2017 ANNUAL REPORT

Building Blocks for the Future

JUNIATA VALLEY FINANCIAL CORP.

President's Letter

As we proudly celebrated Juniata Valley Bank's Sesquicentennial in 2017, we purposefully laid the *Building Blocks For The Future* – we have accomplished much in the last 150 years and we plan to continue our progress in the next 150 years. Our building blocks were both literal and figurative as we built and improved facilities and also continued our expansion of electronic delivery systems and services, invested in human resources and grew our marketplace footprint through acquisition.

LITERAL BLOCKS

Prior to the end of 2017, we crossed the threshold of an innovative new branch, a replacement of our thirty year-old Mountain View office in Mifflintown, PA. As our industry shifts from a brick and mortar service delivery business model to digital access through multiple devices, our customers still want to see and connect with their JVB banker. Our new office design reflects the evolving role of the branch and the service preferences of our clients. Despite the increase in mobile and on-line banking, the Mountain View office remains one of our busiest in sales and transactional volume. The new branch provides an open floorplan for customer comfort as well as private meeting spaces and a learning center. In our Discovery Center, our associates share new products and services in a secure and confidential environment. The Community Room is open to small community groups for meeting and education. And we will launch consumer and business educational sessions, enhanced by Web Conferencing technology, in 2018.

Our Trust and Investment Services outgrew their physical space so we added three professional offices to our Financial Services Office on Butcher Shop Road. The integration of traditional trust services and investment services is a testament to our commitment to deliver responsible and comprehensive solutions for every stage of life and every financial circumstance.

FIGURATIVE BLOCKS

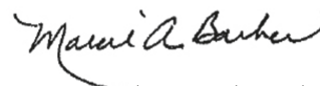
Banking is still a PEOPLE BUSINESS and we know that our success is attributable to the commitment and professional service of our JVB associates. 2017 was a year of investment in bench strength from the board room to the teller line.

Software investments which span 2017 and 2018 will support accounting, loan production, compliance and network security functions and are used to support and enhance the efforts of our professionals, but not replace them.

SHAREHOLDER BLOCKS

Above all else, we are focused on maintaining and growing the value of the franchise for you, our shareholders. The efforts described above did not distract us from continuing to grow our franchise and achieve solid financial results in 2017. Excluding the impact of certain items in order to provide a meaningful performance comparison of 2017 to 2016 (the excluded items are described in detail in this report), we achieved higher levels of profitability in 2017. Having successfully acquired and integrated First National Bank of Port Allegany in 2015, we were pleased to announce a definitive agreement to merge Liverpool Community Bank into JVB late 2017. As we work toward an anticipated closing in the second quarter of 2018, we are already planning the integration of Liverpool's franchise, contiguous to our current markets, into JVB and welcoming Liverpool's shareholders and associates into the JVB family. The acquisition is expected to be accretive to earnings in the first year and will provide a new market for trust and investment services. We will continue to actively seek opportunities that leverage our capital and overhead for greater shareholder return.

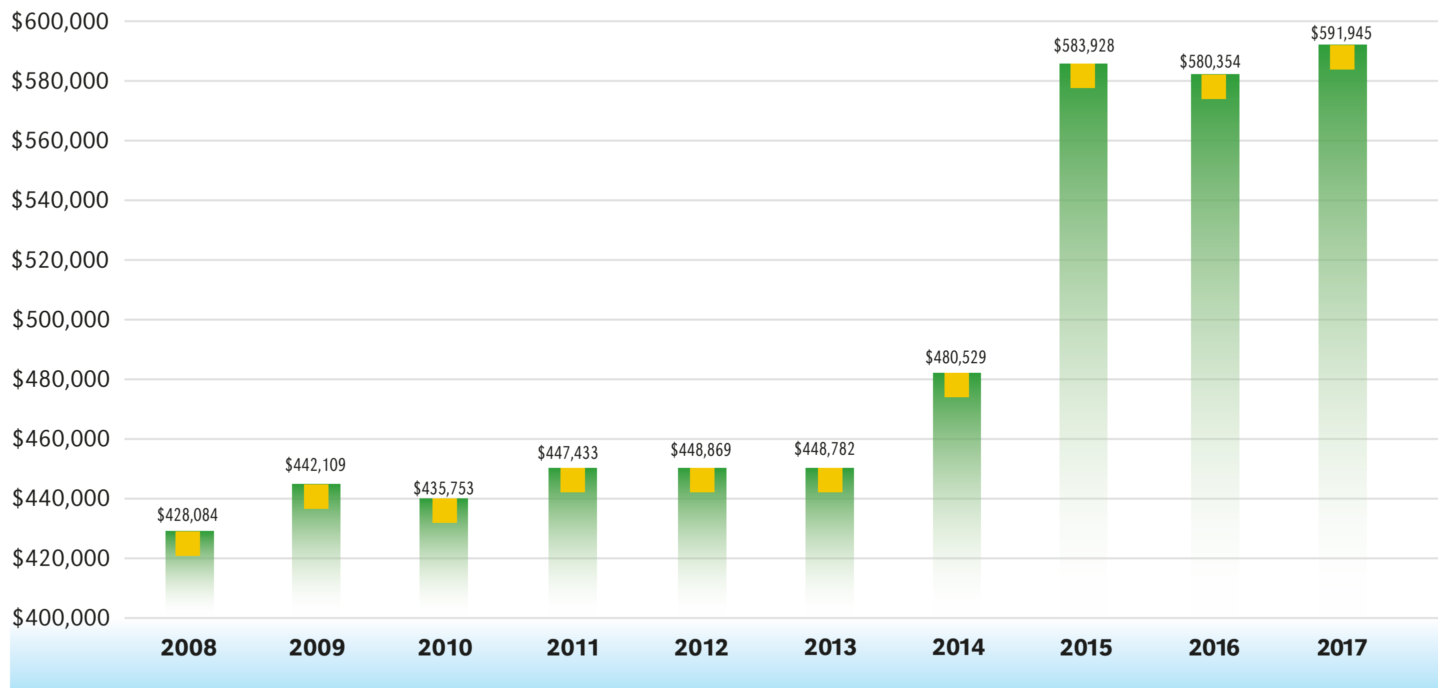
We eagerly look forward to the challenges ahead, believing that the foundation we are building today will surpass the expectations of our customers, our associates and our shareholders for many years into the future.



Marcie A. Barber | President and CEO

TOTAL ASSETS AT YEAR END

(In Thousands)



Juniata Valley Financial Corp.

2017 ANNUAL REPORT

TABLE OF CONTENTS

Message from the President ---------- Inside Front Cover

Five-Year Financial Summary - Selected Financial Data ---------- 2

Management's Discussion and Analysis of Financial Condition and Results of Operations ---------- 3

Report on Management's Assessment of Internal Control over Financial Reporting ---------- 47

Report of Independent Registered Public Accounting Firm on Effectiveness
of Internal Control over Financial Reporting ---------- 48

Report of Independent Registered Public Accounting Firm on Consolidated Financial Statements ---------- 49

Financial Statements

Consolidated Statements of Financial Condition ---------- 50

Consolidated Statements of Income ---------- 51

Consolidated Statements of Comprehensive Income ---------- 52

Consolidated Statements of Stockholders' Equity ---------- 53

Consolidated Statements of Cash Flows ---------- 54

Notes to Consolidated Financial Statements ---------- 56

Common Stock Market Prices and Dividends ---------- 112

Corporate Information ---------- 112

Corporate Officers, Directors and Business Development Boards ---------- 114

Officers of The Juniata Valley Bank ---------- Inside Back Cover

The Juniata Valley Bank, as an independent community bank, will endeavor to identify customers' financial needs and exceed their expectations in delivering quality products and services at a fair price to assure shareholders an above average return and employees competitive salaries and benefits. The business of the bank will be conducted with integrity and responsiveness to the communities served.

FIVE-YEAR FINANCIAL SUMMARY - SELECTED FINANCIAL DATA

(Dollars in thousands, except share and per share data)

BALANCE SHEET INFORMATION	2017	2016	2015	2014	2013
at December 31					
Assets	$ 591,945	$ 580,354	$ 583,928	$ 480,529	$ 448,782
Deposits	477,668	455,822	457,126	380,884	379,645
Loans, net of allowance for loan losses	380,965	375,574	374,565	292,521	275,511
Investments	157,278	154,448	156,186	145,629	128,262
Goodwill	5,448	5,448	5,381	2,046	2,046
Short-term borrowings	12,000	32,196	35,057	20,544	13,797
Long-term debt	25,000	25,000	22,500	22,500	-
Stockholders' equity	59,387	59,090	59,962	49,856	49,984
Number of shares outstanding	4,767,656	4,755,630	4,798,086	4,187,441	4,196,266
Average for the year					
Assets	593,923	577,341	489,323	470,660	450,031
Stockholders' equity	59,938	61,209	51,131	50,704	49,571
Weighted average shares outstanding	4,765,165	4,801,245	4,240,319	4,192,761	4,210,336
INCOME STATEMENT INFORMATION					
Years Ended December 31					
Total interest income	$ 21,374	$ 20,469	$ 17,379	$ 16,932	$ 16,734
Total interest expense	2,855	2,268	2,042	2,598	2,900
Net interest income	18,519	18,201	15,337	14,334	13,834
Provision for loan losses	439	466	502	357	415
Other income	5,292	5,418	4,505	4,334	4,233
Other expenses	17,775	17,178	16,199	13,570	13,146
Income before income taxes	5,597	5,975	3,141	4,741	4,506
Federal income tax expense	1,060	819	83	525	505
Net income	$ 4,537	$ 5,156	$ 3,058	$ 4,216	$ 4,001
PER SHARE DATA					
Earnings per share - basic	$ 0.95	$ 1.07	$ 0.72	$ 1.01	$ 0.95
Earnings per share - diluted	0.95	1.07	0.72	1.01	0.95
Cash dividends	0.88	0.88	0.88	0.88	0.88
Book value	12.46	12.43	12.50	11.91	11.91
FINANCIAL RATIOS					
Return on average assets	0.76%	0.89%	0.62%	0.90%	0.89%
Return on average equity	7.57	8.42	5.98	8.31	8.07
Dividend payout	92.44	81.96	120.57	87.52	92.65
Average equity to average assets	10.09	10.60	10.45	10.77	11.02
Loans to deposits (year-end)	79.76	82.39	81.94	76.80	72.57

MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

FORWARD LOOKING STATEMENTS

The information contained in this Annual Report contains forward-looking statements (as such term is defined in the Securities Exchange Act of 1934 and the regulations thereunder) including statements which are not historical facts or that reflect trends or management's intentions, plans, beliefs, expectations or opinions. Such forward-looking statements are subject to risks and uncertainties and may be affected by various factors which may cause actual results to differ materially from those in the forward-looking statements including, without limitation:

- the impact of adverse changes in the economy and real estate markets, including protracted periods of low-growth and sluggish loan demand;
- the effect of market interest rates, particularly following a period of low market interest rates and current market uncertainties, and relative balances of rate-sensitive assets to rate-sensitive liabilities, on net interest margin and net interest income;
- the effect of competition on rates of deposit and loan growth and net interest margin;
- increases in non-performing assets, which may result in increases in the allowance for credit losses, loan charge-offs and elevated collection and carrying costs related to such non-performing assets;
- other income growth, including the impact of regulatory changes which have reduced debit card interchange revenue;
- investment securities gains and losses, including other than temporary declines in the value of securities which may result in charges to earnings;
- the effects of changes in the applicable federal income tax rate;
- the level of other expenses, including salaries and employee benefit expenses;
- the impact of increased regulatory scrutiny of the banking industry;
- the increasing time and expense associated with regulatory compliance and risk management;
- capital and liquidity strategies, including the impact of the capital and liquidity requirements modified by the Basel III standards;
- the effects of changes in accounting policies, standards, and interpretations of the Company's consolidated balance sheets and consolidated statements of income;
- the Company's failure to identify and to address cyber-security risks;
- the Company's ability to keep pace with technological changes;
- the Company's ability to attract and retain talented personnel;
- the Company's reliance on its subsidiary for substantially all of its revenues and its ability to pay dividends;
- the effects of changes in relevant accounting principles and guidelines on the Company's financial condition; and
- failure of third party service providers to perform their contractual obligations.

Certain of these risks, uncertainties and other factors are discussed in this Annual Report or in the Company's Annual Report on Form 10-K for the year ended December 31, 2017, a copy of which may be obtained from the Company upon request and without charge (except for the exhibits thereto).

OVERVIEW

This discussion concerns Juniata Valley Financial Corp. ("Company" or "Juniata") and its wholly owned subsidiary, The Juniata Valley Bank ("Bank"). The overview is intended to provide a context for the following Management's Discussion and Analysis of Financial Condition and Results of Operations. Management's Discussion and Analysis of Financial Condition and Results of Operations should be read in conjunction with our consolidated financial statements, including the notes thereto, included in this annual report. We have attempted to identify the most important matters on which our management focuses in evaluating our financial condition and operating performance and the short-term and long-term opportunities, challenges and risks (including material trends and uncertainties) which we face. We also discuss the actions we are taking to address these opportunities, challenges and risks. The Overview is not intended as a summary of, or a substitute for review of, Management's Discussion and Analysis of Financial Condition and Results of Operations.

NATURE OF OPERATIONS

Juniata is a bank holding company that delivers financial services within its market, primarily central Pennsylvania. The Company owns one bank, the Bank, which provides retail and commercial banking services through 15 offices in Juniata, Mifflin, Perry, Huntingdon, McKean, Potter and Centre counties. On November 30, 2015, Juniata acquired FNBPA Bancorp, Inc. ("FNBPA"), a Pennsylvania corporation. Under the terms of a merger agreement between the parties, FNBPA merged with and into Juniata, with Juniata continuing as the surviving entity. Simultaneously with the consummation of the foregoing merger, First National Bank of Port Allegany ("FNB"), a nationally chartered bank and wholly-owned subsidiary of FNBPA, merged with and into The Bank. The trade name "JVB Northern Tier" is used to reference the former offices and service area of FNB. Additionally, Juniata owns 39.16% of Liverpool Community Bank ("LCB"), carried as an unconsolidated subsidiary and accounted for under the equity method of accounting.

The Bank provides a full range of consumer and commercial services. Consumer services include Internet, mobile and telephone banking, an automated teller machine ("ATM") network, personal checking accounts, interest checking accounts, savings accounts, insured money market accounts, debit cards, certificates of deposit, club accounts, secured and unsecured installment loans, construction and mortgage loans, safe deposit facilities, credit lines with overdraft checking protection, individual retirement accounts, health savings accounts, online bill payment and other online and mobile services. Commercial banking services include small and high-volume business checking accounts, online account management services, ACH origination, payroll direct deposit, commercial lines and letters of credit, commercial term and demand loans and repurchase agreements.

The Bank also provides a variety of trust, asset management and estate services. The Bank offers annuities, mutual funds, stock and bond brokerage services and long-term care insurance products through an arrangement with a broker-dealer and insurance brokers. Management believes the Company has a relatively stable deposit base with no major seasonal depositor or group of depositors. Most of the Company's commercial customers are small and mid-sized businesses in central Pennsylvania.

Agreement and Plan of Merger

On December 29, 2017, Juniata entered into an Agreement and Plan of Merger (the "Merger Agreement") with LCB. The Merger Agreement provides that, upon the terms, and subject to the conditions set forth therein, LCB will merge with, and into, the Bank, with the Bank continuing as the surviving entity (the "Merger").

Subject to the terms and conditions of the Merger Agreement, at the effective time of the Merger, each share of Liverpool's common stock issued and outstanding immediately prior to the effective time of the Merger (other than the LCB common stock currently owned by Juniata, which will be cancelled) will be converted into the right to receive, at the election of the holder, either: (i) 202.6286 shares of common stock of Juniata (the "Stock Consideration") or (ii) $4,050.00 (the "Cash Consideration"), subject to proration to maintain total Cash Consideration at a minimum of 15% and a maximum of 20% of the total merger consideration. Holders of Liverpool Common Stock prior to the consummation of the Merger will own a percentage of Juniata's common stock outstanding immediately following the consummation of the Merger that will range from 6.4% (if minimum Cash Consideration of 15% were paid) to 6.0% (if the maximum Cash Consideration of 20% were paid).

Consummation of the Merger is subject to customary closing conditions including, but not limited to, the absence of a material adverse change relating to Liverpool or Juniata, approval of the Merger by Liverpool's shareholders and receipt of all required regulatory approvals.

The parties anticipate the Merger will close in the first half of 2018.

ECONOMIC AND INDUSTRY-WIDE FACTORS RELEVANT TO JUNIATA

As a financial services organization, Juniata's core business is most influenced by the level of, and movement of, interest rates. Lending and investing is done daily, using funding from deposits and borrowings, resulting in net interest income, the most significant portion of operating results. Through the use of asset/liability management tools, the Company continually evaluates the effects that possible changes in interest rates could have on operating results and balance sheet growth. Using this information, along with analysis of competitive factors, management designs and prices its products and services.

General economic conditions are relevant to Juniata's business. In addition, economic factors impact customers' needs for financing, thus affecting loan growth. Additionally, changes in the economy can directly impact the credit strength of existing and potential borrowers.

FOCUS OF MANAGEMENT

The management of Juniata believes that it is important to know who and what we are in order to be successful. We must be aligned in our efforts to achieve goals. We've identified the four characteristics that define the Company and the personnel that support it. We are **Committed**, **Capable**, **Caring** and **Connected**. Management seeks to be the preeminent financial institution in its market area and measures its success by the five key elements described below.

Shareholder Satisfaction

Above all else, management is **committed** to maximizing the value of our shareholders' investment, through both stock value appreciation and dividend returns. Remaining **connected** to our communities will allow us to identify the financial needs of our market and to deliver those products and services **capably**. In doing so, we will seek to profitably grow the balance sheet and enhance earnings, while maintaining capital and liquidity levels well exceeding all regulatory guidelines.

Customer Relationships

We are **committed** to maximizing customer satisfaction. We are sensitive to the expanding array of financial services and financial service providers available to our customers, both locally and globally. We are **committed** to fostering a complete customer relationship by helping clients identify their current and future financial needs and offering practical and affordable solutions to both. As our customers' lifestyles change, the channels through which we deliver our services must change as well. One element of the Company's strategic plan is to provide

connection through every means available, wherever we are needed, whether through a stand-alone branch, in-store boutique, ATM or via online and mobile banking anywhere internet or cell phone signals can be received. In 2017, we continued to make advances in technological resources, placing data and information in the hands of our customers and employees, **committed** to optimizing the customer experience.

Balance Sheet Growth

We are **capable** of profitable balance sheet growth. Rapid growth should not be a substitute for careful fiscal and strategic management. It is our goal to continue quality growth despite intense competition by paying **careful** attention to the needs of our customers. We will continue to maintain high credit standards, knowing that lending under the right circumstances is the proper way to maintain soundness and profitability. We believe we consistently pay fair market rates on all deposits, and have invested wisely and conservatively in compliance with self-imposed standards, minimizing risk of asset impairment. We aspire to increase our market share within the current communities that we serve, and to expand in contiguous areas through acquisition and investment. As part of our strategic plan for growth, we continue to actively seek opportunities for acquisitions of branches or stakes in other financial institutions, similar to those that have occurred in prior years. Late in 2015, we consummated one such acquisition with FNBPA and look forward to completing the Merger with LCB in 2018.

Operating Results

We are **capable** of producing profitability ratios that exceed those of many of our peers. Recognizing that net interest margins have narrowed for banks in general and that they may not return to the ranges experienced in the past, we also focus on the importance of providing fee-generating services in which customers find value. Offering a broad array of services prevents us from becoming too reliant on one form of revenue. It has also been our philosophy to spend conservatively and to implement operating efficiencies where possible to keep non-interest expense from escalating in areas that can be controlled.

Connection to the Community

We are active corporate citizens of the communities we serve. Although the world of banking has transitioned to global availability through electronics, we believe that our community banking philosophy is not only still valid, but essential. Despite technological advances, banking is still a personal business, particularly in the rural areas we serve. We believe that our customers shop for services and value a relationship with an institution involved in the same community, with the same interests in its prosperity. We have a foundation and a history in each of the communities we serve. Management takes an active role in local business and industry development organizations to help attract and retain commerce in our market area. We provide businesses, large and small, with financial tools and financing needed to grow and prosper. We have always been **committed** to responsible lending practices. We invest locally by including local municipal bonds in our investment portfolio and participating in funding for such projects as low income and elderly housing. We support charitable programs that benefit the local communities, not only with monetary contributions, but also through the personal involvement of our **caring** employees.

JUNIATA'S OPPORTUNITIES

SOUNDNESS AND STABILITY

Our financial condition is strong. We enjoy strong capital and liquidity ratios that significantly exceed regulatory guidelines. Our business model includes a plan for growth without sacrificing profitability or integrity. We believe an opportunity exists for banks such as ours to offer the trusted, personal service of a locally managed institution that has roots in the community reaching back 150 years.

EXPANSION OF CUSTOMER BASE

Our strategic focus is based on leveraging our collective knowledge of the Company's primary and contiguous markets to identify lending or fee-based opportunities consistent with our risk parameters and profitability targets. We continue to develop our sales team through mentoring and by making employee education paramount. We continually seek and implement back-room efficiencies. We recognize change is taking place in a world where convenience and mobility are priorities for consumers and businesses when choosing a financial institution with whom to do business. We offer full-featured secure mobile banking that includes remote check deposit for use on home computers and all mobile devices for consumers. For businesses, we provide options for cash management and remote deposit. We offer identity protection to the families of our customers, which we believe to be a true value-added service, with features that go far beyond traditional banking services, and sets us apart from other financial institutions in our market area. On November 30, 2015, with the acquisition of FNBPA, we expanded our market into the northern tier region of Pennsylvania and have integrated the JVB brand there. We look forward to expanding our footprint in Perry County, Pennsylvania, upon the consummation of the Merger with LCB in 2018.

DELIVERY SYSTEM ENHANCEMENTS

We seek to continually enhance our customer delivery system, both through technology and physical facilities. We actively seek opportunities to expand our branch network through acquisitions. We believe that it is imperative that our customers have convenient and easy access to personal financial services that complement their particular lifestyle, whether it is through electronic or personal delivery. We achieved an early entry into the mobile banking arena in 2011 and have since expanded online delivery each year following, including consumer remote deposit and Touch ID. Our suite of online services includes the convenience of online loan applications for residential mortgages, home equity, vehicle and other personal loans. Online and mobile banking features include full bill-pay and monetary transfers between internal and external accounts. Our ATM network is equipped with all highly functional state-of-the art machines. Our Customer Care Center became operational in 2016, providing dedicated service to address all customer inquiries and provide outreach through our new social media sites. The rollout of a fully redesigned JVBonline.com website was completed in 2016 as well. In 2017, the construction was completed on a new branch facility featuring a highly interactive and complete customer experience. In 2018, Juniata plans to offer online deposit account opening capability.

JUNIATA'S CHALLENGES

NET INTEREST MARGIN COMPRESSION

While market interest rates are slowly rising, the low interest rate environment that has persisted in recent years has pressured the net interest margin for most banks, including Juniata. Loans have been originated, acquired or repriced at lower rates, reducing the average rate earned on those assets. While the average rate paid on interest-bearing liabilities, such as deposits and borrowings, has also declined, the decline has not always occurred at the same pace as the decline in the average rate earned on interest-earning assets, which can result in a narrowing of the net interest margin. We believe that increasing the net interest margin will continue to be a challenge until general market rates rise more significantly.

COMPETITION

Each year, competition becomes more intense and global in nature. To meet this challenge, we attempt to stay in close contact with our customers, monitoring their satisfaction with our services through surveys, personal visits and networking in the communities we serve. We strive to meet or exceed our customers' expectations and deliver consistent high-quality service. We believe that our customers have become acutely aware of the value of local service, and we strive to maintain their confidence.

RATE ENVIRONMENT

We intend to continue making what we believe to be rational pricing decisions for loans, deposits and non-deposit products. This strategy can be difficult to maintain, as many of our peers appear to continue pricing for growth, rather than long-term profitability and stability. We believe that a strategy of "growth for the sake of growth" results in lower profitability, and such actions by large groups of banks have had an adverse impact on the entire financial services industry. We intend to maintain our core pricing principles, which we believe protect and preserve our future as a sound community financial services provider, proven by results.

REGULATIONS

The Company is subject to banking regulation, as well as regulation by the Securities and Exchange Commission ("SEC") and, as such, must comply with many laws, including the USA Patriot Act, the Sarbanes-Oxley Act of 2002 ("Sarbanes-Oxley") and the Dodd-Frank Wall Street Reform and Consumer Protection Act. Management has established a Disclosure Committee for Financial Reporting, an internal group at Juniata that seeks to ensure that current and potential investors in the Company receive full and complete information concerning our financial condition. Juniata has incurred direct and indirect costs associated with compliance with the SEC's filing and reporting requirements imposed on public companies by the Sarbanes-Oxley Act, as well as adherence to new and existing banking regulations and stronger corporate governance requirements. Regulatory burdens continue to increase as evidenced by the provisions in the Dodd-Frank Act that impact the Company in the areas of corporate governance, capital requirements and restrictions on fees that may be charged to consumers.

APPLICATION OF CRITICAL ACCOUNTING POLICIES

The Company's consolidated financial statements are prepared based upon the application of accounting principles generally accepted in the United States of America ("GAAP"), the most significant of which are described in Note 2 to our consolidated financial statements – Summary of Significant Accounting Policies. Certain of these policies, particularly with respect to allowance for loan losses and the investment portfolio, require numerous estimates and economic assumptions, based upon information available as of the date of the consolidated financial statements. As such, over time, they may prove inaccurate or vary and may significantly affect the Company's reported results and financial position in future periods.

The accounting policy for establishing the allowance for loan losses relies to a greater extent on the use of estimates than other areas and, as such, has a greater possibility of producing results that could be different from those currently reported. Changes in underlying factors, assumptions or estimates in the allowance for loan losses could have a material impact on the Company's future financial condition and results of operations. The section of this Annual Report to Shareholders entitled "Allowance for Loan Losses" provides management's analysis of the Company's allowance for loan losses and related provision expense. The allowance for loan losses is maintained at a level believed adequate by management to absorb probable losses in the loan portfolio. Management's determination of the adequacy of the allowance for loan losses is based upon an evaluation of individual credits in the loan portfolio, historical loan loss experience, current economic conditions and other relevant factors. This determination is inherently subjective, as it requires material estimates, including the amounts and timing of future cash flows expected to be received on impaired loans that may be susceptible to significant change.

In addition, regulatory agencies, as an integral part of their examination process, periodically review the Company's allowance for loan losses and may require the Company to recognize additions to the allowance for loan losses based on their judgments about information available to them at the time of their examination, which may not be currently available to management.

Considerations used by management to determine other-than-temporary impairment status of individual holdings within the investment securities portfolio are based partially upon estimations of fair value and potential for recovery. As market conditions and perception can unpredictably affect the value of individual investments in the future, these determinations could have a material impact on the Company's future financial condition and results of operations.

Goodwill recorded in connection with acquisitions is tested annually for impairment. If certain events occur which indicate goodwill might be impaired between annual tests, goodwill must be tested when such events occur. In making this assessment, Juniata considers a number of factors including operation results, business plans, economic projections, anticipated future cash flows, current market data, stock price, etc. There are inherent uncertainties related to these factors and Juniata's judgement in applying them to the analysis of goodwill impairment. Changes in economic and operating conditions could result in goodwill impairment in future periods.

Valuations of assets acquired and liabilities assumed in business combinations are measured at fair value as of the acquisition date. In many case, determining the fair value of the assets acquired and liabilities assumed requires Juniata to estimate the timing and amount of cash flows expected to result from these assets and liabilities and to discount these cash flows at appropriate rates of interest, which require the utilization of significant estimates and judgment in accounting for the acquisition.

RESULTS OF OPERATIONS

2017 FINANCIAL PERFORMANCE OVERVIEW

The comparability of the results of operations for the years ended December 31, 2017 and December 31, 2016 was impacted by the following events discussed in more detail below: (i) the de-risking of a portion of the Company's defined benefit plan in 2017, (ii) the pending merger between the Bank, and Juniata's unconsolidated subsidiary, LCB, (iii) the reduction in the corporate tax rate due to the enactment of the Tax Cuts and Jobs Act ("TCJA") on December 22, 2017, and (iv) the gains from life insurance proceeds recorded in 2016, while there were none in 2017. Juniata's management believes it to be meaningful to present a performance comparison that segregates the financial impact of the afore-mentioned items, to allow a view of comparative results to 2016. The following discussion includes both GAAP, as well as non-GAAP financial measures that are reconciled to GAAP financial measures in the supplemental tables presented below. The non-GAAP measures will be referred to as "adjusted" results.

As noted above, Juniata initiated a strategy to reduce the liability associated with its defined benefit pension plan in the fourth quarter of 2017. The first step of the initiative consisted of the purchase of a single premium group annuity for a group of Juniata's retirees, transferring the associated pension liability to the issuer of the annuity. This step reduced Juniata's overall pension liability by approximately 12%, which resulted in a pre-tax charge to earnings of $377,000. This pre-tax charge represents an acceleration of pension expenses that would otherwise have impacted Juniata's earnings in the future. During 2018, Management will continue to implement its strategy to further reduce the pension liability.

Also occurring in the fourth quarter of 2017 was the execution of a definitive merger agreement between Juniata and LCB. Merger-related expenses were incurred at both institutions in 2017. Since Juniata accounts for its investment in Liverpool using the equity method, 39.16% of LCB's merger-related expenses reduced Juniata's non-interest income by $33,000. Juniata's own merger-related expenses increased non-interest expense by $13,000.

On December 22, 2017, the TCJA was enacted, lowering Juniata's and LCB's future maximum corporate tax rate from 34% to 21%. The effects of tax law and rate changes must be reflected as a component of tax expense from continuing operations. Though the reduced rate will provide tax savings to Juniata and LCB in future periods, the reduction resulted in write-downs of Juniata's and LCB's net deferred tax assets, which were previously valued based upon the projection of a 34% future tax rate. As a result, a non-cash charge of $416,000 was included in the 2017 income taxes expense. A similar non-cash charge at LCB, resulted in a $32,000 decline in Juniata's non-interest income in the fourth quarter of 2017.

Net income for Juniata in 2017 was $4,537,000, representing a 12.0% decrease as compared to net income for 2016. Earnings per share on a fully diluted basis decreased from $1.07 in 2016 to $0.95 in 2017. When adjusted for the impact of the tax-effected events mentioned above, adjusted net income was $5,253,000 for the year ended December 31, 2017, an increase of 6.2% over adjusted net income for the year ended December 31, 2016. Adjusted earnings per share increased by 6.8% from $1.02 in 2016 to $1.10 in 2017. For 2017, return on average assets ("ROA") and return on average equity ("ROE") were 0.76% and 7.57%, respectively. On an adjusted basis, return on average assets was 0.88% in 2017 as compared to 0.85% in 2016, and return on average equity was 8.76% and 8.08% in 2017 and 2016, respectively.

The net interest margin, on a fully tax-equivalent basis, decreased from 3.57% in 2016 to 3.52% in 2017. While the yield on earning assets increased five basis points to 3.92%, the cost of funds increased 25 basis points, to 0.68%, as rate-sensitive short-term borrowings increased in 2017 compared to 2016.

Five-year historical ratios are presented below.

(Dollars in thousands)

	2017	2016	2015	2014	2013
Return on average assets	0.76%	0.89%	0.62%	0.90%	0.89%
Return on average equity	7.57	8.42	5.98	8.31	8.07
Yield on earning assets	3.92	3.87	3.88	3.94	4.09
Cost to fund earning assets	0.68	0.43	0.59	0.60	0.71
Non-interest income (excluding gains on sales or calls of securities and securities impairment charges) to average assets	0.89	0.90	0.92	0.92	0.94
Non-interest expense to average assets	2.99	2.98	3.31	2.88	2.92
Net non-interest expense to average assets	2.10	2.08	2.39	1.96	1.98

Below, and on the following page, are the comparative disclosures illustrating the reconciliation of the non-GAAP financial measures discussed on the previous page to GAAP financial measures for the most recent three years.

(Dollars in thousands)

Non-GAAP presentation of comparative net income	2017	2016	2015
Net Income	$ 4,537	$ 5,156	$ 3,058
Adjustments to reported net income to reconcile to non-GAAP measure			
Defined benefit plan settlement cost included in employee benefits	377	-	-
Tax benefit of defined benefit plan settlement cost	(128)	-	-
Merger-related expense for JUVF	13	347	1,806
Merger-related expense included in income from unconsolidated subsidiary	33	-	-
Tax benefit of all merger-related expense	(16)	(118)	(495)
Merger-related gains on sale of loans	-	(113)	-
Tax expense of merger-related gains on sale of loans	-	38	-
Gains from life insurance proceeds	-	(364)	-
Tax expense of gains from life insurance proceeds (N/A)	-	-	-
Reduction in valuation of deferred tax assets included in income from unconsolidated subsidiary	32	-	-
Tax benefit for reduction in valuation of deferred tax assets included in income from unconsolidated subsidiary	(11)	-	-
Reduction in valuation of deferred tax assets for JUVF	416	-	-
(1) Total adjustments to reported net income to reconcile to non-GAAP measure	716	(210)	1,311
(2) Adjusted net income (non-GAAP)	$ 5,253	$ 4,946	$ 4,369

(Dollars in thousands, except share and per share data)

Non-GAAP presentation of performance ratios

	2017	2016	2015
Adjusted Earnings Per Share (Diluted)			
Earnings per share (diluted)	$ 0.95	$ 1.07	$ 0.72
Adjustments to reported diluted earnings per share to reconcile to non-GAAP measure (tax effected)			
Defined benefit settlement cost (tax effected)	0.05	-	-
Merger-related expenses (tax effected)	0.01	0.05	0.31
Merger-related gains (tax effected)	-	(0.02)	-
Gains from life insurance proceeds	-	(0.08)	-
Reduction in valuation of deferred tax assets	0.09	-	-
Total adjustments to reported diluted earnings per share to reconcile to non-GAAP measure	0.15	(0.05)	0.31
Adjusted earnings per share (diluted) (non-GAAP)	$ 1.10	$ 1.02	$ 1.03
Net Income	$ 4,537	$ 5,156	$ 3,058
Average Assets	593,923	577,341	489,323
Average Equity	59,938	61,209	51,131
Weighted average diluted shares outstanding	4,775,505	4,802,175	4,241,265
Adjusted Return on Average Assets			
Return on average assets	0.76%	0.89%	0.62%
Total adjustments to reported net income to reconcile to non-GAAP measure (1)	0.12	(0.04)	0.27
Adjusted return on average assets	0.88%	0.86%	0.89%
Adjusted Return on Average Equity			
Return on average equity	7.57%	8.42%	5.98%
Total adjustments to reported net income to reconcile to non-GAAP measure (1)	1.20	(0.34)	2.56
Adjusted return on average equity	8.77%	8.08%	8.54%

Juniata strives to attain consistently satisfactory earnings levels each year by protecting the core (repeatable) earnings base through conservative growth strategies that minimize stockholder and balance-sheet risk, while serving its rural Pennsylvania customer base. This approach has helped achieve solid performances year after year. The Company considers the return on assets ratio to be a key indicator of its success and constantly scrutinizes the broad categories of the income statement that impact this profitability indicator. Summarized below are the components of net income and the contribution of each to ROA for 2017 and 2016.

	2017		2016	
	Net Income Components	% of Average Assets	Net Income Components	% of Average Assets
Net interest income	$ 18,519	3.12%	$ 18,201	3.15%
Provision for loan losses	(439)	(0.07)	(466)	(0.08)
Customer service fees	1,747	0.29	1,736	0.30
Debit card fee income	1,120	0.19	1,044	0.18
BOLI	352	0.06	371	0.06
Trust fees	446	0.08	454	0.08
Commissions from sales of non-deposit products	173	0.03	223	0.04
Income from unconsolidated subsidiary	167	0.03	222	0.04
Insurance-related gains	-	0.00	364	0.06
Security gains	512	0.09	218	0.04
Mortgage banking income	214	0.04	158	0.03
Other noninterest income	561	0.09	628	0.11
Total noninterest income	5,292	0.89	5,418	0.94
Employee expense	(9,996)	(1.68)	(9,184)	(1.59)
Occupancy and equipment	(1,884)	(0.32)	(1,798)	(0.31)
Data processing expense	(1,751)	(0.29)	(1,807)	(0.31)
Director compensation	(241)	(0.04)	(238)	(0.04)
Professional fees	(571)	(0.10)	(539)	(0.09)
Taxes, other than income	(463)	(0.08)	(437)	(0.08)
FDIC insurance premiums	(334)	(0.06)	(375)	(0.06)
Gain (loss) on sales of other real estate owned	8	0.00	(150)	(0.03)
Intangible amortization	(67)	(0.01)	(105)	(0.02)
Amortization of investment in partnership	(612)	(0.10)	(479)	(0.08)
Merger and acquisition expense	(13)	(0.00)	(347)	(0.06)
Other noninterest expense	(1,851)	(0.31)	(1,719)	(0.30)
Total noninterest expense	(17,775)	(2.99)	(17,178)	(2.98)
Income tax expense	(1,060)	(0.18)	(819)	(0.14)
Net income	$ 4,537	0.76%	$ 5,156	0.89%
Average assets	$ 593,923		$ 577,341	

NET INTEREST INCOME

Net interest income is the amount by which interest income on earning assets exceeds interest expense on interest bearing liabilities. Net interest income is the most significant component of revenue, comprising approximately 79% of total revenues (the total of net interest income and non-interest income, exclusive of security gains) for 2017. Interest spread measures the absolute difference between average rates earned and average rates paid. Because some interest earning assets are tax-exempt, an adjustment is made for analytical purposes to present all assets on a fully tax-equivalent basis. Net interest margin is the percentage of net return on average earning assets on a fully tax-equivalent basis and provides a measure of comparability of a financial institution's performance.

Both net interest income and net interest margin are impacted by interest rate changes, changes in the relationships between various rates and changes in the composition of the average balance sheet. Additionally, product pricing, product mix and customer preferences dictate the composition of the balance sheet and the resulting net interest income. Table 1 shows average asset and liability balances, average interest rates and interest income and expense for the years 2017, 2016 and 2015. Table 2 further shows changes attributable to the volume and rate components of net interest income.

TABLE 1
AVERAGE BALANCE SHEETS AND NET INTEREST INCOME ANALYSIS

(Dollars in thousands)	Years Ended December 31								
	2017			2016			2015		
	Average Balance(1)	Interest	Yield/ Rate	Average Balance(1)	Interest	Yield/ Rate	Average Balance(1)	Interest	Yield/ Rate
ASSETS									
Interest earning assets:									
Loans:									
Taxable (5)	$ 355,033	$ 17,090	4.81%	$ 348,914	$ 16,653	4.77%	$ 280,920	$ 13,894	4.95%
Tax-exempt	30,378	915	3.01	30,263	906	2.99	25,208	751	2.98
Total loans (8)	385,411	18,005	4.67	379,177	17,559	4.63	306,128	14,645	4.78
Investment securities:									
Taxable	134,607	2,888	2.15	124,611	2,475	1.99	112,459	2,267	2.02
Tax-exempt	24,797	451	1.82	23,807	418	1.76	28,687	465	1.62
Total investment securities	159,404	3,339	2.09	148,418	2,893	1.95	141,146	2,732	1.94
Interest bearing deposits	580	30	5.17	770	13	1.69	597	2	0.34
Federal funds sold	-	-	NA	675	4	0.52	32	-	0.25
Total interest earning assets	545,395	21,374	3.92	529,040	20,469	3.87	447,903	17,379	3.88
Non-interest earning assets:									
Cash and due from banks	10,513			9,553			7,417		
Allowance for loan losses	(2,809)			(2,572)			(2,349)		
Premises and equipment	6,823			7,017			6,506		
Other assets (7)	34,001			34,303			29,846		
Total assets	$ 593,923			$ 577,341			$ 489,323		
LIABILITIES AND STOCKHOLDERS' EQUITY									
Interest bearing liabilities:									
Demand deposits (2)	$ 123,520	404	0.33	$ 121,479	253	0.21	$ 98,618	161	0.16
Savings deposits	99,385	99	0.10	96,869	102	0.11	74,268	76	0.10
Time deposits	139,652	1,626	1.16	139,387	1,456	1.04	130,843	1,440	1.10
Other, including short and long-term borrowings, and other interest bearing liabilities	56,846	726	1.28	46,310	457	0.99	44,941	365	0.81
Total interest bearing liabilities	419,403	2,855	0.68	404,045	2,268	0.56	348,670	2,042	0.59
Non-interest bearing liabilities:									
Demand deposits	108,141			105,536			84,295		
Other	6,441			6,551			5,227		
Stockholders' equity	59,938			61,209			51,131		
Total liabilities and stockholders' equity	$ 593,923			$ 577,341			$ 489,323		
Net interest income		$ 18,519			$ 18,201			$ 15,337	
Net margin on interest earning assets (3)			3.40%			3.44%			3.42%
Net interest income and margin - Tax equivalent basis (4)		$ 19,223	3.52%		$ 18,883	3.57%		$ 15,964	3.56%

Notes:

(1) Average balances were calculated using a daily average.

(2) Includes interest-bearing demand and money market accounts.

(3) Net margin on interest earning assets is net interest income divided by average interest earning assets.

(4) Interest on obligations of states and municipalities is not subject to federal income tax. In order to make the net yield comparable on a fully taxable basis, a tax equivalent adjustment is applied against the tax-exempt income utilizing a federal tax rate of 34%.

TABLE 2
RATE/VOLUME ANALYSIS OF NET INTEREST INCOME

(Dollars in thousands)	2017 compared to 2016 Increase (Decrease) Due To (6)			2016 compared to 2015 Increase (Decrease) Due To (6)		
	Volume	Rate	Total	Volume	Rate	Total
ASSETS						
Interest earning assets:						
Loans:						
Taxable (5)	$ 294	$ 143	$ 437	$ 3,260	$ (501)	$ 2,759
Tax-exempt	3	6	9	151	4	155
Total loans (8)	297	149	446	3,411	(497)	2,914
Investment securities:						
Taxable	207	206	413	242	(34)	208
Tax-exempt	18	15	33	(84)	37	(47)
Total investment securities	225	221	446	158	3	161
Interest bearing deposits	(4)	21	17	1	10	11
Federal funds sold	(4)	-	(4)	4	-	4
Total interest earning assets	514	391	905	3,574	(484)	3,090
LIABILITIES AND STOCKHOLDERS' EQUITY						
Interest bearing liabilities:						
Demand deposits (2)	$ 4	$ 147	$ 151	$ 42	$ 50	$ 92
Savings deposits	3	(6)	(3)	24	2	26
Time deposits	3	167	170	91	(75)	16
Other, including short and long-term borrowings, and other interest bearing liabilities	117	152	269	11	81	92
Total interest bearing liabilities	127	460	587	168	58	226
Net interest income	$ 387	$ (69)	$ 318	$ 3,406	$ (542)	$ 2,864

(5) Non-accruing loans are included in the above table until they are charged off.

(6) The change in interest due to rate and volume has been allocated to volume and rate changes in proportion to the relationship of the absolute dollar amounts of the change in each.

(7) Includes net unrealized gains (losses) on securities available for sale: $(1,065) in 2017, $(1,302) in 2016 and $897 in 2015.

(8) Interest income includes loan fees of $89, $78 and $93, in 2017, 2016 and 2015, respectively.

On average, total loans outstanding in 2017 increased from 2016 by 1.6%, to $385,411,000. Average yields on loans increased by 4 basis points in 2017 when compared to 2016. As shown in the preceding Rate – Volume Analysis of Net Interest Income Table 2, the increase in yield raised interest income on loans by approximately $149,000, while the increase in volume increased interest income by $297,000, resulting in an aggregate increase in interest recorded on loans of $446,000 in 2017 compared to 2016. The prime rate increased by 25 basis points in March 2017, June 2017, and mid-December 2017 to end the year at 4.50%. The increased yield on prime-related loans in 2017 assisted in the increase in the average yield on loans in 2017 compared to 2016.

During 2017, cash flows from maturities, sales and repayments of investment securities were primarily used to fund a portion of the loan growth and to reinvest in the investment portfolio. Additional funds from deposit growth were likewise invested in the securities portfolio. As a result, average balances of investment securities increased by $10,986,000, and this volume increase accounted for a $225,000 increase in interest income as compared to 2016. The improvement in the overall yield of the investment portfolio by 14 basis points between 2016 and 2017 further increased net interest income by $221,000, resulting in an aggregate increase in interest recorded on investment securities of $446,000 in 2017 compared to 2016.

In total, yield on earning assets in 2017 was 3.92% compared to 3.87% in 2016, an increase of 5 basis points. On a fully tax equivalent basis, the yield on earning assets also increased 5 basis points from 4.00% in 2016 to 4.05% in 2017.

Average interest bearing liabilities increased by $15,358,000 in 2017, compared to 2016. Within the categories of interest bearing liabilities, deposits increased on average by $4,822,000, and borrowings increased by $10,536,000 on average. The average increase in overnight borrowings of approximately $9,774,000 in 2017 compared to 2016 was the primary reason for the increase in average borrowings. Changes in the volume of total interest-bearing liabilities increased interest expense by $127,000 in 2017 as compared to 2016, while changes in interest rates further increased interest expense by $459,000. The percentage of interest earning assets funded by non-interest bearing liabilities was approximately 23.1% in 2017 versus 23.6% in 2016. The total cost to fund earning assets (computed by dividing the total interest expense by the total average earning assets) in 2017 was 0.52%, compared to 0.43% in 2016. This increase was predominantly caused by the 0.75% increase in the Prime rate during 2017, combined with the increased volume in overnight borrowings.

Net interest income was $18,519,000 for 2017, an increase of $318,000 when compared to 2016. Increases in volumes contributed $387,000 toward the improved net interest income, partially offset by a $69,000 reduction of net interest income due to rate changes.

PROVISION FOR LOAN LOSSES

Juniata's provision for loan losses is determined as a result of an analysis of the adequacy level of the allowance for loan losses. In order to closely reflect the potential losses within the current loan portfolio based upon current information known, the Company carries no unallocated allowance. Using the process of analysis described in "Application of Critical Accounting Policies" earlier in this discussion, the Company determined that a provision of $439,000 was appropriate for 2017, a decrease of $27,000 when compared to 2016 when the total loan loss provision was $466,000. The lower provision in 2017 primarily resulted from the relatively unchanged loan volumes and asset quality in 2017 versus 2016. The discussion included in the Loans and Allowance for Loan Losses in the section below titled "Financial Condition" explains the information and analysis used to arrive at the provision for 2017.

NON-INTEREST INCOME

The Company remains committed to providing comprehensive services and products to meet the current and future financial needs of our customers. We believe that our responsiveness to customers' needs surpasses that of our competitors, and we measure our success by the customer acceptance of fee-based services. We continually explore avenues to enhance product offerings in areas beneficial to customers. We offer a variety of options for financing to home-buyers that includes a secondary market lending program, providing significant fee income. We continue to add new features and services for our electronic banking clientele. We make fraud protection services available to all consumer depositors. We provide alternative investment opportunities through an arrangement with a broker dealer and integrate the delivery of non–traditional products with our Trust and Wealth Management Division. This arrangement enables us to meet the investment needs of a varied customer base and to better identify our clients' needs for traditional trust services.

Fee-generated non-interest revenues consist of customer service fees derived from deposit accounts, trust relationships and sales of non-deposit products. In 2017, revenues from these services totaled $2,366,000, representing a decline of $47,000, or 1.9%, from 2016 revenues, primarily due to a decrease in wealth management commissions. Total fees from customer deposits increased by $11,000, or 0.6%. Fees from estate settlements decreased by $39,000, or 34.2%, in 2017 as compared to 2016, while non-estate fees increased by $31,000, or 9.4%. Variance in fees from estate settlements occurs because estate settlements occur sporadically and are not necessarily consistent year to year. Non-estate fees are repeatable revenues that generally increase and decrease in relation to movements in interest rates as market values of trust assets under management increase or decrease and as new relationships are established. Commissions from sales of non-deposit products decreased in 2017, in comparison to 2016, by $50,000, or 22.4%, as sales declined.

Fees generated by debit card activity increased by $76,000, or 7.3%, in 2017 as compared to the prior year due to general increased debit card usage.

Fees and income derived from the origination, sale and servicing of residential mortgage loans (mortgage banking income) was $214,000 in 2017, an increase of $56,000, or 35.4%, compared to 2016, as activity increased. Other non-interest-related fees derived from loan activity increased by $35,000 when comparing 2017 to 2016, primarily due to revenues generated from title insurance fees and a loan referral program that commenced in the second half of 2017. Gains of $364,000 were recorded in 2016 as a result of life insurance claims, while no claims were recorded in 2017.

The Company owns 39.16% of the stock of LCB and accounts for its ownership through the equity method. As such, 39.16% of the income of LCB is recorded by Juniata as non-interest income. As a result of this investment, $167,000 was recorded as income in 2017, compared to $222,000 in 2016. The decline in income from LCB was the result of merger-related expenses and the write-down of its deferred tax asset due to the passing of the Tax Cuts and Jobs Act. Earnings on bank-owned life insurance and annuities decreased in 2017 by $19,000, or 5.1%, when compared to the previous year, because investment in BOLI was lower in 2017.

In 2016, student loans that were included in the FNBPA acquisition were sold, generating a gain of $113,000; no similar corresponding gain was recorded in the 2017 period. Gains realized from the sale and call of investment securities during 2017 were $512,000, compared to $218,000 during 2016.

As a percentage of average assets, non-interest income (excluding securities gains on sales or calls of securities) was 0.89% and 0.90% in 2017 and 2016, respectively.

NON-INTEREST EXPENSE

Management strives to control non-interest expense where possible in order to achieve maximum operating results.

In 2017, total non-interest expense increased by $597,000, or 3.5%, when compared to 2016. The $377,000 in settlement costs from the first step of the de-risking of the defined benefit plan contributed to the increase in employee benefits expense in 2017 of $536,000, or 23.3%, compared to 2016, as well as $238,000 in increased medical insurance claims. Compensation expense for 2017 increased by $276,000, or 4.0%, as compared to 2016 due to staffing enhancements and higher levels of accruals for the employee incentive bonus.

Also contributing to the year over year increase in non-interest expense was an increase of $133,000, or 27.8%, in the amortization of two tax credit investments in low-income housing partnerships due to the addition of the amortization for the phase II project, which began in the second half of 2017. Amortization expense associated with the Bank's investment in low-income housing partnerships, which first became applicable during the second quarter of 2013, was more than offset by the recording of the benefit of the tax credit from the partnerships in both 2017 and 2016. Amortization is scheduled to continue through 2023 for phase I and through 2027 for phase II.

Occupancy and equipment expense increased in the aggregate by $86,000, or 4.8%, due to the completion and occupation of a relocated banking office. Other noninterest expense increased $132,000, or 7.7%, in 2017 to the same period in 2016 due to higher electronic banking losses and the addition of consultant expenses associated with the de-risking of the defined benefit plan.

Offsetting the increase in total non-interest expense was a decline in data processing expense of $56,000, or 3.1%, in 2017 as compared to 2016. Merger and acquisition expense decreased $334,000, or 96.3%, for the year 2017 compared to the same period in 2016 as the remaining merger expenses for the FNBPA acquisition were recorded in 2016. Additionally, the valuation of properties held in other real estate owned resulted in net gains of $8,000 in 2017 compared to net losses of $150,000 in 2016, resulting in a net decline in expense of $158,000, or 105.3%, in 2017.

As a percentage of average assets, non-interest expense was 2.99% in 2017 as compared to 2.98% in 2016.

INCOME TAXES

Income tax expense for 2017 amounted to $1,060,000 versus $819,000 in 2016. The effect of the Tax Cuts and Jobs Act passed in 2017 required an immediate write-down of JVB's deferred tax assets as of December 31, 2017 resulting in an additional tax expense of $416,000. Both periods included the effect of a tax credit amounting to $722,000 in 2017 and $572,000 in 2016. The tax credit was available to the Company as a result of an equity investment in a low-income housing project. Juniata's effective tax rate in 2017 was 18.9% versus 13.7% in 2016. See Note 16 of Notes to Consolidated Financial Statements for further information on income taxes.

NET INCOME

For comparative purposes, the following table sets forth earnings and selected earnings ratios for the past three years.

(Dollars in thousands)

As reported	2017	2016	2015
Net Income	$ 4,537	$ 5,156	$ 3,058
Return on average assets	0.76%	0.89%	0.62%
Return on average equity	7.57%	8.42%	5.98%

OUTLOOK FOR 2018

For Juniata, 2017 was a year of great accomplishment in creating “Building Blocks of the Future”. We constructed a flagship branch with state-of-the-art service delivery, completely remodeled our Trust Division offices, developed a wider array of mortgage product offerings, and advanced and expanded our social media presence. We also reduced the volatility in a legacy defined benefit plan, completed the second phase of our commitment to invest in a low income elderly housing project within one of our local communities, and signed a definitive agreement to merge Liverpool Community Bank into JVB. We pursued each of these initiatives with an eye toward profitable expansion in the future, pursuant to our Strategic Plan.

After eight years of a historically low rate environment, national prime and federal funds rates increased from December 2016 to December 2017 by 100 basis points. We expect, and are prepared for, the interest rate environment to change even more in 2018. And, because rate movement can occur quickly and significantly, we are managing our interest sensitive assets and liabilities with an understanding of the rate risk involved with rapidly rising or declining rates. We enter 2018 with cautious optimism for economic growth which could spark lending opportunities, and the potential of de-regulation of community banking. Our focus will remain on identifying opportunities for fee services and delivering system service enhancements throughout our market area. We will maintain the conservative lending and investing philosophies and responsible deposit pricing that have resulted in our healthy net interest margin and solid balance sheet.

We anticipate receiving regulatory and LCB shareholder approval for the acquisition of LCB in order to consummate that merger by mid-second quarter 2018. We will devote considerable resources to assuring a successful integration of personnel and services and look forward to welcoming the Liverpool community fully into the JVB family. Excluding merger costs necessary to facilitate the transition, we expect the merger to be accretive to earnings in the first year.

In 2018, Juniata will continue to implement its strategy to further reduce the pension liability associated with its frozen legacy defined benefit plan.

Expanding our customer base and enhancing our engagement with our customers remain priorities. In 2017, we further enhanced our marketing efforts to reach a broader consumer base. We plan in 2018 to increase our presence and interaction in social media. Our business development plan focuses on horizontal integration, emphasizing teamwork, to fully meet the financial needs of our customers. We continue to recruit quality and experienced personnel for key positions, and anticipate further upgrades to our community offices, keeping pace with new and more efficient delivery methods.

We believe we are positioned to reward our stockholders with a good return on their investment in our Company while maintaining strong capital and liquidity levels. The confidence of our stockholders and the trust of our community are vital to our ongoing success.

2016 FINANCIAL PERFORMANCE OVERVIEW

Net income for Juniata in 2016 was $5,156,000, representing a 68.6% increase as compared to net income for 2015. The comparability of the results of operations for 2016 were significantly impacted by the acquisition of FNBPA on November 30, 2015, which increased loans and deposits by approximately $47 million and $78 million, respectively, on that date. During the integration of the new market area products were standardized, and customer fee structures were made uniform while efficiencies and economies of scale were identified and implemented throughout the year in 2016. Additionally, Juniata incurred non-interest expense in conjunction with the acquisition in both 2016 and 2015 of $347,000 and $1,806,000, respectively, as well as a gain on the sale of certain loans obtained in the acquisition. Exclusive of these expenses and gain and the corresponding tax impact, net income for the year ended December 31, 2016 was $5,310,000, an increase of $941,000, or 21.5%, over net income of $4,369,000 in 2015. Operating results included those of FNBPA beginning on December 1, 2015.

Earnings per share on a fully diluted basis increased from $0.72 in 2015 to $1.07 in 2016. When adjusted for the impact of the non-GAAP items in the comparative disclosure presented earlier in the 2017 Financial Performance Overview, adjusted earnings per share was $1.02 in 2016 as compared to $1.03 in 2015. The net interest margin, on a fully tax-equivalent basis, increased from 3.56% in 2015 to 3.57% in 2016. The ratio of non-interest income (excluding gains on sales of securities) to average assets declined slightly from 0.92% in 2015 to 0.90% in 2016, while the ratio of non-interest expense to average assets decreased by 33 basis points to 2.98%. Of the 33 basis point improvement in the non-interest expense ratio, 31 basis points was due to the reduction in merger-related expenses. Summarized below are the components of net income and the contribution of each to ROA for 2016 and 2015.

(Dollars in thousands)	2016		2015	
	Net Income Components	% of Average Assets	Net Income Components	% of Average Assets
Net interest income	$ 18,201	3.15%	$ 15,337	3.13%
Provision for loan losses	(466)	(0.08)	(502)	(0.10)
Customer service fees	1,736	0.30	1,563	0.32
Debit card fee income	1,044	0.18	866	0.18
BOLI	371	0.06	378	0.08
Trust fees	454	0.08	396	0.08
Commissions from sales of non-deposit products	223	0.04	347	0.07
Income from unconsolidated subsidiary	222	0.04	238	0.05
Insurance-related gains	364	0.06	98	0.02
Security gains	218	0.04	13	0.00
Mortgage banking income	158	0.03	190	0.04
Other noninterest income	628	0.11	416	0.09
Total noninterest income	5,418	0.94	4,505	0.92
Employee expense	(9,184)	(1.59)	(7,911)	(1.62)
Employee severance	-	0.00	-	0.00
Occupancy and equipment	(1,798)	(0.31)	(1,558)	(0.32)
Data processing expense	(1,807)	(0.31)	(1,589)	(0.32)
Director compensation	(238)	(0.04)	(192)	(0.04)
Professional fees	(539)	(0.09)	(430)	(0.09)
Taxes, other than income	(437)	(0.08)	(368)	(0.08)
FDIC insurance premiums	(375)	(0.06)	(318)	(0.06)
(Loss) gain on sales of other real estate owned	(150)	(0.03)	14	0.00
Intangible amortization	(105)	(0.02)	(51)	(0.01)
Merger and acquisition expense	(347)	(0.06)	(1,806)	(0.37)
Amortization of investment in partnership	(479)	(0.08)	(479)	(0.10)
Other noninterest expense	(1,719)	(0.30)	(1,511)	(0.31)
Total noninterest expense	(17,178)	(2.98)	(16,199)	(3.31)
Income tax expense	(819)	(0.14)	(83)	(0.02)
Net income	$ 5,156	0.89%	$ 3,058	0.01%
Average assets	$ 577,341		$ 489,323	

NET INTEREST INCOME

On average, total loans outstanding in 2016 increased from 2015 by 23.9%, to $379,177,000. Average yields on loans decreased by 15 basis points in 2016 when compared to 2015. As shown in the preceding Rate – Volume Analysis of Net Interest Income Table 2, the decrease in yield reduced interest income on loans by approximately $497,000, while the increase in volume increased interest income by $3,411,000, resulting in an aggregate increase in interest recorded on loans of $2,914,000. The increase in average loan volumes in 2016 was due to two factors, nearly equal in impact: the acquisition of FNBPA; and organic growth. The prime rate increased by 25 basis points in December 2015 after being unchanged for seven years. The prime rate remained at 3.50% throughout 2016 until mid-December when it increased by 25 basis points to 3.75%. Increased yield on prime-related loans in 2016 was offset by new loans originating at lower rates than maturing loans.

During 2016, cash flows from maturities, sales and repayments of investment securities were primarily used to fund a portion of the loan growth and to reinvest in the investment portfolio. Additional funds from deposit growth were likewise invested in the securities portfolio. As a result, average balances of investment securities increased by $7,272,000, and this volume increase accounted for a $158,000 increase in interest income as compared to 2015. The improvement in the overall yield of the investment portfolio between 2015 and 2016 further increased net interest income by $3,000.

In total, yield on earning assets in 2016 was 3.87% as compared to 3.88% in 2015, a decrease of 1 basis point. On a fully tax equivalent basis, the yield on earning assets decreased from 4.02% in 2015 to 4.00% in 2016.

Average interest bearing liabilities increased by $55,375,000 in 2016, as compared to 2015. Within the categories of interest bearing liabilities, deposits increased on average by $54,006,000, and borrowings increased by $1,369,000 on average. Deposits assumed in the merger with FNBPA were the primary reason for the increase in average deposits. In total, average interest bearing transaction accounts and savings accounts increased $45,462,000 while average time deposits increased $8,544,000. In 2016, time deposits accounted for 39.0% of total interest-bearing deposits. During 2015 and 2014, time deposits represented 43.1% and 47.5%, respectively, of all interest-bearing deposits. Changes in total interest-bearing liabilities increased interest expense by $168,000 in 2016 as compared to 2015, while changes in interest rates further increased interest expense by $58,000. Non-interest bearing liabilities used to fund earning assets included demand deposits, which increased $21,241,000 on average. The percentage of interest earning assets funded by non-interest bearing liabilities was approximately 23.6% in 2016 versus 22.2% in 2015. The total cost to fund earning assets (computed by dividing the total interest expense by the total average earning assets) in 2016 was 0.43%, as compared to 0.46% in 2015.

Net interest income was $18,201,000 for 2016, an increase of $2,864,000 when compared to 2015. Increases in volumes contributed $3,406,000 toward the improved net interest income, partially offset by a $542,000 reduction of net interest income due to rate changes.

PROVISION FOR LOAN LOSSES

Management performed an analysis following the process described in “Application of Critical Accounting Policies” earlier in this discussion, and determined that a provision for loan losses of $466,000 was appropriate for 2016, a decrease of $36,000 when compared to 2015 when the total loan loss provision was $502,000. The lower provision in 2016 primarily resulted from the relatively unchanged loan volumes in 2016 versus 2015; in 2016, the provision exceeded net charge-offs by $245,000. The discussion included under the headings “Loans” and “Allowance for Loan Losses” in the section below titled “Financial Condition” explains the information and analysis used to arrive at the provision for 2016.

NON-INTEREST INCOME

In 2016, revenues from fee-generated services (customer service fees derived from deposit accounts, trust relationships and sales of non-deposit products) totaled $2,413,000, representing an increase of $107,000, or 4.6%, from 2015 revenues, primarily due to increases in fees earned from customer deposit services. Total fees from customer deposits increased by $173,000, or 11.1%, due primarily to larger customer base resulting from the FNBPA acquisition that closed on November 30, 2015. Fees from estate settlements increased by $41,000, or 56.2%, in 2016 as compared to 2015, and non-estate fees increased by $17,000, or 5.3%. Variance in fees from estate settlements occurs because estate settlements occur sporadically and are not necessarily consistent year to year. Non-estate fees are repeatable revenues that generally increase and decrease in relation to movements in interest rates as market values of trust assets under management increase or decrease and as new relationships are established. Commissions from sales of non-deposit products decreased in 2016, in comparison to 2015, by $124,000, or 35.7%, as sales declined.

Fees generated by debit card activity increased by $178,000, or 20.6%, in 2016 as compared to the prior year. General increased usage of debit cards was augmented by the increased service area in the Company's Northern Tier market.

Fees and income derived from the origination, sale and servicing of residential mortgage loans (mortgage banking income) was $158,000 in 2016, a decrease of $32,000, or 16.8%, compared to 2015, as activity declined. Other non-interest-related fees derived from loan activity increased by $45,000 when comparing 2016 to 2015, primarily due to revenues generated from title insurance fees. Gains of $364,000 and $98,000 were recorded in 2016 and 2015, respectively, as a result of life insurance claims.

The Company owns 39.16% of the stock of LCB and accounts for its ownership through the equity method. As such, 39.16% of the income of LCB is recorded by Juniata as non-interest income. As a result of this investment, $222,000 was recorded as income in 2016, compared to $238,000 in 2015. Earnings on bank-owned life insurance and annuities decreased in 2016 by $7,000, or 1.9%, when compared to the previous year, because investment in BOLI was lower, and crediting rates were reduced.

In 2016, student loans that were included in the FNBPA acquisition were sold, generating an accounting gain of $113,000; no similar corresponding gain was recorded in the 2015 period. Gains realized from the sale and calls of investment securities during 2016 were $218,000, compared to $13,000 during 2015.

As a percentage of average assets, non-interest income (excluding securities gains and losses) was 0.90% and 0.92% in 2016 and 2015, respectively.

NON-INTEREST EXPENSE

In 2016, total non-interest expense increased by $979,000, or 6.0%, when compared to 2015. The primary driver in the change in non-interest expense was attributable to merger and acquisition costs of $347,000 and $1,806,000 recorded in 2016 and 2015, respectively. Exclusive of these costs, non-interest expense increased by $2,438,000, or 16.9%. Compensation expense for 2016 increased by $788,000 as compared to 2015, due to a number of offsetting factors, including the full year effect of the increase in full-time equivalent employment (due to the addition of personnel from JVB Northern Tier), lower commissions paid for sales of non-deposit products, and higher levels of accruals for employee incentive bonus, pursuant to the Company's Employee Annual Incentive Plan. Costs of employee benefits was $485,000 higher in 2016 than in 2015. Payroll taxes increased, as a result of higher employee compensation costs, and the cost of providing medical coverage within the Company's self-funded plan increased by

$245,000. Additionally, costs associated with maintaining the Company's defined benefit plans increased by $109,000 in 2016 versus 2015 and employer contributions to the defined contribution plan increased by $71,000. Also included in the increase of employee benefit expense was $64,000 relating to accelerated vesting for a supplemental retirement arrangement following the death of a participant.

Data processing expense increased by $218,000, or 13.7%, in 2016 as compared to 2015, as a result of an increased number of customer accounts serviced, in addition to new online features being made available to customers, such as online consumer loan applications. Occupancy and equipment expense increased in the aggregate by $240,000, or 15.4%, due to the maintenance, real estate taxes and upgraded equipment necessary to standardize the new Northern Tier offices, as well as maintenance and repairs in other facilities and equipment. Costs associated with loan documentation and foreclosure activities (included in "other non-interest expense) increased in 2016 as compared to 2015 by $91,000. The increase in "other non-interest expense" also included higher regulatory assessments of $75,000, due to the increased asset size of the Company.

Amortization expense associated with the Bank's investment in a low-income housing project, which first became applicable during the second quarter of 2013, was more than offset by the recording of the benefit of the tax credit from the project in both 2016 and 2015. Amortization was $479,000 in both 2016 and 2015. Amortization is scheduled to continue through 2023 at similar amounts.

Variances in director compensation, professional fees, FDIC insurance premiums, non-income taxes, amortization of intangibles and net gains and losses on sales of assets, which in the aggregate, increased 37.1% in 2016 versus 2015, are due to the increased asset size of the Company following the late 2015 FNBPA acquisition.

As a percentage of average assets, non-interest expense was 2.98% in 2016 as compared to 3.31% in 2015. Exclusive of merger and acquisition expenses, the ratio was 2.92% in 2016 versus 2.94% in 2015.

INCOME TAXES

Income tax expense for 2016 amounted to $819,000 versus $83,000 in 2015. Both periods included the effect of a tax credit of $572,000 in 2016 and $570,000 in 2015. The tax credit was available to the Company as a result of an equity investment in a low-income housing project. The effective tax rate in 2016 was 13.7% versus 2.6% in 2015. See Note 16 of Notes to Consolidated Financial Statements for further information on income taxes.

FINANCIAL CONDITION

BALANCE SHEET SUMMARY

Juniata functions as a financial intermediary and, as such, its financial condition is best analyzed in terms of changes in its uses and sources of funds, and is most meaningful when analyzed in terms of changes in daily average balances. The table below sets forth average daily balances for the last three years and the dollar change and percentage change for the past two years.

TABLE 3
CHANGES IN USES AND SOURCES OF FUNDS

(Dollars in thousands)

	2017 Average Balance	Increase (Decrease) Amount	%	2016 Average Balance	Increase (Decrease) Amount	%	2015 Average Balance
Funding Uses:							
Taxable loans	$ 355,033	$ 6,119	1.8%	$ 348,914	$ 67,994	24.2%	$ 280,920
Tax-exempt loans	30,378	115	0.4	30,263	5,055	20.1	25,208
Taxable securities	134,607	9,996	8.0	124,611	12,152	10.8	112,459
Tax-exempt securities	24,797	990	4.2	23,807	(4,880)	(17.0)	28,687
Interest bearing deposits	580	(190)	(24.7)	770	173	29.0	597
Federal funds sold	-	(675)	(100.0)	675	643	2,009.4	32
Total interest earning assets	545,395	16,355	3.1	529,040	81,137	18.1	447,903
Investment in:							
Unconsolidated subsidiary	4,771	157	3.4	4,614	171	3.8	4,443
Low income housing	4,983	1,564	45.7	3,419	(206)	(5.7)	3,625
BOLI and annuities	14,791	(97)	(0.7)	14,888	(72)	(0.5)	14,960
Goodwill and intangible assets	5,678	(76)	(1.3)	5,754	3,332	137.6	2,422
Other non-interest earning assets	22,179	(1,524)	(6.4)	23,703	6,281	36.1	17,422
Unrealized gains (losses) on securities	(1,065)	440	(29.2)	(1,505)	(2,402)	(267.8)	897
Less: Allowance for loan losses	(2,809)	(237)	(9.2)	(2,572)	(223)	(9.5)	(2,349)
Total uses	$ 593,923	$ 16,582	2.9%	$ 577,341	$ 88,018	18.0%	$ 489,323
Funding Sources:							
Interest bearing demand deposits	$ 123,520	$ 2,041	1.7 %	$ 121,479	$ 22,861	23.2 %	$ 98,618
Savings deposits	99,385	2,516	2.6	96,869	22,601	30.4	74,268
Time deposits under $100,000	105,605	(3,449)	(3.2)	109,054	3,250	3.1	105,804
Time deposits over $100,000	34,047	3,714	12.2	30,333	5,294	21.1	25,039
Repurchase agreements	4,823	112	2.4	4,711	(5)	(0.1)	4,716
Short-term borrowings	25,476	9,763	62.1	15,713	(596)	(3.7)	16,309
Long-term debt	25,000	594	2.4	24,406	1,906	8.5	22,500
Other interest bearing liabilities	1,547	67	4.5	1,480	64	4.5	1,416
Total interest bearing liabilities	419,403	15,358	3.8	404,045	55,375	15.9	348,670
Demand deposits	108,141	2,605	2.5	105,536	21,241	25.2	84,295
Other liabilities	6,441	(110)	(1.7)	6,551	1,324	25.3	5,227
Stockholders' equity	59,938	(1,271)	(2.1)	61,209	10,078	19.7	51,131
Total sources	$ 593,923	$ 16,582	2.9%	$ 577,341	$ 88,018	18.0%	$ 489,323

Overall, total average assets increased by $16,582,000, or 2.9%, for the year 2017 compared to 2016, following an increase of $88,018,000, or 18.0%, in 2016 over average assets in 2015. The large increase in 2016 was primarily due to the acquisition of FNBPA in the fourth quarter of 2015. The ratio of average earning assets to total average assets was 91.8% in 2017, while it was 91.6% and 91.5% in 2016 and 2015, respectively. The ratio of average interest-bearing liabilities to total average assets increased slightly in 2017 to 70.6% from 70.0% in 2016, which was a decline from 71.3% in 2015. Although Juniata's investment in its unconsolidated subsidiary, investment in a low income elderly housing project and its bank owned life insurance and annuities are not classified as interest-earning assets, income is derived directly from those assets. These instruments have represented 4.1% and 4.0% of total average assets in 2017 and 2016, respectively. A more detailed discussion of the Company's earning assets and interest bearing liabilities will follow in the Sections titled "Loans", "Investments", "Deposits" and "Market/Interest Rate Risk".

LOANS

Loans outstanding at the end of each year consisted of the following:

	Years ended December 31,				
(Dollars in thousands)	2017	2016	2015	2014	2013
Commercial, financial and agricultural	$ 45,802	$ 40,827	$ 34,171	$ 23,738	$ 26,281
Real estate - commercial	140,369	123,711	127,213	90,000	74,471
Real estate - construction	28,403	35,206	26,672	20,713	19,681
Real estate - mortgage	146,888	154,905	164,617	140,676	140,459
Obligations of states and political subdivisions	13,044	13,616	17,524	15,730	12,702
Personal	9,398	10,032	6,846	4,044	4,204
Total	$ 383,904	$ 378,297	$ 377,043	$ 294,901	$ 277,798

From year-end 2016 to year-end 2017, total loans outstanding increased by $5,607,000, following an increase of $1,254,000 in 2016 when compared to year-end 2015. The following table summarizes how the ending balances changed annually in each of the last three years.

(Dollars in thousands)	2017	2016	2015
Beginning balance	$ 378,297	$ 377,043	$ 294,901
Net new loans	6,239	1,750	38,004
Loans acquired through merger, net of fair value adjustments	-	-	45,372
Loans charged off	(292)	(279)	(415)
Loans transferred to other real estate owned and other adjustments to carrying value	(340)	(217)	(819)
Net change	5,607	1,254	82,142
Ending balance	$ 383,904	$ 378,297	$ 377,043

The loan portfolio was comprised of approximately 40.7% consumer loans and 59.3% commercial loans (including construction) on December 31, 2017 as compared to 43.6% consumer loans and 56.4% commercial loans on December 31, 2016. Management believes that diversification in the loan portfolio is important and performs a loan concentration analysis on a quarterly basis. The highest loan concentration by activity type was commercial real estate loans secured by income-producing property, with debt service on this category of loans being reliant upon the cash flow generated by the property. In the aggregate, loans in this category had outstanding balances of $101,955,000 at December 31, 2017, or 194.12% of the Bank's capital. Components of this concentration group with balances considered for general reserve purposes are as follows:

NAIC Definition	Outstanding Balance	% of Bank Capital
Lessors of non-residential buildings	$ 33,475,000	63.74%
Hotels and Motels	27,958,000	53.23%
Lessors of residential buildings and dwellings	20,600,000	39.22%
Continuing care retirement communities	19,922,000	37.93%
Total	$ 101,955,000	194.12%

Given the reserves allocated to this sector over the past several years and the continuing softness in the market, management has assigned an additional concentration risk factor to this group of loans when analyzing the adequacy of the allowance for loan losses. See Note 7 of Notes to Consolidated Financial Statements.

During 2017, there was growth in commercial and commercial real estate, largely offset by a decrease in real estate construction and consumer mortgages. The ongoing decline in residential real estate loans is a result of the secondary market continuing to offer more appealing fixed rates to borrowers. In 2016, there was growth in commercial, real estate construction and personal loans, which was offset by decreases in consumer mortgages, commercial real estate and obligations of states and political subdivisions. Juniata is willing, able and continues to lend to qualifying businesses and individuals. Our business model closely aligns lenders and community office managers' efforts to effectively develop referrals and existing customer relationships. Continued emphasis is placed on responsiveness and personal attention given to customers, which we believe differentiates the Bank from its competition. Nearly all commercial loans are either variable or adjustable rate loans, while non-mortgage consumer loans generally have fixed rates for the duration of the loan.

Juniata strives to offer fair, competitive rates and to provide optimal service in order to attract loan growth. Emphasis will continue to be placed upon attracting the entire customer relationship of our borrowers.

The loan portfolio carries the potential risk of past due, non-performing or, ultimately, charged-off loans. The Bank attempts to manage this risk through credit approval standards and aggressive monitoring and collection efforts. Where prudent, the Bank secures commercial loans with collateral consisting of real and/or tangible personal property. The Company maintains a dedicated credit administration division, in response to the need for heightened credit review, both in the loan origination process and in the ongoing risk assessment process. With stringent credit standards in place, Juniata's lending strategy stresses quality growth, diversified by product. A standardized credit policy is in place throughout the Company, and the credit committee of the Board of Directors reviews and approves all loan requests for amounts that exceed management's approval levels. The Company makes credit judgments based on a customer's existing debt obligations, collateral, ability to pay and general economic trends. See Note 3 of Notes to Consolidated Financial Statements.

The allowance for loan losses has been established in order to absorb probable losses on existing loans. A quarterly provision or credit is charged to earnings to maintain the allowance at adequate levels. Charge-offs and recoveries are recorded as adjustments to the allowance. The allowance for loan losses at December 31, 2017 was 0.77% of total loans, net of unearned interest, as compared to 0.72% of total loans, net of unearned interest, at the end of 2016. Loans that Juniata acquired through the combination with FNBPA on November 30, 2015 are recorded at fair value with no carryover of the related allowance for loan losses. Acquired loans subsequently deemed impaired are included in the allowance for loan losses as impaired loans. Through loan amortization and other scheduled payments, the excluded balances are becoming a smaller percentage of total outstanding loans, contributing to the increase in the allowance as a percentage of total loans. The allowance increased $216,000 when compared to December 31, 2016, as a result of net charge-offs of $223,000 offset by the provision of $439,000. Net charge-offs for both 2017 and 2016 were 0.06% of average loans.

At December 31, 2017, non-performing loans (as defined in Table 4 below), as a percentage of the allowance for loan losses, were 102.9% as compared to 195.1% at December 31, 2016. Non-performing loans were 0.79% of loans as of December 31, 2017, and 1.40% of loans as of December 31, 2016. The decrease in nonperforming loans in 2017 compared to 2016 was the result of the workout efforts of the collection staff as some long-term non-performing loans were either brought current or liquidated. Of the $3,025,000 in non-performing loans at December 31, 2017, only one loan for $4,000 is not collateralized with real estate.

TABLE 4
NON-PERFORMING LOANS

	Years ended December 31,				
(Dollars in thousands)	2017	2016	2015	2014	2013
Nonaccrual loans	$ 2,874	$ 4,733	$ 3,688	$ 4,880	$ 5,952
Accruing loans past due 90 days or more, exclusive of loans acquired with credit deterioration	64	554	2	400	251
Restructured loans in default and non-accruing	87	25	-	366	-
Total non-performing loans	$ 3,025	$ 5,312	$ 3,690	$ 5,646	$ 6,203

Loans on which the accrual of interest has been discontinued are designated as non-accrual loans. Accrual of interest on loans is generally discontinued when the contractual payment of principal or interest has become 90 days past due or reasonable doubt exists as to the full, timely collection of principal or interest. However, it is the Company's policy to continue to accrue interest on loans over 90 days past due as long as (1) they are guaranteed or well secured and (2) there is an effective means of timely collection in process. When a loan is placed on non-accrual status, all unpaid interest credited to income in the current year is reversed against current period income, and unpaid interest accrued in prior years is charged against the allowance for loan losses. Interest received on nonaccrual loans generally is either applied against principal or reported as interest income, according to management's judgment as to the collectability of principal. Generally, accruals are resumed on loans only when the obligation is brought fully current with respect to interest and principal, has performed in accordance with the contractual terms for a reasonable period of time and the ultimate collectability of the total contractual principal and interest is no longer in doubt. The Company's nonaccrual and charge-off policies are the same, regardless of loan type. During 2017, gross interest income that would have been recorded if loans on nonaccrual status had been current was $335,000, of which $20,000 was collected and included in net income.

ALLOWANCE FOR LOAN LOSSES

The amount of allowance for loan losses is determined through a critical quantitative and qualitative analysis performed by management that includes significant assumptions and estimates. It is maintained at a level deemed sufficient to absorb probable estimated losses within the loan portfolio, and supported by detailed documentation. To assess potential credit weaknesses, it is critical to analyze observable trends that may be occurring.

Management systematically monitors the loan portfolio and the adequacy of the allowance for loan losses on a quarterly basis to provide for probable losses inherent in the portfolio. The Bank's methodology for maintaining the allowance is highly structured and contains two components: a component for loans that are deemed to be impaired and a component for contingencies.

Component for impaired loans:

A loan is considered to be impaired when, based on current information and events, it is probable that the Company will be unable to collect the scheduled payments of principal or interest when due according to the contractual terms of the loan agreement. Factors considered by management in determining impairment include payment status, collateral value and the probability of collecting scheduled principal and interest payments when due. Loans that experience insignificant payment delays and payment shortfalls generally are not classified as

impaired. Management determines the significance of payment delays and payment shortfalls on a case-by-case basis, taking into consideration all of the circumstances surrounding the loans and the borrower, including the length of the delay, the reasons for the delay, the borrower's prior payment record and the amount of the shortfall in relation to the principal and interest owed. Impairment is measured on a loan by loan basis by the present value of expected future cash flows discounted at the loan's effective interest rate, the loan's observable market price or the fair value of the collateral if the loan is collateral dependent.

The estimated fair values of substantially all of the Company's impaired loans are measured based on the estimated fair value of the loan's collateral. For commercial loans secured with real estate, estimated fair values are determined primarily through third-party appraisals. When a real estate secured loan becomes impaired, a decision is made regarding whether an updated certified appraisal of the real estate is necessary. This decision is based on various considerations, including the age of the most recent appraisal, the loan-to-value ratio based on the current appraisal and the condition of the property. Appraised values may be discounted to arrive at the estimated selling price of the collateral, which is considered to be the estimated fair value. The discounts also include the estimated costs to sell the property. For commercial loans secured by non-real estate collateral, estimated fair values are determined based on the borrower's financial statements, inventory reports, aging accounts receivable, equipment appraisals or invoices. Indications of value from these sources are generally discounted based on the age of the financial information or the quality of the assets. For such loans that are classified as impaired, an allowance is established when the discounted cash flows (or collateral value or observable market price) of the impaired loan is lower than the carrying value of that loan. The Company generally does not separately identify individual consumer segment loans for impairment analysis, unless such loans are subject to a restructuring agreement.

Loans whose terms are modified are classified as troubled debt restructurings if the Company grants borrower's concessions and it is deemed that those borrowers are experiencing financial difficulty. Concessions granted under a troubled debt restructuring generally involve a below-market interest rate based on the loan's risk characteristics or an extension of a loan's stated maturity date. Nonaccrual troubled debt restructurings are restored to accrual status if principal and interest payments, under the modified terms, are current for a sustained period of time after modification. Loans classified as troubled debt restructurings are designated as impaired.

As of December 31, 2017, 40 loans, with aggregate outstanding balances of $7,731,000, were evaluated for impairment. A collateral analysis was performed on each of these 40 loans in order to establish a portion of the reserve needed to carry impaired loans at no higher than fair value. As a result of this analysis, no loans were determined to have insufficient collateral, and therefore, no specific reserves were established. Also included as impaired loans were loans in the amount of $528,000 that were acquired with credit impairment.

Component for contingencies:

A contingency is an existing condition, or set of circumstances, involving uncertainty as to possible gain or loss to the Company that will ultimately be resolved when one or more future events occur or fail to occur. These conditions may be considered in relation to individual loans or in relation to groups of similar types of loans. If the conditions are met, a provision is made even though the particular loans that are uncollectible may not be identifiable.

The component of the allowance for contingencies relates to other loans that have been segmented into risk rated categories as follows:

- Commercial, financial and agricultural
- Real estate – commercial
- Real estate - construction
- Real estate – mortgage
- Obligations of states and political subdivisions
- Personal

Contingency allowance evaluation consists of several key elements. The borrower's overall financial condition, repayment sources, guarantors and value of collateral, if appropriate, are evaluated quarterly or when credit deficiencies arise, such as delinquent loan payments. Credit quality risk ratings include regulatory classifications of special mention, substandard, doubtful and loss. Loans classified as special mention have potential weaknesses that deserve management's close attention. If uncorrected, the potential weaknesses may result in deterioration of the repayment prospects. Loans classified as substandard have one or more well-defined weaknesses that jeopardize the liquidation of the debt. Substandard loans include loans that are inadequately protected by the current net worth and paying capacity of the obligor or of the collateral pledged, if any. Loans classified as doubtful have all the weaknesses inherent in loans classified as substandard with the added characteristic that collection or liquidation in full, on the basis of current conditions and facts, is highly improbable. Loans classified as a loss are considered uncollectible and are charged to the allowance for loan losses. Loans not classified are rated pass. Specific reserves may be established for larger, individual classified loans as a result of this evaluation, as discussed above. Remaining loans are categorized into large groups of smaller balance homogeneous loans and are collectively evaluated for impairment. This computation is generally based on historical loss experience adjusted for qualitative factors. The historical loss experience is averaged over a five-year period for each of the portfolio segments.

The qualitative risk factors are reviewed for relevancy each quarter and include:

- National, regional and local economic and business conditions, as well as the condition of various market segments, including the underlying collateral for collateral dependent loans;
- Nature and volume of the portfolio and terms of loans;
- Experience, ability and depth of lending and credit management and staff;
- Volume and severity of past due, classified and nonaccrual loans, as well as other loan modifications;
- Existence and effect of any concentrations of credit and changes in the level of such concentrations;
- Effect of external influences, including competition, legal and regulatory requirements; and
- Risk from change in the historical look-back period.

Each factor is assigned a value to reflect improving, stable or declining conditions based on management's best judgment using relevant information available at the time of the evaluation. Adjustments to the factors are supported through documentation of changes in conditions in a narrative accompanying the allowance for loan loss calculation.

A summary of activity in the allowance for loan loss for the last five years is shown below. The area most affected by charge-offs in each of the five years presented was real estate – mortgages, whose balances accounted for approximately 38% of the total loan portfolio at December 31, 2017. In 2017, the Company recorded net charge-offs of $223,000. Due to relatively low growth in net loans outstanding, low charge-offs and little deterioration in fair value of collateral related to impaired loans during 2017, the provision for loan loss in 2017 was 5.8% lower than in 2016. With the provision exceeding net charge-offs, the loan loss allowance increased by 7.9% over the allowance level in December 31, 2016. Management's analysis indicated that the loan loss allowance of $2,939,000 at December 31, 2017 was adequate.

(Dollars in thousands)	Years Ended December 31,				
	2017	2016	2015	2014	2013
Balance of allowance - beginning of period	$ 2,723	$ 2,478	$ 2,380	$ 2,287	$ 3,281
Loans charged off:					
Commercial, financial and agricultural	46	4	11	20	4
Real estate - commercial	70	146	66	92	-
Real estate - construction	-	-	24	18	117
Real estate - mortgage	149	103	305	125	1,281
Personal	27	26	9	20	29
Total charge-offs	292	279	415	275	1,431
Recoveries of loans previously charged off:					
Commercial, financial and agricultural	5	-	7	4	13
Real estate - commercial	2	24	-	5	-
Real estate - mortgage	45	15	1	-	-
Personal	17	19	3	2	9
Total recoveries	69	58	11	11	22
Net charge-offs	223	221	404	264	1,409
Provision for loan losses	439	466	502	357	415
Balance of allowance - end of period	$ 2,939	$ 2,723	$ 2,478	$ 2,380	$ 2,287
Ratio of net charge-offs during period to average loans outstanding	0.06%	0.06%	0.13%	0.09%	0.51%

The following tables show how the allowance for loan losses is allocated among the various types of outstanding loans and the percent of loans by type to total loans.

(Dollars in thousands)	Years Ended December 31,				
	2017	2016	2015	2014	2013
Commercial, financial and agricultural	$ 273	$ 318	$ 264	$ 222	$ 253
Real estate - commercial	1,022	948	836	665	534
Real estate - construction	288	231	191	155	212
Real estate - mortgage	1,285	1,143	1,140	1,300	1,246
Personal	71	83	47	38	42
	$ 2,939	$ 2,723	$ 2,478	$ 2,380	$ 2,287

(Dollars in thousands)	Years Ended December 31,				
	2017	2016	2015	2014	2013
Commercial, financial and agricultural	11.9%	10.8%	9.1%	8.0%	9.5%
Real estate - commercial	36.6%	32.7%	33.7%	30.5%	26.8%
Real estate - construction	7.4%	9.3%	7.1%	7.0%	7.1%
Real estate - mortgage	38.3%	40.9%	43.7%	47.8%	50.5%
Obligations of states and political subdivisions	3.4%	3.6%	4.6%	5.3%	4.6%
Personal	2.4%	2.7%	1.8%	1.4%	1.5%
	100.0%	100.0%	100.0%	100.0%	100.0%

INVESTMENTS

Total investments, defined to include all interest earning assets except loans (i.e. investment securities available for sale (at fair value), federal funds sold, interest bearing deposits, restricted investment in bank stock and other interest-earning assets), totaled $157,336,000 on December 31, 2017, representing an increase of $2,793,000 when compared to year-end 2016. The following table summarizes how the ending balances changed annually in each of the last three years.

(Dollars in thousands)	2017	2016	2015
Beginning balance	$ 154,543	$ 156,259	$ 145,639
Purchases of investment securities	42,510	48,309	68,094
Investments acquired through merger	-	-	35,458
Sales, calls and maturities of investment securities	(37,614)	(47,974)	(92,989)
Adjustment in market value of AFS securities	(830)	(1,434)	(296)
Amortization/Accretion	(650)	(740)	(764)
Restricted investment in bank stock, net change	(586)	101	704
Interest bearing deposits with others, net change	(37)	22	413
Net change	2,793	(1,716)	10,620
Ending balance	$ 157,336	$ 154,543	$ 156,259

On average, total investments increased by $10,121,000, or 6.8%, during 2017, following an increase of $8,088,000, or 5.7%, during 2016. The increase in 2017 and 2016 resulted from excess cash available from loan repayments.

The investment area is managed according to internally established guidelines and quality standards. Juniata segregates its investment securities portfolio into two classifications: those held to maturity and those available for sale. Juniata classifies all new marketable investment securities as available for sale, and currently holds no securities in the held to maturity or trading classifications. At December 31, 2017, the market value of the entire securities portfolio was less than amortized cost by $2,132,000 as compared to December 31, 2016, when the market value was less than amortized cost by $1,302,000. The weighted average life of the investment portfolio was 4.3 years on December 31, 2017 and 3.7 years on December 31, 2016. The weighted average maturity has remained short in order to achieve a desired level of liquidity. Table 5, “Maturity Distribution”, in this Management’s Discussion and Analysis of Financial Condition shows the remaining maturity or earliest possible repricing for investment securities.

The following table sets forth the maturities of securities and the weighted average yields of such securities by contractual maturities or call dates. Yields on obligations of states and public subdivisions are presented on a tax-equivalent basis.

(Dollars in thousands)	December 31, 2017		December 31, 2016		December 31, 2015	
Security type and maturity	Fair Value	Weighted Average Yield	Fair Value	Weighted Average Yield	Fair Value	Weighted Average Yield
Obligations of U.S. Government agencies and corporations						
Within one year	$ 5,969	1.11%	$ -	-	$ 1,003	2.13%
After one year but within five years	14,689	1.84%	19,331	1.38%	24,264	1.34%
After five years but within ten years	13,556	1.99%	16,468	1.87%	7,465	2.07%
	34,214	1.78%	35,799	1.61%	32,732	1.53%
Obligations of state and political subdivisions						
Within one year	2,516	1.84%	2,820	2.04%	5,771	1.97%
After one year but within five years	13,955	2.75%	13,240	2.50%	16,151	2.64%
After five years but within ten years	8,510	3.02%	10,599	3.00%	7,282	3.42%
After ten years	-	-	-	-	331	1.85%
	24,981	2.75%	26,659	2.65%	29,535	2.66%
Mortgage-backed securities						
After one year but within five years	-	-	104	1.37%	242	1.35%
After five years but within ten years	5,249	2.21%	7,701	2.22%	5,059	2.27%
After ten years	88,261	2.27%	77,897	2.13%	82,440	2.16%
	93,510	2.26%	85,702	2.13%	87,741	2.16%
Equity securities	1,119		2,328		2,319	
	$ 153,824		$ 150,488		$ 152,327	

BANK OWNED LIFE INSURANCE AND ANNUITIES

The Company periodically insures the lives of certain bank officers in order to provide split-dollar life insurance benefits to some key officers and to offset the cost of providing post-retirement benefits through non-qualified plans. Some annuities are also owned to provide cash streams that match certain post-retirement liabilities. See Note 9 of Notes to Consolidated Financial Statements. The following table summarizes how the cash surrender values of these instruments changed annually in each of the last three years.

(Dollars in thousands)	2017	2016	2015
Beginning balance	$ 14,631	$ 14,905	$ 14,807
BOLI increase in cash surrender value	311	349	362
BOLI receipt of death benefit	-	(651)	(259)
Annuities net (decrease) increase in cash surrender value	30	28	(5)
Net change	341	(274)	98
Ending balance	$ 14,972	$ 14,631	$ 14,905

INVESTMENT IN UNCONSOLIDATED SUBSIDIARY

The Company owns 39.16% of the outstanding common stock of LCB, Liverpool, Pennsylvania. This investment is accounted for under the equity method of accounting. The investment was carried at $4,812,000 as of December 31, 2017. The Company increases its investment in LCB for its share of earnings and decreases its investment by any dividends received from LCB. The investment is evaluated quarterly for impairment. A loss in value of the investment which is determined to be other than a temporary decline would be recognized as a loss in the period in which such determination is made. Evidence of a loss in value might include, but would not necessarily be limited to, absence of an ability to recover the carrying amount of the investment or inability of LCB to sustain an earnings capacity which would justify the current carrying value of the investment. The carrying amount at December 31, 2017 represented an increase of $109,000 when compared to December 31, 2016. In connection with this investment, two representatives of Juniata serve on the Board of Directors of LCB.

On December 29, 2017, Juniata entered into the Merger Agreement with LCB. Upon the terms, and subject to the conditions set forth therein, LCB will merge with, and into, the Bank, with the Bank continuing as the surviving entity. Upon the completion of the merger, the 1,214 shares of Liverpool common stock currently owned by Juniata will be canceled. The parties anticipate the merger will close in the first half of 2018. See Note 25 of Notes to Consolidated Financial Statements.

GOODWILL AND INTANGIBLE ASSETS

Branch Acquisition

On September 8, 2006, the Company acquired a branch office in Richfield, PA. Goodwill at December 31, 2017 and 2016 was $2,046,000. The core deposit intangible of $431,000 was fully amortized as of December 31, 2017 and 2016. Core deposit intangible amortization expense of $29,000 and $45,000 was recorded in the years 2016 and 2015, respectively, while no expense was recorded in 2017. The core deposit intangible was being amortized over a ten-year period on a straight-line basis. Goodwill is not amortized, but is measured annually for impairment.

FNBPA Acquisition

On November 30, 2015, the Company completed its acquisition of FNBPA and, as a result, recorded goodwill of $3,335,000, which was subsequently adjusted in 2016 to $3,402,000. As of December 31, 2017, goodwill related to the FNBPA acquisition remained at $3,402,000. In addition, core deposit intangible in the amount of $303,000 was recorded and will be amortized over a ten-year period using a sum of the year's digits basis. Core deposit intangible amortization expense recorded in 2017 was $49,000 and, for the succeeding five years beginning 2018, is estimated to be $44,000, $38,000, $33,000, $27,000 and $21,000 per year, respectively, and $32,000 in

total for years after 2022. Other intangible assets were identified and recorded as of November 30, 2015, in the amount of $40,000 and were amortized on a straight-line basis over two years, through November 30, 2017. Expense recognized in 2017 was $18,000, while $20,000 was recognized in 2016. Core deposit and other intangible assets, net of amortization, was $195,000 as of December 31, 2017.

Mortgage Servicing Rights

The Company originates and sells residential mortgage loans into the secondary market, but retains the servicing on the loans. The mortgage servicing rights are valued based on the present value of estimated future cash flows on pools of mortgages stratified by rate and maturity date. The computed value is carried as an intangible asset. As of December 31, 2017 and December 31, 2016, the fair value of mortgage servicing rights was $225,000 and $205,000, respectively.

DEFERRED TAXES

The Company accounts for income taxes under the asset/liability method. Deferred tax assets and liabilities are recognized for the future consequences attributable to differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases, as well as operating loss and tax credit carry-forwards, if applicable. A valuation allowance is established against deferred tax assets when, in the judgment of management, it is more likely than not that such deferred tax assets will not become realizable. Management has determined that there was no need for a valuation allowance for deferred taxes as of December 31, 2017 and 2016. As of December 31, 2017 and 2016, the Company recorded a net deferred tax asset of $652,000 and $1,249,000, respectively, which was carried as a non-interest earning asset.

The Tax Cuts and Jobs Act, enacted on December 22, 2017, lowered Juniata's future maximum corporate tax rate from 34% to 21% on January 1, 2018. While the reduced rate will provide tax savings to Juniata in future periods, the reduction resulted in write-downs of Juniata's net deferred tax asset as of year-end 2017, which was previously valued based upon the projection of a 34% future tax rate. Overall, the TCJA resulted in a provisional reduction in net deferred taxes of $416,000, or 69.7%, of the total reduction of $597,000 at December 31, 2017 compared to December 31, 2016.

The remainder of the difference was due to the various other changes in gross temporary tax differences. See Note 16 of Notes to Consolidated Financial Statements.

OTHER NON-INTEREST EARNING ASSETS

The following table summarizes the components of the non-interest earning asset category, and how the ending balances changed annually in each of the last three years.

(Dollars in thousands)	2017	2016	2015
Beginning balance	$ 24,988	$ 25,886	$ 20,879
Cash and cash equivalents	375	(921)	3,628
Premises and equipment, net	2,030	(52)	376
Other real estate owned	(283)	21	385
Investment in low income housing	1,433	444	(479)
Other receivables and prepaid expenses, including deferred tax assets	(551)	(390)	1,097
Net change	3,004	(898)	5,007
Ending balance	$ 27,992	$ 24,988	$ 25,886

DEPOSITS

At December 31, 2017, total deposits were $477,668,000, an increase of $21,846,000 as compared to the previous year end. At December 31, 2016, total deposits were $455,822,000, a decrease of $1,304,000 from total deposits on December 31, 2015. Deposits assumed from the FNBPA acquisition accounted for an increase of $77,392,000 in 2015. The following table summarizes how the ending balances changed annually in each of the last three years.

(Dollars in thousands)	2017	2016	2015 Exclusive of Acquisition	FNBPA Acquisition	2015
Beginning balance	$ 455,822	$ 457,126			$ 380,884
Demand deposits	11,905	(2,661)	8,709	20,261	28,970
Interest bearing demand deposits	3,977	4,023	(3,114)	21,845	18,731
Savings deposits	3,517	526	8,344	19,149	27,493
Time deposits	2,447	(3,192)	(15,089)	16,137	1,048
Net change	21,846	(1,304)	(1,150)	77,392	76,242
Ending balance	$ 477,668	$ 455,822			$ 457,126

The following table shows the comparison of average core deposits and average time deposits as a percentage of total deposits for each of the last three years.

(Dollars in thousands)	Changes in Deposits						
	2017 Average Balance	Increase (Decrease) Amount	Increase (Decrease) %	2016 Average Balance	Increase (Decrease) Amount	Increase (Decrease) %	2015 Average Balance
Core transaction deposits:							
Money market	$ 46,666	$ 2,770	6.3 %	$ 43,896	$ 10,208	30.3 %	$ 33,688
Interest bearing demand	76,854	(729)	(0.9)	77,583	12,653	19.5	64,930
Savings	99,385	2,516	2.6	96,869	22,601	30.4	74,268
Demand	108,141	2,605	2.5	105,536	21,241	25.2	84,295
Total core transaction deposits	331,046	7,162	2.2	323,884	66,703	25.9	257,181
Time deposits:							
$100,000 and greater	34,047	3,714	12.2	30,333	5,294	21.1	25,039
Other	105,605	(3,449)	(3.2)	109,054	3,250	3.1	105,804
Total time deposits	139,652	265	0.2	139,387	8,544	6.5	130,843
Total deposits	$ 470,698	$ 7,427	1.6 %	$ 463,271	$ 75,247	19.4 %	$ 388,024

Average deposits increased $7,427,000, or 1.6%, to $470,698,000 in 2017 following an increase in 2016 of $75,247,000, or 19.4%, to $463,271,000. Core transaction accounts increased by 2.2% and 25.9%, respectively, in 2017 and 2016. The large increase in 2016 is largely due to the acquisition of FNBPA in the fourth quarter of 2015. We also believe that, over the past several years, because of the market uncertainties that accompany uncertain economic periods, investors continued to move balances of available funds into safe, FDIC-insured banking institutions and particularly into liquid transaction accounts, while funds invested in time deposits declined. Due to the sustained low-interest rate environment that existed over the period, we believe many investors had been seeking higher yields than are available in time deposit products. We continue to provide alternatives to such investors through the sale of our wealth management (non-deposit) products and are seeing investors seeking dividend yields in the stock market as well.

The consumer continues to have a need for transaction accounts, and the Bank is continuing to focus on that need in order to build deposit relationships. Our products are geared toward low-cost convenience and ease for the customer. The Company's strategy is to aggressively seek to grow customer relationships by staying in touch with customers' changing needs and new methods of connectivity, in an effort to increase deposit (and loan) market share. The Bank offers identity protection services as an option for all consumer demand depositors. We believe this product to be a valuable and essential tool necessary to combat the upsurge in fraud and identity theft. This product is a unique benefit to our customers as there are no other banks in our immediate market that offer a similar service.

The Bank competes in the marketplace with many sources that offer products that directly compete with traditional banking products. In keeping with our desire to provide our customers with a full array of financial services, we supplement the services traditionally offered by our Trust Department by staffing our community offices with wealth management consultants that are licensed and trained to sell variable and fixed rate annuities, mutual funds, stock brokerage services and long-term care insurance. Although the sale of these products can reduce the Bank's deposit levels, these products offer solutions for our customers that traditional bank products cannot and allow us to more completely service our customer base. Fee income from the sale of non-deposit products (primarily annuities and mutual funds) was $173,000 and $223,000 in 2017 and 2016, respectively, representing approximately 3.3% and 4.1%, respectively, of total non-interest income.

OTHER INTEREST BEARING LIABILITIES

Juniata funds its needs primarily with local deposits and when necessary, relies on external funding sources for additional funding. External funding sources include credit facilities at correspondent banks and the Federal Home Loan Bank of Pittsburgh. Juniata's average balances for all borrowings increased in 2017 by $10,536,000 compared to 2016, and by $1,369,000 in 2016 compared to 2015.

Changes in Borrowings

(Dollars in thousands)	2017 Average Balance	Increase (Decrease) Amount	Increase (Decrease) %	2016 Average Balance	Increase (Decrease) Amount	Increase (Decrease) %	2015 Average Balance
Repurchase agreements	$ 4,823	$ 112	2.4%	$ 4,711	$ (5)	(0.1)%	$ 4,716
Short-term borrowings	25,476	9,763	62.1	15,713	(596)	(3.7)	16,309
Long-term debt	25,000	594	2.4	24,406	1,906	8.5	22,500
Other interest bearing liabilities	1,547	67	4.5	1,480	64	4.5	1,416
Total borrowings	$ 56,846	$ 10,536	22.8%	$ 46,310	$ 1,369	3.0%	$ 44,941

PENSION PLAN

The Company sponsors a noncontributory pension plan, the JVB Plan. The JVB Plan has unfunded liabilities that totaled $2,437,000 as of December 31, 2017. Through the JVB Plan, the Company provides pension benefits to substantially all employees that were employed as of December 31, 2007. Benefits are provided based upon an employee's years of service and compensation through December 31, 2012. Effective December 31, 2012, the JVB Plan was amended to cease future service accruals after that date (i.e., it was frozen). The JVB Plan was amended in 2016 to provide pension benefits to all former FNBPA employees that were previously participants in the former FNB Plan at the same level of benefit provided in the FNB Plan. ASC Topic 715 gives guidance on the allowable pension expense that is recognized in any given year. In determining the appropriate amount of pension expense to recognize, management must make subjective assumptions relating to amounts and rates that are inherently uncertain.

In 2017, Juniata initiated a strategy to reduce the liability associated with its defined benefit pension plan. The first step of the initiative consisted of the purchase of a single premium group annuity for a group of Juniata's retirees, transferring the associated pension liability to the issuer of the annuity. This step reduced Juniata's overall pension liability by approximately 12%, which resulted in a pre-tax charge to earnings of $377,000. This pre-tax charge represents an acceleration of pension expenses that would otherwise have impacted Juniata's earnings in the future. During 2018, Management will continue to implement its strategy to further reduce the pension liability through the purchase of additional single premium group annuities or lump sum payouts of the liability. Please refer to Note 21 of Notes to Consolidated Financial Statements.

STOCKHOLDERS' EQUITY

Total stockholders' equity increased by $297,000 in 2017. The Company is well-capitalized and had the capacity to maintain the traditional dividend level in 2017 despite net income being negatively affected by the de-risking of the defined benefit plan and the deferred tax adjustment charged to income tax expense due to the enactment of the Tax Cuts and Jobs Act at the end of 2017. Net income in 2017 exceeded dividends by $343,000. In addition, the reclassification of the accumulated other comprehensive income ("AOCI") deferred tax adjustment added an additional $588,000 to retained earnings. During 2017, shares repurchased into treasury, net of those reissued, also increased equity by $86,000.

AOCI decreased equity by $825,000 from December 31, 2016 to December 31, 2017. A decline in the fair values of investment securities in 2017, coupled with the deferred tax asset adjustment due to Juniata's corporate tax rate change at the end of 2017, caused a reduction in the AOCI of $817,000, as did the tax rate change to the Company's defined benefit plan resulting in a decline of $8,000, net of tax.

The following table summarizes how the components of equity changed annually in each of the last three years.

(Dollars in thousands)	2017	2016	2015
Beginning balance	$ 59,090	$ 59,962	$ 49,856
Net income	4,537	5,156	3,058
Dividends	(4,194)	(4,226)	(3,687)
Common stock issued to FNBPA stockholders	-	-	10,637
Common stock issued for stock plans	34	64	-
Treasury stock issues for stock plans	172	-	-
Stock-based compensation	71	67	57
Repurchase of stock, net of re-issuance	(86)	(927)	47
Net change in unrealized security gains	(817)	(963)	(200)
Defined benefit retirement plan adjustments, net of tax	(8)	(43)	194
AOCI deferred tax adjustment due to tax reform	588	-	-
Net change	297	(872)	10,106
Ending balance	$ 59,387	$ 59,090	$ 59,962

Average stockholders' equity in 2017 was $59,938,000, a decrease of 2.1% from $61,209,000 in 2016 and was $51,131,000 in 2015. At December 31, 2017, Juniata held 43,955 shares of stock in treasury versus 49,370 at December 31, 2016. Return on average equity decreased to 7.57% in 2017 from 8.42% in 2016. Return on average equity decreased in 2017 due to increased expenses recorded, resulting in lower net income in 2017 compared to 2016. See the discussion in the 2017 Financial Overview section.

The Company periodically repurchases shares of its common stock under the share repurchase program approved by the Board of Directors. In December of 2016, the Board of Directors authorized the repurchase of an additional 200,000 shares of its common stock through its share repurchase program. The program will remain authorized until all approved shares are repurchased, unless terminated by the Board of Directors. Repurchases have typically been accomplished through open market transactions and have complied with all regulatory restrictions on the timing and amount of such repurchases. Shares repurchased have been added to treasury stock and accounted for at cost. These shares may be reissued for stock option exercises, employee stock purchase plan purchases, restricted stock awards, to fulfill dividend reinvestment program needs and to supply shares needed as consideration in an acquisition. During 2017, 2016 and 2015, 4,289, 49,370 and 3,504 shares, respectively, were repurchased in conjunction with this program. During 2017, 9,704 treasury shares were also redeemed for stock option exercises. Shares remaining authorized for repurchase in the program were 173,990 as of December 31, 2017. On November 30, 2015, 555,555 treasury shares were reissued to former FNBPA shareholders in conjunction with the acquisition of FNBPA.

In each of the years 2017, 2016 and 2015, Juniata declared dividends of $0.88 per common share (See Note 17 of Notes to Consolidated Financial Statements regarding restrictions on dividends from the Bank to the Company). The dividend payout ratio was 92.4% and 82.0% in 2017 and 2016, respectively. The dividend payout ratio in 2017 was greater than 2016 due to the impact of recording less net income in 2017 compared to 2016 resulting from increased expenses including the de-risking of the defined benefit plan and the TCJA tax reform adjustments recorded in 2017. In January 2018, the Board of Directors declared a dividend of $0.22 per share to stockholders of record on February 15, 2018, payable on March 1, 2018.

Juniata's book value per share at December 31, 2017 was $12.46 as compared to $12.43 and $12.50 at December 31, 2016 and 2015, respectively. Juniata's average equity to assets ratio for 2017, 2016 and 2015 was 10.09%, 10.60% and 10.45%, respectively. Refer also to the Capital Risk section in the Asset / Liability management discussion that follows.

ASSET / LIABILITY MANAGEMENT OBJECTIVES

Management believes that optimal performance is achieved by maintaining overall risks at a low level. Therefore, the objective of asset/liability management is to control risk and produce consistent, high quality earnings independent of changing interest rates. The Company has identified five major risk areas discussed below:

- Liquidity Risk
- Capital Risk
- Market / Interest Rate Risk
- Investment Portfolio Risk
- Economic Risk

Liquidity Risk

Through liquidity risk management, we seek to maintain our ability to readily meet commitments to fund loans, purchase assets and other securities and repay deposits and other liabilities. Liquidity management also includes the ability to manage unplanned changes in funding sources and recognize and address changes in market conditions that affect the quality of liquid assets. Juniata has developed a methodology for assessing its liquidity risk through an analysis of its primary and total liquidity sources. Juniata relies on three main types of liquidity sources: (1) asset liquidity, (2) liability liquidity and (3) off-balance sheet liquidity.

Asset liquidity refers to assets that we are quickly able to convert into cash, consisting of cash, federal funds sold and securities. Short-term liquid assets generally consist of federal funds sold and securities maturing over

the next twelve months. The quality of our short-term liquidity is very good: as federal funds are unimpaired by market risk and as bonds approach maturity, their value moves closer to par value. Liquid assets tend to reduce earnings when there is not an immediate use for such funds, since normally these assets generate income at a lower rate than loans or other longer-term investments.

Liability liquidity refers to funding obtained through deposits. The largest challenge associated with liability liquidity is cost. Juniata's ability to attract deposits depends primarily on several factors, including sales effort, competitive interest rates and other conditions that help maintain consumer confidence in the stability of the financial institution. Large certificates of deposit, public funds and brokered deposits are all acceptable means of generating and providing funding. If the cost is favorable or fits the overall cost structure of the Bank, then these sources have many benefits. They are readily available, come in large block size, have investor-defined maturities and are generally low maintenance.

Off-balance sheet liquidity is closely tied to liability liquidity. Sources of off-balance sheet liquidity include Federal Home Loan Bank borrowings, repurchase agreements and federal funds lines with correspondent banks. These sources provide immediate liquidity to the Bank. They are available to be deployed when a need arises. These instruments also come in large block sizes, have investor-defined maturities and generally require low maintenance.

"Available liquidity" encompasses all three sources of liquidity when determining liquidity adequacy. It results from the Bank's access to short-term funding sources for immediate needs and long-term funding sources when the need is determined to be permanent. Management uses both on-balance sheet liquidity and off-balance sheet liquidity to manage its liquidity position. The Company's liquidity strategy seeks to maintain an adequate volume of high quality liquid instruments to facilitate customer liquidity demands. Management also maintains sufficient capital, which provides access to the liability and off-balance sheet sides of the balance sheet for funding. An active knowledge of debt funding sources is important to liquidity adequacy.

Contingency funding management involves maintaining contingent sources of immediate liquidity. Management believes that it must consider an array of available sources in terms of volume, maturity, cash flows and pricing. To meet demands in the normal course of business or for contingency, secondary sources of funding such as public funds deposits, collateralized loans, sales of investment securities or sales of loan receivables are considered.

It is the Company's policy to maintain both a primary liquidity ratio and a total liquidity ratio greater than 10% of total assets. The primary liquidity ratio equals liquid assets divided by total assets, where liquid assets equal the sum of cash and due from banks, federal funds sold, interest-bearing deposits with other banks and available for sale securities. Total liquidity is comprised of all components noted in primary liquidity plus securities classified as held-to-maturity, if any. If either of these liquidity ratios falls below 10%, it is the Company's policy to increase liquidity in a timely manner to achieve the required ratio.

It is the Company's policy to maintain available liquidity greater than 10% of total assets and contingency liquidity greater than 7.5% of total assets.

Juniata is a member of the Federal Home Loan Bank ("FHLB") of Pittsburgh, which provides short-term liquidity and a source for long-term borrowings. The Bank uses this vehicle to satisfy temporary funding needs throughout the year. The Company had short-term borrowings of $12,000,000 on December 31, 2017 and $27,700,000 on December 31, 2016.

The Bank's maximum borrowing capacity with the FHLB was $163,181,000 at December 31, 2017. In order to borrow additional amounts, the FHLB would require the Bank to purchase additional FHLB Stock. The FHLB is a source of both short-term and long-term funding. The Bank must maintain sufficient qualifying collateral to secure all outstanding advances.

Juniata needs to have liquid resources available to fulfill contractual obligations that require future cash payments. The table below summarizes the Company's significant contractual obligations to third parties, by type, that were fixed and determined at December 31, 2017. Further discussion of the nature of each obligation is included in the referenced note to the consolidated financial statements.

(Dollars in thousands) Contractual Obligations	Note Reference	Total	Payments Due by Period Less than One Year	One to Three Years	Three to Five Years	More than Five Years
Certificates of deposits	13	$ 140,384	$ 42,428	$ 57,333	$ 28,328	$ 12,295
Short-term borrowings and						
security repurchase agreements	14	21,769	21,769	-	-	-
Long-term debt	14	25,000	10,000	15,000	-	-
Operating lease obligations	15	278	91	126	61	-
Other long-term liabilities						
Supplemental retirement and						
deferred compensation	21	2,896	279	567	495	1,555
3rd party data processor contract	24	6,080	957	1,914	1,914	1,295
		$ 196,407	$ 75,524	$ 74,940	$ 30,798	$ 15,145

The schedule of contractual obligations above excludes expected defined benefit retirement payments that will be paid from the plan assets, as referenced in Note 21 of Notes to Consolidated Financial Statements.

Capital Risk

The Company maintains sufficient core capital to protect depositors and stockholders and to take advantage of business opportunities while ensuring that it has resources to absorb the risks inherent in the business. Federal banking regulators have established capital adequacy requirements for banks and bank holding companies based on risk factors, which require more capital backing for assets with higher potential credit risk than assets with lower credit risk.

In December 2010, the Basel Committee released its final framework for strengthening international capital and liquidity regulation, officially identified by the Basel Committee as "Basel III". In July 2013, the FRB approved final rules to implement the Basel III capital framework which revises the risk-based capital requirements applicable to bank holding companies and depository institutions. The new minimum regulatory capital requirements established by the U.S. Basel III Capital Rules became effective for the Company on January 1, 2015 and will be fully phased in on January 1, 2019.

When fully phased in, Basel III requires financial institutions to maintain: (a) Common Equity Tier 1 (CET1) to risk-weighted assets ratio of at least 4.5%, plus a 2.5% "capital conservation buffer" (which is added to the 4.5% CET1 ratio as that buffer is phased in, effectively resulting in a minimum ratio of CET1 to risk-weighted assets of at least 7.0%); (b) a minimum ratio of tier 1 capital to risk-weighted assets of at least 6.0%, plus the capital

conservation buffer (which is added to the 6.0% tier 1 capital ratio as that buffer is phased in, effectively resulting in a minimum tier 1 capital ratio of 8.5% upon full implementation); (c) a minimum ratio of total (that is, tier 1 plus tier 2) capital to risk-weighted assets of at least 8.0%, plus the capital conservation buffer (which is added to the 8.0% total capital ratio as that buffer is phased in, effectively resulting in a minimum total capital ratio of 10.5% upon full implementation); and (d) as a newly adopted international standard, a minimum leverage ratio of 3.0%, calculated as the ratio of tier 1 capital balance sheet exposures plus certain off-balance sheet exposures (computed as the average for each quarter of the month-end ratios for the quarter).

As a result of the capital conservation buffer rules, if the Bank fails to maintain the required minimum capital conservation buffer, the Company may be unable to obtain capital distributions from it, which could negatively impact the Company's ability to pay dividends, service debt obligations or repurchase common stock. In addition, such a failure could result in a restriction on the Company's ability to pay certain cash bonuses to executive officers, negatively impacting the Company's ability to retain key personnel.

As of December 31, 2017, the Company believes its current capital levels would meet the fully phased-in minimum capital requirements, including capital conservation buffer, as prescribed in the U.S. Basel III Capital Rules. See Note 17 of Notes to the Consolidated Financial Statements.

Market / Interest Rate Risk

Market risk is the exposure to economic loss that arises from changes in the values of certain financial instruments. The types of market risk exposures generally faced by financial institutions include equity market price risk, interest rate risk, foreign currency risk and commodity price risk. Due to the nature of its operations, only equity market price risk and interest rate risk are significant to the Company.

Equity market price risk is the risk that changes in the values of equity investments could have a material impact on the financial position or results of operations of the Company. The Company's equity investments consist of common stocks of publicly traded financial institutions.

Although the Company has realized occasional gains from this portfolio in the past, including $512,000 in 2017, $218,000 in 2016, and $13,000 in 2015, the primary objective is to achieve value appreciation in the long-term while earning consistent, attractive after-tax yields from dividends. The carrying value of the financial institutions stocks accounted for 0.2% of the Company's total assets as of December 31, 2017.

Management performs an impairment analysis on the entire investment portfolio on a quarterly basis. No "other-than-temporary" impairment was identified or recorded in 2017, 2016 or 2015; however, there is no assurance that declines in market values of the portfolio in the future will not result in subsequent "other-than-temporary" impairment charges, depending upon facts and circumstances present.

In addition to its equity portfolio, the Company's investment management and trust services revenue could be impacted by fluctuations in the securities markets. A portion of the Company's trust revenue is based on the value of the underlying investment portfolios. If securities values decline, the Company's trust revenue could be negatively impacted.

Interest rate risk creates exposure in two primary areas. First, changes in rates have an impact on the Company's liquidity position and could affect its ability to meet obligations and continue to grow. Second, movements in interest rates can create fluctuations in the Company's net interest income and changes in the economic value of equity.

The primary objective of the Company's asset-liability management process is to maximize current and future net interest income within acceptable levels of interest rate risk while satisfying liquidity and capital requirements. Management recognizes that a certain amount of interest rate risk is inherent, appropriate and necessary to ensure profitability. A full simulation approach is used to assess earnings and capital at risk from movements in interest rates. First, all rate-sensitive assets and rate-sensitive liabilities are segregated into their respective repricing intervals to determine expected cash flows. Next, a multiplier ("BETA") is assigned to rate sensitive instruments to apply management's repricing behavior. Management reprices differently in rising and declining rates, so different Betas are used to better simulate, especially in regard to deposit pricing. Next, interest income or expense is modeled by determining the impact based on amount of contribution remaining over the following 12 months in the simulation. The model considers three major components of income simulation consisting of (1) determining repricing cash flows, (2) modeling management's repricing behavior, and (3) accounting for the instruments positions within the 12 month simulation period. The net interest income effect is determined on a static basis (as if no other factors were present). As the table below indicates, based upon rate shock simulations on a static basis, the Company's balance sheet is liability-sensitive in all rate scenarios, but more so in a rising rate environment. The impact of a 300 and 400 basis point rate increase is most significant. The modeled effects for increases and decreases to net interest income over a twelve-month period as a result of this modeling approach are shown in the table below. Juniata's rate risk policies provide for maximum limits on net interest income that can be at risk for 100 through 400 basis point changes in interest rates, and Juniata is in compliance with those policy limits.

Effect of Interest Rate Risk on Net Interest Income
(Dollars in thousands)

Change in Interest Rates (Basis Points)	Total Change in Net Interest Income
400	$ (1,723)
300	(999)
200	(531)
100	(201)
0	-
(100)	(208)
(200)	(466)
(300)	(431)
(400)	(556)

The net interest income at risk position remained within the guidelines established by the Company's asset/liability policy in each of the above scenarios.

Table 5, presented below, illustrates the maturity distribution of the Company's interest-sensitive assets and liabilities as of December 31, 2017. Earliest re-pricing opportunities for variable and adjustable rate products and scheduled maturities for fixed rate products have been placed in the appropriate column to compute the cumulative sensitivity ratio (ratio of interest-earning assets to interest-bearing liabilities). Securities with call features are treated as though the call date is the maturity date. Through one year, the cumulative sensitivity ratio is 0.47, indicating a liability-sensitive balance sheet, when measured on a static basis.

TABLE 5
MATURITY DISTRIBUTION

	As of December 31, 2017 Remaining Maturity / Earliest Possible Repricing			
(Dollars in thousands)	Within One Year	Over One Year But Within Five Years	Over Five Years	Total
Interest Earning Assets				
Interest bearing deposits	$ 100	$ 250	$ -	$ 350
Investment securities:				
Debt securities - taxable	6,226	15,804	13,556	35,586
Debt securities - tax-exempt	2,259	12,840	8,510	23,609
Mortgage-backed securities	13,870	48,144	31,496	93,510
Stocks	-	-	1,119	1,119
Loans:				
Commercial, financial, and agricultural	24,764	13,395	7,643	45,802
Real estate - construction	2,567	9,222	16,614	28,403
Other loans	89,551	119,343	100,805	309,699
Total Interest Earning Assets	139,337	218,998	179,743	538,078
Interest Bearing Liabilities				
Demand deposits	122,407	-	-	122,407
Savings deposits	98,966	-	-	98,966
Certificates of deposit over $100,000	9,078	20,948	5,866	35,892
Time deposits	31,669	66,644	6,179	104,492
Securities sold under agreements to repurchase	9,769	-	-	9,769
Short-term borrowings	12,000	-	-	12,000
Long-term debt	10,000	15,000	-	25,000
Other interest bearing liabilities	1,593	-	-	1,593
Total Interest Bearing Liabilities	295,482	102,592	12,045	410,119
Gap	$ (156,145)	$ 116,406	$ 167,698	$ 127,959
Cumulative Gap	$ (156,145)	$ (39,739)	$ 127,959	
Cumulative sensitivity ratio	0.47	0.90	1.31	
Commercial, financial and agricultural loans maturing after one year with:				
Fixed interest rates		$ 12,278	$ 8,357	$ 20,635
Variable interest rates		14,508	4,962	19,470
Total		$ 26,786	$ 13,319	$ 40,105
Certificates of Deposit over $100,000				
Maturing within 3 months				$ 4,489
Maturing within 3 to 6 months				1,681
Maturing within 6 to 12 months				2,908
Maturing after 1 year				26,814
				$ 35,892

Investment Portfolio Risk

Management considers its investment portfolio risk as the amount of appreciation or depreciation the investment portfolio will sustain when interest rates change. The securities portfolio will decline in value when interest rates rise and increase in value when interest rates decline. Securities with long maturities, excessive optionality (as a result of call features) and unusual indexes tend to produce the most market risk during interest rate movements. Rate shocks of minus 100 and plus 100, 200, 300 and 400 basis points were applied to the securities portfolio to determine how Tier 1 capital would be affected if the securities portfolio had to be liquidated and all gains and losses were recognized. The test revealed that, as of December 31, 2017, the risk-based capital ratio would remain adequate under these scenarios.

Economic Risk

Economic risk is the risk that the long-term or underlying value of the Company will change if interest rates change. Economic value of equity (EVE) represents the change in the value of the balance sheet without regard to business continuity. Rate shocks are applied to all financial assets and liabilities, using parallel and non-parallel rate shifts of 100 to 400 basis points to estimate the change in EVE under the various hypothetical scenarios. As of December 31, 2017, in a rising rate environment, the modeling results indicate that the Company's liabilities would increase in value slightly more than assets would lose value. A non-parallel 200 basis point increase shock in rates produced an estimated 3.3% increase in EVE, indicating a stable value well within Juniata's policy guidelines.

OFF-BALANCE SHEET ARRANGEMENTS

The Company has numerous off-balance sheet loan obligations that exist in order to meet the financing needs of its customers. These financial instruments include commitments to extend credit, unused lines of credit and letters of credit. Because many commitments are expected to expire without being drawn upon, the total commitment amounts do not necessarily represent future cash requirements. These instruments involve, to varying degrees, elements of credit and interest rate risk that are not recognized in the consolidated financial statements. The Company does not expect that these commitments will have an adverse effect on its liquidity position.

Exposure to credit loss in the event of non-performance by the other party to the financial instrument for commitments to extend credit and financial guarantees written is represented by the contractual notional amount of those instruments. The Company uses the same credit policies in making these commitments as it does for on-balance sheet instruments.

The Company had outstanding loan origination commitments aggregating $77,023,000 and $56,095,000 at December 31, 2017 and 2016, respectively. In addition, the Company had $3,150,000 and $3,889,000 outstanding in unused lines of credit commitments extended to its customers at December 31, 2017 and 2016, respectively.

Letters of credit are instruments issued by the Company that guarantee payment by the Bank to the beneficiary in the event of default by the Company's customer in the non-performance of an obligation or service. Most letters of credit are extended for a one-year period. The credit risk involved in issuing letters of credit is essentially the same as that involved in extending loan facilities to customers. The Company holds collateral supporting those commitments for which collateral is deemed necessary. The amount of the liability as of December 31, 2017 and 2016 for guarantees under letters of credit issued is not material.

The maximum undiscounted exposure related to these guarantees at December 31, 2017 was $2,541,000, and the approximate value of underlying collateral upon liquidation that would be expected to cover this maximum potential exposure was $14,298,000.

In 2017, the Company executed renewal agreements for technology outsourcing services through two outside service bureaus. Both agreements provide for termination fees if the Company cancels the services prior to the end of the 7-year commitment period that runs through May 31, 2024. At December 31, 2017, termination fees are estimated to be approximately $1,976,000 and $1,822,000, respectively, on the two contracts. The termination fees would decrease by approximately 15% in each succeeding year through 2024. Since the Company does not expect to terminate these services with either vendor prior to the end of the commitment periods, no liability has been recorded as of December 31, 2017.

EFFECTS OF INFLATION

The performance of a bank is affected more by changes in interest rates than by inflation; therefore, the effect of inflation is normally not as significant to the Company as it is to other businesses and industries. During periods of high inflation, the money supply usually increases and banks normally experience above average growth in assets, loans and deposits. A bank's operating expenses may increase during inflationary times as the price of goods and services increase.

A bank's performance is also affected during recessionary periods. In times of recession, a bank usually experiences a tightening on its earning assets and on its profits. A recession is usually an indicator of higher unemployment rates, which could mean an increase in the number of nonperforming loans because of continued layoffs and other deterioration of consumers' financial condition.

REPORT ON MANAGEMENT'S ASSESSMENT OF INTERNAL CONTROL OVER FINANCIAL REPORTING

Management is responsible for the preparation, integrity and fair presentation of the consolidated financial statements included in this Annual Report on Form 10-K. The consolidated financial statements and notes included in this annual report have been prepared in conformity with accounting principles generally accepted in the United States of America, and as such, include some amounts that are based on management's best estimates and judgments.

The Company's management is responsible for establishing and maintaining effective internal control over financial reporting. The system of internal control over financial reporting, as it relates to the financial statements, is evaluated for effectiveness by management and tested for reliability through a program of internal audits and management testing and review. Actions are taken to correct potential deficiencies as they are identified. Any system of internal control, no matter how well designed, has inherent limitations, including the possibility that a control can be circumvented or overridden and misstatements due to error or fraud may occur and not be detected. Also, because of changes in conditions, internal control effectiveness may vary over time. Accordingly, even an effective system of internal control will provide only a reasonable assurance with respect to financial statement preparation.

Management assessed the effectiveness of the Company's internal control over financial reporting as of December 31, 2017. In making this assessment, it used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in Internal Control-Integrated Framework (2013).

Based on our assessment, management concluded that as of December 31, 2017, the Company's internal control over financial reporting is effective and meets the criteria of the *Internal Control-Integrated Framework (2013)*.

The independent registered public accounting firm that audited the consolidated financial statements included in the annual report has issued an attestation report on the Company's internal control over financial reporting.

Marcie A. Barber,
President and Chief Executive Officer

JoAnn N. McMinn,
Chief Financial Officer

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM ON EFFECTIVENESS OF INTERNAL CONTROL OVER FINANCIAL REPORTING

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Shareholders and Board of Directors
Juniata Valley Financial Corp.
Mifflintown, Pennsylvania

Opinion on Internal Control over Financial Reporting

We have audited Juniata Valley Financial Corp., and its wholly-owned subsidiary, The Juniata Valley Bank's (the "Company's") internal control over financial reporting as of December 31, 2017, based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission (the "COSO criteria"). In our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2017, based on the COSO criteria.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) ("PCAOB"), the consolidated statement of financial position of the Company as of December 31, 2017 and 2016, the related consolidated statements of income, comprehensive income, stockholders' equity, and cash flows for each of the three years in the period ended December 31, 2017, and the related notes, and our report dated March 16, 2018 expressed an unqualified opinion thereon.

Basis for Opinion

The Company's management is responsible 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 "Item 9A, Report on Management's Assessment of Internal Control over Financial Reporting". Our responsibility is to express an opinion on the Company's internal control over financial reporting based on our audit. We are a public accounting firm registered with the PCAOB and are required to be independent with respect to the Company in accordance with U.S. federal securities laws and the applicable rules and regulations of the Securities and Exchange Commission and the PCAOB.

We conducted our audit of internal control over financial reporting in accordance with the standards of the PCAOB. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. Our audit 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. Our audit also included performing such other procedures as we considered necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinion.

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.

(Signed BDO USA, LLP)
Harrisburg, Pennsylvania
March 16, 2018

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM ON CONSOLIDATED FINANCIAL STATEMENTS

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

Shareholders and Board of Directors
Juniata Valley Financial Corp.
Mifflintown, Pennsylvania

Opinion on the Consolidated Financial Statements

We have audited the accompanying consolidated statements of financial condition of Juniata Valley Financial Corp., and its wholly-owned subsidiary, The Juniata Valley Bank, (the “Company”) as of December 31, 2017 and 2016, the related consolidated statements of income, comprehensive income, stockholders’ equity, and cash flows for each of the three years in the period ended December 31, 2017, and the related notes (collectively referred to as the “consolidated financial statements”). In our opinion, the consolidated financial statements present fairly, in all material respects, the financial position of the Company and subsidiaries at December 31, 2017 and 2016, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2017, in conformity with accounting principles generally accepted in the United States of America.

We also have audited, in accordance with the standards of the Public Company Accounting Oversight Board (United States) (“PCAOB”), the Company’s internal control over financial reporting as of December 31, 2017, based on criteria established in Internal Control – Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (“COSO”) and our report dated March 16, 2018 expressed an unqualified opinion thereon.

Basis for Opinion

These consolidated financial statements are the responsibility of the Company’s management. Our responsibility is to express an opinion on the Company’s consolidated financial statements based on our audits. We are a public accounting firm registered with the 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 audit to obtain reasonable assurance about whether the consolidated financial statements are free of material misstatement, whether due to error or fraud.

Our audits included performing procedures to assess the risks of material misstatement of the consolidated 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 consolidated 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 consolidated financial statements. We believe that our audits provide a reasonable basis for our opinion.

We have served as the Company’s auditor since 2013.

(Signed BDO USA, LLP)
Harrisburg, Pennsylvania
March 16, 2018

JUNIATA VALLEY FINANCIAL CORP. AND SUBSIDIARY
CONSOLIDATED STATEMENTS OF FINANCIAL CONDITION

(Dollars in thousands, except share and per share data)	December 31, 2017	December 31, 2016
ASSETS		
Cash and due from banks	$ 9,839	$ 9,464
Interest bearing deposits with banks	58	95
Cash and cash equivalents	9,897	9,559
Interest bearing time deposits with banks	350	350
Securities available for sale	153,824	150,488
Restricted investment in bank stock	3,104	3,610
Investment in unconsolidated subsidiary	4,812	4,703
Total loans	383,904	378,297
Less: Allowance for loan losses	(2,939)	(2,723)
Total loans, net of allowance for loan losses	380,965	375,574
Premises and equipment, net	8,887	6,857
Other real estate owned	355	638
Bank owned life insurance and annuities	14,972	14,631
Investment in low income housing partnerships	5,245	3,812
Core deposit and other intangible	195	262
Goodwill	5,448	5,448
Mortgage servicing rights	225	205
Accrued interest receivable and other assets	3,666	4,217
Total assets	$ 591,945	$ 580,354
LIABILITIES AND STOCKHOLDERS' EQUITY		
Liabilities:		
Deposits:		
Non-interest bearing	$ 115,911	$ 104,006
Interest bearing	361,757	351,816
Total deposits	477,668	455,822
Securities sold under agreements to repurchase	9,769	4,496
Short-term borrowings	12,000	27,700
Long-term debt	25,000	25,000
Other interest bearing liabilities	1,593	1,545
Accrued interest payable and other liabilities	6,528	6,701
Total liabilities	532,558	521,264
Stockholders' Equity:		
Preferred stock, no par value:		
Authorized - 500,000 shares, none issued	-	-
Common stock, par value $1.00 per share:		
Authorized 20,000,000 shares		
Issued -		
4,811,611 shares at December 31, 2017;		
4,805,000 shares at December 31, 2016		
Outstanding -		
4,767,656 shares at December 31, 2017;		
4,755,630 shares at December 31, 2016	4,811	4,805
Surplus	18,565	18,476
Retained earnings	40,876	39,945
Accumulated other comprehensive loss	(4,034)	(3,209)
Cost of common stock in Treasury:		
43,955 shares at December 31, 2017;		
49,370 shares at December 31, 2016	(831)	(927)
Total stockholders' equity	59,387	59,090
Total liabilities and stockholders' equity	$ 591,945	$ 580,354

See Notes to Consolidated Financial Statements

JUNIATA VALLEY FINANCIAL CORP. AND SUBSIDIARY CONSOLIDATED STATEMENTS OF INCOME

(Dollars in thousands, except share and per share data)	Years Ended December 31, 2017	2016	2015
Interest income:			
Loans, including fees	$ 18,005	$ 17,559	$ 14,645
Taxable securities	2,888	2,475	2,267
Tax-exempt securities	451	418	465
Other interest income	30	17	2
Total interest income	21,374	20,469	17,379
Interest expense:			
Deposits	2,129	1,811	1,677
Securities sold under agreements to repurchase	31	5	5
Short-term borrowings	295	94	63
Long-term debt	369	328	275
Other interest bearing liabilities	31	30	22
Total interest expense	2,855	2,268	2,042
Net interest income	18,519	18,201	15,337
Provision for loan losses	439	466	502
Net interest income after provision for loan losses	18,080	17,735	14,835
Non-interest income:			
Customer service fees	1,747	1,736	1,563
Debit card fee income	1,120	1,044	866
Earnings on bank owned life insurance and annuities	352	371	378
Trust fees	446	454	396
Commissions from sales of non-deposit products	173	223	347
Income from unconsolidated subsidiary	167	222	238
Fees derived from loan activity	267	232	187
Mortgage banking income	214	158	190
Gain on sales and calls of securities	512	218	13
Gain on sales of loans	-	113	-
Gain from life insurance proceeds	-	364	98
Other non-interest income	294	283	229
Total non-interest income	5,292	5,418	4,505
Non-interest expense:			
Employee compensation expense	7,159	6,883	6,095
Employee benefits	2,837	2,301	1,816
Occupancy	1,173	1,137	1,039
Equipment	711	661	519
Data processing expense	1,751	1,807	1,589
Director compensation	241	238	192
Professional fees	571	539	430
Taxes, other than income	463	437	368
FDIC Insurance premiums	334	375	318
Loss (gain) on sales of other real estate owned	(8)	150	(14)
Amortization of intangibles	67	105	51
Amortization of investment in low-income housing partnerships	612	479	479
Merger and acquisition expense	13	347	1,806
Other non-interest expense	1,851	1,719	1,511
Total non-interest expense	17,775	17,178	16,199
Income before income taxes	5,597	5,975	3,141
Provision for income taxes	1,060	819	83
Net income	$ 4,537	$ 5,156	$ 3,058
Earnings per share			
Basic	$ 0.95	$ 1.07	$ 0.72
Diluted	$ 0.95	$ 1.07	$ 0.72
Cash dividends declared per share	$ 0.88	$ 0.88	$ 0.88
Weighted average basic shares outstanding	4,765,165	4,801,245	4,240,319
Weighted average diluted shares outstanding	4,775,505	4,802,175	4,241,265

See Notes to Consolidated Financial Statements

JUNIATA VALLEY FINANCIAL CORP. AND SUBSIDIARY
CONSOLIDATED STATEMENTS OF COMPREHENSIVE INCOME

(Dollars in thousands)

	Year ended December 31, 2017		
	Pre-Tax Amount	Tax Effect	Net-of-Tax Amount
Net income	$ 5,597	$ (1,060)	$ 4,537
Other comprehensive income (loss):			
Available for sale securities:			
Unrealized holding loss arising during the period	(318)	108	(210)
Unrealized holding gain from unconsolidated subsidiary	3	-	3
Less reclassification adjustment for gains included in net income (1) (3)	(512)	174	(338)
Unrecognized pension net gain (2) (3)	1,024	(348)	676
Unrecognized pension loss due to change in assumptions (2) (3)	(1,141)	388	(753)
Amortization of pension net actuarial loss (2) (3)	584	(199)	385
Other comprehensive loss	(360)	123	(237)
Total comprehensive income	$ 5,237	$ (937)	$ 4,300

	Year ended December 31, 2016		
	Pre-Tax Amount	Tax Effect	Net-of-Tax Amount
Net income	$ 5,975	$ (819)	$ 5,156
Other comprehensive income (loss):			
Available for sale securities:			
Unrealized holding loss arising during the period	(1,215)	413	(802)
Unrealized holding loss from unconsolidated subsidiary	(17)	-	(17)
Less reclassification adjustment for gains included in net income (1) (3)	(218)	74	(144)
Unrecognized pension net loss (2) (3)	(9)	3	(6)
Unrecognized pension loss due to change in assumptions (2) (3)	(305)	104	(201)
Amortization of pension net actuarial loss (2) (3)	248	(84)	164
Other comprehensive loss	(1,516)	510	(1,006)
Total comprehensive income	$ 4,459	$ (309)	$ 4,150

	Year ended December 31, 2015		
	Pre-Tax Amount	Tax Effect	Net-of-Tax Amount
Net income	$ 3,141	$ (83)	$ 3,058
Other comprehensive income (loss):			
Available for sale securities:			
Unrealized holding loss arising during the period	(291)	99	(192)
Unrealized holding gains from unconsolidated subsidiary	1	-	1
Less reclassification adjustment for gains included in net income (1) (3)	(13)	4	(9)
Unrecognized pension net loss (2) (3)	(571)	194	(377)
Unrecognized pension gain due to change in assumptions (2) (3)	623	(212)	411
Amortization of pension net actuarial loss (2) (3)	242	(82)	160
Other comprehensive loss	(9)	3	(6)
Total comprehensive income	$ 3,132	$ (80)	$ 3,052

(1) Amounts are included in (loss) gain on calls of securities on the Consolidated Statements of Income as a separate element within total non-interest income.
(2) Amounts are included in the computation of net periodic benefit cost and are included in employee benefits expense on the Consolidated Statements of Income as a separate element within total non-interest expense.
(3) Income tax amounts are included in the provision for income taxes on the Consolidated Statements of Income.

See Notes to Consolidated Financial Statements

JUNIATA VALLEY FINANCIAL CORP. AND SUBSIDIARY
CONSOLIDATED STATEMENTS OF STOCKHOLDERS' EQUITY

	Years Ended December 31, 2017, 2016 and 2015						
	Number of Shares Outstanding	Common Stock	Surplus	Retained Earnings	Accumulated Other Comprehensive Loss	Treasury Stock	Total Stockholders' Equity
	(Dollars in thousands, except per share data)						
Balance at January 1, 2015	4,187,441	$ 4,746	$ 18,409	$ 39,644	$ (2,197)	$ (10,746)	$ 49,856
Net income				3,058			3,058
Other comprehensive loss					(6)		(6)
Cash dividends at $0.88 per share				(3,687)			(3,687)
Stock-based compensation activity			57				57
Purchase of treasury stock	(3,504)					(63)	(63)
Treasury stock issued for stock plans	6,334		(12)			122	110
Common stock issued to FNBPA stockholders	607,815	52	(102)			10,687	10,637
Balance at December 31, 2015	4,798,086	4,798	18,352	39,015	(2,203)	-	59,962
Net income				5,156			5,156
Other comprehensive loss					(1,006)		(1,006)
Cash dividends at $0.88 per share				(4,226)			(4,226)
Stock-based compensation activity			67				67
Purchase of treasury stock	(49,370)					(927)	(927)
Common stock issued for stock plans	6,914	7	57				64
Balance at December 31, 2016	4,755,630	4,805	18,476	39,945	(3,209)	(927)	59,090
Net income				4,537			4,537
Other comprehensive loss					(237)		(237)
Reclassification due to tax reform				588	(588)		-
Cash dividends at $0.88 per share				(4,194)			(4,194)
Stock-based compensation activity			71				71
Purchase of treasury stock	(4,289)					(86)	(86)
Treasury stock issued for stock plans	9,704		(10)			182	172
Common stock issued for stock plans	6,611	6	28				34
Balance at December 31, 2017	4,767,656	$ 4,811	$ 18,565	$ 40,876	$ (4,034)	$ (831)	$ 59,387

See Notes to Consolidated Financial Statements

JUNIATA VALLEY FINANCIAL CORP. AND SUBSIDIARY
CONSOLIDATED STATEMENTS OF CASH FLOWS

(Dollars in thousands)	Years Ended December 31, 2017	2016	2015
Operating activities:			
Net income	$ 4,537	$ 5,156	$ 3,058
Adjustments to reconcile net income to net cash provided by operating activities:			
Provision for loan losses	439	466	502
Depreciation	672	595	506
Net amortization of securities premiums	650	740	764
Net amortization of loan origination costs	75	63	68
Deferred net loan origination costs	(410)	(124)	(139)
Amortization of core deposit intangible	67	105	51
Amortization of investment in low income housing partnership	612	479	479
Net accretion (amortization) of purchase fair value adjustments	17	(9)	(3)
Net realized gain on sales and calls of securities	(512)	(218)	(13)
Net (gain) loss on sales of other real estate owned	(8)	148	(14)
Earnings on bank owned life insurance and annuities	(352)	(371)	(378)
Deferred income tax expense (benefit)	681	320	(66)
Equity in earnings of unconsolidated subsidiary, net of dividends of $61, $55 and $48	(106)	(167)	(183)
Stock-based compensation expense	71	67	57
Mortgage loans originated for sale	(4,170)	(1,582)	(3,385)
Proceeds from loans sold to others	4,257	1,822	3,438
Gains on sales of loans	(107)	(228)	(190)
Gain from life insurance proceeds	-	(364)	(98)
(Increase) decrease in accrued interest receivable and other assets	(6)	461	292
Increase (decrease) in accrued interest payable and other liabilities	393	(1,056)	497
Net cash provided by operating activities	6,800	6,303	5,243
Investing activities:			
Purchases of:			
Securities available for sale	(42,510)	(48,195)	(67,047)
FHLB stock	-	(111)	(704)
Premises and equipment	(2,703)	(542)	(463)
Bank owned life insurance and annuities	(40)	(53)	(54)
Proceeds from:			
Sales of securities available for sale	21,799	4,304	53,213
Maturities of and principal repayments on securities available for sale	16,322	43,835	39,776
Redemption of FHLB stock	586	-	-
Sale of student loans	-	1,796	-
Bank owned life insurance and annuities	-	-	34
Life insurance claims	-	1,016	357
Sale of other real estate owned	1,007	144	644
Sale of other assets	25	20	-
Net cash received from acquisition of FNBPA	-	-	1,244
Investment in low income housing partnerships	(2,045)	(923)	-
Net increase in loans	(6,239)	(1,750)	(38,004)
Net cash used in investing activities	(13,798)	(459)	(11,004)
Financing activities:			
Net increase (decrease) in deposits	21,837	(1,293)	(1,421)
Net (decrease) increase in short-term borrowings and securities sold under agreements to repurchase	(10,427)	(2,861)	14,513
Issuance of long-term debt	-	10,000	-
Repayment of long-term debt	-	(7,500)	-
Cash dividends	(4,194)	(4,226)	(3,687)
Purchase of treasury stock	(86)	(927)	(63)
Common stock issued for employee stock plans	206	64	110
Net cash provided by (used in) financing activities	7,336	(6,743)	9,452
Net increase (decrease) in cash and cash equivalents	338	(899)	3,691
Cash and cash equivalents at beginning of year	9,559	10,458	6,767
Cash and cash equivalents at end of year	$ 9,897	$ 9,559	$ 10,458

(Dollars in thousands)	Years Ended December 31, 2017	2016	2015
Supplemental information:			
Interest paid	$ 2,823	$ 2,237	$ 2,105
Income taxes paid	735	200	100
Supplemental schedule of noncash investing and financing activities:			
Transfer of loans to other real estate owned	$ 716	$ 313	$ 901
Transfer of loans to other assets	21	20	-
Securities sold settling after year-end	-	104	-

Supplemental schedule of assets and liabilities in connection with merger: *(Dollars In thousands)*	**Years Ended December 31, 2015**
Assets acquired:	
Interest bearing time deposits with banks	$ 350
Securities	35,458
Loans	47,055
Property and equipment	419
Accrued interest receivable	550
Core deposit and other intangible assets	343
Deferred income taxes	732
Other real estate owned	114
Other assets	31
	$ 85,052
Liabilities assumed:	
Deposits	$ 77,665
Pension liability	1,248
Accrued interest payable and other liabilities	81
	$ 78,994

See Notes to Consolidated Financial Statements

JUNIATA VALLEY FINANCIAL CORP. AND SUBSIDIARY

NOTES TO CONSOLIDATED FINANCIAL STATEMENTS YEARS ENDED DECEMBER 31, 2017, 2016 AND 2015

1. NATURE OF OPERATIONS

Juniata Valley Financial Corp. ("Juniata" or the "Company") is a bank holding company operating in central Pennsylvania for the purpose of delivering financial services within its local market. Through its wholly-owned banking subsidiary, The Juniata Valley Bank (the "Bank"), Juniata provides retail and commercial banking and other financial services through 15 branch locations located in Juniata, Mifflin, Perry, McKean, Potter and Huntingdon Counties. Additionally, in Mifflin, Juniata and Centre Counties, the Company maintains three offices for loan production, trust services and wealth management sales. Each of the Company's lines of business are part of the same reporting segment, whose operating results are regularly reviewed and managed by a centralized executive management group. As a result, the Company has only one reportable segment for financial reporting purposes. The Bank provides a full range of banking services, including online and mobile banking, an automatic teller machine network, checking accounts, identity protection products for consumers, savings accounts, money market accounts, fixed rate certificates of deposit, club accounts, secured and unsecured commercial and consumer loans, construction and mortgage loans, safe deposit facilities and credit loans with overdraft checking protection. The Bank also provides a variety of trust services. The Company has a contractual arrangement with a broker-dealer to allow the offering of annuities, mutual funds, stock and bond brokerage services and long-term care insurance to its local market. Most of the Company's commercial customers are small and mid-sized businesses operating in the Bank's local service area. The Bank operates under a state bank charter and is subject to regulation by the Pennsylvania Department of Banking and the Federal Deposit Insurance Corporation. Juniata is subject to regulation by the Board of Governors of the Federal Reserve Bank and the Pennsylvania Department of Banking and Securities.

2. SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES

The accounting policies of Juniata Valley Financial Corp. and its wholly owned subsidiary conform to accounting principles generally accepted in the United States of America ("GAAP") and to general financial services industry practices. A summary of the more significant accounting policies applied in the preparation of the accompanying consolidated financial statements follows.

Principles of consolidation

The consolidated financial statements include the accounts of Juniata Valley Financial Corp. and its wholly owned subsidiary, The Juniata Valley Bank. All significant intercompany transactions and balances have been eliminated.

Use of estimates

The preparation of financial statements in conformity with U.S. generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates. Material estimates that are particularly susceptible to significant change in the near term relate to the determination of the allowance for loan losses, the determination of other-than-temporary impairment on securities, impairment of goodwill and the value of assets acquired and liabilities assumed in business combinations.

Basis of presentation

There were no amounts previously reported that have been reclassified to conform to the consolidated financial statement presentation for 2017.

Significant group concentrations of credit risk

Most of the Company's activities are with customers located within the Juniata Valley and the JVB Northern Tier regions. Note 6 discusses the types of securities in which the Company invests. Note 7 discusses the types of lending in which the Company engages.

As of December 31, 2017, credit exposure to lessors of residential buildings and dwellings represented 63.7% of capital, credit exposure to hotels and motels represented 53.2% of capital, credit exposure to lessors of non-residential buildings and dwellings represented 39.2% of capital, and credit exposure to continuing care retirement communities represented 37.9% of capital. Otherwise, there were no concentrations of credit to any particular industry equaling more than 25% of total capital. The Bank's business activities are geographically concentrated in the counties of Juniata, Mifflin, Perry, Huntingdon, Centre, Franklin, McKean, Potter and Snyder, Pennsylvania. The Bank has a diversified loan portfolio; however, a substantial portion of its debtors' ability to honor their obligations is dependent upon the economy in central Pennsylvania.

Cash and cash equivalents

For purposes of reporting cash flows, cash and cash equivalents include cash on hand, amounts due from banks, interest bearing demand deposits with banks and federal funds sold. Generally, federal funds are sold for one-day periods.

Interest bearing time deposits with banks

Interest-bearing time deposits with banks consist of certificates of deposits in other banks with maturities within five years.

Securities

Securities classified as available for sale, which include marketable investment securities, are stated at fair value, with the unrealized gains and losses, net of tax, reported as a component of other comprehensive income (loss). Securities classified as available for sale are those securities that the Company intends to hold for an indefinite period of time but not necessarily to maturity. Any decision to sell a security classified as available for sale would be based on various factors, including significant movement in interest rates, changes in maturity mix of the Company's assets and liabilities, liquidity needs, regulatory capital considerations and other similar factors. Investment securities that management has the positive intent and ability to hold until maturity regardless of changes in market conditions, liquidity needs or changes in general economic conditions are classified as held to maturity and are stated at cost, adjusted for amortization of premium and accretion of discount computed by the interest method over their contractual lives. Interest and dividends on investment securities available for sale and held to maturity are recognized as income when earned. Premiums and discounts are recognized in interest income using the interest method over the terms of the securities. Gains or losses on the disposition of securities available for sale are based on the net proceeds and the adjusted carrying amount of the securities sold, determined on a specific identification basis. The Company had no securities classified as held to maturity at December 31, 2017 and 2016.

Accounting Standards Codification ("ASC") Topic 320, *Investments – Debt and Equity Securities*, clarifies the interaction of the factors that should be considered when determining whether a debt security is other-than-temporarily impaired. For debt securities, management must assess whether (a) it has the intent to sell the

security and (b) it is more likely than not that it will be required to sell the security prior to its anticipated recovery. These steps are taken before an assessment is made as to whether the entity will recover the cost basis of the investment. For equity securities, consideration is given to management's intention and ability to hold the securities until recovery of unrealized losses in assessing potential other-than-temporary impairment. More specifically, factors considered to determine other-than-temporary impairment status for individual equity holdings include the length of time the stock has remained in an unrealized loss position, the percentage of unrealized loss compared to the carrying cost of the stock, dividend reduction or suspension, market analyst reviews and expectations, and other pertinent factors that would affect expectations for recovery or further decline.

In instances when a determination is made that an other-than-temporary impairment exists and the entity does not intend to sell the debt security and it is not more likely than not that it will be required to sell the debt security prior to its anticipated recovery, the other-than-temporary impairment is separated into the amount of the total other-than-temporary impairment related to a decrease in cash flows expected to be collected from the debt security (the credit loss) and the amount of the total other-than-temporary impairment related to all other factors. The amount of the total other-than-temporary impairment related to the credit loss is recognized in earnings. The amount of the total other-than-temporary impairment related to all other factors is recognized in other comprehensive (loss) income.

Management determines the appropriate classification of debt securities at the time of purchase and re-evaluates such designation as of each balance sheet date.

Restricted Investment in Federal Home Loan Bank Stock

The Bank owns restricted stock investments in the Federal Home Loan Bank and the Atlantic Community Bankers Bank ("ACBB"). Federal law requires a member institution of the Federal Home Loan Bank to hold stock according to a predetermined formula. Both the FHLB and ACBB stock is carried at cost.

Management evaluates the restricted stock for impairment on an annual basis. Management's determination of whether these investments are impaired is based on management's assessment of the ultimate recoverability of the cost of these investments rather than by recognizing temporary declines in value. The recoverability of the cost of the FHLB investments is influenced by criteria such as (1) the significance of the decline in net assets of the FHLB as compared to the capital stock amount for the FHLB and the length of time this situation has persisted, (2) commitments by the FHLB to make payments required by law or regulation and the level of such payments in relation to the operating performance of the FHLB, and (3) the impact of legislative and regulatory changes on institutions and, accordingly, on the customer base of the FHLB.

Management believes no impairment charge was necessary related to the FHLB or ACBB restricted stock during 2017, 2016 or 2015.

Loans

Loans that the Company has the intent and ability to hold for the foreseeable future or until maturity or payoff are stated at the outstanding unpaid principal balances, net of any deferred fees or costs and the allowance for loan losses. Interest income on all loans, other than nonaccrual loans, is accrued over the term of the loans based on the amount of principal outstanding. Unearned income is amortized to income over the life of the loans, using the interest method.

The loan portfolio is segmented into commercial and consumer loans. Commercial loans are comprised of the following classes of loans: (1) commercial, financial and agricultural, (2) commercial real estate, (3) real estate construction, (4) mortgage loans and (5) obligations of states and political subdivisions. Consumer loans are comprised of (4) mortgage loans and (6) personal loans.

Loans on which the accrual of interest has been discontinued are designated as non-accrual loans. Accrual of interest on loans is generally discontinued when the contractual payment of principal or interest has become 90 days past due or reasonable doubt exists as to the full, timely collection of principal or interest. However, it is the Company's policy to continue to accrue interest on loans over 90 days past due as long as (1) they are guaranteed or well secured and (2) there is an effective means of collection in process. When a loan is placed on non-accrual status, all unpaid interest credited to income in the current year is reversed against current period income and unpaid interest accrued in prior years is charged against the allowance for loan losses. Interest received on nonaccrual loans generally is either applied against principal or reported as interest income, according to management's judgment as to the collectability of principal. Generally, accruals are resumed on loans only when the obligation is brought fully current with respect to interest and principal, has performed in accordance with the contractual terms for a reasonable period of time and the ultimate collectability of the total contractual principal and interest is no longer in doubt.

The Company originates loans in the portfolio with the intent to hold them until maturity. At the time the Company no longer intends to hold loans to maturity based on asset/liability management practices, the Company transfers loans from its portfolio to held for sale at fair value. Any write-down recorded upon transfer is charged against the allowance for loan losses. Any write-downs recorded after the initial transfers are recorded as a charge to other non-interest expense. Gains or losses recognized upon sale are included in other non-interest income.

Loan origination fees and costs

Loan origination fees and related direct origination costs for a given loan are deferred and amortized over the life of the loan on a level-yield basis as an adjustment to interest income over the contractual life of the loan. As of December 31, 2017 and 2016, the amount of net unamortized origination fees carried as an adjustment to outstanding loan balances was $52,000 and $103,000, respectively.

Allowance for credit losses

The allowance for credit losses consists of the allowance for loan losses and the reserve for unfunded lending commitments. The allowance for loan losses ("allowance") represents management's estimate of losses inherent in the loan portfolio as of the consolidated statement of financial condition date and is recorded as a reduction to loans. The reserve for unfunded lending commitments represents management's estimate of losses inherent in its unfunded lending commitments and is recorded in other liabilities on the consolidated statement of financial condition, when necessary. The amount of the reserve for unfunded lending commitments is not material to the consolidated financial statements. The allowance for loan losses is increased by the provision for loan losses, and decreased by charge-offs, net of recoveries. Loans deemed to be uncollectible are charged against the allowance for loan losses, and subsequent recoveries, if any, are credited to the allowance.

For financial reporting purposes, the provision for loan losses charged to current operating income is based on management's estimates, and actual losses may vary from estimates. These estimates are reviewed and adjusted at least quarterly and are reported in earnings in the periods in which they become known.

Loans included in any class are considered for charge-off when:

- principal or interest has been in default for 120 days or more and for which no payment has been received during the previous four months;
- all collateral securing the loan has been liquidated and a deficiency balance remains;
- a bankruptcy notice is received for an unsecured loan;
- a confirming loss event has occurred; or
- the loan is deemed to be uncollectible for any other reason.

The allowance for loan losses is maintained at a level considered adequate to offset probable losses on the Company's existing loans. The analysis of the allowance for loan losses relies heavily on changes in observable trends that may indicate potential credit weaknesses. Management's periodic evaluation of the adequacy of the allowance is based on the Bank's past loan loss experience, known and inherent risks in the portfolio, adverse situations that may affect the borrower's ability to repay, the estimated value of any underlying collateral, composition of the loan portfolio, current economic conditions and other relevant factors. This evaluation is inherently subjective as it requires material estimates that may be susceptible to significant revision as more information becomes available.

In addition, regulatory agencies, as an integral part of their examination process, periodically review the Company's allowance for loan losses and may require the Company to recognize additions to the allowance for loan losses based on their judgments about information available to them at the time of their examination, which may not be currently available to management. Based on management's comprehensive analysis of the loan portfolio, management believes the level of the allowance for loan losses as of December 31, 2017 was adequate.

There are two components of the allowance: a specific component for loans that are deemed to be impaired; and a general component for contingencies.

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

The estimated fair values of substantially all of the Company's impaired loans are measured based on the estimated fair value of the loan's collateral. For commercial loans secured with real estate, estimated fair values are determined primarily through third-party appraisals. When a real estate secured loan becomes impaired, a decision is made regarding whether an updated certified appraisal of the real estate is necessary. This decision is based on various considerations, including the age of the most recent appraisal, the loan-to-value ratio based on the current appraisal and the condition of the property. Appraised values may be discounted to arrive at the estimated selling price of the collateral, which is considered to be the estimated fair value. The discounts also include the estimated costs to sell the property. For commercial loans secured by non-real estate collateral, estimated fair values are determined based on the borrower's financial statements, inventory reports, aging accounts receivable, equipment appraisals or invoices. Indications of value from these sources are generally discounted based on the age of the financial information or the quality of the assets. For such loans that are classified as impaired, an allowance is established when the discounted cash flows (or collateral value or observable market price) of the impaired loan is lower than the carrying value of that loan. The Company generally does not separately identify individual consumer segment loans for impairment analysis, unless such loans are subject to a restructuring agreement.

Loans whose terms are modified are classified as troubled debt restructurings if the Company grants borrowers concessions and it is deemed that those borrowers are experiencing financial difficulty. Concessions granted under a troubled debt restructuring generally involve a below-market interest rate based on the loan's risk characteristics or an extension of a loan's stated maturity date. Nonaccrual troubled debt restructurings are restored to accrual status if principal and interest payments, under the modified terms, are current for a sustained period of time after modification. Loans classified as troubled debt restructurings are designated as impaired.

The component of the allowance for contingencies relates to other loans that have been segmented into risk rated categories. The borrower's overall financial condition, repayment sources, guarantors and value of collateral, if appropriate, are evaluated quarterly or when credit deficiencies arise, such as delinquent loan payments. Credit quality risk ratings include regulatory classifications of special mention, substandard, doubtful and loss. Loans classified as special mention have potential weaknesses that deserve management's close attention. If uncorrected, the potential weaknesses may result in deterioration of the repayment prospects. Loans classified as substandard have one or more well-defined weaknesses that jeopardize the liquidation of the debt. Substandard loans include loans that are inadequately protected by the current net worth and paying capacity of the obligor or of the collateral pledged, if any. Loans classified doubtful have all the weaknesses inherent in loans classified substandard with the added characteristic that collection or liquidation in full, on the basis of current conditions and facts, is highly improbable. Loans classified as a loss are considered uncollectible and are charged to the allowance for loan losses. Loans not classified are rated pass. Specific reserves may be established for larger, individual classified loans as a result of this evaluation, as discussed above. Remaining loans are categorized into large groups of smaller balance homogeneous loans and are collectively evaluated for impairment. This computation is generally based on historical loss experience adjusted for qualitative factors. During 2017, the historical loss experience look-back period was changed from ten years to five years in conjunction with an increase in the number of homogeneous loan groups. Increasing the number of portfolio segments allows for a more granular approach to the analysis, and historical loss experience is more specific to the selected loan types. Management asserts that evaluating a look-back period longer than five years is no longer appropriate since more recent information is generally considered to be the most relevant. As indicated above, the historical loss experience is averaged over a five-year look-back period for each of the defined portfolio segments. The qualitative risk factors are reviewed for relevancy each quarter and include:

- National, regional and local economic and business conditions, as well as the condition of various market segments, including the underlying collateral for collateral dependent loans;
- Nature and volume of the portfolio and terms of loans;
- Experience, ability and depth of lending and credit management and staff;
- Volume and severity of past due, classified and nonaccrual loans, as well as other loan modifications;
- Existence and effect of any concentrations of credit and changes in the level of such concentrations; and
- Effect of external factors, including competition, legal and regulatory requirements; and
- Risk from change in the historical look-back period.

Each factor is assigned a value to reflect improving, stable or declining conditions based on management's best judgment using relevant information available at the time of the evaluation. Adjustments to the factors are supported through documentation of changes in conditions in a narrative accompanying the allowance for loan loss calculation.

Acquired Loans

Loans that Juniata acquires through business combinations are recorded at fair value with no carryover of the related 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. The nonaccretable discount includes estimated future credit losses expected to be incurred over the life of the loan. Subsequent decreases to the expected cash flows will require Juniata to evaluate the need for an additional allowance for credit losses. Subsequent improvement in expected cash flows will result in the reversal of a corresponding amount of the nonaccretable discount which Juniata will then reclassify as accretable discount that will be recognized into interest income over the remaining life of the loan.

Acquired loans that met the criteria for impaired or nonaccrual of interest prior to the acquisition may be considered performing upon acquisition, regardless of whether the customer is contractually delinquent, if Juniata expects to fully collect the new carrying value (i.e. fair value) of the loans. As such, Juniata may no longer consider the loan to be nonaccrual or 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.

Loans acquired through business combinations that do not meet the specific criteria of ASC 310-30, but for which a discount is attributable at least in part to credit quality, are also accounted for in accordance with this guidance. As a result, related discounts are recognized subsequently through accretion based on the contractual cash flows of the acquired loans.

Loans Held for Sale

The Company also originates residential mortgage loans with the intent to sell. These individual loans are normally funded by the buyer immediately. The Company maintains servicing rights on these loans. Mortgage servicing rights are recognized as an asset upon the sale of a mortgage loan. A portion of the cost of the loan is allocated to the servicing right based upon relative fair value. Servicing rights are intangible assets and are carried at estimated fair value. Adjustments to fair value are recorded as non-interest income and included in gain on sales of loans in the consolidated statements of income.

In a business combination, the Company may acquire loans which it intends to sell. These loans are assigned a fair value by obtaining actual bids on the loans and adjusting for contingencies in the bids. These loans are carried at lower of cost or market value until sold, adjusted periodically if conditions change before the subsequent sale. Adjustments to fair value and gains or losses recognized upon sale are included in gains on sales of loans which is a component of non-interest income.

Commercial, Financial and Agricultural Lending

The Company originates commercial, financial and agricultural loans primarily to businesses located in its primary market area and surrounding areas. These loans are used for various business purposes, which include short-term loans and lines of credit to finance machinery and equipment purchases, inventory and accounts receivable. Generally, the maximum term for loans extended on machinery and equipment is shorter and does not exceed the projected useful life of such machinery and equipment. Most business lines of credit are written with a five year maturity, subject to an annual review.

Commercial loans are generally secured with short-term assets; however, in many cases, additional collateral, such as real estate, is provided as additional security for the loan. Loan-to-value maximum values have been established by the Company and are specific to the type of collateral. Collateral values may be determined using invoices, inventory reports, accounts receivable aging reports, collateral appraisals, etc.

In underwriting commercial loans, an analysis of the borrower's character, capacity to repay the loan, the adequacy of the borrower's capital and collateral, as well as an evaluation of conditions affecting the borrower, is performed. Analysis of the borrower's past, present and future cash flows is also an important aspect of the Company's analysis.

Concentration analysis assists in identifying industry specific risk inherent in commercial, financial and agricultural lending. Mitigants include the identification of secondary and tertiary sources of repayment and appropriate increases in oversight.

Commercial, financial and agricultural loans generally present a higher level of risk than certain other types of loans, particularly during slow economic conditions.

Commercial Real Estate Lending

The Company engages in commercial real estate lending in its primary market area and surrounding areas. The Company's commercial real estate portfolio is secured primarily by residential housing, commercial buildings, raw land and hotels. Generally, commercial real estate loans have terms that do not exceed 20 years, have loan-to-value ratios of up to 80% of the appraised value of the property and are typically secured by personal guarantees of the borrowers.

As economic conditions deteriorate, the Company reduces its exposure in real estate loans with higher risk characteristics. In underwriting these loans, the Company performs a thorough analysis of the financial condition of the borrower, the borrower's credit history, and the reliability and predictability of the cash flow generated by the property securing the loan. Appraisals on properties securing commercial real estate loans originated by the Company are performed by independent appraisers.

Commercial real estate loans generally present a higher level of risk than certain other types of loans, particularly during slow economic conditions.

Real Estate Construction Lending

The Company engages in real estate construction lending in its primary market area and surrounding areas. The Company's real estate construction lending consists of commercial and residential site development loans, as well as commercial building construction and residential housing construction loans.

The Company's commercial real estate construction loans are generally secured with the subject property, and advances are made in conformity with a pre-determined draw schedule supported by independent inspections. Terms of construction loans depend on the specifics of the project, such as estimated absorption rates, estimated time to complete, etc.

In underwriting commercial real estate construction loans, the Company performs a thorough analysis of the financial condition of the borrower, the borrower's credit history, the reliability and predictability of the cash flow generated by the project using feasibility studies, market data, etc. Appraisals on properties securing commercial real estate loans originated by the Company are performed by independent appraisers.

Real estate construction loans generally present a higher level of risk than certain other types of loans, particularly during slow economic conditions. The difficulty of estimating total construction costs adds to the risk as well.

Mortgage Lending

The Company's real estate mortgage portfolio is comprised of consumer residential mortgages and business loans secured by one-to-four family properties. One-to-four family residential mortgage loan originations, including home equity installment and home equity lines of credit loans, are generated by the Company's marketing efforts, its present customers, walk-in customers and referrals. These loans originate primarily within the Company's market area or with customers primarily from the market area.

The Company offers fixed-rate and adjustable rate mortgage loans with terms up to a maximum of 25-years for both permanent structures and those under construction. The Company's one-to-four family residential mortgage originations are secured primarily by properties located in its primary market area and surrounding areas. The majority of the Company's residential mortgage loans originate with a loan-to-value of 80% or less. Home equity installment loans are secured by the borrower's primary residence with a maximum loan-to-value of 80% and a maximum term of 15 years. Home equity lines of credit are secured by the borrower's primary residence with a maximum loan-to-value of 90% and a maximum term of 20 years.

In underwriting one-to-four family residential real estate loans, the Company evaluates the borrower's ability to make monthly payments, the borrower's repayment history and the value of the property securing the loan. The ability to repay is determined by the borrower's employment history, current financial conditions, and credit background. The analysis is based primarily on the customer's ability to repay and secondarily on the collateral or security. Most properties securing real estate loans made by the Company are appraised by independent fee appraisers. The Company generally requires mortgage loan borrowers to obtain an attorney's title opinion or title insurance, and fire and property insurance (including flood insurance, if necessary) in an amount not less than the amount of the loan. The Company does not engage in sub-prime residential mortgage originations.

Residential mortgage loans and home equity loans generally present a lower level of risk than certain other types of consumer loans because they are secured by the borrower's primary residence. Risk is increased when the Company is in a subordinate position for the loan collateral.

Obligations of States and Political Subdivisions

The Company lends to local municipalities and other tax-exempt organizations. These loans are primarily tax-anticipation notes and, as such, carry little risk. Historically, the Company has never had a loss on any loan of this type.

Personal Lending

The Company offers a variety of secured and unsecured personal loans, including vehicle loans, mobile home loans and loans secured by savings deposits as well as other types of personal loans.

Personal loan terms vary according to the type and value of collateral and creditworthiness of the borrower. In underwriting personal loans, a thorough analysis of the borrower's willingness and financial ability to repay the loan as agreed is performed. The ability to repay is determined by the borrower's employment history, current financial conditions and credit background.

Personal loans may entail greater credit risk than do residential mortgage loans, particularly in the case of personal loans which are unsecured or are secured by rapidly depreciable assets, such as automobiles or recreational equipment. In such cases, any repossessed collateral for a defaulted personal loan may not provide an adequate source of repayment of the outstanding loan balance as a result of the greater likelihood of damage, loss or depreciation. In addition, personal loan collections are dependent on the borrower's continuing financial stability and, thus are more likely to be affected by adverse personal circumstances. Furthermore, the application of various federal and state laws, including bankruptcy and insolvency laws, may limit the amount which can be recovered on such loans.

Other real estate owned

Assets acquired in settlement of mortgage loan indebtedness are recorded as other real estate owned ("OREO") at fair value less estimated costs to sell, establishing a new cost basis. Costs to maintain the assets and subsequent gains and losses attributable to their disposal are included in other expense as realized. No depreciation or amortization expense is recognized. At December 31, 2017 and 2016, the carrying value of other real estate owned was $355,000 and $638,000, respectively.

Goodwill and intangibles

The Company accounts for its business combinations using the purchase accounting method. Purchase accounting requires the total purchase price to be allocated to the estimated fair values of assets acquired and liabilities assumed, including certain intangible assets that must be recognized. Typically, this allocation results in the purchase price exceeding the fair value of net assets acquired, which is recorded as goodwill. Core deposit intangibles are a measure of the value of checking, money market and savings deposits acquired in business combinations accounted for under the purchase method. Core deposit intangibles and other identified intangibles with finite useful lives are amortized over their estimated useful lives.

Goodwill and other intangible assets are tested for impairment annually or when circumstances arise indicating impairment may have occurred. In determining whether impairment has occurred, management considers a number of factors including, but not limited to, the market value of the Company's stock, operating results, business plans, economic projections, anticipated future cash flows and current market data. There are inherent uncertainties related to these factors and management's judgment in applying them to the analysis of impairment. Changes in economic and operating conditions, as well as other factors, could result in impairment in future periods. Any impairment losses arising from such testing would be reported in the Consolidated Statements of Income as a separate line item within operations. There were no impairment losses recognized as a result of periodic impairment testing in each of the three years ended December 31, 2017.

Mortgage servicing rights

The Company originates residential mortgage loans with the intent to sell. These individual loans are normally funded by the buyer immediately. The Company maintains servicing rights on these loans.

Mortgage servicing rights are recognized as an asset upon the sale of a mortgage loan. A portion of the cost of the loan is allocated to the servicing right based upon relative fair value. Servicing rights are intangible assets and are carried at estimated fair value. The carrying amount of mortgage servicing rights was $225,000 and $205,000 at December 31, 2017 and 2016, respectively. Adjustments to fair value are recorded as non-interest income and included in gain on sales of loans in the consolidated statements of income.

The Company retains the servicing rights on mortgage loans sold to the FHLB and receives mortgage banking fee income based upon the principal balance outstanding. Total loans serviced for the FHLB were $23,647,000 and $21,705,000 at December 31, 2017 and 2016, respectively. The mortgage loans sold to the FHLB and serviced by the Company are not reflected in the consolidated statements of financial condition.

Premises and equipment and depreciation

Premises and equipment are stated at cost less accumulated depreciation. Depreciation is computed principally using the straight-line method over the estimated useful lives of the related assets, which range from 3 to 10 years for furniture and equipment and 25 to 50 years for buildings. Expenditures for maintenance and repairs are charged against income as incurred. Costs of major additions and improvements are capitalized. Amortization of leasehold improvements is computed on a straight-line basis over the shorter of the assets' useful life or the related lease term.

Trust assets and revenues

Assets held in a fiduciary capacity are not assets of the Bank or the Bank's Trust Department and are, therefore, not included in the consolidated financial statements. Trust revenues are recorded on the accrual basis.

Bank owned life insurance, annuities and split-dollar arrangements

The cash surrender value of bank owned life insurance and annuities is carried as an asset, and changes in cash surrender value are recorded as non-interest income.

GAAP requires split-dollar life insurance arrangements to have a liability recognized related to the postretirement benefits covered by an endorsement split-dollar life insurance arrangement. The accrued benefit liability was $1,014,000 and $949,000 as of December 31, 2017 and 2016, respectively. Related expenses for 2017, 2016 and 2015 were $95,000, $61,000 and $29,000, respectively.

Investments in low-income housing partnerships

Juniata has invested as a limited partner in two partnerships that provide low-income housing in Lewistown, Pennsylvania. The carrying value of the investment in the limited partnerships was $5,245,000 at December 31, 2017 and $3,812,000 at December 31, 2016. The increase in carrying value in 2017 was the result of draws taken for the completion of the phase II low-income housing project. Federal credits are available for ten years for each of the two projects. Tax credits associated with phase I will continue through 2023 annually at $572,000. Phase II credits were initiated in 2017 and will run through 2027 at an annual amount of $333,000. The tax credits are included in the tax expense line item on the Consolidated Statements of Income. Amortization of the investment using the cost method is scheduled to occur over the same period as tax credits are earned. Juniata's maximum exposure to loss is limited to the carrying value of the investment at year-end.

Income taxes

The Company accounts for income taxes in accordance with income tax accounting guidance ASC Topic 740, *Income Taxes*.

Current 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 the enacted tax law to the 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 reduced by a valuation allowance if, based on the weight of the evidence available, it is more likely than not that some portion or all of a deferred tax asset will not be realized.

The Company accounts for uncertain tax positions 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.

The Company recognizes interest and penalties on income taxes, if any, as a component of income tax expense.

Advertising

The Company follows the policy of charging costs of advertising to expense as incurred. Advertising expenses were $272,000, $243,000 and $222,000 in 2017, 2016 and 2015, respectively.

Off-balance sheet financial instruments

In the ordinary course of business, the Bank has entered into off-balance sheet financial instruments consisting of commitments to extend credit and letters of credit. Such financial instruments are recorded on the consolidated statement of financial condition when they are funded.

Transfer 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.

Comprehensive Income

Comprehensive income consists of net income and other comprehensive income (loss). Other comprehensive income (loss) includes changes in unrealized gains and losses on securities available for sale arising during the period and reclassification adjustments for realized gains and losses on securities available for sale included in net income. The Company has a defined benefit retirement plan which utilizes assumptions and methods to calculate the fair value of Plan assets and recognizing the funded status of the Plans on its consolidated balance sheet. Gains and losses on the Plan are recognized in other comprehensive income (loss), net of tax, until they are amortized, or immediately upon curtailment.

Stock-based compensation

The Company sponsors a stock compensation plan for certain key officers which allows, among other stock-based compensation methods, for stock options and restricted stock awards. Prior to 2016, stock options were used exclusively for long-term compensation, but in 2016 and 2017, restricted shares awards were used. Compensation expense for stock options granted and restricted stock awarded is measured using the fair value of the award on the grant date and is recognized over the vesting period. The Company recognized $71,000, $67,000 and $57,000 of expense for the years ended December 31, 2017, 2016 and 2015, respectively, for stock-based compensation. The stock-based compensation expense amounts for stock options were derived based on the fair value of options using the Black-Scholes option-pricing model. The following weighted average assumptions were used to value options granted in the periods indicated.

	2015
Expected life of options	7.4 years
Risk-free interest rate	1.95%
Expected volatility	21.42%
Expected dividend yield	4.87%

Segment reporting

Management does not separately allocate expenses, including the cost of funding loan demand, between the commercial, retail and trust operations of the Company. As such, discrete financial information is not available, and segment reporting would not be meaningful.

Subsequent events

The Company has evaluated events and transactions occurring subsequent to the consolidated statement of financial condition date of December 31, 2017, for items that should potentially be recognized or disclosed in the consolidated financial statements. The evaluation was conducted through the date these consolidated financial statements were issued.

3. RECENT ACCOUNTING STANDARDS UPDATE ("ASU")

ASU 2018-02, Income Statement - Reporting Comprehensive Income (Topic 220): ***Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income.***

Issued: February 2018

Summary: The Update allows entities to reclassify from AOCI to retained earnings the 'stranded' tax effects of accounting for income tax rate changes on items accounted for in AOCI which were impacted by tax reform enacted in December 2017. The impact of tax rate changes is recorded in income and items accounted for in AOCI could be left with such a stranded tax effect that could have those items appear to not reflect the appropriate tax rate. The FASB's changes are intended to improve the usefulness of information reported to financial statement users.

Effective Date: The changes are effective for years beginning after December 31, 2018, with early adoption permitted. The Company elected to adopt the changes in December 2017. The amount transferred from AOCI to retained earnings totaled $588,000 and represented the impact of the Tax Law rate change to 21% at the date of enactment for the unrealized gains and losses on securities and the defined benefit plan accounted for in AOCI.

Codification Improvements Project, Topic 225, Income Statement and Topic 220, ***Comprehensive Income (combined as Topic 220, Income Statement—Reporting Comprehensive Income)***

Issued: November 2017

Summary: As part of its ongoing Codification Improvements project, the FASB identified Topic 225, Income Statement and Topic 220, Comprehensive Income as two Topics covering related guidance that could be simplified by combining the content within one Topic. The Board agreed with the recommendation to simplify these Topics through a maintenance update.

The existing content in Topic 220 defines and provides more guidance about net income and contains multiple examples of income statements (statement of comprehensive income). As such, the guidance in Topic 225 will be relocated to Topic 220. The combined Topic will be renamed as Topic 220, Income Statement—Reporting Comprehensive Income. There have been no incremental changes to the actual guidance and this Update will have no impact on the Company's consolidated financial position and results of operations.

Effective Date: The combination of Topic 225 and Topic 220 has no accounting impact and therefore does not have an associated effective date.

ASU 2017-12, *Targeted Improvements to Accounting for Hedging Activities*

Issued: August 2017

Summary: ASU 2017-12 improves Topic 815 by simplifying and expanding the eligible hedging strategies for financial and nonfinancial risks by more closely aligning hedge accounting with a company's risk management activities, and also simplifies its application through targeted improvements in key practice areas. This includes expanding the list of items eligible to be hedged and amending the methods used to measure the effectiveness of hedging relationships. In addition, the ASU prescribes how hedging results should be presented and requires incremental disclosures. These changes are intended to allow preparers more flexibility and to enhance the transparency of how hedging results are presented and disclosed. Further, the new standard provides partial relief on the timing of certain aspects of hedge documentation and eliminates the requirement to recognize hedge ineffectiveness separately in earnings in the current period.

Effective Date: The amendments are effective for public business entities, for fiscal years beginning after December 15, 2018, and interim periods within those fiscal years. Early application is permitted in any interim period after issuance of the amendments for existing hedging relationships on the date of adoption. This Update will have no impact on the Company's consolidated financial position and results of operations.

ASU 2017-09, *Scope of Modification Accounting*

Issued: May 2017

Summary: ASU 2017-09 clarifies Topic 718 such that an entity must apply modification accounting to changes in the terms or conditions of a share-based payment award unless all of the following criteria are met:

1. The fair value of the modified award is the same as the fair value of the original award immediately before the modification. The standard indicates that if the modification does not affect any of the inputs to the valuation technique used to value the award, the entity is not required to estimate the value immediately before and after the modification.
2. The vesting conditions of the modified award are the same as the vesting conditions of the original award immediately before the modification.
3. The classification of the modified award as an equity instrument or a liability instrument is the same as the classification of the original award immediately before the modification.

Effective Date: The amendments are effective for all entities for fiscal years beginning after December 15, 2017, including interim periods within those years. This Update will have no impact on the Company's consolidated financial position and results of operations.

ASU 2017-08, *Premium Amortization on Purchased Callable Debt Securities*

Issued: March 2017

Summary: ASU 2017-08 shortens the amortization period for premiums on purchased callable debt securities to the earliest call date, rather than amortizing over the full contractual term. The ASU does not change the accounting for securities held at a discount.

Effective Date: The amendments are effective for public business entities for fiscal years beginning after December 15, 2018. Early adoption is permitted. The Company has early adopted this standard, and the financial statements as of, and for the year ended, December 31, 2017 reflect the impact of premium amortization on callable debt securities to the earliest call date. The adoption of this ASU did not have a material impact on the Company's consolidated financial statements.

ASU 2017-07, *Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost*

Issued: March 2017

Summary: ASU 2017-07 requires that an employer disaggregate the service cost component from the other components of net benefit cost. The amendments also provide explicit guidance on how to present the service cost component and the other components of net benefit cost in the income statement and allows only the service cost component of net benefit cost to be eligible for capitalization.

Effective Date: The amendments are effective for public business entities for fiscal years beginning after December 15, 2017. This Update will have no impact on the Company's consolidated financial position and results of operations because the Company's defined benefit plan is frozen; therefore, there is no service cost component to consider.

ASU 2017-04, *Simplifying the Test for Goodwill Impairment*

Issued: January 2017

Summary: ASU 2017-04 eliminates the requirement of Step 2 in the current guidance to calculate the implied fair value of goodwill to measure a goodwill impairment charge. Instead, entities will record an impairment charge based on the excess of a reporting unit's carrying amount over its fair value in Step 1 of the current guidance.

Effective Date: The amendments are effective for public business entities for fiscal years beginning after December 15, 2019. This Update will have no impact on the Company's consolidated financial position and results of operations.

ASU 2016-15, *Classification of Certain Cash Receipts and Cash Payments*

Issued: August 2016

Summary: ASU 2016-15 clarifies how certain cash receipts and cash payments are presented and classified in the statement of cash flows. The amendments are intended to reduce diversity in practice.

Effective Date: The amendments are effective for public business entities for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2017. The adoption of this Update will have no material impact to the Company's consolidated financial position and results of operations.

ASU 2016-13, *Financial Instruments – Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments*

Issued: June 2016

Summary: ASU 2016-13 requires credit losses on most financial assets to be measured at amortized cost and certain other instruments to be measured using an expected credit loss model (referred to as the current expected credit loss ("CECL") model). Under this model, entities will estimate credit losses over the entire contractual term of the instrument (considering estimated prepayments, but not expected extensions or modifications unless reasonable expectation of a troubled debt restructuring exists) from the date of initial recognition of that instrument.

The ASU also replaces the current accounting model for purchased credit impaired loans and debt securities. The allowance for credit losses for purchased financial assets with a more-than insignificant amount of credit

deterioration since origination ("PCD assets"), should be determined in a similar manner to other financial assets measured on an amortized cost basis. However, upon initial recognition, the allowance for credit losses is added to the purchase price ("gross up approach") to determine the initial amortized cost basis. The subsequent accounting for PCD financial assets is the same expected loss model described above.

Further, the ASU made certain targeted amendments to the existing impairment model for available-for-sale (AFS) debt securities. For an AFS debt security for which there is neither the intent nor a more-likely-than-not requirement to sell, an entity will record credit losses as an allowance rather than a write-down of the amortized cost basis.

Effective Date: The new standard is effective for fiscal years beginning after December 15, 2019, including interim periods within those fiscal years. While the Company's senior management is currently in the process of evaluating the impact of the amended guidance on its consolidated financial statements, it currently expects the ALLL to increase upon adoption given that the allowance will be required to cover the full remaining expected life of the portfolio, rather than the incurred loss model under current U.S. GAAP. The extent of this increase is still being evaluated and will depend on economic conditions and the composition of the Company's loan portfolio at the time of adoption. In preparation, the Company has partnered with a software provider specializing in ALLL analysis and is assessing the sufficiency of data currently available through its core database.

ASU 2016-02, Leases

Issued: February 2016

Summary: The new standard establishes a right-of-use ("ROU") model that requires a lessee to record a ROU asset and a lease liability on the balance sheet for all leases with terms longer than 12 months. Leases will be classified as either finance or operating, with classification affecting the pattern of expense recognition in the income statement.

Effective Date: The new standard is effective for fiscal years beginning after December 15, 2018, including interim periods within those fiscal years. A modified retrospective transition approach is required for lessees for capital and operating leases existing at, or entered into after, the beginning of the earliest comparative period presented in the financial statements, with certain practical expedients available. The Company has determined that the provisions of ASU 2016-02 will result in an increase in assets to recognize the present value of the lease obligations with a corresponding increase in liabilities; however, the Company does not expect this new standard to have a material impact on the Company's financial position, results of operations or cash flows. The Company is currently evaluating the projected present value at the adoption date.

ASU 2016-01, *Measurement of Financial Instruments*

Issued: January 2016

Summary: The amendments in this Update require all equity investments to be measured at fair value with changes in the fair value recognized through net income (other than those accounted for under equity method of accounting or those that result in consolidation of the investee). The amendments in this Update also require an entity to present separately in other comprehensive income (loss) the portion of the total change in the fair value of a liability resulting from a change in the instrument-specific credit risk when the entity has elected to measure the liability at fair value in accordance with the fair value option for financial instruments. In addition, the amendments in this Update eliminate the requirement to disclose the fair value of financial instruments measured at amortized cost for entities that are not public business entities and the requirement to disclose the method(s) and significant assumptions used to estimate the fair value that is required to be disclosed for financial instruments measured at amortized cost on the balance sheet for public business entities.

Effective Date: For public entities, the amendments in the Update are effective for fiscal years beginning after December 15, 2017, including interim periods within those fiscal years. The Company currently holds a small portfolio of equity investments for which the fair value fluctuates with market activity. The Company adopted ASU 2016-01 on January 1, 2018. As of this date, the Company had $197,000 in unrealized gains on equity securities (see Note 6). The adoption of this Update resulted in a reclassification of $156,000 from other comprehensive loss to retained earnings.

ASU 2018-03*, Technical Corrections and Improvements to Financial Instruments – Overall (Subtopic 825-10): Recognition and Measurement of Financial Assets and Financial Liabilities*

Issued: February 2018

Summary: The FASB issued this Update to clarify certain aspects of the guidance on recognizing and measuring financial assets and liabilities in ASU 2016-01:

- Clarification regarding the ability to discontinue application of the measurement alternative for equity securities without a readily determinable fair value
- Clarification of the measurement date for fair value adjustments to the carrying amount of equity securities without a readily determinable fair value for which the measurement alternative is elected
- Clarification of the unit of account for fair value adjustments to forward contracts and purchased options on equity securities without a readily determinable fair value for which the measurement alternative is expected to be elected
- Presentation requirements for certain hybrid financial liabilities for which the fair value option is elected
- Measurement of financial liabilities denominated in a foreign currency for which the fair value option is elected
- Transition guidance for equity securities without a readily determinable fair value

The amendments in ASU 2018-03 are effective for public business entities for fiscal years beginning after December 15, 2017 and for interim periods within those fiscal years beginning after June 15, 2018. For all other entities, the effective date is the same as the effective date for ASU 2016-01. All entities may early adopt the amendments, including adoption in an interim period, provided they have already adopted ASU 2016-01. The adoption of this ASU had no material impact to the Company's consolidated financial position and results of operations.

ASU 2014-09, *Revenue from Contracts with Customers (Topic 606)*

Issued: May 2014

Summary: The amendments in this Update establish a comprehensive revenue recognition standard for virtually all industries under U.S. GAAP, including those that previously followed industry-specific guidance such as the real estate, construction and software industries. The revenue standard's core principle is built on the contract between a vendor and a customer for the provision of goods and services. It attempts to depict the exchange of rights and obligations between the parties in the pattern of revenue recognition based on the consideration to which the vendor is entitled. To accomplish this objective, the standard requires five basic steps: (i) identify the contract with the customer, (ii) identify the performance obligations in the contract, (iii) determine the transaction price, (iv) allocate the transaction price to the performance obligations in the contract, and (v) recognize revenue when (or as) the entity satisfies a performance obligation.

In August 2015, the FASB issued Accounting Standards Update 2015-14, Revenue from Contracts with Customers (Topic 606): Deferral of the Effective Date. ASU 2015-14 defers the effective date of the new revenue recognition standard by one year. As such, it now takes effect for public entities in fiscal years beginning after December 15, 2017. All other entities have an additional year. However, early adoption is permitted for any entity that chooses to adopt the new standard as of the original effective date. Early adoption is permitted only as of annual reporting periods beginning after December 15, 2016, including interim periods within that year.

Three basic transition methods are available – full retrospective, retrospective with certain practical expedients, and a modified retrospective method. Under the third alternative, an entity would apply the new revenue standard only to contracts that are incomplete under legacy U.S. GAAP at the date of initial application (e.g. January 1, 2018) and recognize the cumulative effect of the new standard as an adjustment to the opening balance of retained earnings. That is, prior years would not be restated and additional disclosures would be required to enable users of the financial statements to understand the impact of adopting the new standard in the current year compared to prior years that are presented under legacy U.S. GAAP. Early adoption is prohibited under U.S. GAAP.

The Company adopted the ASU 2014-09 on January 1, 2018 and elected the modified retrospective transition method. Because the amended guidance does not apply to revenue associated with financial instruments, including loans and securities that are accounted for under other U.S. GAAP, the Company assessed the affect the guidance would have on the recognition processes of revenue for wealth and asset management services, estate planning, deposit fees and card processing. The analysis illustrated there would be no material impact on the Company's consolidated financial statements, although the Company will be subject to expanded disclosure requirements.

4. MERGER

FNBPA Merger

On November 30, 2015, Juniata consummated the merger with FNBPA Bancorp, Inc. ("FNBPA"), a Pennsylvania corporation. FNBPA merged with, and into Juniata, with Juniata continuing as the surviving entity. Simultaneously with the consummation of the foregoing merger, First National Bank of Port Allegany ("FNB"), a national banking association and a wholly-owned subsidiary of FNBPA, merged with and into the Bank.

As part of this transaction, FNBPA shareholders received either 2.7813 shares of Juniata's common stock or $50.34 in cash in exchange for each share of FNBPA common stock. As a result, Juniata issued 607,815 shares of common stock with an acquisition date fair value of approximately $10,637,000, based on Juniata's closing stock price of $17.50 on November 30, 2015, and cash of $2,208,000, including cash in lieu of fractional shares. The fair value of total consideration paid was $12,845,000.

The assets and liabilities of FNB and FNBPA were recorded on the consolidated balances sheet at their estimated fair value as of November 30, 2015, and their results of operations have been included in the consolidated income statement since such date.

Included in the purchase price was goodwill and a core deposit intangible of $3,335,000 and $343,000, respectively. The core deposit intangible will be amortized over a ten-year period using a sum of the year's digits basis. The goodwill will not be amortized, but will be measured annually for impairment or more frequently if circumstances require.

Core deposit intangible amortization expense projected for the succeeding five years beginning 2018 is estimated to be $44,000, $38,000, $33,000, $27,000 and $21,000 per year, respectively, and $32,000 in total for years after 2022.

The allocation of the purchase price is as follows:

(Dollars in thousands)

Purchase price assigned to FNBPA common shares exchanged for 607,815 Juniata common shares	$ 10,637
Purchase price assigned to FNBPA common shares exchanged for cash	2,208
Total purchase price	12,845
FNBPA net assets acquired:	
Tangible common equity	9,854
Adjustments to reflect assets acquired and liabilities assumed at fair value:	
Total fair value adjustments	(523)
Associated deferred income taxes	179
Fair value adjustment to net assets acquired, net of tax	(344)
Total FNBPA net assets acquired	9,510
Goodwill resulting from the merger	$ 3,335

The following table summarizes the estimated fair value of the assets acquired and liabilities assumed.

(Dollars in thousands)

Total purchase price	$ 12,845
Net assets acquired	
Cash and cash equivalents	3,452
Interest-bearing time deposits	350
Investment securities	35,458
Loans	47,055
Premises and equipment	419
Accrued interest receivable	550
Core deposit and other intangibles	343
Other real estate owned	114
Other assets	763
Deposits	(77,665)
Accrued interest payable	(13)
Other liabilities	(1,316)
	9,510
Goodwill	$ 3,335

As of November 30, 2015, the merger date, goodwill was recorded at $3,335,000. ASC 805 allows for adjustments to goodwill for a period of up to one year after the merger date for information that becomes available that reflects circumstances at the merger date. During 2016, such information became available and goodwill was increased by $67,000, to $3,402,000, to reflect the adjustments to fair value of two assets.

The fair value of the financial assets acquired included loans receivable with a gross amortized cost basis of $47,797,000. The table below illustrates the fair value adjustments made to the amortized cost basis in order to present a fair value of the loans acquired.

(Dollars in thousands)

Gross amortized cost basis at November 30, 2015	$ 47,797
Market rate adjustment	(110)
Credit fair value adjustment on pools of homogeneous loans	(73)
Credit fair value adjustment on impaired loans	(559)
Fair value of purchased loans at November 30, 2015	$ 47,055

The market rate adjustment represents the movement in market interest rates, irrespective of credit adjustments, compared to the stated rates of the acquired loans. The credit adjustment made on pools of homogeneous loans represents the changes in credit quality of the underlying borrowers from the loan inception to the acquisition date. The credit adjustment on impaired loans is derived in accordance with ASC 310-30 and represents the portion of the loan balances that has been deemed uncollectible based on the Company's expectations of future cash flows for each respective loan. The information about the acquired FNBPA impaired loan portfolio as of November 30, 2015 is as follows.

(Dollars in thousands)

Contractually required principal and interest at acquisition	$ 2,488
Contractual cash flows not expected to be collected (nonaccretable discount)	(1,427)
Expected cash flows at acquisition	1,061
Interest component of expected cash flows (accretable discount)	(157)
Fair value of acquired loans	$ 904

The amount of total revenue, consisting of interest income plus noninterest income, as well as the net income specifically related to FNBPA for the period beginning December 1, 2015, included in the consolidated statements of income of Juniata for the year ended December 31, 2015, was $242,000 and $61,000, respectively.

5. RESTRICTIONS ON CASH AND DUE FROM BANKS

The Bank is required to maintain cash reserve balances with the Federal Reserve Bank if vault cash is insufficient to cover the reserve requirement. As of December 31, 2017 and 2016, respectively, no reserves were required to be held at the Federal Reserve Bank.

6. SECURITIES

The Company's investment portfolio includes primarily mortgage-backed securities issued by U.S. Government sponsored agencies and backed by residential mortgages (approximately 61%), bonds issued by U.S. Government sponsored agencies (approximately 22%) and municipalities (approximately 16%) as of December 31, 2017. Most of the municipal bonds are general obligation bonds with maturities or pre-refunding dates within 5 years. The remaining 1% of the portfolio includes a group of equity investments in other financial institutions.

The amortized cost and fair value of securities as of December 31, 2017 and 2016, by contractual maturity, are shown below. Expected maturities may differ from contractual maturities because the securities may be called or prepaid with or without prepayment penalties.

(Dollars in thousands) Securities Available for Sale Type and maturity	December 31, 2017 Amortized Cost	Fair Value	Gross Unrealized Gains	Gross Unrealized Losses
Obligations of U.S. Government agencies and corporations				
Within one year	$ 6,000	$ 5,969	$ -	$ (31)
After one year but within five years	15,000	14,689	-	(311)
After five years but within ten years	13,998	13,556	-	(442)
	34,998	34,214	-	(784)
Obligations of state and political subdivisions				
Within one year	2,521	2,516	-	(5)
After one year but within five years	13,959	13,955	50	(54)
After five years but within ten years	8,611	8,510	18	(119)
	25,091	24,981	68	(178)
Mortgage-backed securities	94,945	93,510	38	(1,473)
Equity securities	922	1,119	197	-
Total	$ 155,956	$ 153,824	$ 303	$ (2,435)

(Dollars in thousands) Securities Available for Sale Type and maturity	December 31, 2016 Amortized Cost	Fair Value	Gross Unrealized Gains	Gross Unrealized Losses
Obligations of U.S. Government agencies and corporations				
After one year but within five years	$ 19,495	$ 19,331	$ 13	$ (177)
After five years but within ten years	17,000	16,468	-	(532)
	36,495	35,799	13	(709)
Obligations of state and political subdivisions				
Within one year	2,819	2,820	2	(1)
After one year but within five years	13,268	13,240	39	(67)
After five years but within ten years	10,923	10,599	16	(340)
	27,010	26,659	57	(408)
Mortgage-backed securities	86,670	85,702	114	(1,082)
Equity securities	1,615	2,328	713	-
Total	$ 151,790	$ 150,488	$ 897	$ (2,199)

Certain obligations of the U.S. Government and state and political subdivisions are pledged to secure public deposits, securities sold under agreements to repurchase and for other purposes as required or permitted by law. The carrying value of the pledged assets was $47,825,000 and $36,638,000 at December 31, 2017 and 2016, respectively.

In addition to cash received from the scheduled maturities of securities, some investment securities available for sale are sold at current market values during the course of normal operations. Following is a summary of proceeds received from all investment securities transactions and the resulting realized gains and losses:

	Years Ended December 31,		
(Dollars in thousands)	2017	2016	2015
Gross proceeds from sales of securities	$ 21,799	$ 4,304	$ 53,213
Securities available for sale:			
Gross realized gains from sold and called securities	$ 539	$ 139	$ 83
Gross realized losses from sold and called securities	(32)	(21)	(70)
Gross gains from business combinations	5	100	-

The following table shows gross unrealized losses and fair value, aggregated by category and length of time that individual securities have been in a continuous unrealized loss position, at December 31, 2017:

	Unrealized Losses at December 31, 2017								
	Less Than 12 Months			12 Months or More			Total		
(Dollars in thousands)	Number of Securities	Fair Value	Unrealized Losses	Number of Securities	Fair Value	Unrealized Losses	Number of Securites	Fair Value	Unrealized Losses
Obligations of U.S. Government agencies and corporations	5	$ 10,845	$ (157)	15	$ 23,369	$ (627)	20	$ 34,214	$ (784)
Obligations of state and political subdivisions	23	10,491	(70)	6	3,862	(108)	29	14,353	(178)
Mortgage-backed securities	23	51,050	(518)	20	38,740	(955)	43	89,790	(1,473)
Total debt securities	51	72,386	(745)	41	65,971	(1,690)	92	138,357	(2,435)
Equity securities	1	9	-	1	4	-	2	13	-
Total temporarily impaired securities	52	$ 72,395	$ (745)	42	$ 65,975	$ (1,690)	94	$ 138,370	$ (2,435)

At December 31, 2017, 20 U.S. Government and agency securities had unrealized losses that, in the aggregate, did not exceed 1% of amortized cost. Fifteen of these securities have been in a continuous loss position for 12 months or more.

At December 31, 2017, 29 obligations of state and political subdivision bonds had unrealized losses that, in the aggregate, did not exceed 1% of amortized cost. Six of these securities have been in a continuous loss position for 12 months or more.

At December 31, 2017, 43 mortgage-backed securities had an unrealized loss that did not exceed 1% of amortized cost. Twenty of these securities have been in a continuous loss position for 12 months or more.

The mortgage-backed securities in the Company's portfolio are government sponsored enterprise ("GSE") pass-through instruments issued by the Federal National Mortgage Association ("FNMA"), which guarantees the timely payment of principal on these investments.

The unrealized losses noted above are considered to be temporary impairments. The decline in the values of the debt securities is due only to interest rate fluctuations, rather than erosion of issuer credit quality. As a result, the payment of contractual cash flows, including principal repayment, is not at risk. As the Company does not intend to sell the securities, does not believe the Company will be required to sell the securities before recovery and expects to recover the entire amortized cost basis, none of the debt securities are deemed to be other-than-temporarily impaired.

Equity securities owned by the Company consist of common stock of various financial services providers ("Bank Stocks") and are evaluated quarterly for evidence of other-than-temporary impairment. There were two equity securities in an unrealized loss position on December 31, 2017, with one in an unrealized loss position for 12 months or more. The total unrealized loss on equity securities at December 31, 2017 was less than $1,000. Management has identified no other-than-temporary impairment as of, or for the years ended, December 31, 2017, 2016 and 2015 in the equity portfolio. Management continues to track the performance of each stock owned to determine if it is prudent to deem any further other-than-temporary impairment charges. The Company has the ability and intent to hold its equity securities until recovery of unrealized losses.

The following table shows gross unrealized losses and fair value, aggregated by category and length of time that individual securities had been in a continuous unrealized loss position, at December 31, 2016:

	Unrealized Losses at December 31, 2016								
	Less Than 12 Months			12 Months or More			Total		
(Dollars in thousands)	Number of Securities	Fair Value	Unrealized Losses	Number of Securities	Fair Value	Unrealized Losses	Number of Securites	Fair Value	Unrealized Losses
Obligations of U.S. Government agencies and corporations	21	$ 32,783	$ (709)	-	$ -	$ -	21	$ 32,783	$ (709)
Obligations of state and political subdivisions	37	17,437	(406)	1	300	(2)	38	17,737	(408)
Mortgage-backed securities	34	68,989	(1,082)	-	-	-	34	68,989	(1,082)
Total debt securities	92	119,209	(2,197)	1	300	(2)	93	119,509	(2,199)
Equity securities	0	-	-	1	4	-	1	4	-
Total temporarily impaired securities	92	$ 119,209	$ (2,197)	2	$ 304	$ (2)	94	$ 119,513	$ (2,199)

7. LOANS AND RELATED ALLOWANCE FOR LOAN LOSSES

The following table presents the classes of the loan portfolio summarized by the aggregate pass rating and the classified ratings of special mention, substandard and doubtful within the Company's internal risk rating system as of December 31, 2017 and December 31, 2016:

(Dollars in thousands) As of December 31, 2017	Pass	Special Mention	Substandard	Doubtful	Total
Commercial, financial and agricultural	$ 34,826	$ 8,692	$ 2,280	$ 4	$ 45,802
Real estate - commercial	114,299	17,928	7,189	953	140,369
Real estate - construction	22,470	3,297	2,636	-	28,403
Real estate - mortgage	139,861	3,551	2,859	617	146,888
Obligations of states and political subdivisions	12,088	956	-	-	13,044
Personal	9,360	32	6	-	9,398
Total	$ 332,904	$ 34,456	$ 14,970	$ 1,574	$ 383,904

(Dollars in thousands) As of December 31, 2016	Pass	Special Mention	Substandard	Doubtful	Total
Commercial, financial and agricultural	$ 34,510	$ 5,104	$ 1,213	$ -	$ 40,827
Real estate - commercial	100,153	15,843	6,726	989	123,711
Real estate - construction	24,702	4,044	6,460	-	35,206
Real estate - mortgage	144,353	4,426	4,496	1,630	154,905
Obligations of states and political subdivisions	12,431	1,185	-	-	13,616
Personal	9,970	52	10	-	10,032
Total	$ 326,119	$ 30,654	$ 18,905	$ 2,619	$ 378,297

The Company has certain loans in its portfolio that are considered to be impaired. It is the policy of the Company to recognize income on impaired loans that have been transferred to nonaccrual status on a cash basis, only to the extent that it exceeds principal balance recovery. A collateral analysis is performed on each impaired loan at least quarterly, and results are used to determine if a specific reserve is necessary to adjust the carrying value of each individual loan down to the estimated fair value. Generally, specific reserves are carried against impaired loans based upon estimated collateral value until a confirming loss event occurs or until termination of the credit is scheduled through liquidation of the collateral or foreclosure. Consumer mortgage loans secured by residential real estate properties for which formal foreclosure proceedings were in process at December 31, 2017 and December 31, 2016 totaled $1,285,000 and $1,778,000, respectively. Charge off will occur when a confirmed loss is identified. Professional appraisals of collateral, discounted for expected selling costs, are used to determine the charge-off amount.

The following tables summarize information regarding impaired loans by portfolio class as of December 31, 2017 and December 31, 2016:

(Dollars in thousands)	As of December 31, 2017			As of December 31, 2016		
	Recorded Investment	Unpaid Principal Balance	Related Allowance	Recorded Investment	Unpaid Principal Balance	Related Allowance
Impaired Loans						
With no related allowance recorded:						
Commercial, financial and agricultural	$ 468	$ 477	$ -	$ 436	$ 439	$ -
Real estate - commercial	5,031	5,957	-	5,499	6,475	-
Acquired with credit deterioration	191	247	-	641	730	-
Real estate - construction	-	-	-	2,455	2,455	-
Real estate - mortgage	2,232	3,738	-	3,345	5,020	-
Acquired with credit deterioration	337	384	-	415	440	-
With an allowance recorded:						
Real estate - mortgage	-	-	-	712	712	56
Total:						
Commercial, financial and agricultural	$ 468	$ 477	$ -	$ 436	$ 439	$ -
Real estate - commercial	5,031	5,957	-	5,499	6,475	-
Acquired with credit deterioration	191	247	-	641	730	-
Real estate - construction	-	-	-	2,455	2,455	-
Real estate - mortgage	2,232	3,738	-	4,057	5,732	56
Acquired with credit deterioration	337	384	-	415	440	-
	$ 8,259	$ 10,803	$ -	$ 13,503	$ 16,271	$ 56

(Dollars in thousands)	Year Ended December 31, 2017			Year Ended December 31, 2016			Year Ended December 31, 2015		
Impaired loans	Average Recorded Investment	Interest Income Recognized	Cash Basis Interest Income	Average Recorded Investment	Interest Income Recognized	Cash Basis Interest Income	Average Recorded Investment	Interest Income Recognized	Cash Basis Interest Income
With no related allowance:									
Commercial, financial and agricultural	$ 452	$ 25	$ -	$ 456	$ 29	$ -	$ 238	$ 25	$ -
Real estate - commercial	5,265	313	-	3,675	331	-	2,058	45	27
Acquired with credit deterioration	416	-	-	738	-	-	417	-	-
Real estate - construction	1,228	34	-	1,228	136	-	168	-	-
Real estate - mortgage	2,789	21	20	2,991	28	37	2,846	27	36
Acquired with credit deterioration	376	-	-	523	-	-	53	-	-
With an allowance recorded:									
Real estate - mortgage	356	-	-	356	-	-	448	-	-
Total:									
Commercial, financial and agricultural	$ 452	$ 25	$ -	$ 456	$ 29	$ -	$ 238	$ 25	$ -
Real estate - commercial	5,265	313	-	3,675	331	-	2,058	45	27
Acquired with credit deterioration	416	-	-	738	-	-	417	-	-
Real estate - construction	1,228	34	-	1,228	136	-	168	-	-
Real estate - mortgage	3,145	21	20	3,347	28	37	3,294	27	36
Acquired with credit deterioration	376	-	-	523	-	-	53	-	-
	$ 10,882	$ 393	$ 20	$ 9,967	$ 524	$ 37	$ 6,228	$ 97	$ 63

The following table presents nonaccrual loans by classes of the loan portfolio as of December 31, 2017 and December 31, 2016:

(Dollars in thousands)		
Nonaccrual loans:	December 31, 2017	December 31, 2016
Commercial, financial and agricultural	$ 4	$ -
Real estate - commercial	953	1,016
Real estate - mortgage	1,917	3,717
Total	$ 2,874	$ 4,733

Interest income not recorded based on the original contractual terms of the loans for nonaccrual loans was $300,000, $281,000 and $239,000 in 2017, 2016 and 2015, respectively. The aggregate amount of demand deposits that have been reclassified as loan balances at December 31, 2017 and 2016 were $33,000 and $39,000, respectively.

The performance and credit quality of the loan portfolio is also monitored by analyzing the age of the loans receivable as determined by the length of time a recorded payment is past due. The following table presents the classes of the loan portfolio summarized by the past due status as of December 31, 2017 and December 31, 2016:

(Dollars in thousands) As of December 31, 2017	30-59 Days Past Due	60-89 Days Past Due	Greater than 90 Days	Total Past Due	Current	Total Loans	Loans Past Due Greater than 90 Days and Accruing
Commercial, financial and agricultural	$ -	$ -	$ -	$ -	$ 45,802	$ 45,802	$ -
Real estate - commercial							
Real estate - commercial	16	23	-	39	140,139	140,178	-
Acquired with credit deterioration	-	-	28	28	163	191	28
Real estate - construction	-	-	-	-	28,403	28,403	-
Real estate - mortgage							
Real estate - mortgage	694	80	64	838	145,713	146,551	64
Acquired with credit deterioration	-	-	123	123	214	337	123
Obligations of states and political subdivisions	-	-	-	-	13,044	13,044	-
Personal	66	6	-	72	9,326	9,398	-
Total	$ 776	$ 109	$ 215	$ 1,100	$ 382,804	$ 383,904	$ 215

(Dollars in thousands) As of December 31, 2016	30-59 Days Past Due	60-89 Days Past Due	Greater than 90 Days	Total Past Due	Current	Total Loans	Loans Past Due Greater than 90 Days and Accruing
Commercial, financial and agricultural	$ 15	$ -	$ 6	$ 21	$ 40,806	$ 40,827	$ 6
Real estate - commercial							
Real estate - commercial	55	-	-	55	123,015	123,070	-
Acquired with credit deterioration	-	-	452	452	189	641	452
Real estate - construction	6	-	508	514	34,692	35,206	508
Real estate - mortgage							
Real estate - mortgage	1,097	57	40	1,194	153,296	154,490	40
Acquired with credit deterioration	-	-	138	138	277	415	138
Obligations of states and political subdivisions	-	-	-	-	13,616	13,616	-
Personal	25	3	-	28	10,004	10,032	-
Total	$ 1,198	$ 60	$ 1,144	$ 2,402	$ 375,895	$ 378,297	$ 1,144

The following table summarizes information regarding troubled debt restructurings by loan portfolio class as of and for the years ended December 31, 2017 and 2016.

(Dollars in thousands) As of December 31, 2017	Number of Contracts	Pre-Modification Outstanding Recorded Investment	Post-Modification Outstanding Recorded Investment	Recorded Investment
Accruing troubled debt restructurings:				
Real estate - mortgage	7	$ 369	$ 397	$ 315
Non-accruing troubled debt restructurings:				
Commercial, financial, agricultural	1	19	20	4
Real estate - mortgage	1	25	25	20
	9	$ 413	$ 442	$ 339

(Dollars in thousands)	Number of Contracts	Pre-Modification Outstanding Recorded Investment	Post-Modification Outstanding Recorded Investment	Recorded Investment
As of December 31, 2016				
Accruing troubled debt restructurings:				
Real estate - mortgage	7	$ 369	$ 397	$ 340
Non-accruing troubled debt restructurings:				
Real estate - mortgage	1	25	25	23
	8	$ 394	$ 422	$ 363

The Company's troubled debt restructurings are also impaired loans, which may result in a specific allocation and subsequent charge-off if appropriate. As of December 31, 2017, there were no specific reserves relating to the troubled debt restructurings. There was one troubled debt restructured loan for $4,000 at December 31, 2017 for which an $8,000 charge-off was recorded in 2017. The amended terms of the restructured loans vary, whereby interest rates have been reduced, principal payments have been reduced or deferred for a period of time and/or maturity dates have been extended.

As of December 31, 2017, two restructured loans to unrelated borrowers totaling $87,000 were in default because they were delinquent in excess of 30 days with respect to the terms of the restructuring. There have been no defaults of troubled debt restructurings that took place during 2017, 2016 or 2015 within 12 months of restructure.

The following table summarizes loans whose terms have been modified, resulting in troubled debt restructurings during 2017 and 2016.

(Dollars in thousands) As of December 31, 2017	Number of Contracts	Pre-Modification Outstanding Recorded Investment	Post-Modification Outstanding Recorded Investment	Recorded Investment
Non-accruing troubled debt restructurings:				
Commercial, financial, agriculture	1	$ 19	$ 20	$ 4
	1	$ 19	$ 20	$ 4

(Dollars in thousands) As of December 31, 2017	Number of Contracts	Pre-Modification Outstanding Recorded Investment	Post-Modification Outstanding Recorded Investment	Recorded Investment
Accruing troubled debt restructurings:				
Real estate - mortgage	3	$ 189	$ 189	$ 186
	3	$ 189	$ 189	$ 186

The following tables summarize loans and the activity in the allowance for loan losses by loan class, segregated into the amount required for loans individually evaluated for impairment and the amount required for loans collectively evaluated for impairment as of and for the years ended December 31, 2017, 2016 and 2015:

(Dollars in thousands) Allowance for loan losses	Commercial, financial and agricultural	Real estate-commercial	Real estate-construction	Real estate-mortgage	Obligations of states and political subdivisions	Personal	Total
Beginning Balance, January 1, 2017	$ 318	$ 948	$ 231	$ 1,143	$ -	$ 83	$ 2,723
Charge-offs	(46)	(70)	-	(149)	-	(27)	(292)
Recoveries	5	2	-	45	-	17	69
Provisions	(4)	142	57	246	-	(2)	439
Ending balance, December 31, 2017	$ 273	$ 1,022	$ 288	$ 1,285	$ -	$ 71	$ 2,939

As of December 31, 2017 Allowance for loan losses:	Commercial, financial and agricultural	Real estate-commercial	Real estate-construction	Real estate-mortgage	Obligations of states and political subdivisions	Personal	Total
Ending balance	$ 273	$ 1,022	$ 288	$ 1,285	$ -	$ 71	$ 2,939
evaluated for impairment							
individually	$ -	$ -	$ -	$ -	$ -	$ -	$ -
collectively	$ 273	$ 1,022	$ 288	$ 1,285	$ -	$ 71	$ 2,939
Loans:							
Ending balance	$ 45,802	$ 140,369	$ 28,403	$ 146,888	$ 13,044	$ 9,398	$ 383,904
evaluated for impairment							
individually	$ 468	$ 5,031	$ -	$ 2,232	$ -	$ -	$ 7,731
collectively	$ 45,334	$ 135,147	$ 28,403	$ 144,319	$ 13,044	$ 9,398	$ 375,645
Ending balance: loans acquired with deteriorated credit quality	$ -	191	$ -	$ 337	$ -	$ -	$ 528

(Dollars in thousands) Allowance for loan losses	Commercial, financial and agricultural	Real estate-commercial	Real estate-construction	Real estate-mortgage	Obligations of states and political subdivisions	Personal	Total
Beginning Balance, January 1, 2016	$ 264	$ 836	$ 191	$ 1,140	$ -	$ 47	$ 2,478
Charge-offs	(4)	(146)	-	(103)	-	(26)	(279)
Recoveries	-	24	-	15	-	19	58
Provisions	58	234	40	91	-	43	466
Ending balance, December 31, 2016	$ 318	$ 948	$ 231	$ 1,143	$ -	$ 83	$ 2,723

As of December 31, 2016 Allowance for loan losses:	Commercial, financial and agricultural	Real estate-commercial	Real estate-construction	Real estate-mortgage	Obligations of states and political subdivisions	Personal	Total
Ending balance	$ 318	$ 948	$ 231	$ 1,143	$ -	$ 83	$ 2,723
evaluated for impairment							
individually	$ -	$ -	$ -	$ 56	$ -	$ -	$ 56
collectively	$ 318	$ 948	$ 231	$ 1,087	$ -	$ 83	$ 2,667
Loans:							
Ending balance	$ 40,827	$ 123,711	$ 35,206	$ 154,905	$ 13,616	$ 10,032	$ 378,297
evaluated for impairment							
individually	$ 436	$ 5,499	$ 2,455	$ 4,057	$ -	$ -	$ 12,447
collectively	$ 40,391	$ 117,571	$ 32,751	$ 150,433	$ 13,616	$ 10,032	$ 364,794
Ending balance: loans acquired with deteriorated credit quality	$ -	641	$ -	$ 415	$ -	$ -	$ 1,056

(Dollars in thousands) Allowance for loan losses	Commercial, financial and agricultural	Real estate-commercial	Real estate-construction	Real estate-mortgage	Obligations of states and political subdivisions	Personal	Total
Beginning Balance, January 1, 2015	$ 222	$ 665	$ 155	$ 1,300	$ -	$ 38	$ 2,380
Charge-offs	(11)	(66)	(24)	(305)	-	(9)	(415)
Recoveries	7	-	-	1	-	3	11
Provisions	46	237	60	144	-	15	502
Ending balance, December 31, 2015	$ 264	$ 836	$ 191	$ 1,140	$ -	$ 47	$ 2,478

As of December 31, 2015	Commercial, financial and agricultural	Real estate-commercial	Real estate-construction	Real estate-mortgage	Obligations of states and political subdivisions	Personal	Total
Allowance for loan losses:							
Ending balance	$ 264	$ 836	$ 191	$ 1,140	$ -	$ 47	$ 2,478
evaluated for impairment							
individually	$ -	$ -	$ -	$ -	$ -	$ -	$ -
collectively	$ 264	$ 836	$ 191	$ 1,140	$ -	$ 47	$ 2,478
Loans:							
Ending balance	$ 34,171	$ 127,213	$ 26,672	$ 164,617	$ 17,524	$ 6,846	$ 377,043
evaluated for impairment							
individually	$ 475	$ 1,851	$ -	$ 2,636	$ -	$ -	$ 4,962
collectively	$ 33,696	$ 124,528	$ 26,672	$ 161,351	$ 17,524	$ 6,846	$ 370,617
acquired with credit deterioration	$ -	834	$ -	$ 630	$ -	$ -	$ 1,464

8. PLEDGED ASSETS

The Bank must maintain sufficient qualifying collateral with the FHLB in order to secure borrowings. Therefore, a Master Collateral Agreement has been entered into which pledges all mortgage related assets as collateral for future borrowings. Mortgage related assets could include loans or investment securities. As of December 31, 2017, the amount of loans included in qualifying collateral was $224,561,000, for a collateral value of $163,181,000. No investment securities are included in qualifying collateral as of December 31, 2017.

9. BANK OWNED LIFE INSURANCE AND ANNUITIES

The Company holds bank-owned life insurance ("BOLI") and deferred annuities with a combined cash value of $14,972,000 and $14,631,000 at December 31, 2017 and 2016, respectively. As annuitants retire, the deferred annuities may be converted to payout annuities to create payment streams that match certain post-retirement liabilities. The net increase in cash surrender value on the BOLI and annuities was $341,000 and $98,000 in 2017 and 2015, respectively, while the cash surrender value decreased in 2016 by $274,000; the net change resulting from proceeds from life insurance claim payments, premium payments and earnings recorded as non-interest income. The contracts are owned by the Bank in various insurance companies. The crediting rate on the policies varies annually based on the insurance companies' investment portfolio returns in their general fund and market conditions. Changes in cash value of BOLI and annuities in 2017 and 2016 are shown below:

(Dollars in thousands)	Life Insurance	Deferred Annuities	Total
Balance as of January 1, 2016	$ 14,500	$ 405	$ 14,905
Earnings	309	15	324
Premiums on existing policies	40	13	53
Net proceeds from life insurance claim	(651)	-	(651)
Balance as of December 31, 2016	14,198	433	14,631
Earnings	285	16	301
Premiums on existing policies	27	13	40
Balance as of December 31, 2017	$ 14,510	$ 462	$ 14,972

10. PREMISES AND EQUIPMENT

Premises and equipment consist of the following:

(Dollars in thousands)	December 31, 2017	December 31, 2016
Land	$ 1,126	$ 1,126
Buildings and improvements	11,358	9,460
Furniture, computer software and equipment	5,898	5,166
	18,382	15,752
Less: accumulated depreciation	(9,495)	(8,895)
	$ 8,887	$ 6,857

Depreciation expense on premises and equipment charged to operations was $672,000 in 2017, $595,000 in 2016 and $506,000 in 2015.

11. GOODWILL AND OTHER INTANGIBLE ASSETS

Branch Acquisition

On September 8, 2006, the Company acquired a branch office in Richfield, PA. Goodwill at December 31, 2017 and 2016 was $2,046,000. Core deposit intangible of $431,000 was fully amortized as of December 31, 2017 and 2016. The core deposit intangible was being amortized over a ten-year period on a straight-line basis. Goodwill is not amortized, but is measured annually for impairment.

FNBPA Acquisition

On November 30, 2015, the Company completed its acquisition of FNBPA and, as a result, recorded goodwill of $3,335,000. In 2016, an adjustment was made to increase goodwill to $3,402,000. Core deposit intangible in the amount of $303,000 was recorded and is being amortized over a ten-year period using a sum of the year's digits basis. Other intangible assets were identified and recorded as of November 30, 2015, in the amount of $40,000 and were amortized on a straight-line basis over two years, through November 30, 2017.

The following table shows the amortization schedule for each of the intangible assets recorded.

	FNBPA Acquisition	FNBPA Acquisition	Branch Acquisition
(Dollars in thousands)	Core Deposit Intangible	Other Intangible Assets	Core Deposit Intangible
Beginning Balance at Acquisition Date	$ 303	$ 40	$ 431
Amortization expense recorded prior to December 31, 2014	-	-	357
Amortization expense recorded in Years ended:			
December 31, 2015	4	2	45
December 31, 2016	55	20	29
December 31, 2017	49	18	-
Unamortized balance as of December 31, 2017	195	-	-
Scheduled Amortization expense for years ended:			
December 31, 2018	44	-	-
December 31, 2019	38	-	-
December 31, 2020	33	-	-
December 31, 2021	27	-	-
December 31, 2022	21	-	-
After December 31, 2022	32	-	-

12. INVESTMENT IN UNCONSOLIDATED SUBSIDIARY

On September 1, 2006, the Company invested in Liverpool Community Bank (formerly known as The First National Bank of Liverpool), ("LCB"), located in Liverpool, Pennsylvania, by purchasing 39.16% of its outstanding common stock. This investment is accounted for under the equity method of accounting. The investment was carried at $4,812,000 and $4,703,000 as of December 31, 2017 and 2016, respectively. The Company increases its investment in LCB for its share of earnings and decreases its investment by any dividends received from LCB. The investment is evaluated quarterly for impairment. A loss in value of the investment which is determined to be other than a temporary decline would be recognized as a loss in the period in which such determination is made. Evidence of a loss in value might include, but would not necessarily be limited to, absence of an ability to recover the carrying amount of the investment or inability of LCB to sustain an earnings capacity which would justify the current carrying value of the investment.

Acquisition of Liverpool Community Bank

On December 29, 2017, Juniata entered into an Agreement and Plan of Merger (the "Merger Agreement") with LCB. The Merger Agreement provides that, upon the terms, and subject to the conditions set forth therein, LCB will merge with, and into, The Juniata Valley Bank, with The Juniata Valley Bank continuing as the surviving entity (the "Merger").

Subject to the terms and conditions of the Merger Agreement, at the effective time of the Merger, each share of Liverpool's common stock issued and outstanding immediately prior to the effective time of the Merger (other than the LCB common stock currently owned by Juniata, which will be cancelled) will be converted into the right to receive, at the election of the holder, either: (i) 202.6286 shares of common stock of Juniata (the "Stock Consideration") or (ii) $4,050.00 (the "Cash Consideration"), subject to proration to maintain total Cash Consideration at a minimum of 15% and a maximum of 20% of the total merger consideration. Holders of Liverpool Common Stock prior to the consummation of the Merger will own a percentage of Juniata's common stock outstanding immediately following the consummation of the Merger that will range from 6.4% (if minimum Cash Consideration of 15% were paid) to 6.0% (if the maximum Cash Consideration of 20% were paid).

Consummation of the Merger is subject to customary closing conditions including, but not limited to, the absence of a material adverse change relating to Liverpool or Juniata, approval of the Merger by Liverpool's shareholders and receipt of all required regulatory approvals.

The parties anticipate the Merger will close in the first half of 2018.

13. DEPOSITS

The aggregate amount of demand deposit overdrafts that were reclassified as loans were $33,000 at December 31, 2017, compared to $39,000 at December 31, 2016.

Deposits consist of the following:

	December 31,	
(Dollars in thousands)	2017	2016
Demand, non-interest bearing	$ 115,911	$ 104,006
Interest-bearing demand and money market	122,407	118,429
Savings	98,966	95,449
Time deposits, $250,000 or more	8,456	5,773
Other time deposits	131,928	132,165
	$ 477,668	$ 455,822

Deposits and other funds from related parties held by Juniata amounted to $1,116,000 and $1,247,000 at December 31, 2017 and 2016, respectively.

Aggregate amount of scheduled maturities of time deposits as of December 31, 2017 include the following:

(Dollars in thousands)	Time Deposits		
Maturing in:	$250,000 or more	Other	Total Time Deposits
2018	$ 2,530	$ 39,898	$ 42,428
2019	1,726	19,566	21,292
2020	2,676	33,365	36,041
2021	257	19,224	19,481
2022	-	8,847	8,847
Later	1,267	11,028	12,295
	$ 8,456	$ 131,928	$ 140,384

14. BORROWINGS

Short term borrowings as of December 31, 2017, 2016 and 2015 and the related maximum amounts outstanding at the end of any month in each of the three years then ended are presented below.

	December 31,			Maximum Outstanding at Any Month End		
(Dollars in thousands)	2017	2016	2015	2017	2016	2015
Securities sold under agreements to repurchase	$ 9,769	$ 4,496	$ 4,996	$ 9,769	$ 6,018	$ 5,106
Short-term borrowings with Federal Home Loan Bank:						
Overnight advances	12,000	27,700	30,061	30,721	32,300	35,234
Mid-term repo	-	-	-	-	-	6,250
	$ 21,769	$ 32,196	$ 35,057	$ 40,490	$ 38,318	$ 46,590

The following table presents supplemental information related to short-term borrowings.

	Securities sold under agreements to repurchase			Short-term borrowings with Federal Home Loan Bank		
(Dollars in thousands)	2017	2016	2015	2017	2016	2015
Amount outstanding as of December 31	$ 9,769	$ 4,496	$ 4,996	$ 12,000	$ 27,700	$ 30,061
Weighted average interest rate as of December 31	0.32%	0.18%	0.10%	1.54%	0.74%	0.44%
Average amount outstanding during the year	4,823	4,712	4,716	25,476	15,696	16,309
Weighted average interest rate during the year	0.64%	0.11%	0.10%	1.16%	0.60%	0.38%

Long-term debt is comprised only of FHLB advances with an original maturity of one year or more. Outstanding balances were $25,000,000 as of December 31, 2017 and 2016.

The following table summarizes the scheduled maturities of long-term debt as of December 31, 2017.

(Dollars in thousands)

Year	Scheduled Maturities	Weighted Average Interest Rate
2018	$ 10,000	1.33%
2019	15,000	1.59 %
2020	-	-
2021	-	-
2022	-	-
Thereafter	$ 25,000	1.49%

The Bank has repurchase agreements with several of its depositors, under which customers' funds are invested daily into an interest bearing account. These funds are carried by the Company as short-term debt. It is the Company's policy to completely collateralize repurchase agreements with U.S. Government securities. As of December 31, 2017, the securities that serve as collateral for securities sold under agreements to repurchase had a fair value of $10,888,000. The interest rate paid on these funds is variable and subject to change daily.

The Bank's maximum borrowing capacity with the FHLB is $163,181,000, with a balance of $37,000,000 outstanding as of December 31, 2017. In order to borrow additional amounts, the FHLB would require the Bank to purchase additional FHLB Stock. The FHLB is a source of both short-term and long-term funding. The Bank must maintain sufficient qualifying collateral to secure all outstanding advances. Qualifying collateral is defined by the FHLB and includes outstanding balances of the Company's real estate loans, excluding loans with certain risk mitigants, including delinquencies and loans made to insiders, borrowers with low credit scores or loans with high loan-to-value ratios.

15. OPERATING LEASE OBLIGATIONS

The Company has entered into a number of arrangements that are classified as operating leases. The operating leases are for several branch and office locations. The majority of the branch and office location leases are renewable at the Company's option. Future minimum lease commitments are based on current rental payments. Rental expense charged to operations, including license fees for branch offices, was $147,000, $142,000 and $127,000 in 2017, 2016 and 2015, respectively.

The following is a summary of future minimum rental payments for the next five years required under operating leases that have initial or remaining noncancelable lease terms in excess of one year as of December 31, 2016:

(Dollars in thousands)

Years ending December 31,	Lease Obligation
2018	$ 91
2019	72
2020	54
2021	56
2022	5
2023 and beyond	-
Total minimum payments required	$ 278

16. INCOME TAXES

ASC 740 requires the effects of tax law and rate changes be reflected as a component of tax expense from continuing operations. Due to the enactment of the Tax Cuts and Jobs Act on December 22, 2017, Juniata's future maximum corporate tax rate was lowered from 34% to 21%, thereby decreasing the future tax benefit of its net deferred tax asset by 13%. Though the reduced rate will provide tax savings to Juniata in future periods, the reduction resulted in a write-downs of Juniata's net deferred tax assets, which was previously valued based upon the projection of a 34% future tax rate. As a result, a non-cash charge of $416,000 was included in the 2017 expense for income taxes. Offsetting the tax expense was the effect of tax credits for Juniata's investment in two low-income housing partnerships amounting to $722,000 in 2017, $572,000 in 2016 and $570,000 in 2015. Tax credits associated with phase I will continue through 2023. Phase II credits were initiated in the second half of 2017 and will run through 2027. The tax credits are included in the tax expense line item on the Consolidated Statements of Income.

The components of income tax expense for the three years ended December 31 were:

(Dollars in thousands)	Years Ended December 31,		
	2017	2016	2015
Current tax expense	$ 379	$ 499	$ 149
Deferred tax (benefit) expense	681	320	(66)
Total tax expense	$ 1,060	$ 819	$ 83

A reconciliation of the statutory income tax expense computed at 34% to the income tax expense included in the consolidated statements of income follows:

(Dollars in thousands)	Years Ended December 31,		
	2017	2016	2015
Income before income taxes	$ 5,597	$ 5,975	$ 3,141
Statutory tax rate	34.0%	34.0%	34.0%
Federal tax at statutory rate	1,903	2,032	1,068
Tax-exempt interest	(443)	(427)	(391)
Net earnings on BOLI	(75)	(84)	(99)
Gain from life insurance proceeds	-	(124)	(34)
Dividend from unconsolidated subsidiary	(17)	(15)	(15)
Stock-based compensation	24	23	20
Federal tax credits	(722)	(572)	(570)
Merger and acquisition expenses	-	-	115
Tax reform adjustment	416	-	-
Other permanent differences	(26)	(14)	(11)
Total tax expense	$ 1,060	$ 819	$ 83
Effective tax rate	18.9%	13.7%	2.6%

Deductible temporary differences and taxable temporary differences gave rise to a net deferred tax asset for the Company as of December 31, 2017 and 2016. The components giving rise to the net deferred tax asset are detailed below:

(Dollars in thousands)	Years Ended December 31,	
Deferred Tax Assets	2017	2016
Allowance for loan losses	$ 369	$ 413
Deferred directors' compensation	338	534
Employee and director benefits	320	535
Qualified pension liability	512	847
Unrealized losses on securities available for sale	439	429
Unrealized loss from securities impairment	37	106
Investment in low income housing project	141	159
Fair value adjustments to acquired assets and liabilities	168	277
Tax credit carryforward	75	209
Valuation reserves on other real estate owned	1	70
Other	-	83
Total deferred tax assets	2,400	3,662
Deferred Tax Liabilities		
Depreciation	(345)	(272)
Equity income from unconsolidated subsidiary	(368)	(645)
Loan origination costs	(340)	(440)
Prepaid expense	(230)	(386)
Annuity earnings	(52)	(79)
Fair value of mortgage servicing rights	(47)	(70)
Intangible assets	(18)	(42)
Goodwill	(324)	(479)
Other	(24)	-
Total deferred tax liabilities	(1,748)	(2,413)
Net deferred tax asset included in other assets	$ 652	$ 1,249

The Company has concluded that the deferred tax assets are realizable (on a more likely than not basis) through the combination of future reversals of existing taxable temporary differences, certain tax planning strategies and expected future taxable income.

It is the Company's policy to recognize interest and penalties on unrecognized tax benefits in income tax expense in the Consolidated Statements of Income. No significant income tax uncertainties were identified as a result of the Company's evaluation of its income tax position. Therefore, the Company recognized no adjustment for unrecognized income tax benefits for the years ended December 31, 2017, 2016 and 2015. The Company is no longer subject to examination by taxing authorities for years before 2014. Tax years 2014 through the present, with limited exception, remain open to examination.

17. STOCKHOLDERS' EQUITY AND REGULATORY MATTERS

The Company is authorized to issue 500,000 shares of preferred stock with no par value. The Board has the ability to fix the voting, dividend, redemption and other rights of the preferred stock, which can be issued in one or more series. No shares of preferred stock have been issued.

The Company has a dividend reinvestment and stock purchase plan. Under this plan, additional shares of Juniata Valley Financial Corp. stock may be purchased at the prevailing market prices through reinvested dividends and voluntary cash payments, within limits. To the extent that shares are not available in the open

market, the Company has reserved common stock to be issued under the plan. Any adjustment in capitalization of the Company will result in a proportionate adjustment to the reserved shares for this plan. At December 31, 2017, 141,887 shares were available for issuance under the Dividend Reinvestment Plan.

The Company periodically repurchases shares of its common stock under a share repurchase program approved by the Board of Directors. Repurchases have typically been through open market transactions and have complied with all regulatory restrictions on the timing and amount of such repurchases. Shares repurchased have been added to treasury stock and accounted for at cost. These shares may be reissued for stock option exercises, stock awards, employee stock purchase plan purchases, to fulfill dividend reinvestment program needs and to supply shares needed for exchange in an acquisition. During 2017, 2016 and 2015, 4,289, 49,370 and 3,504 shares, respectively, were repurchased in conjunction with this program. Remaining shares authorized in the program were 173,990 as of December 31, 2017. On November 30, 2015, 555,555 treasury shares were reissued to former FNBPA shareholders in conjunction with the acquisition of FNBPA.

The Company and the Bank are subject to risk-based capital standards by which bank holding companies and banks are evaluated in terms of capital adequacy. These regulatory capital requirements are administered by the federal banking agencies. Failure to meet minimum capital requirements can result in certain mandatory and possibly additional discretionary actions by regulators that, if undertaken, could have a direct material effect on the Company's consolidated financial statements. Under capital adequacy guidelines and the regulatory framework for prompt corrective action, the Company and the Bank must meet specific capital guidelines that involve quantitative measures of the Company's and the Bank's assets, liabilities, and certain off-balance sheet items as calculated under regulatory accounting practices. The Company's and Bank's capital amounts and classification are also subject to qualitative judgments by the regulators about components, risk weightings, and other factors.

Quantitative measures established by regulation to ensure capital adequacy require the Company and the Bank to each maintain minimum amounts and ratios. The requirements were revised and became effective on a phased-in basis beginning January 1, 2015 and include the establishment of a Common Equity Tier I level. Juniata's and the Bank's Total, Tier I and Common Equity Tier I capital (as defined in the regulations) to risk-weighted assets (as defined in the regulations), and Tier I capital (as defined in the regulations) to average assets (as defined in the regulations) are set forth in the table below. The new risk-based capital rules require that banks and holding companies maintain a "capital conservation buffer" of 250 basis points in excess of the "minimum capital ratio". The minimum capital ratio is equal to the prompt corrective action adequately capitalized threshold ratio. The capital conservation buffer will be phased in over four years, which began on January 1, 2016, with a maximum buffer of 0.625% of risk weighted assets for 2016, 1.25% for 2017, 1.875% for 2018 and 2.5% for 2019 and thereafter. Failure to maintain the required capital conservation buffer will result in limitations on capital distributions and on discretionary bonuses to executive officers. Management believes, as of December 31, 2017 and 2016, that the Company and the Bank met all capital adequacy requirements to which they were subject.

As of December 31, 2017, the most recent notification from the regulatory banking agencies categorized the Bank as well capitalized under the regulatory framework for prompt corrective action. To be categorized as "well capitalized", the Bank must maintain minimum Total risk-based, Tier I risk-based, Common Equity Tier I risk-based and Tier I leverage ratios as set forth in the table. To the knowledge of management, there are no conditions or events since these notifications that have changed the Bank's category.

The table below provides a comparison of the Company's and the Bank's risk-based capital ratios and leverage ratios to the minimum regulatory requirements as of the dates indicated.

Juniata Valley Financial Corp. (Consolidated)

	Actual		Minimum Requirement For Capital Adequacy Purposes	
(Dollars in thousands)	Amount	Ratio	Amount	Ratio
As of December 31, 2017:				
Total Capital (to Risk Weighted Assets)	$ 59,667	15.01%	$ 31,809	8.00%
Tier 1 Capital (to Risk Weighted Assets)	55,808	14.04%	23,857	6.00%
Common Equity Tier 1 Capital (to Risk Weighted Assets)	55,808	14.04%	17,892	4.50%
Tier 1 Capital (to Average Assets) Leverage	55,808	9.43%	23,666	4.00%
As of December 31, 2016:				
Total Capital (to Risk Weighted Assets)	$ 58,375	15.34%	$ 30,442	8.00%
Tier 1 Capital (to Risk Weighted Assets)	55,331	14.54%	22,831	6.00%
Common Equity Tier 1 Capital (to Risk Weighted Assets)	55,331	14.54%	17,124	4.50%
Tier 1 Capital (to Average Assets) Leverage	55,331	9.68%	22,872	4.00%

The Juniata Valley Bank

	Actual		Minimum Requirement For Capital Adequacy Purposes		Minimum Capital Adequacy With Capital Buffer		Minimum Regulatory Requirements to be "Well Capitalized" under Prompt Corrective Action Provisions	
(Dollars in thousands)	Amount	Ratio	Amount	Ratio	Amount	Ratio	Amount	Ratio
As of December 31, 2017:								
Total Capital (to Risk Weighted Assets)	$ 52,009	13.24%	$ 31,435	8.00%	$ 36,346	9.250%	$ 39,293	10.00%
Tier 1 Capital (to Risk Weighted Assets)	49,026	12.48%	23,576	6.00%	28,488	7.250%	31,435	8.00%
Common Equity Tier 1 Capital (to Risk Weighted Assets)	49,026	12.48%	17,682	4.50%	22,594	5.750%	25,541	6.50%
Tier 1 Capital (to Average Assets) Leverage	49,026	8.36%	23,460	4.00%	23,460	4.000%	29,325	5.00%
As of December 31, 2016:								
Total Capital (to Risk Weighted Assets)	$ 51,102	13.60%	$ 30,053	8.00%	$ 32,401	8.625%	$ 37,566	10.00%
Tier 1 Capital (to Risk Weighted Assets)	48,217	12.84%	15,026	6.00%	24,888	6.625%	30,053	8.00%
Common Equity Tier 1 Capital (to Risk Weighted Assets)	48,217	12.84%	16,905	4.50%	19,253	5.125%	24,418	6.50%
Tier 1 Capital (to Average Assets) Leverage	48,217	8.39%	22,991	4.00%	22,991	4.000%	28,739	5.00%

Certain regulatory restrictions exist regarding the ability of the Bank to transfer funds to the Company in the form of cash dividends, loans or advances. At December 31, 2017, $33,675,000 of undistributed earnings of the Bank, included in the consolidated stockholders' equity, was available for distribution to the Company as dividends without prior regulatory approval, subject to the regulatory capital requirements above.

18. CALCULATION OF EARNINGS PER SHARE

Basic earnings per share ("EPS") is computed by dividing net income by the weighted average number of common shares outstanding for the period. Diluted EPS reflects the potential dilution that could occur if securities or other contracts to issue common stock were exercised or converted into common stock or resulted in the issuance of common stock that then shared in the earnings of the Company. Potential common shares that may be issued by the Company relate solely to outstanding stock options and are determined using the treasury stock method. Restricted stock is participating, and therefore, is included in the EPS calculation. The following table sets forth the computation of basic and diluted earnings per share:

	Years Ended December 31,		
(Dollars in thousands, except earnings per share)	2017	2016	2015
Net income	$ 4,537	$ 5,156	$ 3,058
Weighted-average common shares outstanding	4,765	4,801	4,240
Basic earnings per share	$ 0.95	$ 1.07	$ 0.72
Weighted-average common shares outstanding	4,765	4,801	4,240
Common stock equivalents due to effect of stock options	10	1	1
Total weighted-average common shares and equivalents	$ 4,775	$ 4,802	$ 4,241
Diluted earnings per share	$ 0.95	$ 1.07	$ 0.72
Anti-dilutive stock options outstanding	6	401	103

19. ACCUMULATED OTHER COMPREHENSIVE LOSS

Components of accumulated other comprehensive loss, net of tax as of December 31 of each of the last three years consist of the following:

	As of December 31,		
(Dollars in thousands)	2017	2016	2015
Unrealized (losses) gains on available for sale securities	$ (1,683)	$ (866)	$ 96
Unrecognized expense for defined benefit pension	(2,351)	(2,343)	(2,299)
Accumulated other comprehensive loss	$ (4,034)	$ (3,209)	$ (2,203)

20. FAIR VALUE MEASUREMENT

Fair value measurement and disclosure guidance defines fair value as the price that would be received to sell an asset or transfer a liability in an orderly transaction (that is, not a forced liquidation or distressed sale) between market participants at the measurement date under current market conditions. Additional guidance is provided on determining when the volume and level of activity for the asset or liability has significantly decreased. The guidance also includes guidance on identifying circumstances when a transaction may not be considered orderly.

Fair value measurement and disclosure guidance provides a list of factors that a reporting entity should evaluate to determine whether there has been a significant decrease in the volume and level of activity for the asset or liability in relation to normal market activity for the asset or liability. When the reporting entity concludes there has been a significant decrease in the volume and level of activity for the asset or liability, further analysis of the information from that market is needed, and significant adjustments to the related prices may be necessary to estimate fair value in accordance with fair value measurement and disclosure guidance.

This guidance clarifies that, when there has been a significant decrease in the volume and level of activity for the asset or liability, some transactions may not be orderly. In those situations, the entity must evaluate the weight of the evidence to determine whether the transaction is orderly. The guidance provides a list of circumstances that may indicate that a transaction is not orderly. A transaction price that is not associated with an orderly transaction is given little, if any, weight when estimating fair value.

Fair value measurement and disclosure guidance defines fair value as the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants. A fair value measurement assumes that the transaction to sell the asset or transfer the liability occurs in the principal market for the asset or liability or, in the absence of a principal market, the most advantageous market for the asset or liability. The price in the principal (or most advantageous) market used to measure the fair value of the asset or liability is not adjusted for transaction costs. An orderly transaction is a transaction that assumes exposure to the market for a period prior to the measurement date to allow for marketing activities that are usual and customary for transactions involving such assets and liabilities; it is not a forced transaction. Market participants are buyers and sellers in the principal market that are (i) independent, (ii) knowledgeable, (iii) able to transact and (iv) willing to transact.

Fair value measurement and disclosure guidance requires the use of valuation techniques that are consistent with the market approach, the income approach and/or the cost approach. The market approach uses prices and other relevant information generated by market transactions involving identical or comparable assets and liabilities. The income approach uses valuation techniques to convert future amounts, such as cash flows or earnings, to a single present amount on a discounted basis. The cost approach is based on the amount that currently would be required to replace the service capacity of an asset (replacement cost). Valuation techniques should be consistently applied. Inputs to valuation techniques refer to the assumptions that market participants would use in pricing the asset or liability. Inputs may be observable, meaning those that reflect the assumptions market participants would use in pricing the asset or liability developed based on market data obtained from independent sources, or unobservable, meaning those that reflect the reporting entity's own assumptions about the assumptions market participants would use in pricing the asset or liability developed based on the best information available in the circumstances. In that regard, the guidance establishes a fair value hierarchy for valuation inputs that gives the highest priority to quoted prices in active markets for identical assets or liabilities and the lowest priority to unobservable inputs. The fair value hierarchy is as follows:

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

Level 2 Inputs – Inputs other than quoted prices included in Level 1 that are observable for the asset or liability, either directly or indirectly. These might include quoted prices for similar assets or liabilities in active markets, quoted prices for identical or similar assets or liabilities in markets that are not active, inputs other than quoted prices that are observable for the asset or liability (such as interest rates, volatilities, prepayment speeds, credit risks, etc.) or inputs that are derived principally from or corroborated by market data by correlation or other means.

Level 3 Inputs – Unobservable inputs for determining the fair values of assets or liabilities that reflect an entity's own assumptions about the assumptions that market participants would use in pricing the assets or liabilities.

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

A description of the valuation methodologies used for instruments measured at fair value, as well as the general classification of such instruments pursuant to the valuation hierarchy, is set forth below.

In general, fair value is based upon quoted market prices, where available. If such quoted market prices are not available, fair value is based upon internally developed models that primarily use, as inputs, observable market-based parameters. Valuation adjustments may be made to ensure that financial instruments are recorded at fair value. These adjustments may include amounts to reflect counterparty credit quality, the Company's creditworthiness, among other things, as well as unobservable parameters. Any such valuation adjustments are applied consistently over time. The Company's valuation methodologies may produce a fair value calculation that may not be indicative of net realizable value or reflective of future fair values. While management believes the Company's valuation methodologies are appropriate and consistent with other market participants, the use of different methodologies or assumptions to determine the fair value of certain financial instruments could result in a different estimate of fair value at the reporting date.

Securities Available for Sale

Debt securities classified as available for sale are reported at fair value utilizing Level 2 inputs. For these securities, the Company obtains fair value measurement from an independent pricing service. The fair value measurements consider observable data that may include dealer quotes, market spreads, cash flows, the U.S. Treasury yield curve, live trading levels, trade execution data, market consensus prepayment speeds, credit information and the debt securities' terms and conditions, among other things. Equity securities classified as available for sale are reported at fair value using Level 1 inputs.

Impaired Loans

Certain impaired loans are reported on a non-recurring basis at the fair value of the underlying collateral since repayment is expected solely from the collateral. Fair value is generally determined based upon independent third-party appraisals of the properties, or discounted cash flows based upon the expected proceeds. These assets are included as Level 3 fair values, based upon the lowest level of input that is significant to the fair value measurements.

Other Real Estate Owned

Certain assets included in other real estate owned are carried at fair value as a result of impairment and accordingly are presented as measured on a non-recurring basis. Values are estimated using Level 3 inputs, based on appraisals that consider the sales prices of property in the proximate vicinity.

Mortgage Servicing Rights

The fair value of servicing assets is based on the present value of estimated future cash flows on pools of mortgages stratified by rate and maturity date and are considered Level 3 inputs.

The following table summarizes financial assets and financial liabilities measured at fair value as of December 31, 2017 and December 31, 2016, segregated by the level of the valuation inputs within the fair value hierarchy utilized to measure fair value. There were no transfers of assets between fair value Level 1 and Level 2 during the years ended December 31, 2017 or 2016.

(Dollars in thousands)	December 31, 2017	(Level 1) Quoted Prices in Active Markets for Identical Assets	(Level 2) Significant Other Observable Inputs	(Level 3) Significant Other Unobservable Inputs
Measured at fair value on a recurring basis:				
Debt securities available-for-sale:				
Obligations of U.S. Government agencies and corporations	$ 34,214	$ -	$ 34,214	$ -
Obligations of state and political subdivisions	24,981	-	24,981	-
Mortgage-backed securities	93,510	-	93,510	-
Equity securities available-for-sale	1,119	1,119	-	-
Measured at fair value on a non-recurring basis:				
Impaired loans	1,574	-	-	1,574
Other real estate owned	27	-	-	27
Mortgage servicing rights	225	-	-	225

(Dollars in thousands)	December 31, 2016	(Level 1) Quoted Prices in Active Markets for Identical Assets	(Level 2) Significant Other Observable Inputs	(Level 3) Significant Other Unobservable Inputs
Measured at fair value on a recurring basis:				
Debt securities available-for-sale:				
Obligations of U.S. Government agencies and corporations	$ 35,799	$ -	$ 35,799	$ -
Obligations of state and political subdivisions	26,659	-	26,659	-
Mortgage-backed securities	85,702	-	85,702	-
Equity securities available-for-sale	2,328	2,148	180	-
Measured at fair value on a non-recurring basis:				
Impaired loans	2,563	-	-	2,563
Other real estate owned	358	-	-	358
Mortgage servicing rights	205	-	-	205

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

(Dollars in thousands)

December 31, 2017	Fair Value Estimate	Valuation Technique	Unobservable Input	Range	Average
Impaired loans	$ 1,574	Appraisal of collateral (1)	Appraisal and liquidation adjustments (2)	0% - 13%	8%
Other real estate owned	27	Appraisal of collateral (1)	Appraisal and liquidation adjustments (2)	22%	22%
Mortgage servicing rights	225	Multiple of annual servicing fee	Estimated pre-payment speed, based on rate and term	300% - 400%	371%

(Dollars in thousands)

December 31, 2016	Fair Value Estimate	Valuation Technique	Unobservable Input	Range	Average
Impaired loans	$ 2,563	Appraisal of collateral (1)	Appraisal and liquidation adjustments (2)	7% - 58%	9%
Other real estate owned	358	Appraisal of collateral (1)	Appraisal and liquidation adjustments (2)	30-72%	46%
Mortgage servicing rights	205	Multiple of annual servicing fee	Estimated pre-payment speed, based on rate and term	300% - 400%	368%

(1) Fair value is generally determined through independent appraisals of the underlying collateral that generally include various level 3 inputs which are not identifiable.

(2) Appraisals may be adjusted downward by management for qualitative factors such as economic conditions and estimated liquidation expenses. The range of liquidation expenses and other appraisal adjustments are presented as a percent of the appraisal.

Fair Value of Financial Instruments

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

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

The following describes the estimated fair value of the Company's financial instruments as well as the significant methods and assumptions not previously disclosed used to determine these estimated fair values.

Carrying values approximate fair value for cash and due from banks, interest-bearing demand deposits with banks, restricted stock in the Federal Home Loan Bank, loans held for sale, interest receivable, mortgage servicing rights, non-interest bearing deposits, securities sold under agreements to repurchase, short-term borrowings and interest payable. Other than cash and due from banks, which are considered Level 1 inputs, and mortgage servicing rights, which are Level 3 inputs, these instruments are Level 2 inputs.

Interest bearing time deposits with banks - The estimated fair value is determined by discounting the contractual future cash flows, using the rates currently offered for deposits of similar remaining maturities.

Loans – For variable-rate loans that reprice frequently and which entail no significant changes in credit risk, carrying values approximated fair value. Substantially all commercial loans and real estate mortgages are variable rate loans. The fair value of other loans (i.e. consumer loans and fixed-rate real estate mortgages) are estimated by calculating the present value of the cash flow difference between the current rate and the market rate, for the average maturity, discounted quarterly at the market rate.

Fixed rate time deposits - The estimated fair value is determined by discounting the contractual future cash flows, using the rates currently offered for deposits of similar remaining maturities.

Long-term debt and other interest bearing liabilities – The fair values are estimated using discounted cash flow analysis, based on incremental borrowing rates for similar types of arrangements.

Commitments to extend credit and letters of credit – The fair value of commitments to extend credit is estimated using the fees currently charged to enter into similar agreements, taking into account market interest rates, the remaining terms and present credit-worthiness of the counterparties. The fair value of guarantees and letters of credit is based on fees currently charged for similar agreements.

The estimated fair values of the Company's financial instruments are as follows:

FINANCIAL INSTRUMENTS

(Dollars in thousands)

	December 31, 2017		December 31, 2016	
	Carrying Value	Fair Value	Carrying Value	Fair Value
Financial assets:				
Cash and due from banks	$ 9,839	$ 9,839	$ 9,464	$ 9,464
Interest bearing deposits with banks	58	58	95	95
Interest bearing time deposits with banks	350	350	350	350
Securities	153,824	153,824	150,488	150,488
Restricted investment in FHLB stock	3,104	3,104	3,610	3,610
Loans, net of allowance for loan losses	380,965	372,906	375,574	366,660
Mortgage servicing rights	225	225	205	205
Accrued interest receivable	1,582	1,582	1,582	1,582
Financial liabilities:				
Non-interest bearing deposits	115,911	115,911	104,006	104,006
Interest bearing deposits	361,757	361,468	351,816	354,628
Securities sold under agreements to repurchase	9,769	9,769	4,496	4,496
Short-term borrowings	12,000	12,000	27,700	27,700
Long-term debt	25,000	24,885	25,000	24,963
Other interest bearing liabilities	1,593	1,595	1,545	1,549
Accrued interest payable	300	300	268	268
Off-balance sheet financial instruments:				
Commitments to extend credit	-	-	-	-
Letters of credit	-	-	-	-

The following presents the carrying amount, fair value and placement in the fair value hierarchy of the Company's financial instruments not previously disclosed as of December 31, 2017 and December 31, 2016. This table excludes financial instruments for which the carrying amount approximates fair value.

(Dollars in thousands) December 31, 2017	Carrying Amount	Fair Value	(Level 1) Quoted Prices in Active Markets for Identical Assets or Liabilities	(Level 2) Significant Other Observable Inputs	(Level 3) Significant Other Unobservable Inputs
Financial instruments - Assets					
Interest bearing time deposits with banks	$ 350	$ 350	$ -	$ 350	$ -
Loans, net of allowance for loan losses	380,965	372,906	-	-	372,906
Financial instruments - Liabilities					
Interest bearing deposits	$ 361,757	$ 361,468	$ -	$ 361,468	$ -
Long-term debt	25,000	24,885	-	24,885	-
Other interest bearing liabilities	1,593	1,595	-	1,595	-

(Dollars in thousands) December 31, 2016	Carrying Amount	Fair Value	(Level 1) Quoted Prices in Active Markets for Identical Assets or Liabilities	(Level 2) Significant Other Observable Inputs	(Level 3) Significant Other Unobservable Inputs
Financial instruments - Assets					
Interest bearing time deposits with banks	$ 350	$ 350	$ -	$ 350	$ -
Loans, net of allowance for loan losses	375,574	366,660	-	-	366,660
Financial instruments - Liabilities					
Interest bearing deposits	$ 351,816	$ 354,628	$ -	$ 354,628	$ -
Long-term debt	25,000	24,963	-	24,963	-
Other interest bearing liabilities	1,545	1,549	-	1,549	-

21. EMPLOYEE BENEFIT PLANS

Long-Term Incentive Plan

The Company maintains the 2016 Long-Term Incentive Plan (the "Plan"), that amended and restated the former 2011 Stock Option Plan (the "2011 Plan"). The Plan continues in effect any outstanding awards under the 2011 Plan in accordance with the terms and conditions governing such awards immediately prior to the effective date of the Plan but expanded the types of awards authorized. Under the provisions of the Plan, while active, awards may consist of grants of incentive stock options, nonqualified stock options, stock appreciation rights, restricted stock and performance shares to officers and key employees of the Company, as well as Directors.

The Plan is administered by a committee of the Board of Directors. The Committee determines, among other things, which officers and key employees receive stock compensation, the number of shares to be subject to each award, the option price, the duration of the option and the restricted period, as appropriate. A recipient of the restricted shares will forfeit those shares in their entirety if employment is terminated prior to the vesting date for reasons other than retirement, death or disability. The maximum number of shares of common stock that may be issued under the Plan is 300,000 shares, and 170,175 shares were available for grant as of December 31, 2017. Shares of common stock issued under the plan may be treasury shares or unauthorized but unissued shares.

During 2017 and 2016, certain officers and key employees were issued restricted stock awards of 4,650 and 3,150 shares, respectively. Each of the awards carry a three-year restriction, with no interim vesting.

The following table presents compensation expense and related tax benefits for restricted stock awards recognized on the consolidated statement of income.

(Dollars in thousands)	2017	2016	2015
Compensation expense	$ 43	$ 16	$ -
Tax benefit	(15)	(5)	-
Net income effect	$ 28	$ 11	$ -

At December 31, 2017, there was $82,000 of unrecognized compensation cost related to all non-vested restricted stock awards. This cost is expected to be recognized through July 2020.

The following table presents a summary of non-vested restricted shares activity for 2017.

	Shares	Weighted Average Grant Date Fair Value
Non-vested at January 1, 2017	3,150	$ 17.49
Vested	-	
Cancelled	-	
Granted	4,650	18.52
Non-vested at December 31, 2017	7,800	18.10

No stock options were awarded in 2017. Options granted prior to 2017 vest over three to five years and are exercisable at the grant price, which is at least the fair market value of the stock on the grant date. The Plan provides that the option price per share is not to be less than the fair market value of the stock on the day the option was granted, but in no event less than the par value of such stock. Options granted under the Plan are exercisable no earlier than one year after the date of grant and expire ten years after the date of the grant. All options previously granted under the Plans are scheduled to expire through February 17, 2025.

Total options outstanding at December 31, 2017 have exercise prices between $17.22 and $21.10, with a weighted average exercise price of $17.91 and a weighted average remaining contractual life of 5.1 years.

As of December 31, 2017, there was $90,000 of total unrecognized compensation cost related to nonvested share-based compensation arrangements granted under the Plan. That cost is expected to be recognized through 2020

Cash received from option exercises under the Plans for the year ended December 31, 2017 was $172,000 and $53,000 for the year ended December 31, 2015. No options were exercised in 2016.

A summary of the status of the outstanding stock options as of December 31, 2017, 2016 and 2015, and changes during the years ending on those dates is presented below:

	2017		2016		2015	
	Shares	Weighted Average Exercise Price	Shares	Weighted Average Exercise Price	Shares	Weighted Average Exercise Price
Outstanding at beginning of year	139,155	$ 17.97	142,524	$ 18.07	109,816	$ 18.13
Granted	-	-	-	-	35,800	17.80
Exercised	(9,704)	17.74	-	-	(3,092)	17.22
Forfeited	(4,425)	20.05	(3,369)	22.36	-	-
Outstanding at end of year	125,026	$ 17.91	139,155	$ 17.97	142,524	$ 18.07
Options exercisable at year-end	110,282		97,584		70,920	
Weighted-average fair value of of options granted during the year		$ -		$ -		$ 1.90
Intrinsic value of options exercised during the year		$ 10,807		$ -		$ 866
Intrinsic value of options outstanding and exercisable at December 31, 2017		$ 203,715				

The following table summarizes characteristics of stock options as of December 31, 2017:

		Outstanding		Exercisable
Grant Date	Exercise Price	Shares	Contractual Average Life (Years)	Shares
10/21/2008	$ 21.10	6,100	0.80	6,100
10/20/2009	$ 17.22	6,079	1.80	6,079
9/20/2011	$ 17.75	13,200	3.72	13,200
3/20/2012	$ 18.00	15,800	4.22	15,800
2/19/2013	$ 17.65	19,622	5.14	17,802
2/18/2014	$ 17.72	31,025	6.13	29,335
2/17/2015	$ 17.80	33,200	7.13	21,966
		125,026		110,282

Defined Benefit Retirement Plans

The Company sponsors a defined benefit retirement plan (The Juniata Valley Bank Retirement Plan ("JVB Plan")) which covers substantially all of its employees employed prior to December 31, 2007. As of January 1, 2008, the JVB Plan was amended to close the plan to new entrants. All active participants as of December 31, 2007 became 100% vested in their accrued benefit and, as long as they remained eligible, continued to accrue benefits until December 31, 2012. The benefits are based on years of service and the employee's compensation. Effective December 31, 2012, the JVB Plan was amended to cease future service accruals after that date (i.e., it was frozen).

As a result of the FNBPA acquisition, the Company assumed sponsorship of a second defined benefit retirement plan (Retirement Plan for the First National Bank of Port Allegany ("FNB Plan")) as of November 30, 2015, which covers substantially all former FNBPA employees that were employed prior to September 30, 2008. The FNBPA Plan was amended as of December 31, 2015 to cease future service accruals to previously unfrozen participants and is now considered to be "frozen". Effective December 31, 2016, the FNB Plan was merged into the JVB Plan, which was amended to provide the same benefits to the class of participants previously included in the FNB Plan.

The Company's funding policy is to contribute annually no more than the maximum amount that can be deducted for federal income tax purposes. Contributions are intended to provide for benefits attributed to service through December 31, 2012. The Company does not expect to contribute to the JVB Plan in 2018.

In 2017, Juniata initiated a strategy to reduce the liability associated with its defined benefit pension plan. The first step of the initiative consisted of the purchase of a single premium group annuity for a group of Juniata's retirees, transferring the associated pension liability to the issuer of the annuity. This step reduced Juniata's overall pension liability by approximately 12%, which resulted in a pre-tax charge to earnings of $377,000. This pre-tax charge represents an acceleration of pension expenses that would otherwise have impacted Juniata's earnings in the future.

Management expects to record a $45,000 net periodic expense in 2018 for the JVB Plan, which includes expected amortization out of accumulated other comprehensive loss. The following table sets forth by level, within the fair value hierarchy, debt and equity instruments included in the JVB Plan's assets at fair value as of December 31, 2017 and December 31, 2016. Assets included in the JVB Plan that are not valued in the hierarchy table consist of cash and cash equivalents, totaling $46,000 and $179,000, at December 31, 2017 and 2016, respectively.

(Dollars in thousands)	December 31, 2017	(Level 1) Quoted Prices in Active Markets for Identical Assets	(Level 2) Significant Other Observable Inputs	(Level 3) Significant Other Unobservable Inputs
Measured at fair value on a recurring basis:				
Mutual funds	$ 5,154	$ 5,154	$ -	$ -
Money market funds	7,916	7,916	-	-
	$ 13,070	$ 13,070	$ -	$ -

(Dollars in thousands)	December 31, 2016	(Level 1) Quoted Prices in Active Markets for Identical Assets	(Level 2) Significant Other Observable Inputs	(Level 3) Significant Other Unobservable Inputs
Measured at fair value on a recurring basis:				
U.S. Government and agency securities	$ 102	$ -	$ 102	$ -
Corporate bonds and notes	3,501	-	3,501	-
Mutual funds				
Value funds	3,066	3,066	-	-
Blend funds	3,411	3,411	-	-
Growth funds	2,590	2,590	-	-
Money market funds	991	991	-	-
	$ 13,661	$ 10,058	$ 3,603	$ -

The measurement date for the JVB Plan is December 31. Information pertaining to the activity in the defined benefit plan is as follows:

(Dollars in thousands)	Years Ended December 31,	
	2017	2016
Change in projected benefit obligation (PBO)		
PBO at beginning of year	$ 16,332	$ 10,863
Assumption of liability from FNB Plan	-	5,061
Interest cost	621	666
Change in assumptions	1,141	305
Plan amendments	-	-
Actuarial loss	136	114
Group annuity purchase	(1,974)	-
Benefits paid	(702)	(677)
PBO at end of year	$ 15,554	$ 16,332
Change in plan assets		
Fair value of plan assets at beginning of year	$ 13,840	$ 9,713
Transfer of FNB Plan assets	-	3,903
Actual return on plan assets, net of expenses	1,953	901
Group annuity purchase	(1,974)	-
Benefits paid	(702)	(677)
Fair value of plan assets at end of year	$ 13,117	$ 13,840
Funded status, included in other (liabilities) assets	$ (2,437)	$ (2,492)
Amounts recognized in accumulated comprehensive loss before income taxes consist of:		
Unrecognized actual loss	$ (3,081)	$ (3,550)
Accumulated benefit obligation	$ 15,554	$ 16,332

For the year ended December 31, 2016, the mortality assumptions were derived using the Adjusted RP-2014 White Collar Mortality Table. Incorporated into the most recent table are rates projected generationally using Scale MP-2016 to reflect mortality improvement. The impact on the benefit obligation for the mortality assumption change in 2016 was an increase in the projected benefit obligation of $305,000. For the year ended December 31, 2017, the mortality assumptions were derived using the Adjusted RP-2014 White Collar Mortality Table. Incorporated into the table are rates projected generationally using Scale MP-2017 to reflect mortality improvement. The impact on the benefit obligation for the mortality assumption change in 2017 was an increase in the projected benefit obligation of $1,141,000.

Pension expense for the JVB Plan included the following components for the years ended December 31:

(Dollars in thousands)

	2017	2016	2015
Interest cost on projected benefit obligation	$ 621	$ 666	$ 450
Expected return on plan assets	(793)	(795)	(592)
Settlement loss	377	-	-
Recognized net actuarial loss	207	248	242
Net periodic benefit cost	412	119	100
Net loss (gain)	117	173	(52)
Amortization of net loss	(584)	(248)	(242)
Total recognized in other comprehensive loss (income)	$ (467)	$ (75)	$ (294)
Total recognized in net periodic benefit cost and other comprehensive loss (income)	$ (55)	$ 44	$ (194)

Assumptions used to determine benefit obligations were:

	2017	2016	2015
Discount rate	3.50%	4.00%	4.25%
Rate of compensation increase	N/A	N/A	N/A

Assumptions used to determine the net periodic benefit cost were:

	2017	2016	2015
Discount rate	4.00%	4.25%	4.00%
Expected long-term return on plan assets	6.00	6.00	6.00
Rate of compensation increase	N/A	N/A	N/A

The following table sets forth by level, within the fair value hierarchy, debt and equity instruments included in the FNB Plan's assets at fair value as of December 31, 2015.

(Dollars in thousands)	December 31, 2015	(Level 1) Quoted Prices in Active Markets for Identical Assets	(Level 2) Significant Other Observable Inputs	(Level 3) Significant Other Unobservable Inputs
Measured at fair value on a recurring basis:				
Mutual funds				
Aggressive growth funds	$ 1,003	$ 1,003	$ -	$ -
Growth funds	589	589	-	-
Growth and income funds	1,433	1,433	-	-
Income	878	878	-	-
	$ 3,903	$ 3,903	$ -	$ -

The measurement date for the FNB Plan was December 31. Information pertaining to the activity in the defined benefit plan in 2015 is as follows:

(Dollars in thousands)	2015
Change in projected benefit obligation (PBO)	
PBO at December 1, 2015	$ 5,249
Service cost	3
Interest cost	18
Change in assumptions	(87)
Curtailment gain ($108) net of actuarial loss $2	(106)
Benefits paid	(16)
PBO at end of year	$ 5,061
Change in plan assets	
Fair value of plan assets at December 1, 2015	$ 4,001
Actual return on plan assets, net of expenses	(82)
Benefits paid	(16)
Fair value of plan assets at end of year	$ 3,903
Funded status, included in other (liabilities) assets	$ (1,158)
Accumulated benefit obligation	$ 5,061

For the year ended December 31, 2015, the mortality assumptions were derived using the Adjusted RP-2014 White Collar Mortality Table. Incorporated into the most recent table are rates projected generationally using Scale MP-2015 to reflect mortality improvement.

Pension expense for the FNB Plan included the following components for the year ended December 31:

(Dollars in thousands)	2015
Service cost during the year	$ 3
Interest cost on projected benefit obligation	18
Expected return on plan assets	(23)
Net periodic benefit gain	(2)
Total recognized in net periodic benefit cost and other comprehensive income	$ (2)

Assumptions used to determine benefit obligations were:

	2015
Discount rate	4.25%
Rate of compensation increase	N/A

Assumptions used to determine the net periodic benefit cost were:

	2015
Discount rate	4.00%
Expected long-term return on plan assets	6.00
Rate of compensation increase	N/A

The investment strategy and investment policy for the JVB Plan is to target the plan assets to contain 60% equity and 40% fixed income securities. The asset allocation as of December 31, 2017 was approximately 61% equities and 39% cash equivalents in the JVB Plan.

Future expected benefit payments:

(Dollars in thousands)	2018	2019	2020	2021	2022	2023-2027
Estimated future benefit payments	$ 635	$ 686	$ 676	$ 692	$ 708	$ 3,936

Defined Contribution Plan

The Company has a Defined Contribution Plan under which employees, through payroll deductions, are able to defer portions of their compensation. The Company makes an annual non-elective fully vested contribution equal to 3% of compensation to each eligible participant. As of December 31, 2017, a liability of $224,000 was recorded to satisfy this obligation and was credited to employees' accounts by January 31, 2018. This liability at December 31, 2016 totaled $214,000 and was credited to employee accounts during 2017. Expense incurred under this plan was $222,000, $211,000 and $192,000 in 2017, 2016 and 2015, respectively. The Defined Contribution Plan also includes an employer matching contribution for employees that elect to defer compensation into this program. The matching contribution in 2017, 2016 and 2015 was $189,000, $179,000 and $162,000, respectively.

Employee Stock Purchase Plan

The Company has an Employee Stock Purchase Plan under which employees, through payroll deductions, are able to purchase shares of Company stock annually. The option price of the stock purchases is between 95% and 100% of the fair market value of the stock on the offering termination date as determined annually by the Board of Directors. The maximum number of shares which employees may purchase under the Plan is 250,000; however, the annual issuance of shares may not exceed 5,000 shares plus any unissued shares from prior offerings. There were 1,961 shares issued in 2017, 3,764 shares issued in 2016 and 3,242 shares issued in 2015 under this plan. At December 31, 2017, there were 175,093 shares reserved for issuance under the Employee Stock Purchase Plan.

Supplemental Retirement Plans

The Company has non-qualified supplemental retirement plans for directors and key employees. At December 31, 2017 and 2016, the present value of the future liability associated with these plans was $261,000 and $323,000, respectively. For the years ended December 31, 2017, 2016 and 2015, $25,000, $30,000 and $34,000, respectively, was charged to expense in connection with these plans. The Company offsets the cost of these plans through the purchase of bank-owned life insurance and annuities. See Note 9.

Deferred Compensation Plans

The Company has entered into deferred compensation agreements with certain directors to provide each director an additional retirement benefit, or to provide their beneficiary a benefit, in the event of pre-retirement death. At December 31, 2017 and 2016, the present value of the future liability was $1,609,000 and $1,570,000, respectively. For the years ended December 31, 2017, 2016 and 2015, $33,000, $32,000 and $30,000, respectively, was charged to expense in connection with these plans. The Company offsets the cost of these plans through the purchase of bank-owned life insurance. See Note 9.

Salary Continuation Plans

The Company has non-qualified salary continuation plans for key employees. At December 31, 2017 and 2016, the present value of the future liability was $1,264,000 and $1,251,000, respectively. For the years ended December 31, 2017, 2016 and 2015, $127,000, $185,000 and $119,000, respectively, was charged to expense in connection with these plans. The Company offsets the cost of these plans through the purchase of bank-owned life insurance. See Note 9.

22. 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 customers. These financial instruments may include commitments to extend credit and letters of credit. Because many commitments are expected to expire without being drawn upon, the total commitment amounts do not necessarily represent future cash requirements. These instruments involve, to varying degrees, elements of credit risk that are not recognized in the consolidated financial statements.

Exposure to credit loss in the event of non-performance by the other party to the financial instrument for commitments to extend credit and letters of credit is represented by the contractual amount of those instruments. The Bank uses the same credit policies in making these commitments and conditional obligations as it does for on-balance sheet instruments. The Company controls the credit risk of its financial instruments through credit approvals, limits and monitoring procedures; however, it does not generally require collateral for such financial instruments since there is no principal credit risk.

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

	December 31,	
(Dollars in thousands)	2017	2016
Commitments to grant loans	$ 77,023	$ 56,095
Unfunded commitments under lines of credit	3,150	3,889
Outstanding letters of credit	2,541	2,300

Commitments to extend credit are agreements to lend to a customer as long as there is no violation of any condition established in the contract. Commitments generally have fixed expiration dates or other termination clauses and may require payment of a fee. Since portions of the commitments are expected to expire without being drawn upon, the total commitment amounts do not necessarily represent future cash requirements. The Bank evaluates each customer's creditworthiness on a case-by-case basis. The amount of collateral obtained by the Bank upon extension of credit is based on management's credit evaluation of the counter-party. Collateral held varies but may include personal or commercial real estate, accounts receivable, inventory and equipment.

Outstanding letters of credit are instruments issued by the Bank that guarantee the beneficiary payment by the Bank in the event of default by the Bank's customer in the non-performance of an obligation or service. Most letters of credit are extended for one year periods. The credit risk involved in issuing letters of credit is essentially the same as that involved in extending loan facilities to customers. The Bank holds collateral supporting those commitments for which collateral is deemed necessary. The amount of the liability as of December 31, 2017 and 2016 for guarantees under letters of credit issued is not material.

The maximum undiscounted exposure related to these guarantees at December 31, 2017 was $2,541,000, and the approximate value of underlying collateral upon liquidation that would be expected to cover this maximum potential exposure was $14,298,000.

23. RELATED-PARTY TRANSACTIONS

The Bank has granted loans to certain of its executive officers, directors and their related interests. These loans were made on substantially the same terms, including interest rates and collateral, as those prevailing at the time for comparable transactions with unrelated persons and, in the opinion of management, do not involve more than normal risk of collection. The aggregate dollar amount of these loans was $7,939,000 and $6,443,000 at December 31, 2017 and 2016, respectively. During 2017, $12,736,000 of new loans were made and repayments totaled $11,259,000. In addition, there was a new related interest relationship in 2017 with a party who had a pre-existing loan balance of $25,000 at December 31, 2017, as well as two terminated relationships due to retirements having a combined balance of $6,000. None of these loans were past due, in non-accrual status or restructured at December 31, 2017 or 2016.

24. COMMITMENTS AND CONTINGENT LIABILITIES

In 2017, the Company executed renewal agreements for technology outsourcing services through two outside service bureaus. Both agreements provide for termination fees if the Company cancels the services prior to the end of the 7-year commitment period that runs through May 31, 2024. At December 31, 2017, termination fees are estimated to be approximately $1,976,000 and $1,822,000 on the two contracts. The termination fees would decrease by approximately 15% in each succeeding year through 2024. Since the Company does not expect to terminate these services with either vendor prior to the end of the commitment periods, no liability has been recorded as of December 31, 2017.

The Company, from time to time, may be a defendant in legal proceedings relating to the conduct of its banking business. Most of such legal proceedings are a normal part of the banking business and, in management's opinion, the consolidated financial condition and results of operations of the Company would not be materially affected by the outcome of such legal proceedings.

Additionally, the Company has sold qualifying residential mortgage loans to the FHLB as part of its Mortgage Partnership Finance Program ("Program"). Under the terms of the 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 sold under the Program is "credit enhanced" such that the individual loan's rating is raised to "BBB", as determined by the FHLB. The Program can be terminated by either the FHLB or the Company, without cause, by giving notice to the other party. The FHLB has no obligation to commit to purchase any mortgage through, or from, the Company.

25. SUBSEQUENT EVENTS

In January 2018, the Board of Directors declared a dividend of $0.22 per share to shareholders of record on February 15, 2018, payable on March 1, 2018.

26. JUNIATA VALLEY FINANCIAL CORP. (PARENT COMPANY ONLY) FINANCIAL INFORMATION:

CONDENSED BALANCE SHEETS
(Dollars in thousands)

	December 31, 2017	December 31, 2016
ASSETS		
Cash and cash equivalents	$ 1,082	$ 96
Investment in bank subsidiary	52,522	52,674
Investment in unconsolidated subsidiary	4,812	4,703
Investment securities available for sale	1,169	1,841
Other assets	224	469
TOTAL ASSETS	$ 59,809	$ 59,783
LIABILITIES		
Accounts payable and other liabilities	$ 422	$ 693
STOCKHOLDERS' EQUITY	59,387	59,090
TOTAL LIABILITIES AND STOCKHOLDERS' EQUITY	$ 59,809	$ 59,783

CONDENSED STATEMENTS OF INCOME AND COMPREHENSIVE INCOME
(Dollars in thousands)

	Years Ended December 31, 2017	2016	2015
INCOME			
Interest and dividends on investment securities available for sale	$ 44	$ 59	$ 34
Dividends from bank subsidiary	4,194	5,624	3,900
Income from unconsolidated subsidiary	167	222	238
Gain on sale of securities	314	166	19
Other non-interest income	-	-	1
TOTAL INCOME	4,719	6,071	4,192
EXPENSE			
Merger-related expenses	13	66	279
Other non-interest expense	146	157	131
TOTAL EXPENSE	159	223	410
INCOME BEFORE INCOME TAXES AND EQUITY IN UNDISTRIBUTED NET INCOME OF SUBSIDIARY	4,560	5,848	3,782
Income tax (benefit) expense	(127)	47	27
	4,687	5,801	3,755
Undistributed net (loss) of subsidiary	(150)	(645)	(697)
NET INCOME	$ 4,537	$ 5,156	$ 3,058
COMPREHENSIVE INCOME	$ 4,300	$ 4,150	$ 3,052

CONDENSED STATEMENTS OF CASH FLOWS
(Dollars in thousands)

	Years Ended December 31,		
	2017	2016	2015
Cash flows from operating activities:			
Net income	$ 4,537	$ 5,156	$ 3,058
Adjustments to reconcile net income to net cash provided by operating activities:			
Undistributed net loss of subsidiary	150	645	697
Realized gains on sales of investment securities	(314)	(166)	(19)
Equity in earnings of unconsolidated subsidiary, net of dividends of $61, $55 and $48	(106)	(167)	(183)
Stock-based compensation expense	71	67	57
Decrease (increase) in other assets	513	(413)	(112)
(Decrease) increase in taxes payable	(271)	191	72
(Decrease) increase in accounts payable and other liabilities	(254)	1	14
Net cash provided by operating activities	4,326	5,314	3,584
Cash flows from investing activities:			
Purchases of available for sale securities	-	(470)	-
Proceeds from the sale of available for sale securities	734	252	9
Net cash received from acquisition	-	-	4
Net cash provided by (used in) investing activities	734	(218)	13
Cash flows from financing activities:			
Cash dividends	(4,194)	(4,226)	(3,687)
Purchase of treasury stock	(86)	(927)	(63)
Common stock issued for stock plans	206	64	110
Net cash used in financing activities	(4,074)	(5,089)	(3,640)
Net (decrease) increase in cash and cash equivalents	986	7	(43)
Cash and cash equivalents at beginning of year	96	89	132
Cash and cash equivalents at end of year	$ 1,082	$ 96	$ 89

27. QUARTERLY RESULTS OF OPERATIONS (UNAUDITED)

The unaudited quarterly results of operations for the years ended December 31, 2017 and 2016 follow:

(Dollars in thousands, except per-share data)	2017 Quarter ended			
	March 31	June 30	September 30	December 31
Total interest income	$ 5,174	$ 5,348	$ 5,457	$ 5,395
Total interest expense	627	702	752	774
Net interest income	4,547	4,646	4,705	4,621
Provision for loan losses	105	135	149	50
Securities gains	504	4	2	2
Other income	1,112	1,252	1,217	1,199
Merger and acquisition expense	-	-	-	13
Other expense	4,269	4,229	4,442	4,822
Income before income taxes	1,789	1,538	1,333	937
Income tax expense	330	244	127	359
Net income	$ 1,459	$ 1,294	$ 1,206	$ 578
Per-share data:				
Basic earnings	$ 0.31	$ 0.27	$ 0.25	$ 0.12
Diluted earnings	$ 0.31	$ 0.27	$ 0.25	$ 0.12
Cash dividends	$ 0.22	$ 0.22	$ 0.22	$ 0.22

	2016 Quarter ended			
	March 31	June 30	September 30	December 31
Total interest income	$ 5,187	$ 5,077	$ 5,049	$ 5,156
Total interest expense	558	546	561	603
Net interest income	4,629	4,531	4,488	4,553
Provision for loan losses	121	113	132	100
Securities gains	-	128	6	84
Other income	1,179	1,217	1,565	1,239
Merger and acquisition expense	58	314	-	(25)
Other expense	4,082	4,172	4,330	4,247
Income before income taxes	1,547	1,277	1,597	1,554
Income tax expense	255	162	150	252
Net income	$ 1,292	$ 1,115	$ 1,447	$ 1,302
Per-share data:				
Basic earnings	$ 0.27	$ 0.23	$ 0.30	$ 0.27
Diluted earnings	$ 0.27	$ 0.23	$ 0.30	$ 0.27
Cash dividends	$ 0.22	$ 0.22	$ 0.22	$ 0.22

COMMON STOCK MARKET PRICES AND DIVIDENDS

The common stock of Juniata Valley Financial Corp. is quoted under the symbol "JUVF" on the over-the-counter ("OTC-Pink") Electronic Bulletin Board, a regulated electronic quotation service made available through, and governed by, the NASDAQ system. As of December 31, 2017, the Company had 1,798 stockholders of record.

The following table presents the quarterly high and low prices of the Company's common stock and per common share cash dividends declared for each of the quarterly periods in 2017 and 2016.

	2017		
Quarter Ended	High	Low	Dividends Declared
March 31	$ 19.75	$ 18.25	$ 0.22
June 30	21.60	18.60	0.22
September 30	21.50	18.61	0.22
December 31	22.00	19.70	0.22

	2016		
Quarter Ended	High	Low	Dividends Declared
March 31	$ 18.95	$ 17.10	$ 0.22
June 30	18.35	17.55	0.22
September 30	18.75	17.55	0.22
December 31	19.10	18.00	0.22

As stated in "Note 17 – Stockholders' Equity and Regulatory Matters" in the Notes to Consolidated Financial Statements, the Company is subject to various regulatory capital requirements that limit the amount of capital available for dividends. While the Company expects to continue its policy of regular dividend payments, no assurance of future dividend payments can be given. Future dividend payments will depend upon maintenance of a strong financial condition, future earnings, capital and regulatory requirements, future prospects, business conditions and other factors deemed relevant by the Board of Directors.

For further information on stock quotes, please contact any licensed broker-dealer, some of which make a market in Juniata Valley Financial Corp. stock.

CORPORATE INFORMATION

Corporate Headquarters
Juniata Valley Financial Corp.
128 Bridge Street
P.O. Box 66
Mifflintown, PA 17059
(855) 582-5101
JVBonline.com

INVESTOR INFORMATION

JoAnn N. McMinn,
Executive Vice President and Chief Financial Officer
P.O. Box 66
Mifflintown, PA 17059
JoAnn.McMinn@JVBonline.com

INFORMATION AVAILABILITY

Information about the Company's financial performance may be found at www.JVBonline.com, following the "Investor Information" link.

All reports filed electronically by Juniata Valley Financial Corp. with the United States Securities and Exchange Commission (SEC), including the Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, and Current Reports on Form 8-K, as well as any amendments to those reports, are also accessible at no cost on the SEC's web site at www.SEC.gov.

Additionally, a copy of the Company's Annual Report to the SEC on Form 10-K for the year ended December 31, 2017 will be supplied without charge (except for exhibits) upon written request. Please direct all inquiries to Ms. JoAnn McMinn, as detailed above.

Pursuant to Part 350 of FDIC's Annual Disclosure Regulation, Juniata Valley Financial Corp. will make available to you upon request, financial information about The Juniata Valley Bank. Please contact:

Ms. Danyelle Pannebaker
The Juniata Valley Bank
P.O. Box 66
Mifflintown, PA 17059

INVESTMENT CONSIDERATIONS

In analyzing whether to make, or to continue, an investment in Juniata Valley Financial Corp., investors should consider, among other factors, the information contained in this Annual Report and certain investment considerations and other information more fully described in our Annual Report on Form 10-K for the year ended December 31, 2017, a copy of which can be obtained as described above.

Registrar and Transfer Agent
By regular mail:
Computershare
P.O. Box 30170
College Station, TX 77842-3170
United States

By overnight delivery:
Computershare
211 Quality Circle, Suite 210
College Station, TX 77845
Telephone: (800) 368-5948
Website: www.Computershare.com/investor

Shareholders of record may access their accounts via the Internet to review account holdings and transaction history through Computershare's website: www.Computershare.com/investor.

Information regarding the Company's Dividend Reinvestment and Stock Purchase Plan, including a Prospectus, may be obtained by contacting Computershare, through the means listed above.

The Company offers a dividend direct deposit option whereby shareholders of record may have their dividends deposited directly into the bank account of their choice on the dividend payment date. Please contact Computershare for further information and to register for this service.

ANNUAL MEETING OF SHAREHOLDERS

The Annual Meeting of Shareholders of Juniata Valley Financial Corp. will be held at 10:30 a.m., on Tuesday, May 15, 2018 at the Juniata Valley Bank Financial Center, 1762 Butcher Shop Road, Mifflintown, Pennsylvania.

JUNIATA VALLEY FINANCIAL CORP.
CORPORATE OFFICERS

Timothy I. Havice ---------- Chairman
Philip E. Gingerich, Jr. ---------- Vice Chairman
Marcie A. Barber ---------- President and Chief Executive Officer
JoAnn N. McMinn ---------- Executive Vice President, Secretary, Treasurer and Chief Financial Officer

JUNIATA VALLEY FINANCIAL CORP. AND THE JUNIATA VALLEY BANK
BOARD OF DIRECTORS

Marcie A. Barber
President and Chief Executive Officer

Michael A. Buffington
Founder and President of
Buffington Property Management, LLC
and One-Stop Communications

Martin L. Dreibelbis
Self-Employed, Petroleum Consultant

Philip E. Gingerich, Jr., Vice Chairman
President, Central Insurers Group, Inc.

Timothy I. Havice, Chairman
Owner, T.I. Havice, Developer

Gary E. Kelsey
Potter County, PA Register of Wills and Recorder of Deeds

Richard M. Scanlon,
DMD Retired Dentist and Dental Consultant to
Central PA Institute of Science and Technology

Bradley J. Wagner
President and General Manager of
Hoober Feeds, President of Hegins Feed and
Supply, Inc. and President of L &K Mills

THE JUNIATA VALLEY BANK
BUSINESS DEVELOPMENT BOARD MEMBERS

Mifflin County

Mark S. Elsesser
Donald R. Hartzler
Jeffrey C. Moyer
Craig M. Rupert
William J. Rupp, Jr.
Corey P. Wray

Juniata/Perry/Huntingdon

Kim E. Bomberger
R. Franklin Campbell
Steven R. Ehrenzeller
Gregory J. Gordon
Robert D. Hower
N. Jeffrey Leonard
Dennis A. Long
Georgiana Snyder-Leitzel

McKean/Potter/Northern Tier

Gary E. Kelsey
Dan F. Lane III

DIRECTORY OF OFFICERS OF JVB

EXECUTIVE

Marcie A. Barber . . . . President, Chief Executive Officer
JoAnn N. McMinn. . . . .Executive Vice President, Chief Financial Officer
Danyelle M. Pannebaker . . . . .Executive Assistant

ADMINISTRATION

Tina J. Smith . . . . .Senior Vice President, Director of Human Resources
Suzanne E. Booher . . . . Vice President, Director of Marketing
Brent M. Miller . . . . Vice President, Compliance Officer
Kathy Hutchinson . . . . Vice President, Compliance Specialist and Security/BSA Officer

FINANCE

Cortney E. Wilbert . . . . Vice President, Controller
Kristi J. Burdge . . . . .Assistant Vice President, Accounting Manager
Renee D. Williamson . . . . Financial Information Manager

BUSINESS LENDING

Jeremiah J. Trout . . . . .Senior Vice President, Lending Division Manager
William T. Campbell, Jr. . . . . Vice President, Relationship Manager
Jeffrey A. Herr . . . . Vice President, Relationship Manager
Joseph W. Lashway . . . . .Senior Vice President, Northern Tier Division Manager
H. Fred Wallace . . . . Vice President, Relationship Manager
Pamela K. Parson . . . . Vice President, Collections Manager
Christine L. Burlew . . . . Vice President, Collections Officer
Lora J. Rankin . . . . Northern Tier Collections Officer and Loan Support

CONSUMER LENDING

Jon R. Yarger . . . . Vice President, Consumer Lending Manager
Betty D. Ryan. . . . . Vice President, Secondary Mortgage Market Manager

CREDIT ADMINISTRATION

Lisa M. Snyder. . . . . .Senior Vice President, Credit Administration Manager
Matthew J. Waddell . . . . Vice President, Portfolio Manager

OPERATIONS AND INFORMATION TECHNOLOGY

Steven T. Kramm . . . . .Senior Vice President, Operations/Technology Division Manager
Laurie B. Blauvelt . . . . .Northern Tier Operations and IT Specialist
Curtis M. Crouse . . . . Network Administrator
Lee Ellen Foose . . . . Vice President/Branch Operations Specialist
S. Marlene Hubler. . . . . . Computer Operations and Facilities Manager
Beverly M. McClellan . . . . .Data Analyst
Tammy L Miller . . . . .Deposit Operations Manager
Kelly L. Yetter . . . . Electronic and Business Banking Manager

TRUST AND INVESTMENT SERVICES

Donald E. Shawley . . . . .Senior Vice President, Trust and Investment Services Division Manager
Paul M. Grego . . . . Vice President, Trust Investment Officer
Jonathan F. King . . . . .Financial Services Representative
Adam E. Truitt . . . . Vice President, Financial Services Officer
Cynthia L. Williams . . . . Vice President, Trust Officer

BRANCH ADMINISTRATION

Jason A. McFalls . . . . Vice President, Retail Sales Division Manager
Cynthia L. Bosworth . . . . .Northern Tier Branch Administrator and Compliance Affiliate
Brenda A. Brubaker . . . . Vice President, Director of Customer Care
Lynne S. Ruffner . . . . Vice President, Northern Tier Retail Sales Manager

BLAIRS MILLS AND PORT ROYAL OFFICES

Barbara I. Seaman . . . . Vice President, Community Office Manager and Relationship Manager
Lori A. Yocum . . . . Assistant Office Manager, Blairs Mills Office

BURNHAM OFFICE

Leann M. Fisher . . . . Vice President, Community Office Manager
Holly M. Laub . . . . Assistant Office Manager

COUDERSPORT OFFICE

Kelly L. Bruno . . . . Community Office Manager and Northern Tier Electronic Banking Coordinator
Diane S. Dynda . . . . Assistant Office Manager

GARDENVIEW OFFICE

Larry B. Cottrill, Jr. . . . . Vice President, Community Office Manager and Relationship Manager
Kelly L. Bishop . . . . Assistant Office Manager

McALISTERVILLE AND RICHFIELD OFFICES

Leslie A. Miller. . . . . Vice President, Community Office Manager
Amber Portzline . . . . Assistant Office Manager, Richfield Office

MIFFLINTOWN AND MOUNTAIN VIEW OFFICES

Annette M. Price . . . . Vice President, Community Office Manager and Teller Support Manager

MILLERSTOWN OFFICE

Thomas P. O'Connell . . . . . Vice President, Community Office Manager
Lisa M. Freet . . . . Assistant Office Manager

MONUMENT SQUARE, WATER STREET, & WAL-MART OFFICES

Christine L. Searer . . . . Vice President, Market Manager, Southwest Lewistown
Stacey K. McMurtrie . . . . .Assistant Office Manager, Monument Square Office
Amy J. Pitts . . . . .Assistant Office Manager, Water Street Office

PORT ALLEGANY AND LILLIBRIDGE OFFICES

Denise R. Russell . . . . Community Office Manager

JUNIATA VALLEY FINANCIAL CORP.

218 Bridge Street
Mifflintown, PA 17059
www.jvbonline.com

001CSN2EAB