origination costs, are deferred and amortized as a yield adjustment over the respective term of the loan. For purchased loans that are not deemed impaired at the acquisition date, premiums and discounts are amortized or accreted as adjustments to interest income using the effective yield method.

For all classes of loans, the accrual of interest income on loans, including impaired loans, ceases when principal or interest is past due 90 days or more or immediately if, in the opinion of management, full collection is unlikely. Interest will continue to accrue on loans past due 90 days or more if the collateral is adequate to cover principal and interest, and the loan is in the process of collection. Interest accrued, but not collected, at the date of placement on nonaccrual status, is reversed and charged against interest income, unless fully collateralized. Subsequent payments received are either applied to the outstanding principal balance or recorded as interest income, depending upon management’s assessment of the ultimate collectability of principal. Loans are returned to accrual status, for all loan classes, when all the principal and interest amounts contractually due are brought current, the loan has performed in accordance with the contractual terms of the note for a reasonable period of time, generally six months, and the ultimate collectability of the total contractual principal and interest is reasonably assured. Past due status is based on the contractual terms of the loan.

Loans, the terms of which are modified, are classified as TDRs if a concession was granted in connection with the modification, for legal or economic reasons, related to the debtor’s financial difficulties. Concessions granted under a TDR typically involve a temporary deferral of scheduled loan payments, an extension of a loans' stated maturity date, a temporary reduction in interest rates, or granting of an interest rate below market rates given the risk of the transaction. If a modification occurs while the loan is on accrual status, it will continue to accrue interest under the modified terms. Nonaccrual TDRs may be restored to accrual status if scheduled principal and interest payments, under the modified terms, are current for six months after modification, and the borrower continues to demonstrate its ability to meet the modified terms. TDRs are evaluated individually for impairment on a quarterly basis including monitoring of performance according to their modified terms.

Allowance for Loan Losses – The ALL is evaluated on at least a quarterly basis, as losses are estimated to be probable and incurred, and, if deemed necessary, is increased or decreased through the provision for loan losses on the consolidated statements of income. Loan losses are charged against the ALL when management determines that all or a portion of the loan is uncollectible. Recoveries on previously charged-off loans are credited to the ALL when received. The ALL is allocated to loan portfolio classes on a quarterly basis, but the entire balance is available to cover losses from any of the portfolio classes when those losses are confirmed.

Management uses internal policies and bank regulatory guidance in periodically evaluating loans for collectability and incorporates historical experience, the nature and volume of the loan portfolio, adverse situations that may affect the borrower’s ability to repay, estimated value of any underlying collateral and prevailing economic conditions. This evaluation is inherently subjective as it requires estimates that are susceptible to significant revision as more information becomes available.

See Note 4, Loans and Allowance for Loan Losses, for additional information.

Acquired Loans - Loans acquired in connection with business combinations are recorded at fair value with no carryover of any allowance for loan losses. Fair value of the loans involves estimating the amount and timing of principal and interest cash flows expected to be collected on the loans and discounting those cash flows at a market rate of interest.

The excess of cash flows expected at acquisition over the estimated fair value is referred to as the accretable discount and is recognized into interest income over the remaining life of the loan. The difference between contractually required payments at acquisition and the cash flows expected to be collected at acquisition is referred to as the nonaccretable discount. These loans are accounted for under ASC 310-30, Loans and Debt Securities Acquired with Deteriorated Credit Quality ("ASC 310-30"). The nonaccretable discount includes estimated future credit losses expected to be incurred over the life of the loan. Subsequent decreases in expected cash flows will require us to evaluate the need for an addition to the allowance for loan losses. Subsequent improvement in expected cash flows will result in the reversal of a corresponding amount of the nonaccretable discount, which we will then reclassify as accretable discount to be recognized into interest income over the remaining life of the loan.

Loans acquired through business combinations that do meet the specific criteria of ASC 310-30 are individually evaluated each period to analyze expected cash flows. To the extent that the expected cash flows of a loan have decreased due to credit deterioration, the Company establishes an allowance.

Loans acquired through business combinations that do not meet the specific criteria of ASC 310-30 are accounted for under ASC 310-20, Receivables - Nonrefundable Fees and Other Costs. These loans are initially recorded at fair value, and include credit and interest rate marks associated with acquisition accounting adjustments. Purchase premiums or discounts are subsequently amortized as an adjustment to yield over the estimated contractual lives of the loans. There is no allowance for

loan losses established at the acquisition date for acquired performing loans. An allowance for loan losses is recorded for any credit deterioration in these loans subsequent to acquisition.

Acquired loans that meet the criteria for impairment or nonaccrual of interest prior to the acquisition may be considered performing upon acquisition, regardless of whether the client is contractually delinquent if the Company expects to fully collect the new carrying value (i.e., fair value) of the loans. As such, the Company may no longer consider the loan to be nonperforming and may accrue interest on these loans, including the impact of any accretable discount. In addition, charge-offs on such loans would be first applied to the nonaccretable difference portion of the fair value adjustment.

Loan Commitments and Related Financial Instruments – Financial instruments include off-balance sheet credit commitments issued to meet client financing needs, such as commitments to make loans and commercial letters of credit. These financial instruments are recorded when they are funded. The face amount represents the exposure to loss, before considering client collateral or ability to repay. The Company maintains a reserve for probable losses on off-balance sheet commitments which is included in other liabilities on the consolidated balance sheets.

Loans Serviced – The Bank administers secondary market mortgage programs available through the FHLB and the Federal National Mortgage Association and offers residential mortgage products and services to clients. The Bank originates single-family residential mortgage loans for immediate sale in the secondary market and retains the servicing of those loans. At December 31, 2019 and 2018, the balance of loans serviced for others totaled $360.1 million and $360.3 million, respectively.

Transfers of Financial Assets – Transfers of financial assets are accounted for as sales when control over the assets has been surrendered. Control over transferred assets is deemed to be surrendered when (1) the assets have been isolated from the Company, (2) the transferee obtains the right (free of conditions that constrain it from taking advantage of that right) to pledge or exchange the transferred assets, and (3) the Company does not maintain effective control over the transferred assets through an agreement to repurchase them before their maturity.

Cash Surrender Value of Life Insurance – The Company has purchased life insurance policies on certain employees. Life insurance is recorded at the cash surrender value adjusted for other charges or other amounts due that are probable at settlement.

Premises and Equipment – Buildings, improvements, equipment, furniture and fixtures are carried at cost less accumulated depreciation and amortization. Land is carried at cost. Depreciation and amortization has been recognized generally on the straight-line method and is computed over the estimated useful lives of the various assets as follows: buildings and improvements, including leasehold improvements – 10 to 40 years; and furniture and equipment – 3 to 15 years. Leasehold improvements are amortized over the shorter of the lease term or the indicated life. Repairs and maintenance are charged to operations as incurred, while additions and improvements are typically capitalized. Gains or losses on the retirement or disposal of individual assets is recorded as income or expense in the period of retirement or disposal. Premises no longer in use and held for sale are included in other assets on the consolidated balance sheets at the lower of carrying value or fair value and no depreciation is charged on them. At December 31, 2019 and 2018, premises held for sale totaled $5.2 million and $1.0 million, respectively.

Leases - The Company evaluates its contracts at inception to determine if an arrangement is,or contains, a lease. Operating leases are included in operating lease ROU assets in other assets and operating lease liabilities in accrued interest payable and other liabilities in the consolidated balance sheets. The Company had no finance leases at December 31, 2019.

ROU assets represent the right to use an underlying asset for the lease term, and lease liabilities represent an obligation to make lease payments arising from the lease. Operating lease ROU assets and liabilities are recognized at commencement date based on the present value of lease payments over the lease term. The Company's leases do not provide an implicit rate, so it uses our incremental borrowing rate, which approximates its fully collateralized borrowing rate, based on the information available at commencement date in determining the present value of lease payments. The incremental borrowing rate is reevaluated upon lease modification. The operating lease ROU asset also includes any initial direct costs and prepaid lease payments made less any lease incentives. The Company's lease terms may include options to extend or terminate the lease when it is reasonably certain that it will exercise that option.

The Company adopted ASU 2016-02, “Leases (Topic 842),” on January 1, 2019, using the practical expedient transition method whereby the Company did not revise comparative period information or disclosure. The new standard requires lessees to record assets and liabilities on the balance sheet for all leases with terms longer than 12 months. The Company elected the package of practical expedients permitted under the transition guidance within the new standard, which among other things, allows the Company to carryforward the historical lease classification. The Company also elected certain optional practical expedients, including the hindsight practical expedient under which the Company considered the actual outcomes of lease renewals and terminations when measuring the lease term at adoption, and the Company made an accounting policy election to keep leases with an initial term of 12 months or less off of the balance sheet. The Company recognizes these lease payments in

the consolidated statements of income on a straight-line basis over the lease term. The Company has lease agreements with lease and non-lease components, and has elected the practical expedient to account for these as a single lease component.

The Company's operating leases relate primarily to bank branches and office space. Upon the adoption on January 1, 2019, operating lease liabilities of $8.0 million and related lease assets of $7.5 million were recognized on the consolidated balance sheets. The difference between the lease assets and lease liabilities primarily consists of deferred rent liabilities reclassified upon adoption to reduce the measurement of the lease assets. The standard did not materially impact the Company's consolidated net income and had no impact on cash flows.

Goodwill and Other Intangible Assets – Goodwill is calculated as the purchase premium, if any, after adjusting for the fair value of net assets acquired in purchase transactions. Goodwill is not amortized but is reviewed for potential impairment on at least an annual basis, with testing between annual tests if an event occurs or circumstances change that could potentially reduce the fair value of a reporting unit. Other intangible assets represent purchased assets that can be distinguished from goodwill because of contractual or other legal rights. The Company’s other intangible assets have finite lives and are amortized on either an accelerated amortization method or straight line basis over their estimated lives, generally 10 years for deposit premiums and 10 to 15 years for other client relationship intangibles.

Mortgage Servicing Rights – The estimated fair value of MSRs related to loans sold and serviced by the Company is recorded as an asset upon the sale of such loans. MSRs are amortized as a reduction to servicing income over the estimated lives of the underlying loans. MSRs are evaluated periodically for impairment by comparing the carrying amount to estimated fair value. Fair value is determined periodically through a discounted cash flow valuation performed by a third party. Significant inputs to the valuation include expected servicing income, net of expense, the discount rate and the expected life of the underlying loans. To the extent the amortized cost of the MSRs exceeds their estimated fair values, a valuation allowance is established for such impairment through a charge against servicing income on the consolidated statements of income. If the Company determines, based on subsequent valuations, that the impairment no longer exists or is reduced, the valuation allowance is reduced through a credit to earnings. MSRs totaled $3.1 million and $3.2 million at December 31, 2019 and December 31, 2018, respectively, and are included in other assets on the consolidated balance sheets.

Foreclosed Real Estate – Real estate acquired through foreclosure or other means is initially recorded at the fair value of the related real estate collateral at the transfer date less estimated selling costs, and subsequently at the lower of its carrying value or fair value less estimated costs to sell. Fair value is determined based on an independent third party appraisal of the property or, when appropriate, a recent sales offer. Costs to maintain such real estate are expensed as incurred. Costs that significantly improve the value of the properties are capitalized. Real estate acquired through foreclosure or other means totaled $197 thousand and $130 thousand at December 31, 2019 and 2018, respectively, and is included in other assets on the consolidated balance sheets.

Investments in Real Estate Partnerships – The Company has a 99% limited partner interest in several real estate partnerships in central Pennsylvania. These investments are affordable housing projects, which entitle the Company to tax deductions and credits that expire through 2025. The Company accounts for its investments in affordable housing projects under the proportional amortization method when the criteria are met, which is limited to one investment at December 31, 2019. Other investments are accounted for under the equity method of accounting. The investment in these real estate partnerships, included in other assets on the consolidated balance sheets, totaled $3.6 million and $3.9 million at December 31, 2019 and 2018, respectively, of which $1.3 million and $1.6 million are accounted for under the proportional amortization method.

Equity method losses totaled $55 thousand, $331 thousand and $277 thousand for the years ended December 31, 2019, 2018 and 2017, respectively, and are included in other noninterest income on the consolidated income statements. Proportional amortization method losses totaled $214 thousand, $214 thousand and $217 thousand for the years ended December 31, 2019, 2018 and 2017, respectively, and are included in income tax expense on the consolidated income statements. During 2019, 2018 and 2017, the Company recognized federal tax credits from these projects totaling $460 thousand, $578 thousand and $1.0 million, respectively, which are included in income tax expense on the consolidated income statements.

Advertising – The Company expenses advertising as incurred. Advertising expense totaled $577 thousand, $418 thousand and $631 thousand for the years ended December 31, 2019, 2018 and 2017, respectively.

Repurchase Agreements – The Company enters into agreements under which it sells securities subject to an obligation to repurchase the same or similar securities which are included in short-term borrowings on the consolidated balance sheets. Under these agreements, the Company may transfer legal control over the assets but still retain effective control through an agreement that both entitles and obligates the Company to repurchase the assets. As a result, these repurchase agreements are accounted for as collateralized financing arrangements (i.e., secured borrowings) and not as a sale and subsequent repurchase of securities. The obligation to repurchase the securities is reflected as a liability on the Company’s consolidated balance sheets, while the securities underlying the repurchase agreements remaining are reflected in AFS securities. The repurchase obligation and underlying securities are not offset or netted as the Company does not enter into reverse repurchase agreements.

The right of setoff for a repurchase agreement resembles a secured borrowing, whereby the collateral would be used to settle the fair value of the repurchase agreement should the Company be in default (e.g., fail to make an interest payment to the counterparty). For the repurchase agreements, the collateral is held by the Company in a segregated custodial account under a third party agreement. Repurchase agreements are secured by GSE MBSs and mature overnight.

Share Compensation Plans – The Company has share compensation plans that cover employees and non-employee directors. Compensation expense relating to share-based payment transactions is measured based on the grant date fair value of the share award, including a Black-Scholes model for stock options. Compensation expense for all share awards is calculated and recognized over the employees' or non-employee directors' service period, generally defined as the vesting period.

Income Taxes – Income tax accounting guidance results in two components of income tax expense: current and deferred. Current income tax expense reflects taxes to be paid or refunded for the current period by applying the provisions of enacted tax law to taxable income or excess of deductions over revenues. The Company determines deferred income taxes using the liability (or balance sheet) method. Under this method, the net deferred tax asset or liability is based on the tax effects of the differences between the book and tax bases of assets and liabilities, and enacted changes in tax rates and laws are recognized in the period in which they occur.

Deferred income tax expense results from changes in deferred tax assets and liabilities between periods. Deferred tax assets are recognized if it is more likely than not, based on the technical merits, that the tax position will be realized or sustained upon examination. The term more likely than not means a likelihood of more than 50 percent; the terms examined and upon examination also include resolution of the related appeals or litigation processes, if any. A tax position that meets the more likely than not recognition threshold is initially and subsequently measured as the largest amount of tax benefit that has a greater than 50 percent likelihood of being realized upon settlement with a taxing authority that has full knowledge of all relevant information. The determination of whether or not a tax position has met the more likely than not recognition threshold considers the facts, circumstances, and information available at the reporting date and is subject to management's judgment. Deferred tax assets are reduced by a valuation allowance when, based on the weight of available evidence, it is more likely than not that some portion or all of a deferred tax asset will not be realized. The Company recognizes interest and penalties, if any, on income taxes as a component of income tax expense.

Loss Contingencies – Loss contingencies, including claims and legal actions arising in the ordinary course of business, are recorded as liabilities when the likelihood of loss is probable and an amount or range of loss can be reasonably estimated.

Treasury Stock – Common stock shares repurchased are recorded as treasury stock, at cost on the consolidated balance sheets.

Earnings Per Share – Basic earnings per share represents income available to common stockholders divided by the weighted average number of common shares outstanding during the period. Restricted stock awards are included in weighted average common shares outstanding as they are earned. Diluted earnings per share includes additional common shares that would have been outstanding if dilutive potential common shares had been issued. Potential common shares that may be issued by the Company relate solely to outstanding stock options and restricted stock awards and are determined using the treasury stock method.

Treasury shares are not deemed outstanding for earnings per share calculations.

Comprehensive Income – Comprehensive income consists of net income and OCI. Unrealized gains (losses) on securities available for sale, net of tax, was the sole component of AOCI at December 31, 2019 and 2018.

Fair Value – Fair values of financial instruments are estimated using relevant market information and other assumptions, as more fully disclosed in the Fair Value note to the consolidated financial statements. Fair value estimates involve uncertainties and matters of significant judgment. Changes in assumptions or in market conditions could significantly affect the estimates.

Segment Reporting – The Company operates in one segment – Community Banking. The Company's non-community banking activities, principally related to Wheatland, are insignificant to the consolidated financial statements.

Recent Accounting Pronouncements - ASU No. 2016-13, Financial Instruments - Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments ("ASU 2016-13"). The amendments in this update require an organization to measure all expected credit losses for financial assets held at the reporting date based on historical experience, current conditions, and reasonable and supportable forecasts. Financial institutions and other organizations will use forward-looking information to better inform their credit loss estimates. Many of the loss estimation techniques applied today will still be permitted, although the inputs to those techniques will change to reflect the full amount of expected credit losses. Organizations will continue to use judgment to determine which loss estimation method is appropriate for their circumstances. Additionally, the amendments in this update amend the accounting for credit losses on available-for-sale debt securities and purchased financial assets with credit

deterioration. For certain public companies, this update will be effective for interim and annual periods beginning after December 15, 2019. ASU No. 2019-10, Financial Instruments—Credit Losses (Topic 326), Derivatives and Hedging (Topic 815), and Leases (Topic 842): Effective Dates, extended the implementation deadline for smaller reporting and other companies until the fiscal year and interim periods beginning after December 15, 2022. The Company meets the requirements to be considered a smaller reporting company under SEC Regulation S-K and SEC Rule 405, and did not adopt ASU 2016-13 on January 1, 2020. The Company is evaluating the impact of the delay for adoption of ASU 2016-13.

The Company is working with a third party vendor solution to assist with the application of ASU 2016-13 and finalizing the loss estimation models to be used. Once management determines which methods will be utilized, a third party will be contracted to perform a model validation prior to adoption. While the Company anticipates the allowance for loan losses will increase under its current assumptions, it expects the impact of adopting ASU 2016-13 will be influenced by the composition, characteristics and quality of its loan and securities portfolios, as well as general economic conditions and forecasts at the adoption date.

ASU 2017-04, Intangibles - Goodwill and Other (Topic 350): Simplifying the Test for Goodwill Impairment. The update simplifies how all entities assess goodwill for impairment by eliminating Step 2 from the goodwill impairment test. As amended, the goodwill impairment test will consist of one step comparing the fair value of a reporting unit with its carrying amount. An entity should recognize a goodwill impairment charge for the amount by which the carrying amount exceeds the reporting unit’s fair value. The adoption of this guidance, effective January 1, 2020, will not have a material impact on the Company's consolidated financial statements.

NOTE 2. MERGERS AND ACQUISITIONS AND BRANCH CONSOLIDATIONS

Mercersburg Financial Corporation

On October 1, 2018, the Company acquired 100% of the outstanding common shares of Mercersburg Financial Corporation and its wholly-owned subsidiary, First Community Bank of Mercersburg, headquartered in Mercersburg, Pennsylvania. The Company issued 1,052,635 shares of its common stock and paid $4.9 million in cash for all outstanding shares of Mercersburg stock. Based on the Company's $23.80 closing stock price on Friday, September 28, 2018, the consideration paid to acquire Mercersburg totaled $29.9 million.

The fair value of assets acquired, excluding goodwill, totaled $181.4 million, including loans totaling $141.1 million and investment securities available for sale totaling $7.4 million. The fair value of liabilities assumed totaled $163.4 million, including deposits totaling $160.4 million. The Company recognized $11.9 million in initial goodwill, representing consideration transferred in excess of the fair value of the net assets acquired in the Mercersburg acquisition. The goodwill resulting from the acquisition represents the value expected from the expansion of our market in south central Pennsylvania and the enhancement of our operations through client synergies and efficiencies, thereby providing enhanced client service.

The Mercersburg acquisition was accounted for using the acquisition method of accounting and, accordingly, purchased assets, including identifiable intangible assets, and assumed liabilities were recorded at their respective acquisition date fair values. The fair value measurements of assets acquired and liabilities assumed were subject to refinement for up to one year after the closing date of the acquisition as additional information relative to closing date fair values became available. No material measurement period adjustments were made in the year ended December 31, 2019. The results of operations for the Company include Mercersburg's results from and after October 1, 2018.

Hamilton Bancorp, Inc.

On May 1, 2019, the Company acquired 100% of the outstanding common shares of Hamilton Bancorp, Inc., and its wholly-owned subsidiary, Hamilton Bank, based in Towson, Maryland. The Company acquired Hamilton to introduce our banking and financial services into the greater Baltimore area of Maryland.

Pursuant to the merger agreement, the Company issued 1,765,704 shares of its common stock and paid $14.2 million in cash for all outstanding shares of Hamilton stock and options vesting upon acquisition. Based on the Company's closing stock price of $20.74 on Tuesday, April 30, 2019, the consideration paid to acquire Hamilton totaled $50.8 million.

The fair value of assets acquired, excluding goodwill, totaled $492.8 million, including loans totaling $347.4 million. The fair value of liabilities assumed totaled $449.4 million, including deposits totaling $388.2 million. Goodwill represents consideration transferred in excess of the fair value of the net assets acquired. At May 1, 2019, the Company recognized $7.3 million in goodwill associated with the Hamilton acquisition. The goodwill resulting from the acquisition represents the value expected from the expansion of our market in the greater Baltimore area and the enhancement of our operations through client

synergies and efficiencies, thereby providing enhanced client service. Goodwill acquired in the Hamilton acquisition is not deductible for tax purposes.

The Hamilton acquisition was accounted for using the acquisition method of accounting and, accordingly, purchased assets, including identifiable intangible assets, and assumed liabilities were recorded at their respective acquisition date fair values. The fair value measurements of assets acquired and liabilities assumed are subject to refinement for up to one year after the closing date of the acquisition as additional information relative to closing date fair values become available. The Company continues to finalize the fair values of loans, intangible assets, other assets, income taxes and liabilities. As a result, the recorded fair value adjustments are preliminary and may change as additional information becomes available. Fair value adjustments will be finalized no later than May 2020. No material measurement period adjustments were made from the date of acquisition through December 31, 2019. The results of operations for the Company include Hamilton's results from and after May 1, 2019.

The following table summarizes the consideration paid for Hamilton and the estimated fair values of the assets acquired and liabilities assumed at the acquisition date.

Fair value of consideration transferred:		
Cash	$	**14,197**
Common stock issued		**36,622**
Total consideration transferred	$	**50,819**
Estimated fair values of assets acquired and liabilities assumed:		
Cash and cash equivalents	$	**43,140**
Securities available for sale		**60,882**
Restricted investments in bank stocks		**2,658**
Loans		**347,361**
Premises and equipment		**3,749**
Core deposit intangible		**4,550**
Goodwill		**7,333**
Cash surrender value of life insurance		**17,948**
Deferred tax asset, net		**5,838**
ROU lease asset		**2,793**
Other assets		**3,925**
Total assets acquired	$	**500,177**
Deposits	$	**(388,246)**
Borrowings		**(51,393)**
Other liabilities		**(9,719)**
Total liabilities assumed	$	**(449,358)**

The determination of estimated fair values of the acquired loans required the Company to make certain estimates about discount rates, future expected cash flows, market conditions and other future events that are highly subjective in nature. Based on such factors as past due status, nonaccrual status, bankruptcy status, and credit risk ratings, the acquired loans were divided into loans with evidence of credit quality deterioration, which are accounted for under ASC 310-30 (purchased credit impaired), and loans that do not meet this criteria, which are accounted for under ASC 310-20 (purchased non-impaired). Expected cash flows, both principal and interest, were estimated based on key assumptions covering such factors as prepayments, default rates and severity of loss given default. These assumptions were developed using both Hamilton's historical experience and the portfolio characteristics as of the acquisition date as well as available market research. The fair value estimates for acquired loans were based on the amount and timing of expected principal, interest and other cash flows, including expected prepayments, discounted at prevailing market interest rates applicable to the types of acquired loans, which the Company considered to be level 3 fair value measurements. Deposit liabilities assumed in the Hamilton acquisition were segregated into two categories: time-deposits (i.e., deposit accounts with a stated maturity) and demand deposits, both using level 2 fair value measurements. In determining fair value of time deposits, the Company discounted the contractual cash flows of the deposit accounts using prevailing market interest rates for time deposit accounts of similar type and duration. For demand deposits, the

acquisition date outstanding balance of the assumed demand deposit accounts approximates fair value. Acquisition date fair values for securities available for sale were determined using Level 1 or Level 2 inputs consistent with the methods discussed further in Note 19 - Fair Value. The remaining acquisition date fair values represent either Level 2 or Level 3 fair value measurements (premises and equipment and core deposit intangible).

The Company recognized a core deposit intangible of $4.6 million, which is being amortized using an accelerated method over a 10-year amortization period, consistent with expected future cash flows.

Loans acquired from Hamilton were measured at fair value at the acquisition date with no carryover of any ALL. Loans were segregated into those loans considered to be performing and those considered PCI. The following table presents performing and PCI loans acquired, by loan class, at May 1, 2019.

Upon completion of the Hamilton acquisition, the Company sold the acquired investment portfolio and paid off acquired borrowings at the indicated fair value amounts in conjunction with its asset/liability management strategies.

	Performing	PCI	Total
Commercial real estate:			
Owner-occupied	$ 42,148	$ 6,324	$ 48,472
Non-owner occupied	45,401	770	46,171
Multi-family	10,773	—	10,773
Acquisition and development:			
1-4 family residential construction	7,450	—	7,450
Commercial and land development	4,528	—	4,528
Commercial and industrial	32,316	1,702	34,018
Residential mortgage:			
First lien	152,657	10,494	163,151
Home-equity - term	4,478	1	4,479
Home equity - lines of credit	13,657	—	13,657
Installment and other loans	14,467	195	14,662
Total loans acquired	$ 327,875	$ 19,486	$ 347,361

The following table presents the fair value adjustments made to the amortized cost basis of loans acquired at May 1, 2019.

Gross amortized cost basis at acquisition	$ 362,125
Market rate adjustment	(5,309)
Credit fair value adjustment on non-credit impaired loans	(3,947)
Credit fair value adjustment on impaired loans	(5,508)
Estimated fair value of acquired loans	$ 347,361

The market rate adjustment represents the movement in market interest rates, irrespective of credit adjustments, compared to the contractual rates of the acquired loans. The credit fair value adjustment made on non-credit impaired loans represents the changes in credit quality of the underlying borrowers from loan inception to the acquisition date. The credit fair value adjustment on PCI loans is derived in accordance with ASC 310-30 and represents the portion of the loan balance that has been deemed uncollectible based on our expectations of future cash flows for each respective loan.

The following table provides information about acquired PCI loans at May 1, 2019.

Contractually required principal and interest at acquisition	$	**31,599**
Contractual cash flows not expected to be collected (nonaccretable discount)		**(8,616)**
Expected cash flows at acquisition		**22,983**
Interest component of expected cash flows (accretable discount)		**(3,497)**
Estimated fair value of acquired PCI loans	$	**19,486**

Unaudited pro forma net income for the year ended December 31, 2019 would have totaled $20.9 million, and revenues would have totaled $102.5 million for the same period had the Hamilton acquisition occurred January 1, 2019. Unaudited pro forma net income for the year ended December 31, 2018, would have totaled $12.2 million, and revenues would have totaled $95.3 million for the same period had the Mercersburg and Hamilton acquisitions occurred January 1, 2018.

In connection with the Mercersburg and Hamilton acquisitions, the Company incurred merger related expenses. Mercersburg related merger expenses totaled $280 thousand and $2.9 million during the years ended December 31, 2019 and 2018, respectively, which are included in merger related and branch consolidation expenses on the consolidated statements of income. For December 31, 2019 and 2018, the expenses consisted primarily of $81 thousand and $1.2 million of investment banking, legal and consulting fees; $199 thousand and $1.1 million of information systems expense, including canceling of contracts; and zero and $617 thousand, respectively, of other expenses, including payout of employee termination contracts. Hamilton related merger expenses totaled $7.7 million and $267 thousand for the years ended December 31, 2019 and 2018, respectively, which are included in merger related and branch consolidation expenses on the consolidated statements of income. For December 31, 2019 and 2018, these expenses consisted primarily of $1.9 million and $254 thousand of investment banking, legal and consulting fees; $3.7 million and zero of information systems expense, including canceling of contracts; and $2.2 million and $13 thousand, respectively, of other expenses, including payout of employee termination contracts.

Branch Consolidation

In October, 2019, the Company announced the consolidation of five branches in Franklin and Perry Counties, Pennsylvania, into other, larger branches of the Bank, as part of its ongoing evaluation of branch profitability. The Company also announced the sale/leaseback of an operations center facility to eliminate approximately 50,000 square feet of excess back office space. The branch consolidations were completed in January 2020, and the sale of the operations center facility is anticipated to be completed in the second quarter of 2020.

In conjunction with the consolidation and operations center facility sale/leaseback, the Company recorded $988 thousand in expenses in the fourth quarter of 2019, consisting of $762 thousand in fixed asset writedowns, $126 thousand in lease termination costs, and $100 thousand in severance and other costs. At December 31, 2019, fixed assets included in this consolidation, with an estimated fair value of $4.9 million, were held for sale and carried in other assets on the consolidated balances sheets.

NOTE 3. SECURITIES AVAILABLE FOR SALE

At December 31, 2019 and 2018, all investment securities were classified as AFS. The following table summarizes amortized cost and fair value of AFS securities, and the corresponding amounts of gross unrealized gains and losses recognized in AOCI at December 31, 2019 and 2018.

	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
December 31, 2019				
States and political subdivisions	**$ 83,607**	**$ 4,288**	**$ 32**	**$ 87,863**
GSE residential CMOs	**67,928**	**1,000**	**774**	**68,154**
Non-agency CMOs	**17,210**	**—**	**123**	**17,087**
Private label commercial CMOs	**86,704**	**156**	**231**	**86,629**
Asset-backed and other	**235,544**	**138**	**5,029**	**230,653**
Totals	**$ 490,993**	**$ 5,582**	**$ 6,189**	**$ 490,386**
December 31, 2018				
States and political subdivisions	$ 144,596	$ 1,919	$ 1,511	$ 145,004
GSE residential CMOs	110,421	332	2,689	108,064
Private label residential CMOs	144	—	1	143
Private label commercial CMOs	75,911	55	921	75,045
Asset-backed and other	138,535	126	1,073	137,588
Totals	$ 469,607	$ 2,432	$ 6,195	$ 465,844

The following table summarizes AFS securities with unrealized losses at December 31, 2019 and 2018, aggregated by major security type and length of time in a continuous unrealized loss position.

	Less Than 12 Months			12 Months or More			Total		
	# of Securities	Fair Value	Unrealized Losses	# of Securities	Fair Value	Unrealized Losses	# of Securities	Fair Value	Unrealized Losses
December 31, 2019									
States and political subdivisions	**1**	**$ 6,173**	**$ 32**	**—**	**$ 0**	**$ 0**	**1**	**$ 6,173**	**$ 32**
GSE residential CMOs	**5**	**37,158**	**309**	**1**	**11,602**	**465**	**6**	**48,760**	**774**
Non-agency CMOs	**1**	**17,087**	**123**	**—**	**—**	**—**	**1**	**17,087**	**123**
Private label commercial CMOs	**6**	**26,079**	**67**	**8**	**39,726**	**164**	**14**	**65,805**	**231**
Asset-backed and other	**9**	**92,189**	**1,145**	**9**	**121,399**	**3,884**	**18**	**213,588**	**5,029**
Totals	**22**	**$ 178,686**	**$ 1,676**	**18**	**$ 172,727**	**$ 4,513**	**40**	**$ 351,413**	**$ 6,189**
December 31, 2018									
States and political subdivisions	27	$ 46,585	$ 662	6	$ 23,036	$ 849	33	$ 69,621	$ 1,511
GSE residential CMOs	1	18,037	122	7	46,168	2,567	8	64,205	2,689
Private label residential CMOs	1	143	1	—	—	—	1	143	1
Private label commercial CMOs	11	56,499	712	2	6,349	209	13	62,848	921
Asset-backed and other	6	78,900	859	3	10,808	214	9	89,708	1,073
Totals	**46**	**$ 200,164**	**$ 2,356**	**18**	**$ 86,361**	**$ 3,839**	**64**	**$ 286,525**	**$ 6,195**

The Company determines whether unrealized losses are temporary in nature in accordance with FASB ASC 325-40, when applicable, and FASB ASC 320-10, *Investments - Overall*, ("FASB ASC 320-10"). The evaluation is based upon factors such as the creditworthiness of the underlying borrowers, performance of the underlying collateral, if applicable, and the level of credit support in the security structure. Management also evaluates other factors and circumstances that may be indicative of an OTTI condition. This includes, but is not limited to, an evaluation of the type of security, length of time and extent to which the fair value has been less than cost and near-term prospects of the issuer.

FASB ASC 320-10 requires the Company to assess if an OTTI exists by considering whether the Company has the intent to sell the security or it is more likely than not that it will be required to sell the security before recovery. If either of these situations applies, the guidance requires the Company to record an OTTI charge to earnings on debt securities for the difference between the amortized cost basis of the security and the fair value of the security. If neither of these situations applies, the Company is required to assess whether it is expected to recover the entire amortized cost basis of the security. If the Company is not expected to recover the entire amortized cost basis of the security, the guidance requires the Company to bifurcate the identified OTTI into a credit loss component and a component representing loss related to other factors. A discount rate is applied which equals the effective yield of the security. The difference between the present value of the expected flows and the amortized book value is considered a credit loss, which would be recorded through earnings as an OTTI charge. When a market price is not readily available, the market value of the security is determined using the same expected cash flows; the discount rate is a rate the Company determines from the open market and other sources as appropriate for the security. The difference between the market value and the present value of cash flows expected to be collected is recognized in accumulated other comprehensive loss on the consolidated statements of financial condition.

As of December 31, 2019, the Company had no cumulative OTTI. There were no OTTI charges recognized in earnings as a result of credit losses on investments in the years ended December 31, 2019, 2018 and 2017.

State and Political Subdivisions. The unrealized losses presented in the table above have been caused by a widening of spreads and/or a rise in interest rates from the time these securities were purchased. Management considers the investment rating, the state of the issuer of the security and other credit support in determining whether the security is OTTI. As of December 31, 2019 and 2018, management concluded that an OTTI did not exist on any of the aforementioned securities based upon its assessment. Management also concluded that it does not intend to sell nor will it be required to sell the securities, before their recovery, which may be maturity, and management expects to recover the entire amortized cost basis of these securities.

GSE Residential CMOs. The unrealized losses presented in the table above have been caused by a widening of spreads and/or a rise in interest rates from the time these securities were purchased. The contractual terms of these securities do not permit the issuer to settle the securities at a price less than its par value basis. As of December 31, 2019 and 2018, management concluded that an OTTI did not exist on any of the aforementioned securities based upon its assessment. Management also concluded that it does not intend to sell nor will it be required to sell the securities, before their recovery, which may be maturity, and management expects to recover the entire amortized cost basis of these securities.

Non-agency CMOs. The unrealized losses presented in the table above have been caused by a widening of spreads and/or a rise in interest rates from the time the securities were purchased. As of December 31, 2019, management concluded that an OTTI did not exist on any of the aforementioned securities based upon its assessment. Management also concluded that it does not intend to sell nor will it be required to sell the securities, before their recovery, which may be maturity, and management expects to recover the entire amortized cost basis of these securities.

Private Label Residential CMOs, Private Label Commercial CMOs and Asset-backed and Other. The unrealized losses presented in the table above have been caused by a widening of spreads and/or a rise in interest rates from the time the securities were purchased. As of December 31, 2019 and 2018, management concluded that an OTTI did not exist on any of the aforementioned securities based upon its assessment. Management also concluded that it does not intend to sell nor will it be required to sell the securities, before their recovery, which may be maturity, and management expects to recover the entire amortized cost basis of these securities.

The following table summarizes amortized cost and fair value of AFS securities by contractual maturity at December 31, 2019. Expected maturities may differ from contractual maturities if borrowers have the right to call or prepay obligations with or without call or prepayment penalties. Securities not due at a single maturity date are shown separately.

	Available for Sale	
	Amortized Cost	**Fair Value**
Due in one year or less	**$ 230**	**$ 230**
Due after one year through five years	**—**	**—**
Due after five years through ten years	**26,346**	**27,631**
Due after ten years	**57,031**	**60,002**
CMOs	**171,842**	**171,870**
Asset-backed and other	**235,544**	**230,653**
	$ 490,993	**$ 490,386**

The following table summarizes proceeds from sales of AFS securities and gross gains and gross losses for the years ended December 31, 2019, 2018 and 2017.

	2019	2018	2017
Proceeds from sale of AFS securities	**$ 199,928**	$ 156,364	$ 162,320
Gross gains	**4,974**	1,681	1,477
Gross losses	**225**	675	287

AFS securities with a fair value of $158.7 million and $164.2 million at December 31, 2019 and 2018, respectively, were pledged to secure public funds and for other purposes as required or permitted by law.

NOTE 4. LOANS AND ALLOWANCE FOR LOAN LOSSES

The Company's loan portfolio is grouped into classes to allow management to monitor the performance by the borrower and to monitor the yield on the portfolio. Consistent with ASU 2010-20, *Disclosures about the Credit Quality of Financing Receivables and the Allowance for Loan Losses,* the segments are further broken down into classes to allow for differing risk characteristics within a segment.

The risks associated with lending activities differ among the various loan classes and are subject to the impact of changes in interest rates, market conditions of collateral securing the loans, and general economic conditions. All of these factors may adversely impact both the borrower's ability to repay its loans and associated collateral.

The Company has various types of commercial real estate loans, which have differing levels of credit risk. Owner occupied commercial real estate loans are generally dependent upon the successful operation of the borrower's business, with the cash flows generated from the business being the primary source of repayment of the loan. If the business suffers a downturn in sales or profitability, the borrower's ability to repay the loan could be in jeopardy.

Non-owner occupied and multi-family commercial real estate loans and non-owner occupied residential loans present a different credit risk to the Company than owner occupied commercial real estate loans, as the repayment of the loan is dependent upon the borrower's ability to generate a sufficient level of occupancy to produce rental income that exceeds debt service requirements and operating expenses. Lower occupancy or lease rates may result in a reduction in cash flows, which hinders the ability of the borrower to meet debt service requirements, and may result in lower collateral values. The Company generally recognizes that greater risk is inherent in these credit relationships as compared to owner occupied loans mentioned above.

Acquisition and development loans consist of 1-4 family residential construction and commercial and land development loans. The risk of loss on these loans is largely dependent on the Company's ability to assess the property's value at the completion of the project, which should exceed the property's construction costs. During the construction phase, a number of factors could potentially negatively impact the collateral value, including cost overruns, delays in completing the project, competition, and real estate market conditions which may change based on the supply of similar properties in the area. In the event the collateral value at the completion of the project is not sufficient to cover the outstanding loan balance, the Company must rely upon other repayment sources, if any, including the guarantors of the project or other collateral securing the loan.

Commercial and industrial loans include advances to local and regional businesses for general commercial purposes and include permanent and short-term working capital, machinery and equipment financing, and may be either in the form of lines of credit or term loans. Although commercial and industrial loans may be unsecured to our highest-rated borrowers, the majority of these loans are secured by the borrower's accounts receivable, inventory and machinery and equipment. In a significant number of these loans, the collateral also includes the business real estate or the business owner's personal real estate or assets. Commercial and industrial loans present credit exposure to the Company, as they are more susceptible to risk of loss during a downturn in the economy as borrowers may have greater difficulty in meeting their debt service requirements and the value of the collateral may decline. The Company attempts to mitigate this risk through its underwriting standards, including evaluating the creditworthiness of the borrower and, to the extent available, credit ratings of the business. Additionally, monitoring of the loans through annual renewals and meetings with the borrowers are typical. However, these procedures cannot eliminate the risk of loss associated with commercial and industrial lending.

Municipal loans consist of extensions of credit to municipalities and school districts within the Company's market area. These loans generally present a lower risk than commercial and industrial loans, as they are generally secured by the municipality's full taxing authority, by revenue obligations, or by its ability to raise assessments on its clients for a specific utility.

The Company originates loans to its retail clients, including fixed-rate and adjustable first lien mortgage loans with the underlying 1-4 family owner occupied residential property securing the loan. The Company's risk exposure is minimized in these types of loans through the evaluation of the creditworthiness of the borrower, including credit scores and debt-to-income ratios, and underwriting standards which limit the loan-to-value ratio to generally no more than 80% upon loan origination, unless the borrower obtains private mortgage insurance.

Home equity loans, including term loans and lines of credit, present a slightly higher risk to the Company than 1-4 family first liens, as these loans can be first or second liens on 1-4 family owner occupied residential property, but can have loan-to-value ratios of no greater than 90% of the value of the real estate taken as collateral. The creditworthiness of the borrower is considered including credit scores and debt-to-income ratios.

Installment and other loans' credit risk are mitigated through prudent underwriting standards, including evaluation of the creditworthiness of the borrower through credit scores and debt-to-income ratios and, if secured, the collateral value of the assets. These loans can be unsecured or secured by assets the value of which may depreciate quickly or may fluctuate, and may present a greater risk to the Company than 1-4 family residential loans.

The following table presents the loan portfolio by segment and class, excluding residential LHFS, at December 31, 2019 and 2018.

	2019	**2018**
Commercial real estate:		
Owner-occupied	**$ 170,884**	$ 129,650
Non-owner occupied	**361,050**	252,794
Multi-family	**106,893**	78,933
Non-owner occupied residential	**120,038**	100,367
Acquisition and development:		
1-4 family residential construction	**15,865**	7,385
Commercial and land development	**41,538**	42,051
Commercial and industrial	**214,554**	160,964
Municipal	**47,057**	50,982
Residential mortgage:		
First lien	**336,372**	235,296
Home equity – term	**14,030**	12,208
Home equity – lines of credit	**165,314**	143,616
Installment and other loans	**50,735**	33,411
Total loans [1]	**$ 1,644,330**	$ 1,247,657

[1] Includes $395.9 million and $135.0 million of acquired loans at December 31, 2019 and 2018, respectively.

In order to monitor ongoing risk associated with its loan portfolio and specific loans within the segments, management uses an internal grading system. The first several rating categories, representing the lowest risk to the Bank, are combined and given a "Pass" rating. Management generally follows regulatory definitions in assigning criticized ratings to loans, including "Special Mention," "Substandard," "Doubtful" or "Loss." The Special Mention category includes loans that have potential weaknesses that may, if not monitored or corrected, weaken the asset or inadequately protect the Bank's position at some future date. These assets pose elevated risk, but their weakness does not yet justify a more severe, or classified rating. Substandard loans are classified as they have a well-defined weakness, or weaknesses that jeopardize liquidation of the debt. These loans are characterized by the distinct possibility that the Bank will sustain some loss if the deficiencies are not corrected. Substandard loans include loans that management has determined not to be impaired, as well as loans considered to be impaired. A Doubtful loan has a high probability of total or substantial loss, but because of specific pending events that may strengthen the asset, its classification as Loss is deferred. Loss loans are considered uncollectible, as the borrowers are often in bankruptcy, have suspended debt repayments, or have ceased business operations. Once a loan is classified as Loss, there is little prospect of collecting the loan's principal or interest and it is charged-off.

The Company has a loan review policy and program which is designed to identify and monitor risk in the lending function. The Management ERM Committee, comprised of executive officers and loan department personnel, is charged with the oversight of overall credit quality and risk exposure of the Company's loan portfolio. This includes the monitoring of the lending activities of all Company personnel with respect to underwriting and processing new loans and the timely follow-up and corrective action for loans showing signs of deterioration in quality. A loan review program provides the Company with an

independent review of the commercial loan portfolio on an ongoing basis. Generally, consumer and residential mortgage loans are included in the Pass categories unless a specific action, such as extended delinquencies, bankruptcy, repossession or death of the borrower occurs, which heightens awareness as to a possible credit event.

Internal loan reviews are completed annually on all commercial relationships with a committed loan balance in excess of $500 thousand, which includes confirmation of risk rating by an independent credit officer. In addition, all commercial relationships greater than $500 thousand rated Substandard, Doubtful or Loss are reviewed quarterly and corresponding risk ratings are reaffirmed by the Company's Problem Loan Committee, with subsequent reporting to the Management ERM Committee and the Board of Directors.

The following summarizes the Company's loan portfolio ratings based on its internal risk rating system at December 31, 2019 and 2018:

	Pass	Special Mention	Non-Impaired Substandard	Impaired - Substandard	Doubtful	PCI Loans	Total
December 31, 2019							
Commercial real estate:							
Owner-occupied	**$ 151,161**	**$ 4,513**	**$ 3,163**	**$ 5,872**	**$ —**	**$ 6,175**	**$ 170,884**
Non-owner occupied	**342,753**	**17,152**	**—**	**—**	**—**	**1,145**	**361,050**
Multi-family	**100,361**	**4,822**	**682**	**345**	**—**	**683**	**106,893**
Non-owner occupied residential	**111,697**	**4,534**	**1,115**	**235**	**—**	**2,457**	**120,038**
Acquisition and development:							
1-4 family residential construction	**15,865**	**—**	**—**	**—**	**—**	**—**	**15,865**
Commercial and land development	**39,939**	**206**	**1,393**	**—**	**—**	**—**	**41,538**
Commercial and industrial	**198,951**	**1,133**	**8,899**	**1,763**	**—**	**3,808**	**214,554**
Municipal	**42,649**	**4,408**	**—**	**—**	**—**	**—**	**47,057**
Residential mortgage:							
First lien	**323,040**	**978**	**—**	**2,590**	**—**	**9,764**	**336,372**
Home equity – term	**13,774**	**74**	**149**	**13**	**—**	**20**	**14,030**
Home equity – lines of credit	**164,469**	**74**	**38**	**733**	**—**	**—**	**165,314**
Installment and other loans	**50,497**	**—**	**—**	**85**	**—**	**153**	**50,735**
	$ 1,555,156	**$ 37,894**	**$ 15,439**	**$ 11,636**	**$ —**	**$ 24,205**	**$ 1,644,330**
December 31, 2018							
Commercial real estate:							
Owner-occupied	$ 121,903	$ 3,024	$ 987	$ 1,880	$ —	$ 1,856	$ 129,650
Non-owner occupied	242,136	10,008	—	—	—	650	252,794
Multi-family	71,482	5,886	717	131	—	717	78,933
Non-owner occupied residential	97,590	736	1,197	309	—	535	100,367
Acquisition and development:							
1-4 family residential construction	7,385	—	—	—	—	—	7,385
Commercial and land development	41,251	25	583	—	—	192	42,051
Commercial and industrial	150,286	2,278	2,940	286	—	5,174	160,964
Municipal	50,982	—	—	—	—	—	50,982
Residential mortgage:							
First lien	229,971	—	—	2,877	—	2,448	235,296
Home equity – term	12,170	—	—	16	—	22	12,208
Home equity – lines of credit	142,638	165	15	798	—	—	143,616
Installment and other loans	33,229	15	1	—	—	166	33,411
	$ 1,201,023	$ 22,137	$ 6,440	$ 6,297	$ —	$ 11,760	$ 1,247,657

For commercial real estate, acquisition and development, and commercial and industrial 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. Generally, loans that are more than 90 days past due are deemed 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 to determine if the loan should be placed on nonaccrual status. Nonaccrual loans in the commercial and commercial real estate portfolios and any TDRs are, by definition, deemed to be impaired. Impairment is measured on a loan-by-loan basis for commercial, construction and restructured loans by either the present value of the expected future cash flows discounted at the loan's effective interest rate, the loan's obtainable market price, or the fair value of the collateral if the loan is collateral dependent. A loan is collateral dependent if the repayment of the loan is expected to be provided solely by the underlying collateral. For loans that are deemed to be impaired for extended periods of time, periodic updates on fair values are obtained, which may include updated appraisals. Updated fair values are incorporated into the impairment analysis in the next reporting period.

Loan charge-offs, which may include partial charge-offs, are taken on an impaired loan that is collateral dependent if the loan's carrying balance exceeds its collateral's appraised value, the loan has been identified as uncollectible, and it is deemed to be a confirmed loss. Typically, impaired loans with a charge-off or partial charge-off will continue to be considered impaired, unless the note is split into two and management expects the performing note to continue to perform and the loan is adequately secured. The second, or non-performing note, would be charged-off. Generally, an impaired loan with a partial charge-off may continue to have an impairment reserve on it after the partial charge-off, if factors warrant.

At December 31, 2019 and 2018, nearly all of the Company's loan impairments were measured based on the estimated fair value of the collateral securing the loan, except for TDRs. By definition, TDRs are considered impaired. All TDR impairment analyses are initially based on discounted cash flows for those loans. For real estate loans, collateral generally consists of commercial real estate, but in the case of commercial and industrial loans, it could also consist of accounts receivable, inventory, equipment or other business assets. Commercial and industrial loans may also have real estate collateral.

Updated appraisals are generally required every 18 months for classified commercial loans in excess of $250 thousand. The "as is" value provided in the appraisal is often used as the fair value of the collateral in determining impairment, unless circumstances, such as subsequent improvements or approvals, dictate that another value provided by the appraiser is more appropriate.

Generally, impaired commercial loans secured by real estate, other than new and performing TDRs, are measured at fair value using certified real estate appraisals that had been completed within the last 18 months. Appraised values are discounted for estimated costs to sell the property and other selling considerations to arrive at the property's fair value. In those situations in which it is determined an updated appraisal is not required for loans individually evaluated for impairment, fair values are based on either an existing appraisal or a discounted cash flow analysis as determined by management. The approaches are discussed below:

- Existing appraisal – if the existing appraisal provides a strong loan-to-value ratio (generally 70% or lower) and, after consideration of market conditions and knowledge of the property and area, it is determined by the Credit Administration staff that there has not been a significant deterioration in the collateral value, the existing certified appraised value may be used. Discounts to the appraised value, as deemed appropriate for selling costs, are factored into the fair value.
- Discounted cash flows – in limited cases, discounted cash flows may be used on projects in which the collateral is liquidated to reduce the borrowings outstanding, and is used to validate collateral values derived from other approaches.

Collateral on certain impaired loans is not limited to real estate, and may consist of accounts receivable, inventory, equipment or other business assets. Estimated fair values may be determined based on borrowers' financial statements, inventory ledgers, accounts receivable agings or appraisals from individuals with knowledge in the business. Stated balances are generally discounted for the age of the financial information or the quality of the assets. In determining fair value, liquidation discounts are applied to this collateral based on existing loan valuation policies.

The Company distinguishes substandard loans on both an impaired and non-impaired basis, as it places less emphasis on a loan's classification, and increased reliance on whether the loan was performing in accordance with the contractual terms. A substandard classification does not automatically meet the definition of impaired. Loss potential, while existing in the aggregate

amount of substandard loans, does not have to exist in individual extensions of credit classified as substandard. As a result, the Company's methodology includes an evaluation of certain accruing commercial real estate, acquisition and development, and commercial and industrial loans rated substandard to be collectively evaluated for impairment. Although the Company believes these loans meet the definition of substandard, they are generally performing and management has concluded that it is likely the Company will be able to collect the scheduled payments of principal and interest when due according to the contractual terms of the loan agreement.

Larger groups of smaller balance homogeneous loans are collectively evaluated for impairment. Generally, the Company does not separately identify individual consumer and residential loans for impairment disclosures, unless such loans are the subject of a restructuring agreement due to financial difficulties of the borrower.

The following table, which excludes PCI loans, summarizes impaired loans by segment and class, segregated by those for which a specific allowance was required and those for which a specific allowance was not required at December 31, 2019 and 2018. The recorded investment in loans excludes accrued interest receivable due to insignificance. Related allowances established generally pertain to those loans in which loan forbearance agreements were in the process of being negotiated or updated appraisals were pending and any partial charge-off will be recorded when final information is received.

	Impaired Loans with a Specific Allowance			Impaired Loans with No Specific Allowance	
	Recorded Investment (Book Balance)	Unpaid Principal Balance (Legal Balance)	Related Allowance	Recorded Investment (Book Balance)	Unpaid Principal Balance (Legal Balance)
December 31, 2019					
Commercial real estate:					
Owner-occupied	**$ —**	**$ —**	**$ —**	**$ 5,872**	**$ 8,086**
Multi-family	**—**	**—**	**—**	**345**	**569**
Non-owner occupied residential	**—**	**—**	**—**	**235**	**422**
Commercial and industrial	**—**	**—**	**—**	**1,763**	**3,361**
Residential mortgage:					
First lien	**425**	**425**	**36**	**2,165**	**3,164**
Home equity—term	**—**	**—**	**—**	**13**	**15**
Home equity—lines of credit	**—**	**—**	**—**	**733**	**1,077**
Installment and other loans	**—**	**—**	**—**	**85**	**97**
	$ 425	**$ 425**	**$ 36**	**$ 11,211**	**$ 16,791**
December 31, 2018					
Commercial real estate:					
Owner-occupied	$ —	$ —	$ —	$ 1,880	$ 2,576
Multi-family	—	—	—	131	336
Non-owner occupied residential	—	—	—	309	632
Commercial and industrial	—	—	—	286	457
Residential mortgage:					
First lien	743	743	38	2,134	2,727
Home equity—term	—	—	—	16	23
Home equity—lines of credit	—	—	—	798	1,081
	$ 743	$ 743	$ 38	$ 5,554	$ 7,832

The following table, which excludes PCI loans, summarizes the average recorded investment in impaired loans and related recognized interest income for the years ended December 31, 2019, 2018 and 2017.

	2019		2018		2017	
	Average Impaired Balance	Interest Income Recognized	Average Impaired Balance	Interest Income Recognized	Average Impaired Balance	Interest Income Recognized
Commercial real estate:						
Owner-occupied	**$ 2,455**	**$ 2**	$ 1,495	$ 2	$ 1,000	$ 6
Non-owner occupied	**46**	**—**	1,842	—	392	—
Multi-family	**152**	**—**	148	—	182	—
Non-owner occupied residential	**217**	**—**	346	—	418	—
Acquisition and development:						
1-4 family residential construction	**—**	**—**	181	—	154	—
Commercial and land development	**21**	**—**	1	—	—	—
Commercial and industrial	**683**	**—**	322	—	413	—
Residential mortgage:						
First lien	**2,582**	**50**	3,234	59	4,012	58
Home equity – term	**13**	**—**	19	—	61	—
Home equity – lines of credit	**750**	**2**	657	2	488	2
Installment and other loans	**13**	**—**	4	—	10	—
	$ 6,932	**$ 54**	$ 8,249	$ 63	$ 7,130	$ 66

The following table presents impaired loans that are TDRs, with the recorded investment at December 31, 2019 and 2018.

	2019		2018	
	Number of Contracts	Recorded Investment	Number of Contracts	Recorded Investment
Accruing:				
Commercial real estate:				
Owner-occupied	**1**	**$ 30**	1	$ 39
Residential mortgage:				
First lien	**9**	**931**	11	1,069
Home equity - lines of credit	**1**	**18**	1	24
	11	**979**	13	1,132
Nonaccruing:				
Commercial real estate:				
Owner-occupied	**4**	**1,909**	1	37
Residential mortgage:				
First lien	**5**	**359**	8	658
	9	**2,268**	9	695
	20	**$ 3,247**	22	$ 1,827

There were three new commercial real estate owner occupied TDRs totaling $1.9 million for the year ended December 31, 2019, no restructured loans for the year ended December 31, 2018, and two commercial real estate owner occupied TDRs totaling $119 thousand for the year ended December 31, 2017 that were modified as TDRs within the previous 12 months which were in payment default. No additional commitments have been made to borrowers whose loans are considered TDRs.

The following table presents the number of loans modified, and their pre-modification and post-modification investment balances for the years ended December 31, 2019, and 2017. There were no loans modified during 2018.

	Number of Contracts	Pre-Modification Investment Balance	Post-Modification Investment Balance
December 31, 2019			
Commercial real estate:			
Owner-occupied	**3**	**$ 1,866**	**$ 1,881**
December 31, 2017			
Commercial real estate:			
Owner-occupied	2	$ 119	$ 119

The loans presented in the table above were considered TDRs as a result of the Company agreeing to below market interest rates given the risk of the transaction; allowing the loan to remain on interest only status; or a reduction in interest rates, in order to give the borrowers an opportunity to improve their cash flows. For new and accruing TDRs, impairment is generally assessed using a discounted cash flow analysis. For TDRs in default of their modified terms, impairment is generally determined on a collateral dependent approach. Certain loans modified during a period may no longer be outstanding at the end of the period if the loan was paid off.

Management further monitors the performance and credit quality of the loan portfolio by analyzing the length of time a portfolio is past due, by aggregating loans based on their delinquencies. The following table presents the classes of the loan portfolio summarized by aging categories of performing loans and nonaccrual loans at December 31, 2019 and 2018.

		Days Past Due					
	Current	30-59	60-89	90+ (still accruing)	Total Past Due	Non-Accrual	Total Loans
December 31, 2019							
Commercial real estate:							
Owner-occupied	$ 158,723	$ 144	$ —	$ —	$ 144	$ 5,842	$ 164,709
Non-owner occupied	359,425	480	—	—	480	—	359,905
Multi-family	105,865	—	—	—	—	345	106,210
Non-owner occupied residential	116,370	841	66	69	976	235	117,581
Acquisition and development:							
1-4 family residential construction	15,587	278	—	—	278	—	15,865
Commercial and land development	40,403	1,135	—	—	1,135	—	41,538
Commercial and industrial	208,668	315	—	—	315	1,763	210,746
Municipal	47,057	—	—	—	—	—	47,057
Residential mortgage:							
First lien	314,473	9,092	1,234	150	10,476	1,659	326,608
Home equity – term	13,993	—	4	—	4	13	14,010
Home equity – lines of credit	163,907	417	275	—	692	715	165,314
Installment and other loans	50,224	236	37	—	273	85	50,582
Subtotal	1,594,695	12,938	1,616	219	14,773	10,657	1,620,125
Loans acquired with credit deterioration:							
Commercial real estate:							
Owner-occupied	6,015	—	129	31	160	—	6,175
Non-owner occupied	564	—	—	581	581	—	1,145
Multi-family	683	—	—	—	—	—	683
Non-owner occupied residential	1,710	105	111	531	747	—	2,457
Commercial and industrial	3,792	—	—	16	16	—	3,808
Residential mortgage:							
First lien	6,308	1,857	745	854	3,456	—	9,764
Home equity – term	16	4	—	—	4	—	20
Installment and other loans	131	22	—	—	22	—	153
Subtotal	19,219	1,988	985	2,013	4,986	—	24,205
	$ 1,613,914	$ 14,926	$ 2,601	$ 2,232	$ 19,759	$ 10,657	$ 1,644,330

	Current	Days Past Due 30-59	60-89	90+ (still accruing)	Total Past Due	Non-Accrual	Total Loans
December 31, 2018							
Commercial real estate:							
Owner-occupied	$ 125,887	$ 66	$ —	$ —	$ 66	$ 1,841	$ 127,794
Non-owner occupied	252,144	—	—	—	—	—	252,144
Multi-family	78,085	—	—	—	—	131	78,216
Non-owner occupied residential	99,268	226	29	—	255	309	99,832
Acquisition and development:							
1-4 family residential construction	7,385	—	—	—	—	—	7,385
Commercial and land development	41,822	37	—	—	37	—	41,859
Commercial and industrial	154,988	411	105	—	516	286	155,790
Municipal	50,982	—	—	—	—	—	50,982
Residential mortgage:							
First lien	228,714	1,592	734	—	2,326	1,808	232,848
Home equity – term	11,487	678	5	—	683	16	12,186
Home equity – lines of credit	142,394	420	28	—	448	774	143,616
Installment and other loans	33,135	66	44	—	110	—	33,245
Subtotal	1,226,291	3,496	945	—	4,441	5,165	1,235,897
Loans acquired with credit deterioration:							
Commercial real estate:							
Owner-occupied	1,784	—	72	—	72	—	1,856
Non-owner occupied	650	—	—	—	—	—	650
Multi-family	717	—	—	—	—	—	717
Non-owner occupied residential	535	—	—	—	—	—	535
Acquisition and development:							
Commercial and land development	192	—	—	—	—	—	192
Commercial and industrial	4,943	231	—	—	231	—	5,174
Residential mortgage:							
First lien	1,971	382	42	53	477	—	2,448
Home equity – term	17	5	—	—	5	—	22
Installment and other loans	149	13	—	4	17	—	166
Subtotal	10,958	631	114	57	802	—	11,760
	$ 1,237,249	$ 4,127	$ 1,059	$ 57	$ 5,243	$ 5,165	$ 1,247,657

The Company maintains its ALL at a level management believes adequate for probable incurred credit losses. The ALL is established and maintained through a provision for loan losses charged to earnings. On a quarterly basis, management assesses the adequacy of the ALL utilizing a defined methodology which considers specific credit evaluation of impaired loans as discussed above, historical loan loss experience, and qualitative factors. Management believes its approach properly addresses relevant accounting guidance for loans individually identified as impaired and for loans collectively evaluated for impairment, and other bank regulatory guidance.

In connection with its quarterly evaluation of the adequacy of the ALL, management reviews its methodology to determine if it properly addresses the current risk in the loan portfolio. For each loan class, general allowances based on

quantitative factors, principally historical loss trends, are provided for loans that are collectively evaluated for impairment. An adjustment to historical loss factors may be incorporated for delinquency and other potential risk not elsewhere defined within the ALL methodology.

In addition to this quantitative analysis, adjustments to the ALL requirements are allocated on loans collectively evaluated for impairment based on additional qualitative factors, including:

Nature and Volume of Loans – including loan growth in the current and subsequent quarters based on the Company's targeted growth and strategic plan, coupled with the types of loans booked based on risk management and credit culture; the number of exceptions to loan policy; and supervisory loan to value exceptions.

Concentrations of Credit and Changes within Credit Concentrations – including the composition of the Company's overall portfolio makeup and management's evaluation related to concentration risk management and the inherent risk associated with the concentrations identified.

Underwriting Standards and Recovery Practices – including changes to underwriting standards and perceived impact on anticipated losses; trends in the number of exceptions to loan policy; supervisory loan to value exceptions; and effectiveness of administration of loan recovery practices.

Delinquency Trends – including delinquency percentages noted in the portfolio relative to economic conditions; severity of the delinquencies; and whether the ratios are trending upwards or downwards.

Classified Loans Trends – including internal loan ratings of the portfolio; severity of the ratings; whether the loan segment's ratings show a more favorable or less favorable trend; and underlying market conditions and impact on the collateral values securing the loans.

Experience, Ability and Depth of Management/Lending staff – including the years of experience of senior and middle management and the lending staff; turnover of the staff; and instances of repeated criticisms of ratings.

Quality of Loan Review – including the years of experience of the loan review staff; in-house versus outsourced provider of review; turnover of staff; and the perceived quality of their work in relation to other external information.

National and Local Economic Conditions – including trends in the consumer price index, unemployment rates, the housing price index, housing statistics compared to the prior year, bankruptcy rates, regulatory and legal environment risks and competition.

The following table presents activity in the ALL for the years ended December 31, 2019, 2018 and 2017.

	Commercial					Consumer				
	Commercial Real Estate	Acquisition and Development	Commercial and Industrial	Municipal	Total	Residential Mortgage	Installment and Other	Total	Unallocated	Total
December 31, 2019										
Balance, beginning of year	**$ 6,876**	**$ 817**	**$ 1,656**	**$ 98**	**$ 9,447**	**$ 3,753**	**$ 244**	**$ 3,997**	**$ 570**	**$ 14,014**
Provision for loan losses	**515**	**139**	**841**	**2**	**1,497**	**(347)**	**180**	**(167)**	**(430)**	**900**
Charge-offs	**(25)**	**—**	**(299)**	**—**	**(324)**	**(386)**	**(155)**	**(541)**	**—**	**(865)**
Recoveries	**268**	**3**	**158**	**—**	**429**	**127**	**50**	**177**	**—**	**606**
Balance, end of year	**$ 7,634**	**$ 959**	**$ 2,356**	**$ 100**	**$ 11,049**	**$ 3,147**	**$ 319**	**$ 3,466**	**$ 140**	**$ 14,655**
December 31, 2018										
Balance, beginning of year	$ 6,763	$ 417	$ 1,446	$ 84	$ 8,710	$ 3,400	$ 211	$ 3,611	$ 475	$ 12,796
Provision for loan losses	(442)	396	209	14	177	363	165	528	95	800
Charge-offs	(17)	(7)	—	—	(24)	(148)	(292)	(440)	—	(464)
Recoveries	572	11	1	—	584	138	160	298	—	882
Balance, end of year	$ 6,876	$ 817	$ 1,656	$ 98	$ 9,447	$ 3,753	$ 244	$ 3,997	$ 570	$ 14,014
December 31, 2017										
Balance, beginning of year	$ 7,530	$ 580	$ 1,074	$ 54	$ 9,238	$ 2,979	$ 144	$ 3,123	$ 414	$ 12,775
Provision for loan losses	38	(167)	333	30	234	531	174	705	61	1,000
Charge-offs	(835)	—	(85)	—	(920)	(180)	(166)	(346)	—	(1,266)
Recoveries	30	4	124	—	158	70	59	129	—	287
Balance, end of year	$ 6,763	$ 417	$ 1,446	$ 84	$ 8,710	$ 3,400	$ 211	$ 3,611	$ 475	$ 12,796

The following table summarizes the ending loan balances individually evaluated for impairment based upon loan segment, as well as the related ALL loss allocation for each at December 31, 2019 and 2018. PCI loans are excluded from loans individually evaluated for impairment.

	Commercial					Consumer				
	Commercial Real Estate	Acquisition and Development	Commercial and Industrial	Municipal	Total	Residential Mortgage	Installment and Other	Total	Unallocated	Total
December 31, 2019										
Loans allocated by:										
Individually evaluated for impairment	**$ 6,452**	**$ —**	**$ 1,763**	**$ —**	**$ 8,215**	**$ 3,336**	**$ 85**	**$ 3,421**	**$ —**	**$ 11,636**
Collectively evaluated for impairment	**752,413**	**57,403**	**212,791**	**47,057**	**1,069,664**	**512,380**	**50,650**	**563,030**	**—**	**1,632,694**
	$ 758,865	**$ 57,403**	**$ 214,554**	**$ 47,057**	**$ 1,077,879**	**$ 515,716**	**$ 50,735**	**$ 566,451**	**$ —**	**$ 1,644,330**
Allowance for loan losses allocated by:										
Individually evaluated for impairment	**$ —**	**$ —**	**$ —**	**$ —**	**$ —**	**$ 36**	**$ —**	**$ 36**	**$ —**	**$ 36**
Collectively evaluated for impairment	**7,634**	**959**	**2,356**	**100**	**11,049**	**3,111**	**319**	**3,430**	**140**	**14,619**
	$ 7,634	**$ 959**	**$ 2,356**	**$ 100**	**$ 11,049**	**$ 3,147**	**$ 319**	**$ 3,466**	**$ 140**	**$ 14,655**
December 31, 2018										
Loans allocated by:										
Individually evaluated for impairment	$ 2,320	$ —	$ 286	$ —	$ 2,606	$ 3,691	$ —	$ 3,691	$ —	$ 6,297
Collectively evaluated for impairment	559,424	49,436	160,678	50,982	820,520	387,429	33,411	420,840	—	1,241,360
	$ 561,744	$ 49,436	$ 160,964	$ 50,982	$ 823,126	$ 391,120	$ 33,411	$ 424,531	$ —	$ 1,247,657
Allowance for loan losses allocated by:										
Individually evaluated for impairment	$ —	$ —	$ —	$ —	$ —	$ 38	$ —	$ 38	$ —	$ 38
Collectively evaluated for impairment	6,876	817	1,656	98	9,447	3,715	244	3,959	570	13,976
	$ 6,876	$ 817	$ 1,656	$ 98	$ 9,447	$ 3,753	$ 244	$ 3,997	$ 570	$ 14,014

The following table provides activity for the accretable yield of purchased impaired loans for the years ended December 31, 2019 and 2018.

	2019	2018
Accretable yield, beginning of period	**$ 2,065**	$ —
New loans purchased	**3,497**	2,243
Accretion of income	**(2,336)**	(178)
Reclassifications from nonaccretable difference due to improvement in expected cash flows	**2,444**	—
Other changes, net	**1,280**	—
Accretable yield, end of period	**$ 6,950**	$ 2,065

NOTE 5. PREMISES AND EQUIPMENT

The following table summarizes premises and equipment at December 31, 2019 and 2018.

	2019	2018
Land	**$ 8,786**	$ 7,825
Buildings and improvements	**27,520**	31,987
Leasehold improvements	**6,216**	3,926
Furniture and equipment	**22,293**	22,998
Construction in progress	**593**	1,946
	65,408	68,682
Less accumulated depreciation	**27,884**	30,481
	$ 37,524	$ 38,201

Depreciation expense totaled $2.7 million, $2.6 million, and $2.7 million for the years ended December 31, 2019, 2018 and 2017, respectively.

NOTE 6. LEASES

A lease provides the lessee the right to control the use of an identified asset for a period of time in exchange for consideration. The Company has primarily entered into operating leases for branches and office space. Most of the Company's leases contain renewal options, which the Company is reasonably certain to exercise. Including renewal options, the Company's leases range from three to 50 years. Operating lease right-of-use assets and lease liabilities are included in other assets and accrued interest and other liabilities on the Company's consolidated balance sheets.

The Company uses its incremental borrowing rate to determine the present value of the lease payments, as the rate implicit in the Company's leases is not readily determinable. Lease agreements that contain non-lease components are generally accounted for as a single lease component, while variable costs, such as common area maintenance expenses and property taxes, are expensed as incurred.

The following table summarizes the Company's right-of-use assets and related lease liabilities for the year ended December 31, 2019.

Cash paid for operating lease liabilities	**$ 1,122**
Operating lease right-of-use assets [1]	**$ 10,485**
Weighted-average remaining lease term (in years)	**17.6**
Weighted-average discount rate	**4.5 %**

[1] Includes $8.0 million for operating leases existing on January 1, 2019, $144 thousand for operating leases that commenced in the first quarter of 2019, $2.8 million for operating leases that were acquired in the second quarter of 2019, and the removal of $423 thousand of operating leases due to branch consolidations recorded in the fourth quarter of 2019.

The following table presents maturities of the Company's lease liabilities by year.

2020	**$ 1,279**
2021	**1,147**
2022	**727**
2023	**748**
2024	**738**
Thereafter	**10,549**
	15,188
Less: imputed interest	**5,500**
Total lease liabilities	**$ 9,688**

NOTE 7. GOODWILL AND OTHER INTANGIBLE ASSETS

The following table presents changes in goodwill for the years ended December 31, 2019 and 2018.

	2019	2018
Balance, beginning of year	**$ 12,592**	$ 719
Acquired goodwill	**7,029**	11,873
Adjustments to acquired goodwill	**304**	—
Balance, end of year	**$ 19,925**	$ 12,592

The following table presents changes in other intangible assets for the years ended December 31, 2019 and 2018.

	2019	2018
Balance, beginning of year	**$ 3,910**	$ 356
Acquired CDI	**4,550**	3,840
Non-compete agreement	**290**	—
Amortization expense	**(1,570)**	(286)
Balance, end of year	**$ 7,180**	$ 3,910

The following table presents the components of other identifiable intangible assets at December 31, 2019 and 2018.

	2019		2018	
	Gross Carrying Amount	Accumulated Amortization	Gross Carrying Amount	Accumulated Amortization
Amortized intangible assets:				
Core deposit intangibles	**$ 8,390**	**$ 1,493**	$ 3,840	$ 190
Other client relationship intangibles	**524**	**338**	931	671
Non-compete agreement	**290**	**193**	—	—
Total	**$ 9,204**	**$ 2,024**	$ 4,771	$ 861

During 2019, other client relationship intangibles with a gross carrying amount of $406 thousand were fully amortized.

The following table presents future estimated aggregate amortization expense at December 31, 2019.

2020	**$ 1,591**
2021	**1,313**
2022	**1,137**
2023	**960**
2024	**784**
Thereafter	**1,395**
	$ 7,180

The Company incurred amortization expense of $1.6 million, $286 thousand and $102 thousand, respectively, in the years ending December 31, 2019, 2018 and 2017.

NOTE 8. INCOME TAXES

The Company files income tax returns in the U.S. federal jurisdiction, the Commonwealth of Pennsylvania and the State of Maryland. The Company is no longer subject to tax examination by tax authorities for years before 2016.

The following table summarizes income tax expense for the years ended December 31, 2019, 2018 and 2017.

	2019	2018	2017
Current expense	**$ 934**	$ 1,097	$ 1,260
Deferred expense	**1,776**	543	443
Expense due to enactment of federal tax reform legislation	**—**	—	2,635
Income tax expense	**$ 2,710**	$ 1,640	$ 4,338

The following table reconciles the Company's effective income tax rate to its statutory federal rate for the years ended December 31, 2019, 2018 and 2017.

	2019	2018	2017
Statutory federal tax rate	**21.0 %**	21.0 %	34.0 %
Increase (decrease) resulting from:			
Tax exempt interest income	**(4.2)%**	(7.7)%	(13.0)%
Income from life insurance	**(1.7)%**	(1.7)%	(2.4)%
Disallowed interest expense	**0.3 %**	0.8 %	1.0 %
Low-income housing credits and related expense	**(1.3)%**	(2.5)%	(4.6)%
Merger related	**0.7 %**	0.6 %	— %
Expense due to enactment of federal tax reform legislation	**— %**	— %	21.2 %
Other	**(1.0)%**	0.9 %	(1.3)%
Effective income tax rate	**13.8 %**	11.4 %	34.9 %

Income tax expense includes $997 thousand, $211 thousand and $405 thousand related to net security gains for the years ended December 31, 2019, 2018, and 2017.

On December 22, 2017, federal tax reform legislation, commonly referred to as the Tax Cuts and Jobs Act of 2017 (the "Tax Act"), was enacted. Among other things, the Tax Act reduced the Company's statutory federal tax rate from 34% to 21% effective January 1, 2018. As a result, the Company was required to remeasure, through income tax expense, certain deferred tax assets and liabilities using the enacted rate at which the Company expects them to be recovered or settled. The remeasurement of the Company's net deferred tax asset resulted in additional federal deferred tax expense of $2.6 million, which is included in income tax expense for 2017. Also, on December 22, 2017, the SEC staff issued Staff Accounting Bulletin No. 118 ("SAB 118"), which provided guidance on accounting for the tax effects of the Tax Act. SAB 118 provided for a measurement period that should not extend beyond one year from the Tax Act's enactment date for companies to complete the accounting under ASC 740, Income Taxes. In remeasuring the Company's net deferred tax asset, the Company estimated the income in 2017 for its limited partnership investments in affordable housing real estate partnerships and interest income on nonperforming loans. Adjustment between the Company's estimates and the actual amounts determined during the measurement period did not have a material impact to the Company's consolidated financial statements.

The Company recognizes, when applicable, interest and penalties related to unrecognized tax benefits in the provision for income taxes in the results of operations. There were no penalties or interest related to income taxes recorded in the consolidated income statements for the years ended December 31, 2019, 2018 and 2017 and no amounts accrued for penalties at December 31, 2019 and 2018.

The following table summarizes the Company's deferred tax assets and liabilities at December 31, 2019, 2018 and 2017.

	2019	2018
Deferred tax assets:		
Allowance for loan losses	**$ 3,418**	$ 3,143
Deferred compensation	**415**	723
Retirement and salary continuation plans	**2,357**	1,416
Share-based compensation	**631**	742
Off-balance sheet reserves	**234**	219
Nonaccrual loan interest	**697**	537
Net unrealized losses on securities available for sale	**127**	791
Purchase accounting adjustments	**4,081**	1,795
Bonus accrual	**493**	470
Low-income housing credit carryforward	**—**	641
Net operating loss carryforward	**1,872**	—
Other	**672**	321
Total deferred tax assets	**14,997**	10,798
Deferred tax liabilities:		
Depreciation	**452**	458
Mortgage servicing rights	**694**	590
Purchase accounting adjustments	**1,599**	1,021
Other	**275**	150
Total deferred tax liabilities	**3,020**	2,219
Net deferred tax asset, included in other assets	**$ 11,977**	$ 8,579

At December 31, 2019, the Company had acquired federal and state net operating loss carryforwards of $11.1 million and $6.7 million, respectively, subject to annual loss limitation limits, that expire through 2037. A deferred tax asset is recognized for these carryforwards because the benefit is more likely than not to be realized.

FASB ASC 740, Income Taxes, ("ASC 740") clarifies the accounting for income taxes by prescribing a minimum probability threshold that a tax position must meet before a financial statement benefit is recognized. The minimum threshold is defined in ASC 740 as a tax position that is more likely than not to be sustained upon examination by the applicable taxing authority, including resolution of any related appeals or litigation processes, based on the technical merits of the position. The tax benefit to be recognized is measured as the largest amount of benefit that has a greater than 50% likelihood of being realized upon ultimate settlement. ASC 740 was applied to all existing tax positions upon initial adoption. There was no liability for uncertain tax positions and no known unrecognized tax benefits at December 31, 2019 or 2018.

NOTE 9. RETIREMENT PLANS

The Company maintains a 401(k) profit-sharing plan for all qualified employees. Employees are eligible to participate in the 401(k) profit-sharing plan following completion of one month of service and attaining age 18. Pursuant to the 401(k) profit-sharing plan, employees can contribute up to the lesser of $53 thousand or 100% of their compensation. Substantially all of the Company's employees are covered by the plan, which contains limited match or safe harbor provisions. The Company will match 50% of the first 6% of the base contribution that an employee contributes. The Company's match is immediately vested and paid at the end of the year. Employer contributions to the plan are based on the performance of the Company and are at the discretion of the Board of Directors. Employer contribution expense totaled $590 thousand, $479 thousand and $432 thousand for the years ended December 31, 2019, 2018, and 2017, respectively.

The Company has deferred compensation agreements with certain present and former directors, whereby a director or his beneficiaries will receive a monthly retirement benefit beginning at age 65. The arrangement is funded by an amount of life insurance on the participating director, which is calculated to meet the Company's obligations under the compensation agreement. The cash value of the life insurance policies is an unrestricted asset of the Company. The estimated present value of future benefits to be paid totaled $68 thousand and $82 thousand at December 31, 2019 and 2018, respectively. Expense for this plan totaled $8 thousand, $9 thousand and $11 thousand for the years ended December 31, 2019, 2018, and 2017, respectively.

The Company also has supplemental discretionary deferred compensation plans for directors and executive officers. The plans are funded annually with director fees and salary reductions which are either placed in a trust account invested by the Bank's OFA division or recognized as a liability. The trust account balance totaled $1.8 million and $1.7 million at December 31, 2019 and 2018, respectively, and is directly offset in other liabilities. Expense for these plans totaled $61 thousand, $61 thousand and $10 thousand, for the years ended December 31, 2019, 2018, and 2017, respectively.

In addition, the Company has two supplemental retirement and salary continuation plans for directors and executive officers. These plans are funded with single premium life insurance on the plan participants. The cash value of the life insurance policies is an unrestricted asset of the Company. The estimated present value of future benefits to be paid on these plans totaled $10.6 million and $8.5 million at December 31, 2019 and 2018, respectively. Expense for these plans totaled $1.0 million, $872 thousand and $739 thousand, for the years ended December 31, 2019, 2018, and 2017, respectively.

The Company has promised a continuation of life insurance coverage to certain persons post-retirement. The estimated present value of future benefits to be paid totaled $1.5 million and $1.5 million at December 31, 2019 and 2018, respectively. Expense for this plan totaled $22 thousand, $126 thousand and $77 thousand for the years ended December 31, 2019, 2018, and 2017, respectively.

Trust account balances, and estimated present values of future benefits and deferred compensation liabilities, noted above are included in other assets and other liabilities, respectively, on the consolidated balance sheets.

NOTE 10. SHARE-BASED COMPENSATION PLANS

The Company maintains share-based compensation plans under the shareholder-approved 2011 Plan. The purpose of the share-based compensation plans is to provide officers, employees, and non-employee members of the Board of Directors of the Company with additional incentive to further the success of the Company. At December 31, 2019, 881,920 shares of the common stock of the Company were reserved to be issued and 455,028 shares were available to be issued.

The 2011 Plan incentive awards may consist of grants of incentive stock options, nonqualified stock options, stock appreciation rights, restricted stock, deferred stock units and performance shares. All employees and members of the Board of Directors of the Company and its subsidiaries, are eligible to participate in the 2011 Plan. The 2011 Plan allows for the Compensation Committee of the Board of Directors to determine the type of incentive to be awarded, its term, manner of exercise, vesting and restrictions on shares. Generally, awards are nonqualified under the IRC, unless the awards are deemed to be incentive awards to employees at the Compensation Committee's discretion.

The following table presents a summary of nonvested restricted shares activity for 2019.

	Shares	Weighted Average Grant Date Fair Value
Nonvested shares, beginning of year	**275,412**	**$ 20.33**
Granted	**114,893**	**20.24**
Forfeited	**(36,069)**	**19.42**
Vested	**(125,478)**	**17.65**
Nonvested shares, end of year	**228,758**	**$ 21.90**

The following table presents restricted shares compensation expense, with tax benefit information, and fair value of shares vested at December 31, 2019, 2018 and 2017.

	2019	2018	2017
Restricted share award expense	**$ 1,578**	$ 1,479	$ 1,369
Restricted share award tax benefit	**451**	374	465
Fair value of shares vested	**2,744**	1,074	303

At December 31, 2019 and 2018, unrecognized compensation expense related to the share awards totaled $2.2 million and $2.1 million, respectively. The unrecognized compensation expense at December 31, 2019 is expected to be recognized over a weighted-average period of 1.9 years.

The following table presents a summary of outstanding stock options activity for 2019.

	Shares		Weighted Average Exercise Price
Outstanding, beginning of year	**40,984**	**$**	**24.34**
Expired	**(10,425)**		**32.47**
Options outstanding and exercisable, end of year	**30,559**	**$**	**21.56**

The exercise price of each option equals the market price of the Company's stock on the grant date. An option's maximum term is ten years. All options are fully vested upon issuance. The following table presents information pertaining to options outstanding and exercisable at December 31, 2019.

Range of Exercise Prices	Number Outstanding and Exercisable	Weighted Average Remaining Contractual Life (Years)		Weighted Average Exercise Price
$21.14 - $25.76	**30,559**	**0.53**	**$**	**21.56**

Outstanding and exercisable options had an intrinsic value of $41 thousand at December 31, 2019 and $0 at December 31, 2018.

The Company maintains an employee stock purchase plan to provide employees of the Company an opportunity to purchase Company common stock. Eligible employees may purchase shares in an amount that does not exceed 10% of their annual salary at the lower of 95% of the fair market value of the shares on the semi-annual offering date, or related purchase date. The Company reserved 350,000 shares of its common stock to be issued under the employee stock purchase plan. At December 31, 2019, 168,066 shares were available to be issued.

The following table presents information for the employee stock purchase plan for years ended December 31, 2019, 2018 and 2017.

		2019		2018		2017
Shares purchased		**5,399**		5,907		6,632
Weighted average price of shares purchased	**$**	**20.69**	$	23.04	$	20.57
Compensation expense recognized		**8**		14		17
Tax benefits		**2**		3		6

The Company issues new shares or treasury shares, depending on market conditions, in its share-based compensation plans.

NOTE 11. DEPOSITS

The following table summarizes deposits by type at December 31, 2019 and 2018.

		2019		2018
Noninterest-bearing	**$**	**249,450**	$	204,843
NOW and money market		**963,672**		856,520
Savings		**142,832**		113,515
Time ($250,000 or less)		**450,490**		343,551
Time (over $250,000)		**69,078**		40,327
Total	**$**	**1,875,522**	$	1,558,756

The following table summarizes scheduled future maturities as of December 31, 2019.

2020	**$ 375,795**
2021	**85,047**
2022	**31,533**
2023	**19,131**
2024	**5,244**
Thereafter	**2,818**
	$ 519,568

Brokered time deposits totaled $16.1 million and $126.6 million at December 31, 2019 and 2018, respectively. Management evaluates brokered deposits as a funding option, taking into consideration regulatory views on such deposits as non-core funding sources. Time deposits that meet or exceed the FDIC limit of $250,000 at December 31, 2019 and 2018 totaled $69.1 million and $40.3 million, respectively.

NOTE 12. RELATED PARTY TRANSACTIONS

Directors and executive officers of the Company, including their immediate families and companies in which they have a direct or indirect material interest, are considered to be related parties. In the ordinary course of business, the Company engages in various related party transactions, including extending credit and bank service transactions. The Company relies on the directors and executive officers for the identification of their associates.

Federal banking regulations require that any extensions of credit to insiders and their related interests not be offered on terms more favorable than would be offered to non-related borrowers of similar creditworthiness. The following table presents the aggregate activity in loans to related parties during 2019.

Balance, beginning of year	**$ 1,041**
New loans	**1,929**
Repayments	**(1,652)**
Balance, end of year	**$ 1,318**

None of these loans are past due, on nonaccrual status or have been restructured to provide a reduction or deferral of interest or principal because of deterioration in the financial position of the borrower. There were no loans to a related party that were considered classified loans at December 31, 2019 or 2018.

The Company accepts deposits from related parties, which totaled $5.2 million and $3.5 million at December 31, 2019 and 2018, respectively, on the same terms, including interest rates, as those prevailing at the time for comparable transactions with non-related parties.

NOTE 13. SHORT-TERM BORROWINGS

The Company has short-term borrowing capability from the FHLB, federal funds purchased and the FRB discount window. The following table summarizes these short-term borrowings at and for the years ended December 31, 2019, 2018 and 2017.

	2019	2018	2017
Balance at year-end	**$ 146,600**	$ 55,000	$ 50,000
Weighted average interest rate at year-end	**1.87 %**	2.76 %	1.21 %
Average balance during the year	**$ 23,171**	$ 71,457	$ 54,610
Average interest rate during the year	**2.20 %**	2.09 %	1.08 %
Maximum month-end balance during the year	**$ 146,600**	$ 103,000	$ 72,000

The Company also enters into borrowing arrangements with certain of its deposit clients by agreements to repurchase ("repurchase agreements") under which the Company pledges investment securities owned and under its control as collateral against the borrowing arrangement, which generally matures within one day from the transaction date. The Company is required to hold U.S. Treasury, U.S. Agency or U.S. GSE securities as underlying securities for repurchase agreements. The following table provides additional details for repurchase agreements at and for the years ended December 31, 2019, 2018 and 2017.

	2019	2018	2017
Balance at year-end	**$ 8,269**	$ 9,069	$ 43,576
Weighted average interest rate at year-end	**1.31 %**	1.22 %	0.56 %
Average balance during the year	**$ 8,830**	$ 9,715	$ 43,205
Average interest rate during the year	**1.28 %**	0.82 %	0.45 %
Maximum month-end balance during the year	**$ 12,774**	$ 14,591	$ 55,270
Fair value of securities underlying the agreements at year-end	**13,062**	17,942	53,485

NOTE 14. LONG-TERM DEBT

The following table presents components of the Company's long-term debt at December 31, 2019, and 2018.

	Amount		Weighted Average rate	
	2019	2018	2019	2018
FHLB fixed rate advances maturing:				
2020	**$ 40,350**	$ 40,350	**1.76 %**	1.76 %
2022	**20,000**	—	**3.06 %**	— %
	60,350	40,350	**2.19 %**	1.76 %
FHLB amortizing advance requiring monthly principal and interest payments, maturing:				
2025	**2,717**	3,100	**4.74 %**	4.74 %
Total FHLB Advances	**$ 63,067**	$ 43,450	**2.30 %**	1.92 %

Except for amortizing advances, interest only is paid on a quarterly basis.

The following table summarizes the future annual principal payments required on these borrowings at December 31, 2019.

2020	**$ 40,751**
2021	**421**
2022	**20,441**
2023	**462**
2024	**484**
Thereafter	**508**
	$ 63,067

The Bank is a member of the FHLB of Pittsburgh and has access to the FHLB program of overnight and term advances. Under terms of a blanket collateral agreement for advances, lines and letters of credit from the FHLB, collateral for all outstanding advances, lines and letters of credit consisted of 1-4 family mortgage loans and other real estate secured loans totaling $836.7 million at December 31, 2019. The Bank had additional availability of $540.7 million at the FHLB on December 31, 2019 based on its qualifying collateral, net of short-term borrowings and long-term debt detailed above, deposit letters of credit totaling $85.0 million and non-deposit letters of credit totaling $1.4 million at December 31, 2019.

The Bank has available unsecured lines of credit, with interest based on the daily Federal Funds rate, with two correspondent banks totaling $30.0 million, at December 31, 2019. The Company also has a $5.0 million unsecured line of

credit, with a bank, at the prime rate of interest, at December 31, 2019. There were no borrowings under these lines of credit at December 31, 2019 and 2018.

NOTE 15. SUBORDINATED NOTES

The Company has unsecured subordinated notes payable, which mature on December 30, 2028. At December 31, 2019 and 2018, subordinated notes payable outstanding totaled $31.8 million and $31.9 million, respectively, which qualified for Tier 2 capital. The notes are recorded on the consolidated balance sheets net of remaining debt issuance costs totaling $653 thousand and $641 thousand at December 31, 2019 and 2018, respectively, which are amortized over a 10 year period on an effective yield basis. The subordinated notes have a fixed interest rate of 6.0% through December 30, 2023, which then converts to a variable rate of three-month LIBOR for the applicable interest period plus 3.16% through maturity. The Company may, at its option, redeem the notes, in whole or in part, on any interest payment date on or after December 30, 2023, and at any time upon the occurrence of certain events. There are no debt covenants on the subordinated notes payable.

NOTE 16. SHAREHOLDERS' EQUITY AND REGULATORY CAPITAL

The Company maintains a stockholder dividend reinvestment and stock purchase plan. Under the plan, shareholders may purchase additional shares of the Company's common stock at the prevailing market prices with reinvestment dividends and voluntary cash payments. The Company reserved 1,045,000 shares of its common stock to be issued under the dividend reinvestment and stock purchase plan. At December 31, 2019, approximately 665,000 shares were available to be issued under the plan.

Banks and bank holding companies are subject to regulatory capital requirements administered by federal banking agencies. Capital adequacy guidelines and, additionally for banks, prompt corrective action regulations, involve quantitative measures of assets, liabilities and certain off-balance sheet items calculated under regulatory accounting practices. Capital amounts and classifications are also subject to qualitative judgments by regulators. Failure to meet capital requirements can initiate regulatory action. Under the Basel Committee on Banking Supervision's capital guidelines for U.S. Banks ("Basel III rules"), an entity must hold a capital conservation buffer above the adequately capitalized risk-based capital ratios. The required capital conservation buffer was 1.25% for 2017, 1.875% for 2018 and 2.50% for 2019 under phase-in rules. The Company and the Bank have elected not to include net unrealized gain or loss on available for sale securities in computing regulatory capital.

Effective with the third quarter of 2018, the FRB raised the consolidated asset limit to be considered a small bank holding company from $1.0 billion to $3.0 billion, and a company with assets under the revised limits is not subject to the FRB consolidated capital rules. A company with consolidated assets under the revised limit may continue to file reports that include capital amounts and ratios. The Company has elected to continue to file those reports.

Management believes, at December 31, 2019 and 2018, that the Company and the Bank met all capital adequacy requirements to which they are subject.

Prompt corrective action regulations provide five classifications: well capitalized, adequately capitalized, undercapitalized, significantly undercapitalized and critically undercapitalized, although these terms are not used to represent overall financial condition. If adequately capitalized, regulatory approval is required to accept brokered deposits. If undercapitalized, capital distributions are limited, as is asset growth and expansion, and capital restoration plans are required. At December 31, 2019, the most recent regulatory notifications categorized the Bank as well capitalized under the regulatory framework for prompt corrective action. There are no conditions or events since that notification that management believes have changed the Bank's classification.

The following table presents capital amounts and ratios at December 31, 2019 and 2018.

	Actual		For Capital Adequacy Purposes (includes applicable capital conservation buffer)		To Be Well Capitalized Under Prompt Corrective Action Regulations	
	Amount	Ratio	Amount	Ratio	Amount	Ratio
December 31, 2019						
Total risk-based capital:						
Orrstown Financial Services, Inc.	**$ 244,003**	**14.1 %**	**$ 182,028**	**10.500 %**	**n/a**	**n/a**
Orrstown Bank	**231,805**	**13.4 %**	**181,948**	**10.500 %**	**$ 173,284**	**10.0 %**
Tier 1 risk-based capital:						
Orrstown Financial Services, Inc.	**196,451**	**11.3 %**	**147,356**	**8.500 %**	**n/a**	**n/a**
Orrstown Bank	**216,100**	**12.5 %**	**147,291**	**8.500 %**	**138,627**	**8.0 %**
Tier 1 common equity risk-based capital:						
Orrstown Financial Services, Inc.	**196,451**	**11.3 %**	**121,352**	**7.000 %**	**n/a**	**n/a**
Orrstown Bank	**216,100**	**12.5 %**	**121,299**	**7.000 %**	**112,635**	**6.5 %**
Tier 1 leverage capital:						
Orrstown Financial Services, Inc.	**196,451**	**8.6 %**	**91,782**	**4.0 %**	**n/a**	**n/a**
Orrstown Bank	**216,100**	**9.4 %**	**91,798**	**4.0 %**	**114,747**	**5.0 %**
December 31, 2018						
Total risk-based capital:						
Orrstown Financial Services, Inc.	$ 206,988	15.6 %	$ 131,393	9.875 %	n/a	n/a
Orrstown Bank	177,892	13.4 %	131,286	9.875 %	$ 132,948	10.0 %
Tier 1 risk-based capital:						
Orrstown Financial Services, Inc.	160,117	12.0 %	104,782	7.875 %	n/a	n/a
Orrstown Bank	162,880	12.3 %	104,696	7.875 %	106,358	8.0 %
Tier 1 common equity risk-based capital:						
Orrstown Financial Services, Inc.	160,117	12.0 %	84,823	6.375 %	n/a	n/a
Orrstown Bank	162,880	12.3 %	84,754	6.375 %	86,416	6.5 %
Tier 1 leverage capital:						
Orrstown Financial Services, Inc.	160,117	8.4 %	76,089	4.0 %	n/a	n/a
Orrstown Bank	162,880	8.6 %	76,113	4.0 %	95,142	5.0 %

In September 2015, the Board of Directors of the Company authorized a share repurchase program under which the Company may repurchase up to 5% of the Company's outstanding shares of common stock, or approximately 416,000 shares, in accordance with all applicable securities laws and regulations, including Rule 10b-18 of the Securities Exchange Act of 1934, as amended. When and if appropriate, repurchases may be made in open market or privately negotiated transactions, depending on market conditions, regulatory requirements and other corporate considerations, as determined by management. Share repurchases may not occur and may be discontinued at any time. At December 31, 2019, 82,725 shares had been repurchased under the program at a total cost of $1.4 million, or $17.38 per share.

On January 21, 2020, the Board declared a cash dividend of $0.17 per common share, which was paid on February 10, 2020.

Banking regulations limit the ability of the Bank to pay dividends or make loans or advances to the Parent Company. Dividends that may be paid in any calendar year are limited to the current year's net profits, combined with the retained net profits of the preceding two years. At December 31, 2019, dividends from the Bank available to be paid to the Parent Company, without prior approval of the Bank's regulatory agency, totaled $30.7 million, subject to the Bank meeting or exceeding regulatory capital requirements. The Parent Company's principal source of funds for dividend payments to shareholders is dividends received from the Bank.

At December 31, 2019, there were no loans from the Bank to any nonbank affiliate, including the Parent Company. The Bank's loans to a single affiliate may not exceed 10%, and loans to all affiliates may not exceed 20%, of the Bank’s capital stock, surplus, and undivided profits, plus the ALL (as defined by regulation). Loans from the Bank to nonbank affiliates,

including the Parent Company, are also required to be collateralized according to regulatory guidelines. At December 31, 2019, the maximum amount the Bank had available to loan nonbank affiliates totaled $196 thousand.

NOTE 17. EARNINGS PER SHARE

The following table presents earnings per share for the years ended December 31, 2019, 2018 and 2017.

	2019	2018	2017
Net income	**$ 16,924**	$ 12,805	$ 8,090
Weighted average shares outstanding - basic	**10,362**	8,360	8,070
Dilutive effect of share-based compensation	**152**	177	156
Weighted average shares outstanding - diluted	**10,514**	8,537	8,226
Per share information:			
Basic earnings per share	**$ 1.63**	$ 1.53	$ 1.00
Diluted earnings per share	**1.61**	1.50	0.98

Average outstanding stock options of approximately 22,000, 21,000 and 42,000, respectively, for the years ended December 31, 2019, 2018 and 2017 were not included in the computation of earnings per share because the effect was antidilutive, as the exercise price exceeded the average market price. The dilutive effect of share-based compensation in each year above relates principally to restricted stock awards.

NOTE 18. FINANCIAL INSTRUMENTS WITH OFF-BALANCE SHEET RISK

The Company is a party to financial instruments with off-balance sheet risk in the normal course of business to meet the financing needs of its clients. These financial instruments include commitments to extend credit and standby letters of credit. Those instruments involve, to varying degrees, elements of credit and interest rate risk in excess of the amount recognized in the consolidated balance sheets. The contract amounts of those instruments reflect the extent of involvement the Company has in particular classes of financial instruments.

The Company's exposure to credit loss in the event of nonperformance by the other party to the financial instrument for commitments to extend credit and standby letters of credit and financial guarantees written is represented by the contractual amount of those instruments. The Company uses the same credit policies in making commitments and conditional obligations as it does for on-balance sheet instruments. The following table presents these contractual, or notional, amounts at December 31, 2019, and 2018.

	2019	2018
Commitments to fund:		
Home equity lines of credit	**$ 205,502**	$ 160,971
1-4 family residential construction loans	**19,812**	13,002
Commercial real estate, construction and land development loans	**19,018**	31,133
Commercial, industrial and other loans	**222,288**	147,518
Standby letters of credit	**10,588**	13,909

Commitments to extend credit are agreements to lend to a client 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 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. The Company evaluates each client's credit-worthiness on a case-by-case basis. The amount of collateral obtained, if deemed necessary by the Company upon extension of credit, is based on management's credit evaluation of the client. Collateral varies but may include accounts receivable, inventory, equipment, residential real estate, and income-producing commercial properties.

Standby letters of credit and financial guarantees written are conditional commitments issued by the Company to guarantee the performance of a client to a third party. Those guarantees are primarily issued to support public and private borrowing arrangements. The credit risk involved in issuing letters of credit is essentially the same as that involved in extending loans to clients. The Company holds collateral supporting those commitments when deemed necessary by management. The

liability, at December 31, 2019 and 2018, for guarantees under standby letters of credit issued was not considered to be material.

The Company maintains a reserve, based on historical loss experience of the related loan class, for off-balance sheet credit exposures that currently are not funded, in other liabilities on the consolidated balance sheets. This reserve totaled $1.0 million and $998 thousand at December 31, 2019 and 2018, respectively. The following table presents the net amount expensed for this off-balance sheet credit exposures reserve for years ended December 31, 2019, 2018 and 2017.

	2019	2018	2017
Off-balance sheet credit exposures expense	**$ 39**	$ 182	$ 32

The Company sells loans to the FHLB of Chicago as part of its MPF Program. Under the terms of the MPF Program, there is limited recourse back to the Company for loans that do not perform in accordance with the terms of the loan agreement. Each loan that is sold under the program is "credit enhanced" such that the individual loan's rating is raised to a minimum "BBB," as determined by the FHLB of Chicago. Outstanding loans sold under the MPF Program totaled $26.0 million and $30.1 million at December 31, 2019 and 2018, respectively, with limited recourse back to the Company on these loans of $777 thousand and $1.2 million, respectively. Many of the loans sold under the MPF Program have primary mortgage insurance, which reduces the Company's overall exposure. The net amount expensed or recovered for the Company's estimate of losses under its recourse exposure for loans foreclosed, or in the process of foreclosure, is recorded in other operating expenses on the consolidated statements of income. The following table presents the net amounts expensed (recovered) for years ended December 31, 2019, 2018 and 2017.

	2019	2018	2017
MPF program recourse (recovery) loss	**$ (20)**	$ (135)	$ 25

NOTE 19. FAIR VALUE

Fair value is the exchange price that would be received for an asset or paid to transfer a liability (exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. Certain financial instruments and all non-financial instruments are excluded from fair value disclosure requirements. Accordingly, the aggregate fair value amounts presented do not represent the underlying value of the Company.

The fair value hierarchy distinguishes between (1) market participant assumptions developed based on market data obtained from independent sources (observable inputs) and (2) an entity's own assumptions about market participant assumptions based on the best information available in the circumstances (unobservable inputs). The fair value hierarchy consists of three broad levels, which gives the highest priority to unadjusted quoted prices in active markets for identical assets or liabilities (Level 1) and the lowest priority to unobservable inputs (Level 3). The three levels of the fair value hierarchy are:

Level 1 – quoted prices (unadjusted) for identical assets or liabilities in active markets that the entity has the ability to access at the measurement date.

Level 2 – significant other observable inputs other than Level 1 prices such as prices for similar assets and liabilities in active markets; quoted prices for identical or similar instruments in markets that are not active; or other inputs that are observable or can be corroborated by observable market data.

Level 3 – at least one significant unobservable input that reflects a company's own assumptions about the assumptions that market participants would use in pricing an asset or liability.

In instances in which multiple levels of inputs are used to measure fair value, hierarchy classification is based on the lowest level input that is significant to the fair value measurement in its entirety. The Company's assessment of the significance of a particular input to the fair value measurement in its entirety requires judgment, and considers factors specific to the asset or liability.

The Company used the following methods and significant assumptions to estimate fair value for instruments measured on a recurring basis:

Where quoted prices are available in an active market, securities are classified within Level 1 of the valuation hierarchy. Level 1 securities include highly liquid government bonds, mortgage products and exchange traded equities. If quoted market prices are not available, securities are classified within Level 2 and fair values are estimated by using pricing models, quoted prices of securities with similar characteristics or discounted cash flow. Level 2 securities include U.S. agency securities, mortgage-backed securities, obligations of states and political subdivisions and certain corporate, asset backed and other securities. In certain cases where there is limited activity or less transparency around inputs to the valuation, securities are classified within Level 3 of the valuation hierarchy. All of the Company’s securities are classified as available for sale.

The Company had no fair value liabilities measured on a recurring basis at December 31, 2019 or 2018.

The following table summarizes assets measured at fair value on a recurring basis at December 31, 2019 or 2018.

	Level 1	Level 2	Level 3	Total Fair Value Measurements
December 31, 2019				
AFS Securities:				
States and political subdivisions	**$ —**	**$ 87,863**	**$ —**	**$ 87,863**
GSE residential CMOs	**—**	**68,154**	**—**	**68,154**
Non-agency CMOs	**—**	**—**	**17,087**	**17,087**
Private label commercial CMOs	**—**	**79,437**	**7,192**	**86,629**
Asset-backed and other	**—**	**230,653**	**—**	**230,653**
Loans held for sale	**—**	**9,364**	**—**	**9,364**
Interest rate lock commitments on residential mortgages	**—**	**—**	**103**	**103**
Totals	**$ —**	**$ 475,471**	**$ 24,382**	**$ 499,853**
December 31, 2018				
AFS Securities:				
States and political subdivisions	$ —	$ 145,004	$ —	$ 145,004
GSE residential CMOs	—	108,064	—	108,064
Private label residential CMOs	—	143	—	143
Private label commercial CMOs	—	67,836	7,209	75,045
Asset-backed and other	—	137,588	—	137,588
Totals	$ —	$ 458,635	$ 7,209	$ 465,844

The Company has CMOs measured at fair value on a recurring basis using significant unobservable inputs (Level 3) at December 31, 2019 and 2018. The Level 3 valuation is based on a non-executable broker quote, which is considered a significant unobservable input. Such quotes are updated as available and may remain constant for a period of time for certain broker-quoted securities that do not move with the market or that are not interest rate sensitive as a result of their structure or overall attributes.

Effective October 1, 2019, the Company’s residential mortgage loans held-for-sale were recorded at fair value utilizing Level 2 measurements. This fair value measurement is determined based upon third party quotes obtained on similar loans. The adoption of this accounting election resulted in an increase of $226 thousand in gain on sale of loans in the consolidated statements of income for the year ended December 31, 2019. For loans held-for-sale for which the fair value option has been elected, the aggregate fair value exceeded the aggregate principal balance by $226 thousand as of December 31, 2019.

As a part of its normal residential mortgage operations, the Company will enter into an interest rate lock commitment with a potential borrower. The Company enters into a corresponding commitment to an investor to sell that loan at a specific price shortly after origination. In accordance with FASB ASC 820, adjustments are recorded through earnings to account for the net change in fair value of these transactions for the held-for-sale pipeline. The determination of the fair value of interest rate lock commitments on residential mortgages is based on agreed upon pricing with the respective investor on each loan and includes a pull through percentage. The pull through percentage represents an estimate of loans in the pipeline to be delivered to an investor versus the total loans committed for delivery. Significant changes in this input could result in a significantly higher or lower fair value measurement. As the pull through percentage is a significant unobservable input, this is deemed a Level 3 valuation input. The pull through percentage, which is based upon historical experience, was 95% as of December 31, 2019. The fair value of interest rate lock commitments was $103 thousand at December 31, 2019 and is included in other assets on the consolidated balance sheets.

The following provides details of the Level 3 fair value measurement activity for the years ended December 31, 2019 or 2018.

CMOs:

	2019	2018
Balance, beginning of year	$ 7,209	$ —
Unrealized (loss) gain included in OCI	(17)	37
Purchases	17,619	7,213
Net discount accretion (premium amortization)	7	(41)
Principal payments	(539)	—
Balance, end of year	$ 24,279	$ 7,209

Interest rate lock commitments on residential mortgages:

	2019
Balance, beginning of year	**$ —**
Total gains (losses), realized/unrealized:	
Included in earnings	**103**
Balance, end of year	**$ 103**

Certain financial assets are measured at fair value on a nonrecurring basis. Adjustments to the fair value of these assets usually results from the application of lower-of-cost-or-market accounting or write-downs of individual assets. The Company used the following methods and significant assumptions to estimate fair value for these financial assets.

Impaired Loans

Loans are designated as impaired when, in the judgment of management and based on current information and events, it is probable that all amounts due, according to the contractual terms of the loan agreement, will not be collected. The measurement of loss associated with impaired loans for all loan classes can be based on either the observable market price of the loan, the fair value of the collateral, or discounted cash flows using a market rate of interest for performing TDRs. For collateral-dependent loans, fair value is measured based on the value of the collateral securing the loan, less estimated costs to sell. Collateral may be in the form of real estate or business assets including equipment, inventory, and accounts receivable. The value of the real estate collateral is determined utilizing an income or market valuation approach based on an appraisal conducted by an independent, licensed appraiser outside of the Company using observable market data (Level 2). However, if the collateral is a house or building in the process of construction, or if management adjusts the appraisal value, then the fair value is considered Level 3. The value of business equipment is based upon an outside appraisal, if deemed significant, or the net book value on the applicable business' financial statements if not considered significant using observable market data. Likewise, values for inventory and accounts receivable collateral are based on financial statement balances or aging reports (Level 3). Impaired loans with an allocation to the ALL are measured at fair value on a nonrecurring basis. Any fair value adjustments are recorded in the period incurred as provision for loan losses on the consolidated statements of income. Changes in the fair value of impaired loans for those still held at December 31 considered in the determination of the provision for loan losses totaled $77 thousand, $146 thousand and $867 thousand for the years ended December 31, 2019, 2018, and 2017, respectively.

Foreclosed Real Estate

OREO property acquired through foreclosure is initially recorded at the fair value of the property at the transfer date less estimated selling cost. Subsequently, OREO is carried at the lower of its carrying value or the fair value less estimated selling cost. Fair value is usually determined based upon an independent third-party appraisal of the property or occasionally upon a recent sales offer. There were no specific charges to value OREO at the lower of cost or fair value on properties held at December 31, 2019 and 2018. Changes in the fair value of foreclosed real estate for those still held at December 31 charged to OREO totaled $0 for the years ended December 31, 2019, 2018, and 2017.

Mortgage Servicing Rights

The fair value of mortgage servicing rights is estimated to be equal to its carrying value, unless the quarterly valuation model calculates the present value of the estimated net servicing income is less than its carrying value, in which case a lower of cost or fair value charge is taken. At December 31, 2019, a $70 thousand lower of cost or fair value reserve existed on the mortgage servicing right portfolio. In 2019, net impairment charges of $70 thousand were recorded in mortgage banking activities on the consolidated statements of income. No reserve existed at December 31, 2018, and no impairment charges were recorded in 2018.

The following table summarizes assets measured at fair value on a nonrecurring basis at December 31, 2019 and 2018.

	Level 1	Level 2	Level 3	Total Fair Value Measurements
December 31, 2019				
Impaired loans				
Commercial real estate:				
Owner-occupied	**$ —**	**$ —**	**$ 938**	**$ 938**
Multi-family	**—**	**—**	**96**	**96**
Non-owner occupied residential	**—**	**—**	**103**	**103**
Commercial and industrial	**—**	**—**	**11**	**11**
Residential mortgage:				
First lien	**—**	**—**	**641**	**641**
Home equity - lines of credit	**—**	**—**	**400**	**400**
Installment and other loans	**—**	**—**	**7**	**7**
Total impaired loans	**$ —**	**$ —**	**$ 2,196**	**$ 2,196**
Mortgage servicing rights	**$ —**	**$ 3,119**	**$ —**	**$ 3,119**
December 31, 2018				
Impaired loans				
Commercial real estate:				
Owner-occupied	$ —	$ —	$ 1,087	$ 1,087
Multi-family	—	—	131	131
Non-owner occupied residential	—	—	278	278
Commercial and industrial	—	—	25	25
Residential mortgage:				
First lien	—	—	1,121	1,121
Home equity - lines of credit	—	—	409	409
Total impaired loans	$ —	$ —	$ 3,051	$ 3,051

The following table presents additional qualitative information about assets measured on a nonrecurring basis and for which the Company has utilized Level 3 inputs to determine fair value.

	Fair Value Estimate	Valuation Techniques	Unobservable Input	Range
December 31, 2019				
Impaired loans	**$ 2,196**	Appraisal of collateral	Management adjustments on appraisals for property type and recent activity	0% - 20% discount
			- Management adjustments for liquidation expenses	6% - 33% discount
Mortgage servicing rights	**3,119**	Discounted cash flows	Weighted average CPR	11.63%
			Discount rate	9.54%
December 31, 2018				
Impaired loans	$ 3,051	Appraisal of collateral	Management adjustments on appraisals for property type and recent activity	5% - 75% discount
			- Management adjustments for liquidation expenses	6% - 20% discount

Fair values of financial instruments

GAAP requires disclosure of the fair value of financial assets and liabilities, including those that are not measured and reported at fair value on a recurring or nonrecurring basis. The following table presents the carrying amounts and estimated fair values of financial assets and liabilities at December 31, 2019, and 2018.

	Carrying Amount	Fair Value	Level 1	Level 2	Level 3
December 31, 2019					
Financial Assets					
Cash and due from banks	**$ 25,969**	**$ 25,969**	**$ 25,969**	**$ —**	**$ —**
Interest-bearing deposits with banks	**30,493**	**30,493**	**30,493**	**—**	**—**
Restricted investments in bank stock	**16,184**	**n/a**	**n/a**	**n/a**	**n/a**
AFS securities	**490,386**	**490,386**	**—**	**466,107**	**24,279**
Loans held for sale	**9,364**	**9,364**	**—**	**9,364**	**—**
Loans, net of allowance for loan losses	**1,629,675**	**1,652,788**	**—**	**—**	**1,652,788**
Interest rate lock commitments on residential mortgages	**103**	**103**	**—**	**—**	**103**
Accrued interest receivable	**6,040**	**6,040**	**—**	**1,863**	**4,177**
Financial Liabilities					
Deposits	**1,875,522**	**1,876,555**	**—**	**1,876,555**	**—**
Short-term borrowings	**154,869**	**154,869**	**—**	**154,869**	**—**
Long-term debt	**63,067**	**63,405**	**—**	**63,405**	**—**
Subordinated notes	**31,847**	**33,953**	**—**	**33,953**	**—**
Accrued interest payable	**879**	**879**	**—**	**879**	**—**
December 31, 2018					
Financial Assets					
Cash and due from banks	$ 26,156	$ 26,156	$ 26,156	$ —	$ —
Interest-bearing deposits with banks	45,664	45,664	45,664	—	—
Federal funds sold	16,995	16,995	16,995	—	—
Restricted investments in bank stock	10,842	n/a	n/a	n/a	n/a
AFS securities	465,844	465,844	—	458,635	7,209
Loans held for sale	3,340	3,413	—	3,413	—
Loans, net of allowance for loan losses	1,233,643	1,229,645	—	—	1,229,645
Accrued interest receivable	5,927	5,927	—	2,853	3,074
Financial Liabilities					
Deposits	1,558,756	1,555,912	—	1,555,912	—
Short-term borrowings	64,069	64,069	—	64,069	—
Long-term debt	83,450	82,951	—	82,951	—
Subordinated notes	31,859	31,256	—	31,256	—
Accrued interest payable	1,301	1,301	—	1,301	—

The methods used to estimate the fair value of financial instruments at December 31, 2019 did not necessarily represent an exit price. In accordance with the Company's adoption of ASU 2016-01, the methods utilized to measure the fair value of financial instruments at December 31, 2019 represents an approximation of exit price; however, an actual exit price may differ.

NOTE 20. REVENUE FROM CONTRACTS WITH CLIENTS

On January 1, 2018, the Company adopted ASU 2014-09, Revenue from Contracts with Customers (Topic 606) and all subsequent amendments (collectively "ASC 606"). The update implements a common revenue standard that clarifies the principles for recognizing revenue. The core principle of ASC 606 is that an entity should recognize revenue to depict the transfer of promised goods or services to clients in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. The majority of the Company's revenue comes from interest income, including loans and securities, that are outside the scope of ASC 606. The Company's services that fall within the scope of ASC 606 are presented within noninterest income on the consolidated statements of income and are recognized as revenue as the Company satisfies its obligation to the client. Services within the scope of ASC 606 include service charges on deposit accounts, income from fiduciary investment management and brokerage activities and interchange fees from service charges on ATM and debit card transactions. ASC 606 did not result in a change to the accounting for any in-scope revenue streams; as such, no cumulative effect adjustment was recorded.

Descriptions of revenue generating activities that are within the scope of ASC 606 are as follows:

Service Charges on Deposit Accounts - The Company earns fees from its deposit clients for transaction-based, account maintenance, and overdraft services. Transaction-based fees, which include services such as ATM use fees, stop payment charges, statement rendering, and ACH fees, are recognized at the time the transaction is executed as that is the point in time the Company fulfills the client's request. Account maintenance fees, which relate primarily to monthly maintenance, are earned over the course of a month, representing the period over which the Company satisfies the performance obligation. Overdraft fees are recognized at the point in time that the overdraft occurs. Service charges on deposits are withdrawn from the client's account balance.

Interchange Income - The Company earns interchange fees from debit/credit cardholder transactions conducted through the MasterCard payment network. Interchange fees from cardholder transactions represent a percentage of the underlying transaction value and are recognized daily, concurrently with the transaction processing services provided to the cardholder. Interchange income is presented net of cardholder rewards.

Loan swap referral fees - The Company earns fees from a third-party service provider for loan hedging referrals provided to lending clients. The Company acts as an agent in arranging the relationship between our client and the third-party service provider. The company is paid and recognizes income upon completion of the loan hedge between our client and the third-party service provider.

Trust and Investment Management Income - The Company earns wealth management and investment brokerage fees from its contracts with trust and wealth management clients to manage assets for investment, and/or to transact on their accounts. These fees are primarily earned over time as the Company provides the contracted services and are generally assessed based on a tiered scale of the market value of assets under management. Fees that are transaction based, including trade execution services, are recognized at the point in time that the transaction is executed, i.e., the trade date. Other related services provided included financial planning services and the associated fees the Company earns, which are based on a fixed fee schedule, are recognized when the services are rendered. Services are generally billed in arrears and a receivable is recorded until fees are paid.

Brokerage Income - The Company earns fees from investment management and brokerage services provided to its clients through a third-party service provider. The Company receives commissions from the third-party service provider and recognizes income on a weekly basis based upon client activity. As the Company acts as an agent in arranging the relationship between the client and the third-party service provider and does not control the services rendered to the clients, brokerage income is presented net of related costs.

Gains/Losses on Sales of OREO - The Company records a gain or loss on the sale of OREO when control of the property transfers to the buyer, which generally occurs at the time of an executed deed. If the Company finances the sale of OREO to the buyer, the Company 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, the Company adjusts the transaction price and related gain or loss on sale if a significant financing component is present.

At December 31, 2019 and December 31, 2018, the Company had receivables from trust and wealth management clients totaling $719 thousand and $640 thousand, respectively.

The following table presents the Company's noninterest income disaggregated by revenue source for the years ended December 31, 2019, 2018 and 2017.

	2019	2018	2017
Noninterest income			
Service charges on deposit accounts	**$ 3,793**	$ 3,578	$ 3,392
Loan swap referral fees	**1,197**	—	—
Trust and investment management income	**7,255**	6,576	6,400
Brokerage income	**2,426**	2,035	1,896
Interchange income	**3,281**	2,821	2,618
Revenue from contracts with clients	**17,952**	15,010	14,306
Other service charges	**416**	562	235
Mortgage banking activities	**3,049**	2,663	2,919
Income from life insurance	**2,044**	1,463	1,109
Other income	**331**	320	190
Investment securities gains	**4,749**	1,006	1,190
Total noninterest income	**$ 28,541**	$ 21,024	$ 19,949

NOTE 21. ORRSTOWN FINANCIAL SERVICES, INC. (PARENT COMPANY ONLY) CONDENSED FINANCIAL INFORMATION

Condensed Balance Sheets

	December 31,	
	2019	2018
Assets		
Cash in Orrstown Bank	**$ 11,568**	$ 28,596
Investment in Orrstown Bank	**242,041**	175,299
Other assets	**1,724**	2,057
Total assets	**$ 255,333**	$ 205,952
Liabilities		
Subordinated notes	**$ 31,847**	$ 31,859
Accrued interest and other liabilities	**237**	660
Total liabilities	**32,084**	32,519
Shareholders' Equity		
Common stock	**584**	491
Additional paid-in capital	**188,365**	151,678
Retained earnings	**35,246**	24,472
Accumulated other comprehensive loss	**(480)**	(2,972)
Treasury stock	**(466)**	(236)
Total shareholders' equity	**223,249**	173,433
Total liabilities and shareholders' equity	**$ 255,333**	$ 205,952

Condensed Statements of Income

	For the Years Ended December 31,		
	2019	**2018**	**2017**
Income			
Dividends from bank subsidiary	**$ 2,000**	$ 4,450	$ —
Interest income from bank subsidiary	**257**	7	15
Other income	**55**	102	61
Total income	**2,312**	4,559	76
Expenses			
Interest on short-term borrowings	—	57	—
Interest on subordinated notes	**1,987**	73	—
Total interest expense	**1,987**	130	—
Share-based compensation	**236**	205	247
Management fee to bank subsidiary	**1,350**	1,042	501
Merger related expenses	**1,574**	1,545	—
Other expenses	**802**	656	1,116
Total expenses	**5,949**	3,578	1,864
(Loss) income before income tax benefit and equity in undistributed income of subsidiaries	**(3,637)**	981	(1,788)
Income tax benefit	**(1,182)**	(735)	(596)
(Loss) income before equity in undistributed income of subsidiaries	**(2,455)**	1,716	(1,192)
Equity in undistributed income of subsidiaries	**19,379**	11,089	9,282
Net income	**$ 16,924**	$ 12,805	$ 8,090

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Condensed Statements of Cash Flows

	For the Years Ended December 31,		
	2019	2018	2017
Cash flows from operating activities:			
Net income	**$ 16,924**	$ 12,805	$ 8,090
Adjustments to reconcile net income to cash provided by (used in) operating activities:			
Amortization	**47**	3	—
Deferred income taxes	**16**	22	16
Equity in undistributed income of subsidiaries	**(19,379)**	(11,089)	(9,282)
Share-based compensation	**236**	205	247
Net change in other liabilities	**(423)**	12	(35)
Net change in other assets	**311**	2,039	(377)
Net cash (used in) provided by operating activities	**(2,268)**	3,997	(1,341)
Cash flows from investing activities:			
Capital contributed to subsidiaries	**(100)**	—	(6,100)
Net cash paid for acquisitions	**(8,142)**	(4,597)	—
Net cash used in investing activities	**(8,242)**	(4,597)	(6,100)
Cash flows from financing activities:			
Dividends paid	**(6,150)**	(4,375)	(3,488)
Proceeds from issuance of subordinated notes, net of costs	—	31,857	—
Proceeds from issuance of common stock	**1,463**	1,448	1,276
Payments to repurchase common stock	**(1,772)**	(651)	—
Other, net	**(59)**	—	—
Net cash (used in) provided by financing activities	**(6,518)**	28,279	(2,212)
Net (decrease) increase in cash	**(17,028)**	27,679	(9,653)
Cash, beginning	**28,596**	917	10,570
Cash, ending	**$ 11,568**	$ 28,596	$ 917

NOTE 22. CONTINGENCIES

The nature of the Company's business generates a certain amount of litigation involving matters arising out of the ordinary course of business. Except as described below, in the opinion of management, there are no legal proceedings that might have a material effect on the results of operations, liquidity, or the financial position of the Company at this time.

On May 25, 2012, SEPTA filed a putative class action complaint in the U.S. District Court for the Middle District of Pennsylvania against the Company, the Bank and certain current and former directors and executive officers (collectively, the "Orrstown Defendants"). The complaint alleges, among other things, that (i) in connection with the Company's Registration Statement on Form S-3 dated February 23, 2010 and its Prospectus Supplement dated March 23, 2010, and (ii) during the purported class period of March 24, 2010 through October 27, 2011, the Company issued materially false and misleading statements regarding the Company's lending practices and financial results, including misleading statements concerning the stringent nature of the Bank's credit practices and underwriting standards, the quality of its loan portfolio, and the intended use of the proceeds from the Company's March 2010 public offering of common stock. The complaint asserts claims under Sections 11, 12(a) and 15 of the Securities Act of 1933, Sections 10(b) and 20(a) of the Securities Exchange Act of 1934 and Rule 10b-5 promulgated thereunder, and seeks class certification, unspecified money damages, interest, costs, fees and equitable or injunctive relief. Under the Private Securities Litigation Reform Act of 1995 ("PSLRA"), motions for appointment of Lead Plaintiff in this case were due by July 24, 2012. SEPTA was the sole movant and the Court appointed SEPTA Lead Plaintiff on August 20, 2012.

Pursuant to the PSLRA and the Court's September 27, 2012 Order, SEPTA was given until October 26, 2012 to file an amended complaint and the Orrstown Defendants until December 7, 2012 to file a motion to dismiss the amended complaint. SEPTA's opposition to the Orrstown Defendants' motion to dismiss was originally due January 11, 2013. Under the PSLRA,

discovery and all other proceedings in the case were stayed pending the Court's ruling on the motion to dismiss. The September 27, 2012 Order specified that if the motion to dismiss were denied, the Court would schedule a conference to address discovery and the filing of a motion for class certification. On October 26, 2012, SEPTA filed an unopposed motion for enlargement of time to file its amended complaint in order to permit the parties and new defendants to be named in the amended complaint time to discuss plaintiff's claims and defendants' defenses. On October 26, 2012, the Court granted SEPTA's motion, mooting its September 27, 2012 scheduling Order, and requiring SEPTA to file its amended complaint on or before January 16, 2013 or otherwise advise the Court of circumstances that require a further enlargement of time. On January 14, 2013, the Court granted SEPTA's second unopposed motion for enlargement of time to file an amended complaint on or before March 22, 2013.

On March 4, 2013, SEPTA filed an amended complaint. The amended complaint expanded the list of defendants in the action to include the Company's former independent registered public accounting firm, Smith Elliott Kearns & Company, LLC ("SEK"), and the underwriters of the Company's March 2010 public offering of common stock. In addition, among other things, the amended complaint extends the purported 1934 Exchange Act class period from March 15, 2010 through April 5, 2012. Pursuant to the Court's March 28, 2013 Second Scheduling Order, on May 28, 2013, all defendants filed their motions to dismiss the amended complaint, and on July 22, 2013, SEPTA filed its "omnibus" opposition to all of the defendants' motions to dismiss. On August 23, 2013, all defendants filed reply briefs in further support of their motions to dismiss. On December 5, 2013, the Court ordered oral argument on the Orrstown Defendants' motion to dismiss the amended complaint to be heard on February 7, 2014. Oral argument on the pending motions to dismiss SEPTA's amended complaint was held on April 29, 2014.

The Second Scheduling Order stayed all discovery in the case pending the outcome of the motions to dismiss, and informed the parties that, if required, a telephonic conference to address discovery and the filing of SEPTA's motion for class certification would be scheduled after the Court's ruling on the motions to dismiss.

On April 10, 2015, pursuant to Court order, all parties filed supplemental briefs addressing the impact of the U.S. Supreme Court's March 24, 2015 decision in *Omnicare, Inc. v. Laborers District Council Construction Industry Pension Fund* on defendants' motions to dismiss the amended complaint.

On June 22, 2015, in a 96-page Memorandum, the Court dismissed without prejudice SEPTA's amended complaint against all defendants, finding that SEPTA failed to state a claim under either the Securities Act of 1933, as amended, or the Securities Exchange Act of 1934, as amended. The Court ordered that, within 30 days, SEPTA either seek leave to amend its amended complaint, accompanied by the proposed amendment, or file a notice of its intention to stand on the amended complaint.

On July 22, 2015, SEPTA filed a motion for leave to amend under Local Rule 15.1, and attached a copy of its proposed second amended complaint to its motion. Many of the allegations of the proposed second amended complaint are essentially the same or similar to the allegations of the dismissed amended complaint. The proposed second amended complaint also alleges that the Orrstown Defendants did not publicly disclose certain alleged failures of internal controls over loan underwriting, risk management, and financial reporting during the period 2009 to 2012, in violation of the federal securities laws. On February 8, 2016, the Court granted SEPTA's motion for leave to amend and SEPTA filed its second amended complaint that same day.

On February 25, 2016, the Court issued a scheduling Order directing: all defendants to file any motions to dismiss by March 18, 2016; SEPTA to file an omnibus opposition to defendants' motions to dismiss by April 8, 2016; and all defendants to file reply briefs in support of their motions to dismiss by April 22, 2016. Defendants timely filed their motions to dismiss the second amended complaint and the parties filed their briefs in accordance with the Court-ordered schedule, above. The February 25, 2016 Order stays all discovery and other deadlines in the case (including the filing of SEPTA's motion for class certification) pending the outcome of the motions to dismiss.

The allegations of SEPTA's second amended complaint disclosed the existence of a confidential, non-public, fact-finding inquiry regarding the Company being conducted by the SEC. As disclosed in the Company's Form 8-K filed on September 27, 2016, on that date the Company entered into a settlement agreement with the SEC resolving the investigation of accounting and related matters at the Company for the periods ended June 30, 2010, to December 31, 2011. As part of the settlement of the SEC's administrative proceedings and pursuant to the cease-and-desist order, without admitting or denying the SEC's findings, the Company, its Chief Executive Officer, its former Chief Financial Officer, its former Executive Vice President and Chief Credit Officer, and its Chief Accounting Officer, agreed to pay civil money penalties to the SEC. The Company agreed to pay a civil money penalty of $1.0 million. The Company had previously established a reserve for that amount which was expensed in the second fiscal quarter of 2016. In the settlement agreement with the SEC, the Company also agreed to cease and desist from committing or causing any violations and any future violations of Securities Act Sections 17(a)(2) and 17(a)(3) and Exchange Act Sections 13(a), 13(b)(2)(A) and 13(b)(2)(B), and Rules 12b-20, 13a-1 and 13a-13 promulgated thereunder.

On September 27, 2016, the Orrstown Defendants filed with the Court a Notice of Subsequent Event in Further Support of their Motion to Dismiss the Second Amended Complaint, regarding the settlement with the SEC. The Notice attached a copy of the SEC's cease-and-desist order and briefly described what the Company believed were the most salient terms of the neither-

admit-nor-deny settlement. On September 29, 2016, SEPTA filed a Response to the Notice, in which SEPTA argued that the settlement with the SEC did not support dismissal of the second amended complaint.

On December 7, 2016, the Court issued an Order and Memorandum granting in part and denying in part defendants' motions to dismiss SEPTA's second amended complaint. The Court granted the motions to dismiss the Securities Act claims against all defendants, and granted the motions to dismiss the Exchange Act Section 10(b) and Rule 10b-5 claims against all defendants except Orrstown Financial Services, Inc., Orrstown Bank, Thomas R. Quinn, Jr., Bradley S. Everly, and Jeffrey W. Embly. The Court also denied the motions to dismiss the Exchange Act Section 20(a) claims against Quinn, Everly, and Embly.

On January 31, 2017, the Court entered a Case Management Order establishing the schedule for the litigation and, on August 15, 2017, it entered a revised Order that, among other things, set the following deadlines: all fact discovery closes on March 1, 2018, and SEPTA's motion for class certification is due the same day; expert merits discovery closes May 30, 2018; summary judgment motions are due by June 26, 2018; the mandatory pretrial and settlement conference is set for December 11, 2018; and trial is scheduled to begin on January 7, 2019.

On December 15, 2017, the Orrstown Defendants and SEPTA exchanged expert reports in opposition to and in support of class certification, respectively. On January 15, 2018, the parties exchanged expert rebuttal reports. SEPTA's motion for class certification was due March 1, 2018, with the Orrstown Defendants' opposition due April 2, 2018, and SEPTA's reply due April 23, 2018.

On February 9, 2018, SEPTA filed a Status Report and Request for a Telephonic Status Conference asking the Court to convene a conference to discuss the status of discovery in the case and possible revisions to the case schedule. On February 12, 2018, the Orrstown Defendants filed their status report to provide the Court with a summary of document discovery in the case to date. On February 27, 2018, SEPTA filed an unopposed motion for a continuance of the existing case deadlines pending a status conference with the Court or the issuance of a revised case schedule. On February 28, 2018, the Court issued an Order continuing all case management deadlines until further order of the Court.

On March 27, 2018, the Court held a telephonic status conference with the parties to discuss outstanding discovery issues and case deadlines. On May 2, 2018, the parties filed a joint status report. On May 10, 2018, the Court held a follow-up telephonic status conference at which the parties reported on the progress of discovery to date. Party and non-party document discovery in the case has continued. To date, SEPTA has taken a few non-party depositions.

On August 9, 2018, SEPTA filed a motion to compel the production of Confidential Supervisory Information (CSI) of non-parties the Board of Governors of the Federal Reserve System (FRB) and the Pennsylvania Department of Banking and Securities, in the possession of Orrstown and third parties. On August 23, 2018, the Orrstown Defendants filed a response to the motion to compel. On August 30, 2018, the FRB filed an unopposed motion to intervene in the Action for the purpose of opposing SEPTA's motion to compel, and on September 27, 2018, the FRB filed its brief in opposition to SEPTA's motion. On October 11, 2018, SEPTA filed its reply brief in support of its motion to compel. On February 12, 2019, the Court denied SEPTA's motion to compel the production of CSI on the ground that SEPTA had failed to exhaust its administrative remedies.

On April 11, 2019, SEPTA filed a motion for leave to file a third amended complaint. The proposed third amended complaint seeks to reassert the Securities Act claims that the Court dismissed as to all defendants on December 7, 2016, when the Court granted in part and denied in part defendants' motions to dismiss SEPTA's second amended complaint. The proposed third amended complaint also seeks to reassert the Exchange Act claims against those defendants that the Court dismissed from the case on December 7, 2016. Defendants' briefs in opposition to SEPTA's motion for leave to file a third amended complaint were filed on April 25, 2019. SEPTA filed a reply brief in further support of its motion for leave to file a third amended complaint on May 9, 2019.

On June 13, 2019, Orrstown filed a motion for protective order to stay discovery pending resolution of SEPTA's motion for leave to file a third amended complaint. On June 19, 2019, former defendants SEK and the underwriters of the Company's March 2010 public offering joined in Orrstown's motion for protective order. On June 25, 2019, SEPTA filed its opposition to Orrstown's motion. On July 9, 2019, Orrstown filed a reply brief in further support of its motion. On July 17, 2019, the Court entered an Order partially granting Orrstown's motion for protective order, ruling that all deposition discovery in the case is stayed pending a decision on SEPTA's motion for leave to file a third amended complaint.

On February 14, 2020, the Court issued an Order and Memorandum granting SEPTA's motion for leave to file a third amended complaint. The third amended complaint is now the operative complaint. It reinstates the Orrstown Defendants, as well as SEK and the underwriter defendants, previously dismissed from the case on December 7, 2016. The third amended complaint also revives the previously-dismissed 1933 Securities Act claim against the Orrstown Defendants and the underwriter defendants. Under the Court-ordered briefing schedule, all defendants' motions to dismiss the third amended complaint are due March 27, 2020, SEPTA's oppositions are due May 1, 2020, and defendants' reply briefs are due May 22, 2020.

On February 24, 2020, the Orrstown Defendants, and the underwriter defendants and SEK, separately filed motions under 28 U.S.C. § 1292(b) asking the Court to certify its February 14, 2020 Order for interlocutory appeal to the Third Circuit Court of Appeals. That motion is pending.

The Company believes that the allegations of SEPTA's third amended complaint are without merit and intends to defend itself vigorously against those claims. It is not possible at this time to estimate reasonably possible losses, or even a range of reasonably possible losses, in connection with the litigation.

ITEM 9 – CHANGES IN AND DISAGREEMENTS WITH ACCOUNTANTS ON ACCOUNTING AND FINANCIAL DISCLOSURE

None.

ITEM 9A – CONTROLS AND PROCEDURES

Based on the evaluation required by Securities Exchange Act Rules 13a-15(b) and 15d-15(b), the Company's management, including the Chief Executive Officer and Chief Financial Officer, conducted an evaluation of the effectiveness of our disclosure controls and procedures, as defined in Securities Exchange Act Rules 13a-15(e) and 15d-15(e), at December 31, 2019. Based on that evaluation, our Chief Executive Officer and Chief Financial Officer concluded that our disclosure controls and procedures were effective at December 31, 2019. There have been no changes in internal control over financial reporting that have materially affected, or are reasonably likely to materially affect, our internal control over financial reporting during the fourth quarter of 2019.

Management's Report on Internal Controls Over Financial Reporting is included in Part II, Item 8, "Financial Statements and Supplementary Data." The effectiveness of the Company's internal control over financial reporting at December 31, 2019 has been audited by Crowe LLP, an independent registered public accounting firm, as stated in the Report of Independent Registered Public Accounting Firm appearing in Part II, Item 8, "Financial Statements and Supplementary Data."

ITEM 9B – OTHER INFORMATION

None.

PART III

ITEM 10 – DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

The Company has adopted a code of ethics that applies to all senior financial officers (including its chief executive officer, chief financial officer, chief accounting officer, and any person performing similar functions). You can find a copy of the Code of Ethics for Senior Financial Officers by visiting our website at www.orrstown.com and following the links to “Investor Relations” and “Governance Documents.” A copy of the Code of Ethics for Senior Financial Officers may also be obtained, free of charge, by written request to Orrstown Financial Services, Inc., 77 East King Street, PO Box 250, Shippensburg, Pennsylvania 17257, Attention: Secretary. The Company intends to disclose any amendments to or waivers from a provision of the Company’s Code of Ethics for Senior Financial Officers in a timely manner.

All other information required by Item 10 is incorporated by reference from the Company’s definitive proxy statement for the 2020 Annual Meeting of Shareholders filed pursuant to Regulation 14A, under Section 16(a) Beneficial Ownership Reporting Compliance and Proposal 1 – Election of Directors – Biographical Summaries of Nominees and Directors; Information About Executive Officers; Involvement in Certain Legal Proceedings; and Proposal 1 – Election of Directors – Nomination of Directors, and Board Structure, Committees and Meeting Attendance.

ITEM 11 – EXECUTIVE COMPENSATION

The information required by Item 11 is incorporated by reference from the Company’s definitive proxy statement for the 2020 Annual Meeting of Shareholders filed pursuant to Regulation 14A, under Proposal 1 – Election of Directors – Compensation of Directors, Compensation Discussion and Analysis, Compensation Committee Report, Executive Compensation Tables, Potential Payments Upon Termination or Change in Control and Compensation Committee Interlocks and Insider Participation.

ITEM 12 – SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

The following table presents equity compensation plan information at December 31, 2019.

Plan Category	Number of securities to be issued upon exercise of outstanding options, warrants and rights (a)	Weighted average exercise price of outstanding options, warrants and rights (b)	Number of securities remaining available for future issuance under equity compensation plans (excluding securities reflected in column (a)) (c)
Equity compensation plan approved by security holders	27,767	$ 21.14	455,028
Equity compensation plan not approved by security holders [(1)]	2,792	25.76	—
Total	30,559	$ 21.56	455,028

(1) Awards from the Non-Employee Director Stock Option Plan of 2000. Certain options granted remain outstanding from this plan, however no additional options will be granted under this plan.

All other information required by Item 12 is incorporated, by reference, from the Company's definitive proxy statement for the 2020 Annual Meeting of Shareholders filed pursuant to Regulation 14A, under Share Ownership of Certain Beneficial Owners and Management.

ITEM 13 – CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS, AND DIRECTOR INDEPENDENCE

The information required by Item 13 is incorporated by reference from the Company's definitive proxy statement for the 2020 Annual Meeting of Shareholders filed pursuant to Regulation 14A, under Proposal 1 – Election of Directors – Director Independence, and Transactions with Related Persons, Promoters and Certain Control Persons.

ITEM 14 – PRINCIPAL ACCOUNTING FEES AND SERVICES

The information required by Item 14 is incorporated by reference from the Company's definitive proxy statement for the 2020 Annual Meeting of Shareholders filed pursuant to Regulation 14A, under Proposal 3 – Ratification of the Audit Committee's Selection of Crowe LLP as the Company's Independent Registered Public Accounting Firm for the Fiscal Year Ending December 31, 2019 – Relationship with Independent Registered Public Accounting Firm.

PART IV

ITEM 15 – EXHIBITS, FINANCIAL STATEMENT SCHEDULES

a. The following documents are filed as part of this report:

(1) – Financial Statements

Consolidated financial statements of the Company and subsidiaries required in response to this Item are incorporated by reference from Item 8 of this report.

(2) – Financial Statement Schedules

All financial statement schedules for which provision is made in the applicable accounting regulations of the Securities and Exchange Commission are not required under the related instructions or are inapplicable and therefore have been omitted.

(3) – Exhibits

2.1(a)	Agreement and Plan of Merger, dated May 31, 2018, by and between Orrstown Financial Services, Inc. and Mercersburg Financial Corporation, incorporated by reference to Exhibit 2.1 of the Registrant's Form 8-K filed June 1, 2018.
2.1(b)	Agreement and Plan of Merger, dated October 23, 2018, by and between Orrstown Financial Services, Inc. and Hamilton Bancorp, Inc., incorporated by reference to Exhibit 2.1 of the Registrant's Form 8-K filed October 24, 2018.
3.1	Articles of Incorporation as amended, incorporated by reference to Exhibit 3.1 of the Registrant's Form 8-K filed on January 29, 2010.
3.2	By-laws as amended, incorporated by reference to Exhibit 3.2 to the Registrant's Report on Form 8-K filed January 30, 2018.
4.1	Specimen Common Stock Certificate, incorporated by reference to the Registrant's Registration Statement on Form S-3 filed February 8, 2010 (File No. 333-164780).
4.2	Subordinated Indenture, dated December 19, 2018, by and between Orrstown Financial Services, Inc., and U.S. Bank, National Association, incorporated by reference to Exhibit 4.1 of the Registrant's Form 8-K filed on December 20, 2018.
4.3	Form of Global Note for subordinated notes, incorporated by reference to Exhibit 4.2 of the Registrant's Form 8-K filed December 20, 2018.
4.4	Form of Registration Rights Agreement for subordinated notes, incorporated by reference to Exhibit 10.2 of the Registrant's Form 8-K filed December 20, 2018.
10.1(a)	Form of Change in Control Agreement for selected officers – incorporated by reference to Exhibit 10.1 of the Registrant's Form 8-K filed May 14, 2008.
10.1(b)	Change in Control Agreement between Orrstown Financial Services, Inc., Orrstown Bank and Thomas R. Quinn, Jr. incorporated by reference to Exhibit 10.2 of the Registrant's Form 8-K filed June 8, 2015.
10.1(c)	Change in Control Agreement between Orrstown Financial Services, Inc., Orrstown Bank and Thomas R. Quinn, Jr. incorporated by reference to Exhibit 10.2 to the Registrant's Form 8-K filed September 27, 2019.
10.1(d)	Change in Control Agreement between Orrstown Financial Services, Inc., Orrstown Bank and Philip E. Fague, incorporated by reference to Exhibit 10.4 to the Registrant's Form 8-K filed June 2, 2015.
10.1(e)	Change in Control Agreement between Orrstown Financial Services, Inc., Orrstown Bank and Robert G. Coradi, incorporated by reference to Exhibit 10.8 to the Registrant's Form 8-K filed June 2, 2015.
10.1(f)	Change in Control Agreement between Orrstown Financial Services, Inc., Orrstown Bank and Barbara E. Brobst, incorporated by reference to Exhibit 10.10 to the Registrant's Form 8-K filed June 2, 2015.
10.1(g)	Change in Control Agreement between Orrstown Financial Services, Inc., Orrstown Bank and Adam L. Metz, incorporated by reference to Exhibit 10.2 to the Registrant's Form 8-K filed March 14, 2017.
10.1(h)	Change in Control Agreement between Orrstown Financial Services, Inc., Orrstown Bank and Robert J. Fignar, incorporated by reference to Exhibit 10.3 to the Registrant's Form 8-K filed June 1, 2018.
10.1(i)	Change in Control Agreement between Orrstown Financial Services, Inc., Orrstown Bank and Thomas R. Brugger, incorporated by reference to Exhibit 10.2 to the Registrant's Form 8-K filed June 25, 2019.

10.2(a)	Amended and Restated Salary Continuation Agreement between Orrstown Bank and Phillip E. Fague, incorporated by reference to Exhibit 10.2 (b) of the Registrant's Form 10-K filed March 15, 2010.
10.2(b)	Salary Continuation Agreement between Orrstown Bank and Thomas R. Quinn, Jr. – incorporated by reference to Exhibit 10.1 to the Registrant's Form 8-K filed January 8, 2010.
10.2(c)	Salary Continuation Agreement between Orrstown Bank and Thomas R. Quinn, Jr. – incorporated by reference to Exhibit 10.1 to the Registrant's Form 8-K filed September 27, 2019.
10.2(d)	Salary Continuation Agreement between Orrstown Bank and David P. Boyle – incorporated by reference to Exhibit 10.1 to the Registrant's Form 8-K filed July 17, 2015.
10.3	Officer group term replacement plan for selected officers – incorporated by reference to Exhibit 10.2 to Registrant's Form 10-K for the year ended December 31, 1999 filed March 28, 2000.
10.4(a)	Director Retirement Agreement, as amended, between Orrstown Bank and Anthony F. Ceddia, incorporated by reference to Exhibit 10.4(a) to the Registrant's Form 10-K filed March 15, 2010.
10.4(b)	Director Retirement Agreement, as amended, between Orrstown Bank and Jeffrey W. Coy, incorporated by reference to Exhibit 10.4(b) to the Registrant's Form 10-K filed March 15, 2010.
10.4(c)	Director Retirement Agreement, as amended, between Orrstown Bank and Andrea Pugh, incorporated by reference to Exhibit 10.4(c) to the Registrant's Form 10-K filed March 15, 2010.
10.4(d)	Director Retirement Agreement, as amended, between Orrstown Bank and Gregory A. Rosenberry, incorporated by reference to Exhibit 10.4(d) to the Registrant's Form 10-K filed March 15, 2010.
10.4(e)	Director Retirement Agreement, as amended, between Orrstown Bank and Glenn W. Snoke, incorporated by reference to Exhibit 10.4(f) to the Registrant's Form 10-K filed March 15, 2010.
10.4(f)	Director Retirement Agreement, as amended, between Orrstown Bank and Joel R. Zullinger, incorporated by reference to Exhibit 10.4(h) to the Registrant's Form 10-K filed March 15, 2010.
10.5	Revenue neutral retirement plan – incorporated by reference to Exhibit 10.4 to the Registrant's Form 10-K filed March 28, 2000.
10.6	Non-employee director stock option plan of 2000 – incorporated by reference to the Registrant's registration statement on Form S-8 filed March 31, 2000.
10.7	Employee stock option plan of 2000 – incorporated by reference to the Registrant's registration statement on Form S-8 filed March 31, 2000.
10.8	2011 Orrstown Financial Services, Inc. Stock Incentive Plan – incorporated by reference to Exhibit 10.1 of the Registrant's registration statement on Form S-8 filed May 24, 2018..
10.9(a)	Employment Agreement between Orrstown Financial Services, Inc., Orrstown Bank and Thomas R. Quinn, Jr. incorporated by reference to Exhibit 10.1 to Registrant's Form 8-K filed June 8, 2015.
10.9(b)	Employment Agreement between Orrstown Financial Services, Inc., Orrstown Bank and Thomas R. Brugger, incorporated by reference to Exhibit 10.1 to Registrant's Form 8-K filed June 25, 2019.
10.9(c)	Employment Agreement between Orrstown Financial Services, Inc., Orrstown Bank and Philip E. Fague, incorporated by reference to Exhibit 10.3 to the Registrant's Form 8-K filed June 2, 2015.
10.9(d)	Employment Agreement between Orrstown Financial Services, Inc., Orrstown Bank and Robert G. Coradi, incorporated by reference to Exhibit 10.7 to the Registrant's Form 8-K filed June 2, 2015.
10.9(e)	Employment Agreement between Orrstown Financial Services, Inc., Orrstown Bank and Barbara E. Brobst, incorporated by reference to Exhibit 10.9 to the Registrant's Form 8-K filed June 2, 2015.
10.9(f)	Employment Agreement between Orrstown Financial Services, Inc., Orrstown Bank and Adam L. Metz, incorporated by reference to Exhibit 10.1 to the Registrant's Form 8-K filed March 14, 2017.
10.9(g)	Employment Agreement between Orrstown Financial Services, Inc., Orrstown Bank and Robert J. Fignar, incorporated by reference to Exhibit 10.2 to the Registrant's Form 8-K filed June 1, 2018.
10.10	Brick Plan – Deferred Income Agreement between Orrstown Bank and Joel R. Zullinger, incorporated by reference to Exhibit 10.11 to the Registrant's Form 10-K filed March 15, 2010.
10.11(a)	Director/Executive Officer Deferred Compensation Plan, incorporated by reference to Exhibit 10.13(a) to the Registrant's Form 10-K filed March 15, 2010.
10.11(b)	Trust Agreement for Director/Executive Officer Deferred Compensation Plan, incorporated by reference to Exhibit 10.13(b) to the Registrant's Form 10-K filed March 15, 2010.

10.12	Deferred Compensation Agreement between Orrstown Bank and Thomas R. Quinn, Jr., incorporated by reference to Exhibit 10.1 to the Registrant's Form 8-K filed September 27, 2019.
10.13	Form of Subordinated Note Purchase Agreement, incorporated by reference to Exhibit 10.1 of the Registrant's Report of Form 8-K filed on December 20, 2018.
14	Code of Ethics Policy for Senior Financial Officers posted on Registrant's website.
21	Subsidiaries of the registrant
23.1	Consent of Crowe LLP, Independent Registered Public Accounting Firm
31.1	Rule 13a – 14(a)/15d-14(a) Certification (Chief Executive Officer)
31.2	Rule 13a – 14(a)/15d-14(a) Certifications (Chief Financial Officer)
32.1	Section 1350 Certifications (Chief Executive Officer)
32.2	Section 1350 Certifications (Chief Financial Officer)

101.LAB	XBRL Taxonomy Extension Label Linkbase
101.PRE	XBRL Taxonomy Extension Presentation Linkbase
101.INS	XBRL Instance Document
101.SCH	XBRL Taxonomy Extension Schema
101.CAL	XBRL Taxonomy Extension Calculation Linkbase
101.DEF	XBRL Taxonomy Extension Definition Linkbase

All other exhibits for which provision is made in the applicable accounting regulations of the Securities and Exchange Commission are not required under the related instructions or are inapplicable and therefore have been omitted.

b. Exhibits – The exhibits to this Form 10-K begin after the signature page.
c. Financial statement schedules – None required.

ITEM 16 – FORM 10-K SUMMARY

Not applicable.

Table of Contents

SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) 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.

ORRSTOWN FINANCIAL SERVICES, INC.
(Registrant)

Dated: March 16, 2020

By: /s/ Thomas R. Quinn, Jr.
Thomas R. Quinn, Jr., President and Chief Executive Officer

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, this report has been signed below by the following persons on behalf of the registrant and in the capacities and on the dates indicated.

Signature	Title	Date
/s/ Thomas R. Quinn, Jr. Thomas R. Quinn, Jr.	President and Chief Executive Officer (Principal Executive Officer) and Director	March 16, 2020
/s/ Thomas R. Brugger Thomas R. Brugger	Executive Vice President and Chief Financial Officer (Principal Financial Officer)	March 16, 2020
/s/ Gary A. Manley Gary A. Manley	Senior Vice President and Principal Accounting Officer	March 16, 2020
/s/ Joel R. Zullinger Joel R. Zullinger	Chairman of the Board and Director	March 16, 2020
/s/ Robert A. DeAlmeida Robert A. DeAlmeida	Director	March 16, 2020
/s/ Cindy J. Joiner Cindy J. Joiner	Director	March 16, 2020
/s/ Mark K. Keller Mark K. Keller	Director	March 16, 2020
/s/ Thomas D. Longenecker Thomas D. Longenecker	Director	March 16, 2020
/s/ Andrea Pugh Andrea Pugh	Director	March 16, 2020
/s/ Michael J. Rice Michael J. Rice	Director	March 16, 2020
/s/ Eric A. Segal Eric A. Segal	Director	March 16, 2020
/s/ Glenn W. Snoke Glenn W. Snoke	Director	March 16, 2020
/s/ Floyd E. Stoner Floyd E. Stoner	Director	March 16, 2020

Exhibit 21

SUBSIDIARIES OF THE REGISTRANT

1. Orrstown Bank, Shippensburg, Pennsylvania; a state-chartered bank organized under the Pennsylvania Banking Code of 1965.
2. Wheatland Advisors, Inc, Lancaster, Pennsylvania; a Registered Investment Advisor.

Exhibit 23.1

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in Registration Statement Nos. 333-225169, 333-196239, 333-33714 and 333-33712 on Form S-8 and Registration Statement Nos. 333-234321, 333-208614 and 333-53405 on Form S-3 of Orrstown Financial Services, Inc. of our report dated March 16, 2020 relating to the consolidated financial statements and effectiveness of internal control over financial reporting appearing in this Annual Report on Form 10-K.

/s/ Crowe LLP

Washington, D.C.
March 16, 2020

Exhibit 31.1

CERTIFICATION

I, Thomas R. Quinn, Jr., certify that:

1. I have reviewed this annual report on Form 10-K of Orrstown Financial Services, Inc.;

2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;

4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:

    a. Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

    b. Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

    c. Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

    d. Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonably likely to materially affect, the registrant's internal control over financial reporting;

5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of registrant's board of directors (or persons performing the equivalent functions):

    a. All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and

    b. Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: March 16, 2020

By: /s/ Thomas R. Quinn, Jr.

Thomas R. Quinn, Jr.
President and Chief Executive Officer
(Principal Executive Officer)

Exhibit 31.2

CERTIFICATION

I, Thomas R. Brugger, certify that:

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

Date: March 16, 2020

By: /s/ Thomas R. Brugger

Thomas R. Brugger
Executive Vice President and Chief Financial Officer
(Principal Financial Officer)

Exhibit 32.1

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

In connection with the Annual Report of Orrstown Financial Services, Inc. (the “Company”) on Form 10-K for the period ending December 31, 2019 as filed with the Securities and Exchange Commission on the date therein specified (the “Report”), I, Thomas R. Quinn, Jr., President and Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. section 1350, as adopted pursuant to section 906 of the Sarbanes-Oxley Act of 2002, that:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company as of and for the period covered by the Report.

Date: March 16, 2020 By: /s/ Thomas R. Quinn, Jr.

Thomas R. Quinn, Jr.
President and Chief Executive Officer

Exhibit 32.2

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

In connection with the Annual Report of Orrstown Financial Services, Inc. (the “Company”) on Form 10-K for the period ending December 31, 2019 as filed with the Securities and Exchange Commission on the date therein specified (the “Report”), I, Thomas R. Brugger, Executive Vice President and Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. section 1350, as adopted pursuant to section 906 of the Sarbanes-Oxley Act of 2002, that:

1. The Report fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
2. The information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company as of and for the period covered by the Report.

Date: March 16, 2020

By: /s/ Thomas R. Brugger

Thomas R. Brugger
Executive Vice President and Chief Financial Officer