HEARTLAND FINANCIAL USA INC
Form 10-K
February 27, 2019

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549
FORM 10-K
R ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE
SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended December 31, 2018

¨ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the transition period from ___________ to ___________

Commission File Number: 001-15393

HEARTLAND FINANCIAL USA, INC.
(Exact name of Registrant as specified in its charter)

Delaware	42-1405748
(State or other jurisdiction of incorporation or organization)	(I.R.S. Employer identification number)
1398 Central Avenue, Dubuque, Iowa 52001	(563) 589-2100
(Address of principal executive offices) (Zip Code)	(Registrant's telephone number, including area code)

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

Title of Class	Name of Each Exchange on Which Registered
Common Stock $1.00 par value	The Nasdaq Global Select Market
Preferred Share Purchase Rights	

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

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

Indicate by check mark if the Registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Exchange Act.
Yes ¨ No þ

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

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

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of Registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K. ¨

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

Large accelerated filer þ Accelerated filer ¨ Non-accelerated filer ¨ Smaller reporting company ¨ Emerging growth company ¨

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

Indicate by check mark whether the Registrant is a shell company (as defined in Exchange Act Rule 12b-2). Yes ¨ No þ

The aggregate market value of the voting and non-voting common equity held by non-affiliates of the Registrant (assuming, for purposes of this calculation only, that the Registrant's directors, executive officers and greater than 10% shareholders are affiliates of the Registrant), based on the last sales price quoted on the Nasdaq Global Select Market on June 30, 2018, the last business day of the registrant's most recently completed second fiscal quarter, was approximately $1,777,169,199.

As of February 26, 2019, the Registrant had issued and outstanding 34,568,232 shares of common stock, $1.00 par value per share.

DOCUMENTS INCORPORATED BY REFERENCE
Portions of the Proxy Statement for the 2019 Annual Meeting of Stockholders are incorporated by reference into Part III.

HEARTLAND FINANCIAL USA, INC.
Form 10-K Annual Report
Table of Contents

PART I

SAFE HARBOR STATEMENT

This Annual Report on Form 10-K (including information incorporated by reference) contains, and future oral and written statements of Heartland Financial USA, Inc. and its management may contain, forward-looking statements, within the meaning of such term in the Private Securities Litigation Reform Act of 1995, with respect to the financial condition, results of operations, plans, objectives, future performance and business of Heartland. Forward-looking statements, which may be based upon beliefs, expectations and assumptions of Heartland's management and on information currently available to management, are generally identifiable by the use of words such as "believe", "expect", "anticipate", "plan", "intend", "estimate", "may", "will", "would", "could", "should" or other similar expressions. Additionally, all statements in this Annual Report on Form 10-K, including forward-looking statements, speak only as of the date they are made, and Heartland undertakes no obligation to update any statement in light of new information or future events.

Heartland's ability to predict results or the actual effect of future plans or strategies is inherently uncertain. The factors which could have a material adverse effect on the operations and future prospects of Heartland are detailed in the "Risk Factors" section included under Item 1A. of Part I of this Annual Report on Form 10-K. These risks and uncertainties should be considered in evaluating forward-looking statements and undue reliance should not be placed on such statements.

ITEM 1. BUSINESS

A. GENERAL DESCRIPTION

Heartland Financial USA, Inc. (individually referred to herein as "Parent Company" and collectively with all of its subsidiaries and affiliates referred to herein as "Heartland," "we," "us," or "our") is a multi-bank holding company registered under the Bank Holding Company Act of 1956, as amended (the "BHCA"), that was originally formed in the state of Iowa in 1981 and reincorporated in the State of Delaware in 1993. Heartland's headquarters are located at 1398 Central Avenue, Dubuque, Iowa. Our website address is www.htlf.com. You can access, free of charge, our filings with the Securities and Exchange Commission (the "SEC"), including our Annual Report on Form 10-K, our quarterly reports on Form 10-Q, current reports on Form 8-K and any other amendments to those reports, at our website under the Investor Relations tab, or at the SEC website at www.sec.gov. Proxy materials for our upcoming 2019 Annual Shareholders Meeting to be held on May 22, 2019, will be available electronically via a link on our website at www.htlf.com.

At December 31, 2018, Heartland had total assets of $11.41 billion, total loans held to maturity of $7.41 billion and total deposits of $9.40 billion. Heartland’s total stockholders' equity as of December 31, 2018, was $1.33 billion. Net income available to common stockholders for 2018 was $117.0 million.

Heartland conducts a community banking business through 11 independently chartered community banks (collectively, the "Banks") operating in the states of Iowa, Illinois, Wisconsin, New Mexico, Arizona, Montana, Colorado, Minnesota, Kansas, Missouri, Texas and California. All Banks are members of the Federal Deposit Insurance Corporation (the "FDIC"). Listed below are the Banks, which, as of the date of this Annual Report on Form 10-K, operate a total of 119 banking locations:

- Dubuque Bank and Trust Company, Dubuque, Iowa, is chartered under the laws of the state of Iowa.
- Illinois Bank & Trust, Rockford, Illinois, is chartered under the laws of the state of Illinois.
- Wisconsin Bank & Trust, Madison, Wisconsin, is chartered under the laws of the state of Wisconsin.

- New Mexico Bank & Trust, Albuquerque, New Mexico, is chartered under the laws of the state of New Mexico.
- Rocky Mountain Bank, Billings, Montana, is chartered under the laws of the state of Montana.
- Arizona Bank & Trust, Phoenix, Arizona, is chartered under the laws of the state of Arizona.
- Citywide Banks, Denver, Colorado, is chartered under the laws of the state of Colorado.
- Minnesota Bank & Trust, Edina, Minnesota, is chartered under the laws of the state of Minnesota.
- Morrill & Janes Bank and Trust Company, Merriam, Kansas, is chartered under the laws of the state of Kansas.
- Premier Valley Bank, Fresno, California, is chartered under the laws of the state of California.
- First Bank & Trust, Lubbock, Texas, is chartered under the laws of the state of Texas.

Dubuque Bank and Trust Company also has two wholly-owned non-bank subsidiaries:

- DB&T Insurance, Inc., a multi-line insurance agency, with one wholly-owned subsidiary:
- Heartland Financial USA, Inc. Insurance Services, a multi-line insurance agency with the primary purpose of providing online insurance products to consumers and small business clients in Bank markets.
- DB&T Community Development Corp., a community development company with the primary purpose of partnering in low-income housing and historic rehabilitation projects.

First Bank & Trust has one wholly-owned mortgage company:

- PrimeWest Mortgage Corporation, a mortgage company with the primary purpose of originating, selling and servicing residential mortgage loans. The loans are primarily sold into the secondary market with mortgage servicing rights retained.

Heartland has two active non-bank subsidiaries as listed below:

- Heartland Community Development Inc., a property management company with the primary purpose of holding and managing certain nonperforming assets acquired from the Banks.

- Citizens Finance Parent Co., a consumer finance company with two wholly-owned companies:
- Citizens Finance Co., a consumer finance company with offices in Iowa and Wisconsin.
- Citizens Finance of Illinois Co., a consumer finance company with offices in Illinois.

Prior to December 31, 2018, Heartland decided to exit the consumer finance business and entered into an agreement to sell the loan portfolios of Citizens Finance Co. and Citizens Finance of Illinois Co. The transaction closed on January 11, 2019. The offices in Iowa and Wisconsin closed on February 1, 2019, and the offices in Illinois closed on February 11, 2019.

In addition, as of December 31, 2018, Heartland had trust preferred securities issued through special purpose trust subsidiaries formed for the purpose of offering cumulative capital securities, including Heartland Financial Statutory Trust IV, Heartland Financial Statutory Trust V, Heartland Financial Statutory Trust VI, Heartland Financial Statutory Trust VII, Morrill Statutory Trust I, Morrill Statutory Trust II, Sheboygan Statutory Trust I, CBNM Capital Trust I, Citywide Capital Trust III, Citywide Capital Trust IV, Citywide Capital Trust V, OCGI Statutory Trust III and OCGI Capital Trust IV.

All of Heartland’s subsidiaries were wholly owned as of December 31, 2018.

The principal business of our Banks consists of making loans to and accepting deposits from businesses and individuals. Our Banks provide full service commercial and retail banking in their communities. Both our loans and our deposits are generated primarily through strong banking and community relationships, and through management that is actively involved in the community. Our lending and investment activities are funded primarily by core deposits. This stable source of funding is achieved by developing strong banking relationships with customers through value-added product offerings, competitive market pricing, convenience and high-touch personal service. Deposit products, which are insured by the FDIC to the full extent permitted by law, include checking and other demand deposit accounts, NOW accounts, savings accounts, money market accounts, certificates of deposit, individual retirement accounts, health savings accounts and other time deposits. Loan products include commercial and industrial, commercial real estate, small business, agricultural, real estate mortgage, consumer, and credit cards for commercial, business and personal use.

We enhance the customer-centric local services of our Banks with a full complement of value-added services, including wealth management, investment and insurance services. We provide contemporary technology solutions that provide our customers convenient electronic banking services and client access to account information through business and personal online banking, mobile banking, bill payment, remote deposit capture, treasury management services, credit and debit cards and automated teller machines.

Business Model and Operating Philosophy

Heartland’s operating philosophy is to maximize the benefits of a community banking model by:

1. Creating strong community ties through customer-centric local bank delivery of products and services.

- Deeply rooted local leadership and boards
- Local community knowledge and relationships
- Local decision-making
- Independent charters
- Locally recognized brands
- Commitment to an exceptional customer experience

2. Providing extensive banking services to increase revenue.

- Full range of commercial products, including government guaranteed lending and treasury management services
- Private client services, including investment management, trust, retirement plans and brokerage and investment services
- Convenient and competitive retail products and services
- Residential mortgage origination
- Providing added client value through consultative relationship building

3. Centralizing back-office operations for efficiency.

- Leverage expertise across all Banks
- Contemporary technology for account processing and delivery systems
- Efficient back-office support for loan processing and deposit operations
- Centralized loan underwriting and collections
- Centralized loss management and risk analysis
- Centralized support for other professional services, including human resources, marketing, legal, compliance, finance, administration, internal audit, investment management, customer support and facilities

We believe the personal and professional service we offer to our customers provides an appealing alternative to the service provided by the "megabanks." While we are committed to a community banking philosophy, we believe our size, combined with our robust suite of financial products and services, allows us to effectively compete in our respective market areas. To remain price competitive, we also believe that we must manage expenses and gain economies of scale by centralizing back office support functions. Although each of our Banks operates under the direction of its own board of directors, we have standard operating policies regarding asset/liability management, liquidity management, investment management, and lending and deposit structure management.

Another component of our operating strategy is to encourage all directors, officers and employees to maintain a strong ownership interest in Heartland. We have established ownership guidelines for our directors and executive management and have an employee stock purchase plan available to employees.

We maintain a strong community commitment by encouraging the active participation of our employees, officers and board members in local charitable, civic, school, religious and community development activities.

Acquisition and Branch Optimization Strategy

Our primary objectives are to increase profitability and diversify our market area and asset base by expanding through acquisitions and to grow organically by increasing our customer base in the markets we serve. In the current environment, we are continuing to seek opportunities for growth through acquisitions. Although we are focused on opportunities in our existing and adjacent markets, we would consider acquisitions in new growth markets if they fit our business model, support our customer-centric culture, provide a sufficient return on investment and would be accretive to earnings within the first year of combined operations. We typically consider acquisitions of established financial institutions, primarily commercial banks or thrifts.

In recent years, we have focused on markets with growth potential in the Midwestern and Western regions of the United States. Our strategy is to balance the growth in our Western markets with the stability of our Midwestern markets.

Through acquisition and organic growth, our goal is to reach at least $1 billion in assets in each state where Heartland operates. As of December 31, 2018, Dubuque Bank and Trust Company, Wisconsin Bank & Trust, New Mexico Bank & Trust, Citywide Banks and First Bank & Trust each have assets over $1 billion.

Due to changes in the competitive landscape and our customers' banking behaviors, we selectively sold, consolidated and closed branches in 2018. We also entered into an agreement to sell our consumer finance company. These sales, consolidations, and closures are expected to result in the reduction of nine bank branches and fourteen consumer finance offices across our footprint once the sales are completed in the first half of 2019. We anticipate these strategic activities will provide the resources to support our investments in areas that improve our customer experiences and fuel our organic growth. As a result of our ongoing branch optimization, we may complete additional, selective reductions in our branch network in 2019.

The following table provides information about the implementation of Heartland's expansion strategy:

Year	Name	De Novo	Acquisition	Merged Into
1988	Citizens Finance Co.		X	N/A
1989	Key City Bank		X	Dubuque Bank and Trust Company
1991	Farley State Bank		X	Dubuque Bank and Trust Company
1992	Galena State Bank & Trust Co.		X	Illinois Bank & Trust (2015)
1994	First Community Bank		X	Dubuque Bank and Trust Company (2011)
1995	Riverside Community Bank(1)	X		N/A
1997	Cottage Grove State Bank(2)		X	N/A
1998	New Mexico Bank & Trust	X		N/A
1999	Bank One Monroe (branch)		X	Wisconsin Bank & Trust
2000	First National Bank of Clovis		X	New Mexico Bank & Trust
2003	Arizona Bank & Trust	X		N/A
2004	Rocky Mountain Bank		X	N/A
2006	Summit Bank & Trust(3)	X		N/A
2006	Bank of the Southwest		X	Arizona Bank & Trust
2008	Minnesota Bank & Trust	X		N/A
2009	Elizabeth State Bank		X	Galena State Bank & Trust Co.(4)
2012	Liberty Bank, FSB (three branches)		X	Dubuque Bank and Trust Company
2012	First National Bank Platteville		X	Wisconsin Bank & Trust
2012	Heritage Bank, N.A.		X	Arizona Bank & Trust
2013	Morrill & Janes Bank and Trust Company		X	N/A
2013	Freedom Bank		X	Illinois Bank & Trust (2014)
2015	Community Bank & Trust (Sheboygan)		X	Wisconsin Bank & Trust
2015	Community Bank (Santa Fe)		X	New Mexico Bank & Trust
2015	First Scottsdale Bank, N.A.		X	Arizona Bank & Trust
2015	Premier Valley Bank		X	N/A
2016	Centennial Bank(3)		X	Summit Bank & Trust(3)
2017	Founders Community Bank		X	Premier Valley Bank
2017	Citywide Banks		X	Centennial Bank and Trust(5)
2018	Signature Bank		X	Minnesota Bank & Trust
2018	First Bank & Trust		X	N/A

(1) Riverside Community Bank changed its name to Illinois Bank & Trust in 2014.
(2) Cottage Grove State Bank was renamed Wisconsin Community Bank upon acquisition and subsequently changed its name to Wisconsin Bank & Trust.
(3) Summit Bank & Trust changed its name to Centennial Bank and Trust upon the acquisition of Centennial Bank.
(4) Galena State Bank & Trust Co. was merged into Illinois Bank & Trust in 2015.
(5) Centennial Bank and Trust changed its name to Citywide Banks upon the acquisition of Citywide Banks.

On January 16, 2019, Heartland entered into a definitive merger agreement to acquire Blue Valley Ban Corp., and its wholly-owned subsidiary, Bank of Blue Valley, headquartered in Overland Park, Kansas. As of the announcement date, the transaction, in which all of the issued and outstanding shares of the Blue Valley Ban Corp. stock will be exchanged for shares of Heartland common stock, was valued at approximately $93.9 million. Simultaneous with the closing of the transaction, Bank of Blue Valley will merge into Heartland's Kansas-based subsidiary, Morrill & Janes Bank and Trust Company, and the combined entity will operate as Bank of Blue Valley. The amount of the merger consideration is subject to fluctuations in the price of Heartland common stock and certain potential adjustments, and the transaction is subject to customary closing conditions. The transaction is expected to close in the second quarter of 2019 with a systems conversion planned for the third quarter of 2019. As of December 31, 2018, Bank of Blue Valley had total assets of approximately $715.1 million, which included approximately $561.3 million of gross loans outstanding, and approximately $562.6 million of deposits. Because the merger agreement was signed on January 16, 2019, and the transaction is expected to close in the second quarter of 2019, the transaction has no impact on Heartland’s 2018 consolidated financial statements.

Primary Business Lines

General
We are engaged in the business of community banking, and operate as a single business segment. Previously, we had operated as two business segments: community banking and retail mortgage banking services. We decided to fully outsource our legacy residential real estate lending business beginning in the fourth quarter of 2018, as more fully described in the section entitled "Residential Real Estate Mortgage Lending," and as a result, the retail mortgage banking services segment was eliminated.

Our Banks provide a wide range of commercial, small business and consumer banking services to businesses, including public sector and non-profit entities, and to individuals. We provide a contemporary menu of traditional and non-traditional service channels including online banking, mobile banking and telephone banking. Our Banks provide a comprehensive suite of banking services comprised of competitively priced deposit and innovative credit offerings, along with treasury management and private client services.

Our bankers actively solicit the business of new companies entering their market areas as well as established companies in their respective business communities. We believe that the Banks are successful in attracting new customers in their markets through professional service, a suite of comprehensive banking products, competitive pricing, innovative credit facilities, convenient locations and proactive communications. Our primary lines of business are described below.

Commercial Banking
Our Banks have a strong commercial loan base generated primarily through business networks and personal relationships in the communities they serve. The current portfolios of the Banks reflect the businesses in those communities and include a wide range of business loans, including lines of credit for working capital and operational purposes and term loans for the acquisition of equipment and real estate. Although most loans are made on a secured basis, loans may be made on an unsecured basis where warranted by the overall financial condition of the borrower. Generally, terms of commercial business loans range from one to five years.

Commercial bankers at the Banks provide a consultative customer-centric approach utilizing the comprehensive suite of banking products and services to deliver tailored solutions to the client in an organized and efficient manner both for the client and the bank. Bankers are trained and experienced in providing consultative solutions to clients to assist them in accomplishing their business strategies and objectives. The suite of banking services used to accompany this approach are developed to be at the highest level in the industry and can be customized to fit the objectives of the client.

Closely integrated with our loan programs is a significant emphasis on treasury management services that enhance our business clients' ability to monitor, accumulate and disburse funds efficiently. Our treasury management has five basic functions:

- collection;
- disbursement;
- management of cash;
- information reporting; and
- fraud detection and prevention.

Our treasury management services suite includes online banking and bill payment, automated clearing house ("ACH") services, wire transfer, zero balance accounts, transaction reporting, lock box services, remote deposit capture, accounts receivable solutions, commercial purchasing cards, merchant credit card services, investment sweep accounts, reconciliation services, foreign exchange and several fraud prevention services, including check and electronic positive pay, and virus/malware protection service.

Many of the businesses in the communities we serve are small to mid-sized businesses, and commercial lending to small businesses has been, and continues to be, an emphasis for the Banks. The table below shows the certifications granted to the Banks from the United States Small Business Administration ("SBA") and United States Department of Agriculture (the "USDA") Rural Development Business and Industry loan program.

Bank	SBA Express Lender	SBA Preferred Lender	SBA Export Express	USDA Certified Lender
Dubuque Bank and Trust Company	X			
Illinois Bank & Trust	X			
Wisconsin Bank & Trust	X	X		X
New Mexico Bank & Trust	X	X	X	
Arizona Bank & Trust	X			
Rocky Mountain Bank	X	X		
Citywide Banks	X			
Minnesota Bank & Trust	X			
Morrill & Janes Bank and Trust Company	X	X	X	
Premier Valley Bank	X	X	X	
First Bank & Trust	X	X		

Our commercial loans are primarily made based on the identified cash flow of the borrower and secondarily on the underlying collateral provided by the borrower. We value the collateral for most of these loans based upon its estimated fair market value and require personal guarantees in most instances. The primary repayment risks of commercial loans are that the cash flow of the borrowers may be unpredictable, and the collateral securing these loans may fluctuate in value.

In order to limit underwriting risk, we are committed to ensuring that all loan personnel are well trained. We use a third-party assessment to assess the credit skills and training needs for our loan personnel, and we have developed specific individualized training. All new lending personnel are expected to complete a similar diagnostic training program. Centralized staff in the credit administration department assists all of the commercial and agricultural lending officers of the Banks in the analysis and underwriting of credit.

In addition to the lending personnel of the Banks reporting to their respective board of directors, we use an internal loan review function to analyze credits of the Banks and provide periodic reports to their boards of directors. To reduce the risk of loss, we have processes to help identify problem loans early, and we aggressively seek resolution of credit problems.

As a result of the economic recession between 2008 and 2011, an internal Special Assets group was formed to focus on resolving assets. Commercial or agricultural loans in a default or workout status are assigned to the Special Assets group. Special Assets personnel are also responsible for marketing repossessed properties and meet with representatives from each Bank on a quarterly basis.

Small Business Banking

In 2013, Heartland established a Small Business Lending Center dedicated to serving the credit needs of small businesses with annual sales generally under $5 million. The Small Business Lending Center is designed to provide quick turnaround on small business customer credit requests on a wide variety of credit products. We believe that small businesses are an underserved market segment and see additional opportunity in serving this market with competitively priced deposit offerings and convenient electronic banking services, as well as wealth management, retirement plan services and brokerage services. The Banks have designated business bankers and banking center managers that serve the distinct banking needs of this customer segment.

Agricultural Loans

Agricultural loans are emphasized by those Banks with operations in and around rural areas, including Dubuque Bank and Trust Company, Rocky Mountain Bank, Wisconsin Bank & Trust's Monroe and Platteville banking centers, New Mexico Bank & Trust’s Clovis banking offices, Morrill & Janes Bank & Trust Company's northeast Kansas banking offices, and First Bank & Trust. Agricultural loans constituted approximately 8% of our total loan portfolio at December 31, 2018. Dubuque Bank and Trust Company, Wisconsin Bank & Trust and Morrill & Janes Bank and Trust Company are designated as Preferred Lenders by the USDA Farm Service Agency (the "FSA"). In making agricultural loans, we have policies designating a primary lending area for each Bank, in which a majority of its agricultural operating and real estate loans are made. Under this policy, loans in a secondary market area must be secured by real estate.

Agricultural loans, many of which are secured by crops, machinery and real estate, are provided to finance capital improvements and farm operations as well as acquisitions of livestock and machinery. Agricultural loans present unique credit risks relating to adverse weather conditions, loss of livestock due to disease or other factors, declines in market prices for agricultural products and the impact of government regulations. The ultimate repayment of agricultural loans is dependent upon the profitable operation or management of the agricultural entity.

In underwriting agricultural loans, the lending officers of the Banks work closely with their customers to review budgets and cash flow projections for the ensuing crop year. These budgets and cash flow projections are monitored closely during the year and reviewed with the customers at least annually. The Banks also work closely with governmental agencies, including the FSA, to help agricultural customers obtain credit enhancement products such as loan guarantees, interest assistance and crop insurance.

Residential Real Estate Mortgage Lending

Heartland’s residential real estate mortgage lending business has experienced low and declining profitability over the past several years, and competitive changes have evolved in the residential real estate lending market, which would have required significant investments in technology and process changes for Heartland to remain competitive. In response, Heartland decided to fully outsource its legacy residential real estate mortgage lending business, which was completed during the fourth quarter of 2018, by entering into arrangements with third parties to offer residential mortgage loans to customers in many of our markets. In addition, with our acquisition in 2018 of First Bank & Trust in Lubbock, Texas, we acquired its wholly owned mortgage subsidiary, PrimeWest Mortgage Corporation. PrimeWest Mortgage Corporation was not included in the outsourcing changes and continues to provide mortgage loans to customers in Texas and has expanded to also serve the mortgage needs of our customers in several of our southwestern markets. Our mortgage servicing unit, which operates as a division of Dubuque Bank and Trust Company, continues to service mortgage loans that were sold into the secondary market prior to the outsourcing of our legacy mortgage lending business. Residential mortgage loans originated after the transition through third parties are not being serviced by us. PrimeWest Mortgage Corporation continues to service the loans it sells into the secondary market. At December 31, 2018, residential real estate mortgage loans serviced, primarily for government sponsored entities (“GSE’s”), totaled $4.10 billion, of which $648.9 million are serviced by PrimeWest Mortgage Corporation.

Dubuque Bank and Trust Company has been a Ginnie Mae ("GNMA") issuer since 2012 for the GNMA I and II single-family mortgage-backed securities program. As a GNMA issuer, Dubuque Bank and Trust Company is allowed to pool and securitize FHA loans, VA loans, and Department of Agriculture's Rural Development loans. Beginning July 1, 2017, any GNMA government guaranteed residential real estate loans originated by Heartland's banks are sold into the secondary market with servicing released.

Retail Banking

A wide variety of retail banking services are delivered through our 119 banking centers. Services include checking, savings, money market accounts, certificates of deposit, individual retirement accounts ("IRAs"), health savings accounts ("HSAs") and consumer credit cards. Brokerage services, including fixed rate annuity products are also provided in many locations. Consumer lending services of the Banks include a broad array of consumer loans, including motor vehicle, home improvement, home equity lines of credit ("HELOC"), fixed rate home equity and personal lines of credit. Consumer loans typically have shorter terms, lower balances, higher yields and higher risks of default than one- to four-family residential mortgage loans. Consumer loan collections are dependent on the borrower’s continuing financial stability, and are therefore more likely to be affected by adverse personal circumstances.

Our Banks continue to enhance our retail customers' banking experience through the addition of secure electronic banking options including on-line account opening and mobile banking. Our retail customers receive high-touch service in our banking center locations and further enjoy the convenience of on-line bill pay, mobile deposit, and 24-hour access to account detail. As technology advances, we are committed to offering our customers the convenience of online and mobile delivery channels with the security they expect.

Private Client Services

Dubuque Bank and Trust Company, Illinois Bank & Trust, Wisconsin Bank & Trust, New Mexico Bank & Trust, Arizona Bank & Trust, Citywide Banks, Minnesota Bank & Trust, Morrill & Janes Bank and Trust Company and First Bank & Trust offer trust and investment services in their respective communities. In the Heartland markets that do not yet warrant a full trust department, the sales and administration of trust and investment services is performed by Dubuque Bank and Trust Company personnel. As of December 31, 2018, total trust assets under management were $2.38 billion. Collectively, the Banks provide a full complement of trust, investment and financial planning services for individuals and corporations. Heartland also specializes in Retirement Plan Services, offering business clients customized 401(k), 403(b) and Profit Sharing plans.

Heartland has contracted with LPL Financial Institution Services, a division of LPL Financial, to operate independent securities brokerage offices at all of the Banks. Through LPL Financial, Heartland offers a full array of investment services including mutual funds, annuities, retirement products, education savings products, brokerage services, employer sponsored plans and insurance products. A complete line of vehicle, property and casualty, life and disability insurance is also offered by Heartland through DB&T Insurance, Inc. and Heartland Financial USA, Inc. Insurance Services.

B. MARKET AREAS

Heartland is a geographically diversified company with a Midwestern and Western franchise, which balances the risk of regional economic fluctuations. In general, we view our Midwest markets as stable with slower growth prospects and the West as offering greater opportunities for growth accompanied by the potential of wider economic swings. We strive to balance the growth in our Western markets with the stability of our Midwestern markets. The following table sets forth certain information about the offices and total deposits of each of the Banks as of December 31, 2018, (dollars in thousands):

Charter State	Bank Name	Banking Locations	Market Areas Served	Total Bank Deposits
IA	Dubuque Bank and Trust Company	8	Dubuque MSA	$1,214,541
		2	Lee County(1)	
IL	Illinois Bank & Trust	2	Galena	$715,482
		2	Jo Daviess County	
		4	Rockford MSA	
		2	Whiteside County(1)	
WI	Wisconsin Bank & Trust	3	Madison MSA	$927,821
		1	Green Bay MSA	
		7	Sheboygan MSA(2)	
		1	Calumet County(2)	
		2	Milwaukee County	
		2	Grant County	
		1	Green County	
NM	New Mexico Bank & Trust	9	Albuquerque MSA	$1,307,464
		2	Santa Fe MSA	
		3	Clovis MSA	
		2	Rio Arriba County	
		1	Los Alamos County	
AZ	Arizona Bank & Trust	7	Phoenix MSA	$574,762
MT	Rocky Mountain Bank	2	Billings MSA	$424,700
		2	Flathead County	
		1	Gallatin County	
		1	Ravalli County	
		1	Jefferson County	
		1	Sanders County	
		1	Sheridan County	

Charter State	Bank Name	Banking Locations	Market Areas Served	Total Bank Deposits
CO	Citywide Banks	11	Denver MSA	$1,848,373
		4	Jefferson County	
		2	Arapahoe County	
		2	Boulder County	
		2	Eagle County	
		1	Grand County	
		1	Routt County(3)	
		1	Clear Creek County	
		1	Summit County	
MN	Minnesota Bank & Trust	2	Minneapolis/St. Paul MSA	$560,399
KS	Morrill & Janes Bank and Trust Company	4	Kansas City MSA	$489,471
		1	Nemaha County	
		2	Brown County	
		1	Atchison County	
		1	Dallas, TX MSA(4)	
CA	Premier Valley Bank	1	Fresno MSA	$639,194
		1	Madera County	
		1	Mariposa County	
		4	San Luis Obispo County	
		1	Tuolumne County	
TX	First Bank & Trust	4	Lubbock, TX MSA	$861,629
		2	Lynn County	
		1	Mitchell County	
		1	Scurry County	

(1) Subsequent to December 31, 2018, Heartland entered into an agreement to sell these locations. The transaction is expected to close in the first half of 2019.
(2) Prior to December 31, 2018, Heartland entered into an agreement to sell one location in the Sheboygan MSA and one location in Calumet County. The transaction closed on February 22, 2019.
(3) Prior to December 31, 2018, Heartland entered into an agreement to sell this location. The transaction is expected to close in the first half of 2019.
(4) Subsequent to December 31, 2018, the loans and deposits of this location were transferred to Heartland's First Bank & Trust subsidiary.

Heartland's consumer finance company, Citizens Finance Parent Co., operates two subsidiary companies in the following locations:

Citizens Finance Co.(1)	Citizens Finance of Illinois Co.(1)
Cedar Rapids, IA	Aurora, IL
Davenport, IA	Crystal Lake, IL
Des Moines, IA	Elgin, IL
Dubuque, IA	Loves Park, IL
Appleton, WI	Peoria, IL
Madison, WI	Springfield, IL
Milwaukee, WI	Tinley Park, IL

(1) Prior to December 31, 2018, Heartland decided to exit the consumer finance business and entered into an agreement to sell the loan portfolios of Citizens Finance Co. and Citizens Finance of Illinois Co. The transaction closed on January 11, 2019. The offices in Iowa and Wisconsin closed on February 1, 2019, and the offices in Illinois closed on February 11, 2019.

C. COMPETITION

We face direct competition for deposits, loans and other financial related services. To compete effectively, develop our market share, maintain flexibility and keep pace with changing economic and social conditions, we continuously refine and develop our banking products and services. We have found the principal methods of competing in the financial services industry are through personal service, product selection, convenience and technology.

The market areas of the Banks are highly competitive, and our competitors are comprised of other commercial banks, credit unions, thrifts, stock brokers, mutual fund companies, mortgage companies and loan production offices, insurance companies and on-line providers and other non-bank financial service companies. Some of these competitors are local, while others are regional, national or global.

Under the Gramm-Leach-Bliley Act, effective in 2000, securities firms and insurance companies that elect to become financial holding companies may acquire banks and other financial institutions. As a result of the enactment of the Wall Street Reform and Consumer Protection Act (the "Dodd-Frank Act") in 2010, substantial changes to the regulation of bank holding companies and their subsidiaries have occurred, significantly changing the regulatory environment in which we operate. The Dodd-Frank Act originally mandated certain enhanced prudential standards for bank holding companies with greater than $50 billion in total consolidated assets as well as company-run stress tests for firms with greater than $10 billion in assets. On May 24, 2018, the Economic Growth, Regulatory Relief and Consumer Protection Act (the "Economic Growth Act") was signed into law. The Economic Growth Act exempted bank holding companies under $100 billion in assets from these requirements immediately upon enactment. This change shifts the increased costs of these requirements to bank holding companies with assets of $100 billion or more, removing a deterrent to merger and acquisition activity by institutions that were approaching $50 billion in assets.

The financial services industry is also likely to face heightened competition as technological advances enable more companies to provide financial services. These technological advances may diminish the importance of depository institutions and other financial intermediaries in the transfer of funds between parties.

We believe we are positioned to compete for loans effectively through the array and quality of the credit services we provide, and the high-touch, customer-centric way in which we provide them. We invest in building long-lasting customer relationships, and our strategy is to serve our customers above and beyond their expectations through excellence in customer service and providing banking solutions that are tailored to our customers’ needs. We believe that our long-standing presence and commitment to the communities we serve and the personal service we emphasize enhance our ability to compete favorably in attracting and retaining consumer and business customers. We continue to attract deposit-oriented customers by offering personal attention, combined with contemporary electronic banking convenience, professional service and competitive interest rates. The breadth of our product suite, coupled with our superior customer service allows us to compete favorably with our larger competitors.

D. EMPLOYEES

At December 31, 2018, Heartland employed 2,045 full-time equivalent employees, none of whom are covered by a collective bargaining agreement.

E. INTERNET ACCESS

Heartland maintains an Investor Relations website at www.htlf.com. We offer our Annual Report on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and other reports filed or furnished pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934, as amended, free of charge from our website.

F. SUPERVISION AND REGULATION

General

Financial institutions, their holding companies, and their affiliates are extensively regulated under federal and state law. As a result, the growth and earnings performance of Heartland may be affected not only by management decisions and general economic conditions, but also by the requirements of federal and state statutes and by the regulations and policies of various bank regulatory authorities. Both the scope of the laws and regulations and the intensity of the supervision to which Heartland is subject have increased in recent years in response to the financial crisis, as well as other factors such as technological and market changes. Regulatory enforcement and fines have also increased across the banking and financial services sector. Many of these changes have occurred as a result of the Dodd-Frank Act and its implementing regulations, most of which are now in place. While the regulatory environment has entered a period of rebalancing of the post financial crisis framework, notably with the passage of the Economic Growth Act, Heartland expects that its business will remain subject to extensive regulation and supervision.

As a bank holding company with subsidiary banks chartered under the laws of eleven different states, Heartland is regulated by the Board of Governors of the Federal Reserve System (the "Federal Reserve"). Each of the Banks is regulated by the FDIC as its principal federal regulator and one of the following as its state regulator: the Arizona State Banking Department (the "Arizona Department"); the California Department of Business Oversight, Division of Financial Institutions (the "California Division"); the Colorado Department of Regulatory Agencies, Division of Banking (the "Colorado Division"); the Illinois Department of Financial and Professional Regulation (the "Illinois DFPR"); the Iowa Superintendent of Banking (the "Iowa Superintendent"); the State Bank Commissioner of Kansas Division of Banking (the "Kansas Division"); the Minnesota Department of Commerce: Division of Financial Institutions (the "Minnesota Division"); the Montana Division of Banking and Financial Institutions (the "Montana Division"); the New Mexico Financial Institutions Division (the "New Mexico FID"); the Texas Department of Banking (the "Texas Division"); and the Division of Banking of the Wisconsin Department of Financial Institutions (the "Wisconsin DFI").

Federal and state laws and regulations generally applicable to financial institutions regulate, among other things, the scope of business, the kinds and amounts of investments, reserve requirements, capital levels, the establishment of branches, mergers and consolidations and the payment of dividends. This system of supervision and regulation establishes a comprehensive framework for the respective operations of Heartland and its subsidiaries and is intended primarily for the protection of the FDIC-insured deposits and depositors, consumers, the stability of the financial system in the United States, and the health of the national economy, rather than stockholders.

Federal and state banking regulators regularly examine Heartland and its subsidiaries to evaluate their financial condition and monitor their compliance with laws and regulatory policies. Following those exams, Heartland and the Banks are assigned supervisory ratings. These ratings are considered confidential supervisory information and disclosure to third parties is not allowed without permission of the issuing regulator. Violations of laws and regulations or deemed deficiencies in risk management practices may be incorporated into these supervisory ratings. A downgrade in these ratings could limit Heartland’s ability to pursue acquisitions or conduct other expansionary activities for a period of time, require new or additional regulatory approvals before engaging in certain other business activities or investments, affect a subsidiary bank’s deposit insurance assessment rate, and impose additional recordkeeping and corporate governance requirements, as well as generally increase regulatory scrutiny of Heartland.

Banking and other financial services statutes, regulations and policies are continually under review by Congress, state legislatures and federal and state regulatory agencies. In addition to laws and regulations, state and federal bank regulatory agencies may issue policy statements, interpretive letters and similar written guidance applicable to Heartland and its subsidiaries. Any change in the statutes, regulations or regulatory policies including changes in their interpretation or implementation, may have a material effect on the business of Heartland and its subsidiaries.

This section summarizes material elements of the regulatory framework that applies to Heartland and its subsidiaries. It does not describe all of the statutes, regulations and regulatory policies that apply to us, nor does it disclose all of the requirements of the statutes, regulations and regulatory policies requirements that are described.

Economic Growth, Regulatory Relief and Consumer Protection Act

On May 24, 2018, the Economic Growth Act was signed into law. The immediate impact to Heartland of the Economic Growth Act eases various regulatory requirements, which will reduce the cost to comply with the original Dodd-Frank Act. However, management is continuing to evaluate the impact of other changes affected by the Economic Growth Act.

•

Among other regulatory changes, the Economic Growth Act amends various sections of the Dodd-Frank Act, providing relief from Dodd-Frank's enhanced prudential standards and regulatory and company-run stress tests. The Federal Reserve has already stated that it will not take action to require bank holding companies with less than $100 billion in assets to comply with requirements related to resolution planning, liquidity risk management, internal liquidity stress testing, the liquidity coverage ratio, debt-to-equity limits, and capital planning, even before formal revisions to the regulations that implement these requirements. The Dodd-Frank Act originally mandated certain enhanced prudential standards for bank holding companies with greater than $50 billion in total consolidated assets as well as company-run stress tests for firms with greater than $10 billion in assets.

- In addition, the Economic Growth Act increased the threshold for requiring a dedicated board risk committee from $10 billion in total consolidated assets (established under the Dodd-Frank Act) to $50 billion in total consolidated assets.
- The Economic Growth Act amends the Volcker Rule by narrowing the definition of "banking entity" and revising the statutory provisions related to the naming of covered funds.

- The Economic Growth Act provides that a depository institution must only assign a heightened risk weight to High Volatility Commercial Real Estate exposures as defined in the Economic Growth Act.
- The Economic Growth Act also provides an exemption to the appraisal requirements for certain transactions with values of less than $400,000 involving real property or an interest in real property that is located in a rural area, as defined in the Act.

Most of the changes required by the Economic Growth Act applicable to bank holding companies with less than $100 billion in assets were effective upon adoption or have been effectively implemented by interim rules and regulatory policy statements. Furthermore, the Economic Growth Act directs the Federal Reserve to further tailor its supervision and regulation of large bank holding companies with more than $100 billion in assets.

The federal banking agencies indicated through interagency guidance that the capital planning and risk management practices of institutions with total assets less than $100 billion would continue to be reviewed through the regular supervisory process, which may offset the impact of the relief from stress testing and risk management requirements provided by the Economic Growth Act.

Heartland

General

Heartland, as the sole shareholder of Dubuque Bank and Trust Company, New Mexico Bank & Trust, Rocky Mountain Bank, Wisconsin Bank & Trust, Illinois Bank & Trust, Arizona Bank & Trust, Citywide Banks, Minnesota Bank & Trust, Morrill & Janes Bank and Trust Company, Premier Valley Bank and First Bank & Trust, is a bank holding company. As a bank holding company, Heartland is registered with, and is subject to regulation, supervision and examination by, the Federal Reserve under the BHCA. In accordance with Federal Reserve policy, Heartland is expected to act as a source of financial and managerial strength to the Banks and to commit resources to support the Banks in circumstances where Heartland might not otherwise do so. In addition, under the Dodd-Frank Act, the FDIC has backup enforcement authority over a depository institution holding company, such as Heartland, if the conduct or threatened conduct of the holding company poses a risk to the Deposit Insurance Fund, although such authority may not be used if the holding company is in sound condition and does not pose a foreseeable and material risk to the insurance fund.

Under the BHCA, Heartland is subject to periodic examination by the Federal Reserve. Supervision and examinations are confidential, and the outcomes of these actions will not be made public. Heartland is also required to file with the Federal Reserve periodic reports of Heartland's operations and such additional information regarding Heartland and its subsidiaries as the Federal Reserve may require.

Acquisitions, Activities and Change in Control

The primary purpose of a bank holding company is to control and manage banks. The BHCA generally requires the prior approval of the Federal Reserve for any merger involving a bank holding company or any acquisition by a bank holding company. Subject to certain conditions (including certain deposit concentration limits established by the BHCA), the Federal Reserve may allow a bank holding company to acquire banks located in any state of the United States. In approving interstate acquisitions, the Federal Reserve is required to give effect to applicable state law limitations on the aggregate amount of deposits that may be held by the acquiring bank holding company and its insured depository institution affiliates in the state in which the target bank is located (provided that those limits do not discriminate against out-of-state depository institutions or their holding companies).

The BHCA generally prohibits Heartland from acquiring direct or indirect ownership or control of more than 5% of the voting shares of any company that is not a bank and from engaging in any business other than that of banking, managing and controlling banks, or furnishing services to banks and their subsidiaries. This general prohibition is subject to a number of exceptions. The principal exception allows bank holding companies to engage in, and to own shares of companies engaged in, certain businesses found by the Federal Reserve to be "so closely related to banking ... as to be a proper incident thereto." This authority permits bank holding companies, such as Heartland, to engage in a variety of banking-related businesses, including consumer finance, equipment leasing, mortgage banking, brokerage and the operation of a computer service bureau (which may engage in software development). Under the Dodd-Frank Act, however, any non-bank subsidiary would be subject to regulation no less stringent than the regulation applicable to the lead bank of the bank holding company. The BHCA generally does not place territorial restrictions on the domestic activities of non-bank subsidiaries of bank holding companies.

Additionally, bank holding companies that meet certain eligibility requirements prescribed by the BHCA may elect to operate as financial holding companies which may engage in, or own shares in companies engaged in, a wider range of nonbanking activities. As of the date of this Annual Report on Form 10-K, Heartland has not applied for approval to operate as a financial holding company.

Federal law also prohibits any person or persons acting in concert from acquiring "control" of an FDIC-insured institution or its holding company without prior notice to the appropriate federal bank regulator or any other company from acquiring "control" without Federal Reserve approval to become a bank holding company. "Control" is conclusively presumed to exist upon the acquisition of 25% or more of the outstanding voting securities of a bank or bank holding company, but may exist at 10% ownership levels for public companies, such as Heartland, and under certain other circumstances. Each of the Banks is generally subject to similar restrictions on changes in control under the law of the state granting its charter.

Capital Requirements

Bank holding companies are required to maintain minimum levels of capital in accordance with Federal Reserve capital adequacy guidelines, separate from and in addition to the capital requirements applicable to subsidiary financial institutions. These quantitative calculations are minimums, and the Federal Reserve, FDIC and applicable state banking regulators may determine that a banking organization, based on its size, complexity or risk profile, must maintain a higher level of capital in order to operate in a safe and sound manner. In addition, if a bank holding company is not well-capitalized, it will have difficulty engaging in acquisition transactions, and, if its capital levels fall below the minimum required levels, a bank holding company, among other things, may be denied approval to acquire or establish additional banks or non-bank businesses.

In general, the regulations of the Federal Reserve and the FDIC as the primary regulator of state banks, separate capital into two components, Tier 1 or "Core" capital and Tier 2 or "Supplementary" capital, and test these capital components based on their ratio to assets and to "risk weighted assets." Beginning January 1, 2015, when the third installment of the Basel Accords ("Basel III") regulatory capital reforms became applicable to Heartland, a third category of capital, "Common Equity Tier 1 capital," has been added. It is tested against risk weighted assets. Tier 1 capital generally consists of (a) common stockholders' equity, qualifying noncumulative preferred stock, and to the extent they do not exceed 25% of total Tier 1 capital, qualifying cumulative perpetual preferred stock and trust preferred securities, and (b) among other things, goodwill and specified intangible assets, credit enhancing strips and investments in unconsolidated subsidiaries. Tier 2 capital includes, to the extent not in excess of Tier 1 capital, the allowance for loan losses, other qualifying perpetual preferred stock, certain hybrid capital instruments and qualifying term subordinated debt. Risk weighted assets include the sum of specific assets of an institution multiplied by risk weightings for each asset class.

Until the implementation of the Basel III requirements, the Federal Reserve's capital guidelines applicable to bank holding companies, like the regulations applicable to subsidiary banks, required holding companies with less than $10 billion of assets to comply with three capital ratios: (i) a leverage requirement consisting of a minimum ratio of Tier 1 capital to total assets (the "Leverage Ratio") of 3.0% for the most highly-rated banks with a minimum requirement of at least 4.0% for all others; (ii) a risk-based capital requirement consisting of a minimum ratio of Tier 1 capital to total risk-weighted assets (the "Tier1 Capital Ratio") of 4.0% and (iii) a risk-based capital requirement consisting of a minimum ratio of total capital to total risk-weighted assets (the "Total Capital Ratio") of 8.0%. The Basel III regulations, which became effective for Heartland and the Banks on January 1, 2015, (1) increased the minimum Leverage Ratio to 4.0% for all banks, (2) increased the Tier 1 Capital Ratio to 6.0% on January 1, 2015 and increased the Tier 1 Capital Ratio to 8.5% on January 1, 2019, and (3) created a new requirement to maintain a ratio of Common Equity Tier 1 capital ("Common Equity Tier 1 Capital Ratio") to risk-weighted assets of 4.5% as of January 1, 2015, which gradually increased to 7.0% on January 1, 2019. The Basel III Rules require inclusion in Common Equity Tier 1 Capital of the effects of other comprehensive income adjustments, such as gains and losses on securities held to maturity, that are currently excluded from the definition of Tier1 capital, but allow institutions, such as Heartland, to make a one-time election not to include those effects. Heartland and its banks elected not to include the effects of other comprehensive income in Common Equity Tier 1 Capital. Further, under the Basel III rules, if an institution grows beyond $15 billion in assets and makes an acquisition, its ability to include trust preferred securities in Tier 1 capital is phased out. However, the trust preferred securities issued by Heartland, as a holding company with less than

$15 billion in assets, are grandfathered as Tier 1 capital by the Dodd-Frank Act, until Heartland grows beyond $15 billion in assets and makes an acquisition.

Additional requirements may be imposed in the future. The Basel Committee has recently finalized a package of revisions to the Basel III framework, unofficially known as Basel IV. The changes are meant to improve the calculation of risk-weighted assets and the comparability of capital ratios. Federal banking regulators are expected to undertake one or more rulemakings in future years to implement these revisions in the United States. The ultimate impact on our capital and liquidity will depend on the final United States rulemakings and implementation process thereafter.

Further, federal law and regulations provide various incentives for financial institutions to maintain regulatory capital at levels in excess of minimum regulatory requirements. For example, a financial institution generally must be "well-capitalized" to engage in acquisitions, and well-capitalized institutions may qualify for exemptions from prior notice or application requirements otherwise applicable to certain types of activities and may qualify for expedited processing of other required notices or applications. Additionally, one of the criteria that determines a bank holding company's eligibility to operate as a financial holding company is a requirement that both the holding company and all of its financial institution subsidiaries be "well-capitalized." Under current federal regulations, in order to be "well-capitalized" a financial institution must maintain a Total Capital Ratio of 10.0% or greater, a Tier 1 Capital Ratio of 6.0% or greater and a Leverage Ratio of 5.0% or greater. In order to be "well-capitalized" under the new Basel III Rules, a bank or bank holding company will be required to have a Total Capital Ratio of 10.0% or greater, a Tier 1 Capital Ratio of 8.0% or greater, a Leverage Ratio of 5.0% or greater, and a Common Equity Tier 1 Capital Ratio of 6.5% or greater. As of December 31, 2018, Heartland had regulatory capital in excess of the Federal Reserve requirements for well-capitalized bank holding companies.

In addition, in December 2018, the United States federal banking agencies finalized standards that permit bank holding companies and banks to phase-in, for regulatory capital purposes, the day-one impact of the new current expected credit loss accounting standard on retained earnings over a period of three years. For further discussion of the new current expected credit loss accounting standard, see Note 1 of the consolidated financial statements.

Stress Testing

Pursuant to the Dodd-Frank Act and regulations published by the Federal Reserve, institutions with average total consolidated assets greater than $10 billion were required to conduct an annual "stress test" of capital and consolidated earnings and losses under a base case and two severely adverse stress scenarios provided by bank regulatory agencies. The Economic Growth Act raised the asset threshold for stress testing from $10 billion to $100 billion for bank holding companies. As a result Heartland, as well as its Banks, are no longer subject to stress test regulations or any requirement to publish the results of the stress testing. Heartland will continue to perform certain stress tests internally and incorporate the economic models and information developed through its stress testing program into its risk management and business planning activities.

Dividend Payments

Heartland's ability to pay dividends to its stockholders may be affected by both general corporate law consideration, and policies of the Federal Reserve applicable to bank holding companies. As a Delaware corporation, Heartland is subject to the limitations of the Delaware General Corporation Law (the "DGCL"), which allows Heartland to pay dividends only out of its surplus (as defined and computed in accordance with the provisions of the DGCL) or, if Heartland has no such surplus, out of its net profits for the fiscal year in which the dividend is declared and/or the preceding fiscal year. In addition, policies of the Federal Reserve suggest that a bank holding company should not pay cash dividends unless its net income available to common stockholders over the past year has been sufficient to fully fund the dividends and the prospective rate of earnings retention appears consistent with its capital needs, asset quality, and overall financial condition. The Federal Reserve also possesses enforcement powers over bank holding companies and their non-bank subsidiaries to prevent or remedy actions that represent unsafe or unsound practices or violations of applicable statutes and regulations. Among these powers is the ability to proscribe the payment of dividends by banks and bank holding companies.

The Banks

General

All of the Banks are state chartered, non-member banks, which means that they are all formed under state law and are not members of the Federal Reserve System. As a result, each Bank is subject to direct regulation by the banking authorities in the state in which it was chartered, as well as by the FDIC as its primary federal regulator.

Dubuque Bank and Trust Company is an Iowa-chartered bank. As an Iowa-chartered bank, Dubuque Bank and Trust Company is subject to the examination, supervision, reporting and enforcement requirements of the Iowa Superintendent, the chartering authority for Iowa banks.

Illinois Bank & Trust is an Illinois-chartered bank. As an Illinois-chartered bank, Illinois Bank & Trust is subject to the examination, supervision, reporting and enforcement requirements of the Illinois DFPR, the chartering authority for Illinois banks.

Wisconsin Bank & Trust is a Wisconsin-chartered bank. As a Wisconsin-chartered bank, Wisconsin Bank & Trust is subject to the examination, supervision, reporting and enforcement requirements of the Wisconsin DFI, the chartering authority for Wisconsin banks.

New Mexico Bank & Trust is a New Mexico-chartered bank. As a New Mexico-chartered bank, New Mexico Bank & Trust is subject to the examination, supervision, reporting and enforcement requirements of the New Mexico FID, the chartering authority for New Mexico banks.

Arizona Bank & Trust is an Arizona-chartered bank. As an Arizona-chartered bank, Arizona Bank & Trust is subject to the examination, supervision, reporting and enforcement requirements of the Arizona Department, the chartering authority for Arizona banks.

Rocky Mountain Bank is a Montana-chartered bank. As a Montana-chartered bank, Rocky Mountain Bank is subject to the examination, supervision, reporting and enforcement requirements of the Montana Division, the chartering authority for Montana banks.

Citywide Banks is a Colorado-chartered bank. As a Colorado-chartered bank, Citywide Banks is subject to the examination, supervision, reporting and enforcement requirements of the Colorado Division, the chartering authority for Colorado banks.

Minnesota Bank & Trust is a Minnesota-chartered bank. As a Minnesota-chartered bank, Minnesota Bank & Trust is subject to the examination, supervision, reporting and enforcement requirements of the Minnesota Division, the chartering authority for Minnesota banks.

Morrill & Janes Bank and Trust Company is a Kansas-chartered bank. As a Kansas-chartered bank, Morrill & Janes Bank and Trust Company is subject to the examination, supervision, reporting and enforcement requirements of the Kansas Division, the chartering authority for Kansas banks.

Premier Valley Bank is a California-chartered bank. As a California-chartered bank, Premier Valley Bank is subject to the examination, supervision, reporting and enforcement requirements of the California Division, the chartering authority for California banks.

First Bank & Trust is a Texas-chartered bank. As a Texas-chartered bank, First Bank & Trust is subject to the examination, supervision, reporting and enforcement requirements of the Texas Division, the chartering authority for Texas banks.

Deposit Insurance
The FDIC is an independent federal agency that insures the deposits, up to $250,000 per depositor, of federally insured banks and savings institutions and safeguards the safety and soundness of the commercial banking and thrift industries.

As FDIC-insured institutions, the Banks are required to pay deposit insurance premium assessments to the FDIC using a risk-based assessment system based upon average total consolidated assets minus tangible equity of the insured bank.

The Dodd-Frank Act directed that the minimum deposit insurance fund reserve ratio would increase from 1.15% to 1.35% by September 30, 2020, and that the cost of the increase be borne by depository institutions with assets of $10 billion or more. In addition, all institutions with deposits insured by the FDIC were required to pay assessments to fund interest payments on bonds issued by the Financing Corporation, an agency of the federal government established to recapitalize the predecessor to the Savings Association Insurance Fund. Since December 31, 2013, the assessment rate has been 0.01450% of total deposits. This requirement was met effective September 30, 2018, as a result of the FDIC's reserve ratio exceeding 1.35%.

The Dodd-Frank Act also provides the FDIC with discretion to determine whether to pay rebates to insured depository institutions when its deposit insurance reserves exceed certain thresholds. Previously, the FDIC was required to give rebates to depository institutions equal to the excess once the reserve ratio exceeded 1.50%, and was required to rebate 50% of the excess over 1.35% but not more than 1.50% of insured deposits. In July 2016, the FDIC implemented rules for the reserve ratio requirements of the Dodd-Frank Act. Under the rules, banks with assets of less than $10 billion will receive assessment credits for the portion of their assessments that contribute to the increase in the reserve ratio from 1.15% to 1.35%. The FDIC will apply the credits each quarter that the bank's reserve ratio is at or above 1.38%

to offset the regular deposit insurance assessments.

Supervisory Assessments

Each of the Banks is required to pay supervisory assessments to its respective state banking regulator to fund the operations of that agency. In general, the amount of the assessment is calculated on the basis of each institution's total assets. During 2018, the Banks paid supervisory assessments totaling $1.2 million.

Capital Requirements

Like Heartland, under current federal regulations, each Bank is required to maintain the minimum Leverage Ratio, Tier 1 Capital Ratio and Total Capital Ratio described under the caption "Heartland-Capital Requirements" above, and effective January 1, 2015, was required to comply with the enhanced capital requirements under the Basel III regulations, as well as the new Common Equity Tier 1 Capital Ratio. The capital requirements described above are minimum requirements and higher capital levels may be required if warranted by the particular circumstances or risk profiles of individual institutions. For example, federal regulators regularly require new institutions to maintain higher capital ratios during the first few years after their formation, and may require additional capital to take adequate account of, among other things, interest rate risk or the risks posed by concentrations of credit, nontraditional activities or securities trading activities.

Federal law also provides the federal banking regulators with broad power to take prompt corrective action to resolve the problems of undercapitalized institutions. The extent of the regulators' powers depends on whether the institution in question is "adequately capitalized," "undercapitalized," "significantly undercapitalized" or "critically undercapitalized," in each case as defined by regulation. Depending upon the capital category to which an institution is assigned, the regulators' corrective powers include: (i) requiring the institution to submit a capital restoration plan; (ii) limiting the institution's asset growth and restricting its activities; (iii) requiring the institution to issue additional capital stock (including additional voting stock) or to be acquired; (iv) restricting transactions between the institution and its affiliates; (v) restricting the interest rate the institution may pay on deposits; (vi) ordering a new election of directors of the institution; (vii) requiring that senior executive officers or directors be dismissed; (viii) prohibiting the institution from accepting deposits from correspondent banks; (ix) requiring the institution to divest certain subsidiaries; (x) prohibiting the payment of principal or interest on subordinated debt; and (xi) ultimately, appointing a receiver for the institution.

As of December 31, 2018: (i) none of the Banks was subject to a directive from its primary federal regulator to increase its capital; (ii) each of the Banks exceeded its minimum regulatory capital requirements under applicable capital adequacy guidelines; (iii) each of the Banks was "well-capitalized," as defined by applicable regulations; and (iv) none of the Banks were subject to a directive to maintain capital higher than the regulatory capital requirements, as discussed below under the caption "Safety and Soundness Standards."

Liability of Commonly Controlled Institutions

Under federal law, institutions insured by the FDIC may be liable for any loss incurred by, or reasonably expected to be incurred by, the FDIC in connection with the default of commonly controlled FDIC-insured depository institutions or any assistance provided by the FDIC to commonly controlled FDIC-insured depository institutions in danger of default. Because Heartland controls each of the Banks, the Banks are commonly controlled for purposes of these provisions of federal law.

Anti-Money Laundering

The Bank Secrecy Act, the Uniting and Strengthening America by Providing Appropriate Tools Required to Intercept and Obstruct Terrorism Act of 2001 (the "PATRIOT Act") and other related federal laws and regulations require financial institutions, including the Banks, to implement policies and procedures relating to anti-money laundering, customer identification and due diligence requirements and the reporting of certain types of transactions and suspicious activity. In May 2016, the Financial Crimes Enforcement Network published a final rule that requires financial institutions to develop policies, procedures and practices to prevent and deter money laundering. The program must be a written board-approved program that is reasonably designed to identify and verify the identities of beneficial owners of legal entity customers at the time a new account is opened. The program must, at a minimum (1) provide for a system of internal controls to assure ongoing compliance; (2) designate a compliance officer; (3) establish an ongoing employee training program; and (4) implement an independent audit function to test programs. Financial institutions were required to comply with the new rule beginning May 11, 2018. This rule has increased compliance costs for the Banks.

Dividend Payments

The primary source of funds for Heartland is dividends from the Banks. In general, the Banks may only pay dividends either out of their historical net income after any required transfers to surplus or reserves have been made or out of their retained earnings.

The payment of dividends by any financial institution is affected by the requirement to maintain adequate capital pursuant to applicable capital adequacy guidelines and regulations, and a financial institution generally is prohibited from paying any dividends if, following payment thereof, the institution would be undercapitalized. As described above, each of the Banks exceeded its minimum capital requirements under applicable guidelines as of December 31, 2018.

As of December 31, 2018, approximately $311.3 million was available in retained earnings at the Banks for payment of dividends to Heartland under the regulatory capital requirements to remain well-capitalized. Notwithstanding the availability of funds for dividends, however, the FDIC and state regulators may reduce or prohibit the payment of dividends by the Banks.

Transactions with Affiliates

The Federal Reserve regulates transactions between Heartland and its subsidiaries. Generally, the Federal Reserve Act and Regulation W, as amended by the Dodd-Frank Act, limit lending and other "covered transactions" between the Banks and their affiliates. The aggregate amount of covered transactions a Bank may enter into with an affiliate may not exceed 10% of the capital stock and surplus of the Bank. The aggregate amount of covered transactions with all affiliates may not exceed 20% of the capital stock and surplus of the Bank.

Covered transactions with affiliates are also subject to collateralization requirements and must be conducted on arm's length terms. Covered transactions include (a) a loan or extension of credit by a Bank, including derivative contracts, (b) a purchase of securities issued to a Bank, (c) a purchase of assets by a Bank unless otherwise exempted by the Federal Reserve, (d) acceptance of securities issued by an affiliate to the Bank as collateral for a loan, and (e) the issuance of a guarantee, acceptance or letter of credit by a Bank on behalf of an affiliate.

Insider Transactions

The Banks are subject to certain restrictions imposed by federal law on extensions of credit to Heartland and its subsidiaries, on investments in the stock or other securities of Heartland and its subsidiaries and the acceptance of the stock or other securities of Heartland or its subsidiaries as collateral for loans made by the Banks. Certain limitations and reporting requirements are also placed on extensions of credit by each of the Banks to its directors and officers, to directors and officers of Heartland and its subsidiaries, to principal stockholders of Heartland and to "related interests" of such directors, officers and principal stockholders. In addition, federal law and regulations may affect the terms upon which any person who is a director or officer of Heartland or any of its subsidiaries or a principal stockholder of Heartland may obtain credit from banks with which the Banks maintain correspondent relationships.

Safety and Soundness Standards

The federal banking agencies have adopted guidelines that establish operational and managerial standards to promote the safety and soundness of federally insured depository institutions. The guidelines set forth standards for internal controls, information systems, internal audit systems, loan documentation, credit underwriting, interest rate exposure, asset growth, compensation, fees and benefits, vendor and model risk management, asset quality and earnings. In general, the safety and soundness guidelines prescribe the goals to be achieved in each area, and each institution is responsible for establishing its own procedures to achieve those goals. If an institution fails to comply with any of the standards set forth in the guidelines, the institution's primary federal regulator may require the institution to submit a plan for achieving and maintaining compliance. If an institution fails to submit an acceptable compliance plan, or fails in any material respect to implement a compliance plan that has been accepted by its primary federal regulator, the regulator is required to issue an order directing the institution to cure the deficiency. Until the deficiency cited in the regulator's order is cured, the regulator may restrict the institution's rate of growth, require the institution to increase its capital, restrict the rates the institution pays on deposits or require the institution to take any action the regulator deems appropriate under the circumstances. Noncompliance with the standards established by the safety and soundness guidelines may also constitute grounds for other enforcement action by the federal banking regulators, including cease and desist orders and civil money penalty assessments.

In June 2016, the Federal Reserve Board issued supervisory guidance for assessing risk management for supervised institutions with total consolidated assets of less than $50 billion ("SR 16-11"). This guidance provides four key areas to evaluate in assessing a risk management system: board and senior management oversight of risk management; policies, procedures and limits; risk monitoring and management information systems and internal controls. In August 2017, the Federal Reserve Board issued proposed guidance addressing supervisory expectations of boards of directors that includes a proposal to further revise and align the supervisory expectations of boards of directors in areas beyond risk management with the board expectations set forth in SR 16-11.

Branching Authority

Each of the Banks has the authority, pursuant to the laws under which it is chartered, to establish branches anywhere in the state in which its main office is located, subject to the receipt of all required regulatory approvals.

Federal law permits state and national banks to merge with banks in other states subject to: (i) regulatory approval; (ii) federal and state deposit concentration limits; and (iii) state law limitations requiring the merging bank to have been in existence for a minimum period of time (not to exceed five years) prior to the merger.

State Bank Investments and Activities

Each of the Banks generally is permitted to make investments and engage in activities directly or through subsidiaries as authorized by the laws of the state under which it is chartered. However, under federal law and FDIC regulations, FDIC-insured state banks are prohibited, subject to certain exceptions, from making or retaining equity investments of a type, or in an amount, that are not permissible for a national bank. Federal law and FDIC regulations also prohibit FDIC-insured state banks and their subsidiaries, subject to certain exceptions, from engaging as principal in any activity that is not permitted for a national bank, unless the bank meets, and continues to meet, its minimum regulatory capital requirements and the FDIC determines the activity would not pose a significant risk to the deposit insurance fund of which the bank is a member.

Incentive Compensation Policies and Restrictions

In July 2010, the federal banking agencies issued guidance that applies to all banking organizations supervised by the agencies. Pursuant to the guidance, to be consistent with safety and soundness principles, Heartland's incentive compensation arrangements should: (1) appropriately balance risk and financial reward; (2) be compatible with effective controls and risk management; and (3) be supported by strong corporate governance, including active and effective oversight by Heartland's board of directors.

In addition, in March 2011, the federal banking agencies, along with the Federal Housing Finance Agency, and the Securities and Exchange Commission, released a proposed rule intended to ensure that regulated financial institutions design their incentive compensation arrangements to account for risk. In May 2016, financial regulators proposed a rule replacing the 2011 proposed rule. While the proposed 2011 proposed rule was principles-based, the new proposed rule is prescriptive in nature and is intended to prohibit incentive-based compensation arrangements that could encourage inappropriate risk taking by providing excessive compensation or could lead to material financial loss. The new proposed rule would require financial institutions to consider compensation arrangements for "senior executive officers" and "significant risk takers" against several factors, and would require that such arrangements contain both financial and non-financial measures of performance. Until a final rule is issued, it is not clear whether and how this rule will ultimately impact the Banks.

The Volcker Rule and Proprietary Trading

In December 2013, federal banking regulators jointly issued a final rule to implement Section 13 of the BHCA (adopted as part 619 of the Dodd-Frank Act), which prohibits banking entities (including Heartland and the Banks) from engaging in proprietary trading of securities, derivatives and certain other financial instruments for the entity's own account, and prohibits certain interests in, or relationships with, a hedge fund or private equity fund. It also imposes rules regarding compliance programs. Commonly referred to as the "Volcker Rule," the final rule as originally adopted was effective on April 1, 2014 and would have required banking entities to conform their activities to its requirements by July 21, 2015. However, based upon announcements of the Federal Reserve Board in December 2014, certain key elements that require sale of investment in private equity and hedge funds were not effective until July 21, 2017. Heartland did not engage in any significant amount of proprietary trading, as defined in the Volcker Rule, and the impact of the Volcker Rule on Heartland's business activities and investment portfolio was minimal. Heartland has reviewed its investment portfolio to determine if any investments meet the Volcker Rule's definition of covered funds. Based on the review, Heartland determined that the impact related to investments considered to be covered funds did not have a significant effect on its financial condition or results of operations.

In May 2018, the Federal Reserve requested comment on proposals to simplify and tailor the compliance requirements of the Volcker Rule. The Economic Growth Act has already changed some of these requirements, as described in the section of this Annual Report on Form 10-K entitled "Supervision and Regulation." Management will continue to evaluate the impact of the Volcker Rule as regulations implementing these changes are finalized.

Federal Reserve Liquidity Regulations

Federal Reserve regulations, as presently in effect, require depository institutions to maintain non-interest earning reserves against their transaction accounts (primarily NOW and regular checking accounts), as follows: (i) for transaction accounts aggregating $10.7 million or less, there is no reserve requirement; (ii) for transaction accounts over $10.7 million and up to $55.2 million, the reserve requirement is 3% of total transaction accounts; and (iii) for transaction accounts aggregating in excess of $55.2 million, the reserve requirement is $1.3 million plus 10% of the aggregate amount of total transaction accounts in excess of $55.2 million. These reserve requirements are subject to annual adjustment by the Federal Reserve. The Banks are in compliance with the foregoing requirements.

Community Reinvestment Act Requirements

The Community Reinvestment Act imposes a continuing and affirmative obligation on each of the Banks to help meet the credit needs of their respective communities, including low- and moderate-income neighborhoods, in a safe and sound manner. The FDIC and the respective state regulators regularly assess the record of each Bank in meeting the credit needs of its community. Applications for additional acquisitions would be subject to evaluation of the effectiveness of the Banks' in meeting their Community Reinvestment Act requirements.

Consumer Protection
The Consumer Finance Protection Bureau ("CFPB") has undertaken numerous rule-making and other initiatives, including issuing informal guidance and taking enforcement actions against certain financial institutions. The CFPB’s rulemaking, examination and enforcement authority has affected and will continue to significantly affect financial institutions involved in the provision of consumer financial products and services.

The CFPB has also been publishing complaints submitted by consumers regarding consumer financial products and services in a publicly-accessible online portal. In June 2015, the CFPB also began publishing complaint narratives from consumers that opted to have their narratives made public. The publication of complaint narratives could affect the Banks in the following ways: (i) complaint data might be used by the CFPB to make decisions regarding regulatory, enforcement or examination issues; and (ii) the publication of such narratives may have a negative effect on the reputation of those institutions that are the subject of complaints.

Mortgage Lending

Mortgage loans held at each of the Banks, which were made prior to the outsourcing of Heartland’s legacy mortgage lending business, and mortgage loans originated by PrimeWest Mortgage Corporation are subject to a number of laws and rules affecting residential mortgages, including the Home Mortgage Disclosure Act ("HMDA") and Regulation C and the Real Estate Settlement Procedures Act ("RESPA") and Regulation X. In recent years, the CFPB and other federal agencies have proposed and finalized a number of rules affecting residential mortgages. These rules implement the Dodd-Frank Act amendments to the Equal Credit Opportunity Act, Truth in Lending Act ("TILA") and RESPA. The final rules, among other things, impose requirements regarding procedures to ensure compliance with "ability to repay" requirements, policies and procedures for servicing mortgages, and additional rules and restrictions regarding mortgage loan originator compensation and qualification and registration requirements for individual loan originator employees. These rules also impose new or revised disclosure requirements, including a new integrated mortgage origination disclosure that combines disclosures currently required under TILA and RESPA.

Regulation C requires lenders to report certain information regarding home loans. In October 2015, the CFPB issued a final rule amending Regulation C which, among other things, revises tests for determining what financial institutions and credit transactions are covered under HMDA and imposes reporting requirements for new data points identified in the Dodd-Frank Act or identified by the CPFB as necessary to carry out the purposes of HMDA. The final rule requires more detailed information from lenders and requires lenders to deliver certain information about mortgage loan underwriting and pricing.

In October 2016, federal regulators issued a proposed rule to implement provisions of the Briggert-Waters Flood Insurance Reform Act. Federal law generally requires financial institutions to impose a mandatory purchase requirement for flood insurance for loans secured by certain real property located in areas with special flood hazards. The proposed rule outlines provisions for identifying when private flood insurance policies must be accepted and criteria to apply in determining whether certain types of coverage qualify as "flood insurance" for federal flood insurance law purposes. Until a final rule is issued, it is not clear whether and how this rule will ultimately impact the Banks.

Ability-to-Repay and Qualified Mortgage Rule

Effective on January 10, 2014, Regulation Z was amended to require mortgage lenders, such as PrimeWest Mortgage Corporation, to make a reasonable and good faith determination based on verified and documented information that a consumer applying for a mortgage loan has a reasonable ability to repay the loan according to its terms. Mortgage lenders are required to determine consumers’ ability to repay in one of two ways. The first alternative requires the mortgage lender to consider the following eight underwriting factors when making the credit decision: (1) current or reasonably expected income or assets; (2) current employment status; (3) the monthly payment on the covered transaction; (4) the monthly payment on any simultaneous loan; (5) the monthly payment for mortgage-related obligations; (6) current debt obligations, alimony and child support; (7) the monthly debt-to-income ratio or residual income; and (8) credit history. Alternatively, the mortgage lender can originate "qualified mortgages," which are entitled to a presumption that the creditor making the loan satisfied the ability-to-repay requirements. In general, a "qualified mortgage" is a mortgage loan without negative amortization, interest-only payments, balloon payments or terms exceeding 30 years. In addition, to be a qualified mortgage, the points and fees paid by a consumer cannot exceed 3% of the total loan amount. Qualified mortgages that are "higher-priced" (e.g., subprime loans) have a rebuttable presumption of compliance with the ability-to-repay rules, while qualified mortgages that are not "higher-priced" (e.g., prime loans) are given a safe harbor of compliance. The Banks and PrimeWest Mortgage Corporation primarily originate compliant qualified mortgages.

Risk Retention and Qualified Residential Mortgage Rule

In October 2014, the FDIC, the Federal Reserve and four other federal regulatory agencies issued a final rule to implement amendments to the Securities Exchange Act of 1934, as amended, that impose risk retention requirements on asset-backed securities. The final rule generally requires a sponsor of an asset-backed securitization to retain not less than 5% of the credit risk of the underlying asset. Certain securitizations that are comprised of "qualified residential mortgages" are exempt from the risk retention requirements, with qualified residential mortgage defined to be consistent with the definition of qualified mortgages. The final rule for residential securitizations was effective December 24, 2015, and rules for all other categories of covered asset-based securitizations were effective December 24, 2016. The operations of the Banks were not materially impacted by the final rule particularly since the Banks primarily originate qualified residential mortgages.

Data Security

In January 2015, new legislative proposals and administration efforts regarding privacy and cybersecurity were announced which, among other things, propose a national data breach notification standard. Legislation regarding data security with respect to security breach notifications and sharing cybersecurity threat information has also been proposed. In 2015, the Federal Financial Institutions Examination Council ("FFIEC") developed the Cybersecurity Assessment Tool to help institutions identify their risks and determine their preparedness for cybersecurity threats.

In September 2016, the FFIEC issued a revised Information Security booklet. The revised booklet includes updated guidelines for evaluating the adequacy of information security programs (including effective threat identification, assessment and monitoring, and incident identification assessment and response), assurance reports and testing of information security programs.

New laws or guidance with respect to data security could impact card issuers and increase compliance costs related to credit card or debit card products. However, it is currently uncertain what (if any) impact these developments will have on the Banks.

Durbin Amendment
The Dodd-Frank Act included provisions (known as the "Durbin Amendment"), which restrict interchange fees to those which are "reasonable and proportionate" for certain debit card issuers and limits the ability of networks and issuers to restrict debit card transaction routing. The Federal Reserve issued final rules implementing the Durbin Amendment on June 29, 2011. In the final rules, interchange fees for debit card transactions were capped at $0.21 plus five basis points in order to be eligible for a safe harbor such that the fee is conclusively determined to be reasonable and proportionate. The interchange fee restrictions contained in the Durbin Amendment, and the rules promulgated thereunder, only apply to debit card issuers with $10 billion or more in total consolidated assets at year-end. Because Heartland's assets exceeded $10 billion at December 31, 2018, it will be required to comply with the Durbin Amendment effective July 1, 2019. Based on estimated calculations using 2018 debit card volume, the impact of the Durbin Amendment would be approximately $6.0 million on an annualized basis.

ITEM 1A. RISK FACTORS

In addition to the other information in this Annual Report on Form 10-K, stockholders or prospective investors should carefully consider the following risk factors that may adversely affect our business, financial results or stock price. Additional risks that we currently do not know about or currently view as immaterial may also impair our business or adversely impact our financial results or stock price.

Economic and Market Conditions Risk

Our business and financial results are significantly affected by general business and economic conditions.
Our business activities and earnings are affected by general business conditions in the United States and particularly in the states in which our Banks operate. Factors such as the volatility of interest rates, home prices and real estate values, unemployment, credit defaults, increased bankruptcies, decreased consumer spending and household income, volatility in the securities markets, and the cost and availability of capital have negatively impacted our business in the past and may adversely impact us in the future. Economic deterioration that affects household and/or corporate incomes could result in renewed credit deterioration and reduced demand for credit or fee-based products and services, negatively impacting our performance. In addition, changes in securities market conditions and monetary fluctuations could adversely affect the availability and terms of funding necessary to meet our liquidity needs.

Our business is concentrated in and dependent upon the continued growth and welfare of the various markets that we serve.
We operate in markets in Iowa, Illinois, Wisconsin, Arizona, New Mexico, Montana, Colorado, Minnesota, Kansas, Missouri, Texas and California, and our financial condition, results of operations and cash flows are subject to changes in the economic conditions in those markets. Our success depends upon the business activity, population, income levels, deposits and real estate activity in those areas. Although our customers' business and financial interests may extend well beyond our market areas, adverse economic conditions that affect our specific market area could reduce our growth rate, affect the ability of our customers to repay their loans to us and generally affect our financial condition and results of operations.

Our business and performance is vulnerable to the impact of volatility in debt and equity markets.
As most of our assets and liabilities are financial in nature, our performance is sensitive to the performance of the financial markets. Turmoil and volatility in the financial markets can be a major contributory factor to overall weak economic conditions, including the impaired ability of borrowers and other counterparties to meet obligations to us. Financial market volatility may:

- Affect the value or liquidity of our on-balance sheet and off-balance sheet financial instruments.
- Affect the value of capitalized servicing assets.
- Affect our ability to access capital markets to raise funds. Inability to access capital markets if needed, at cost effective rates, could adversely affect our liquidity and results of operations.
- Affect the value of the assets that we manage or otherwise administer or service for others. Although we are not directly impacted by changes in the value of such assets, decreases in the value of those assets would affect related fee income and could result in decreased demand for our services.

Changes in interest rates and other conditions could negatively impact our results of operations.
As a result of the high percentage of our assets and liabilities that are interest-bearing, changes in interest rates, in the shape of the yield curve or in spreads between different market interest rates, can have a material effect on our financial performance. Our profitability is in part a function of the spread between the interest rates earned on investments and loans and the interest rates paid on deposits and other interest-bearing liabilities. Like most banking institutions, our net interest spread and margin will be affected by general economic conditions and other factors, including fiscal and monetary policies of the Federal Reserve that influence market interest rates, and our ability to respond to changes in such rates. The Federal Reserve began raising rates in late 2015 and 2016 and their benchmark rate and market rates continued to increase during 2017 and 2018, contributing to improvement in our net interest income as the increase in interest we receive on our assets exceeded the increase in interest we were required to pay our depositors. However there is substantial uncertainty regarding the extent to which interest rates may increase in 2019 and future periods and what the future effects of any such increases will be on our interest income and expense.

At any given time, our assets and liabilities may be affected differently by a given change in interest rates. Asset values, especially commercial real estate collateral, securities or other fixed rate earning assets, can decline significantly with relatively minor changes in interest rates. As a result, an increase or decrease in rates, the length of loan terms or the mix of adjustable and fixed rate loans in our portfolio could have a positive or negative effect on our net income, capital and liquidity. We measure interest rate risk under various rate scenarios using specific criteria and assumptions. A summary of this process, along with the results of our net interest income simulations, is presented under the caption "Quantitative and Qualitative Disclosures About Market Risk" included under Item 7A of Part II of this Annual Report on Form 10-K. Although we believe our current level of interest rate sensitivity is reasonable and effectively managed, significant fluctuations in interest rates may have an adverse effect on our business, financial condition and results of operations, and specifically, our net interest income. Also, our interest rate risk modeling techniques and assumptions may not fully predict or capture the impact of actual interest rate changes on our financial condition and results of operations.

We may be adversely impacted by the transition from the London Interbank Offered Rate ("LIBOR") as a reference rate.
We have derivative contracts, borrowings and other financial instruments with attributes that are either directly or indirectly dependent on the LIBOR. In 2017, the United Kingdom Financial Conduct Authority indicated in an announcement that the continuation of LIBOR on the current basis cannot and will not be guaranteed after 2021. United States regulatory authorities have voiced similar support for phasing out LIBOR. The impact of alternatives to LIBOR on the valuations, pricing and operation of our financial instruments is not yet known.

Future impacts of the Tax Cuts and Jobs Act on us and our customers are unknown at present, creating uncertainty and risk related to our customers' future demand for credit and our future results. Additionally, changes in the federal, state or local tax laws may negatively impact our financial performance.
The Tax Cuts and Jobs Act was signed into law in December 2017. Increased economic activity expected to result from the decrease in tax rates on businesses generally could spur additional economic activity that would encourage additional borrowing. At the same time, some customers may elect to use their additional cash flow from lower taxes to fund their existing levels of activity, decreasing borrowing needs. The potential limitation of the federal income tax deductibility of business interest expense for a significant number of our customers effectively increases the cost of borrowing and makes equity or hybrid funding relatively more attractive. This could have a long-term negative impact on business customer borrowing. We realized a significant increase in our after-tax net income available to stockholders in 2018 but there is no guarantee that future years' results will have the same benefit. Some or all of this benefit could be lost to the extent that the banks and financial services companies we compete with elect to lower interest rates and fees and we are forced to respond in order to remain competitive. Additionally, the tax benefits could be repealed as a result of future regulatory actions. There is no assurance that presently anticipated benefits of the Tax Cuts and Jobs Act will be realized in the future.

We are subject to changes in tax law that could increase our effective tax rates. These law changes may be retroactive to previous periods and as a result could negatively affect our current and future financial performance. The Tax Cuts and Jobs Act, the full impact of which is subject to further evaluation and analysis, is likely to have both positive and negative effects on our financial performance. We will continue to monitor the evolving impact of the Tax Cuts and Jobs Act, which may differ from the foregoing description, possibly materially, due to changes in interpretations or in assumptions that we have made, guidance or regulations that may be promulgated, and other actions that we may take as a result of this legislation. Similarly, our customers are likely to experience varying effects from both the individual and business tax provisions of the Tax Cuts and Jobs Act and such effects, whether positive or negative, may have a corresponding impact on our business and the economy as a whole.

Credit Risks

We could suffer material credit losses if we do not appropriately manage our credit risk.
There are many risks inherent in making any loan, including risks of dealing with individual borrowers, risks of nonpayment, risks resulting from uncertainties as to the future value of collateral and risks resulting from changes in economic and industry conditions. We attempt to minimize our credit risk through prudent loan application approval procedures, careful monitoring of the concentration of our loans within specific industries, periodic independent reviews of outstanding loans by our loan review department and appropriate training of our credit administration staff. However, changes in the economy can cause the assumptions that we made at the time of loan origination to change and can cause borrowers to be unable to make payments on their loans. In addition, significant changes in collateral values can cause us to be unable to collect the full value of loans we make. We cannot assure you that our loan approval and monitoring procedures will reduce these credit risks.

We depend on the accuracy and completeness of information about our customers and counterparties.
In deciding whether to extend credit or enter into other transactions, we may rely on information furnished by or on behalf of customers and counterparties, including financial statements, credit reports and other financial information. We may also rely on representations of those customers, counterparties or other third parties, such as independent auditors, regarding the accuracy and completeness of that information. Reliance on inaccurate or misleading financial statements, credit reports or other financial information could cause us to make uncollectible loans or enter into other unfavorable transactions, which could have a material adverse effect on our financial condition and results of operations.

Commercial loans, which involve greater complexities to underwrite and administer, make up a significant portion of our loan portfolio.
Heartland's commercial loans were $5.73 billion (including $3.71 billion of commercial real estate loans), or approximately 77%, of our total loan portfolio as of December 31, 2018. Our commercial loans, which tend to be larger and more complex credits than loans to individuals, are primarily made based on the identified cash flow of the borrower and secondarily on the underlying collateral provided by the borrower. Most often, this collateral consists of accounts receivable, inventory, machinery or real estate. In the case of loans secured by accounts receivable, the availability of funds for the repayment of these loans may be substantially dependent on the ability of the borrower to collect amounts due from its customers. The other types of collateral securing these loans may depreciate over time, may be difficult to appraise and may fluctuate in value based on the success of the customer's business and market conditions.

Our loan portfolio has a large concentration of commercial real estate loans, a segment that can be subject to volatile cash flows and collateral values.
Commercial real estate lending is a large portion of our commercial loan portfolio. These loans were $3.71 billion, or approximately 65%, of our total commercial loan portfolio as of December 31, 2018. The market value of real estate can fluctuate significantly in a short period of time as a result of market conditions in the geographic area in which the real estate is located. Adverse developments affecting real estate values could negatively affect some of our commercial real estate loans, and other developments could increase the credit risk associated with our loan portfolio. Non-owner occupied commercial real estate loans typically are dependent, in large part, on sufficient income from the properties securing the loans to cover operating expenses and debt service. Lot and land development loans have a greater risk of default in a weaker economy because the source of repayment is reliant on the successful and timely sale of lots or land held for resale. Economic events or governmental regulations outside of the control of Heartland or the borrower could negatively impact the future cash flow and market values of the affected properties.

The construction, land acquisition and development loans that are part of our commercial real estate loans present project completion risks, as well as the risks applicable to other commercial real estate loans.
Our commercial real estate loan portfolio includes commercial construction loans, including land acquisition and development loans, which involve additional risks because funds are advanced based upon estimates of costs and the estimated value of the completed project. Because of the uncertainties inherent in estimating construction costs, as well as the market value of the completed project and the effects of governmental regulation on real property, it is difficult to evaluate accurately the total funds required to complete a project and the related loan-to-value ratio. As a result, commercial construction loans often involve the disbursement of substantial funds with repayment dependent, in part, on the success of the ultimate project and the ability of the borrower to sell or lease the property. If our appraisal of the value of the completed project proves to be overstated, we may have inadequate security for the repayment of the loan upon completion of construction of the project.

We may encounter issues with environmental law compliance if we take possession, through foreclosure or otherwise, of the real property that secures a commercial real estate loan.
A significant portion of our loan portfolio is secured by real property. During the ordinary course of business, we may foreclose on and take title to properties securing certain loans. In doing so, there is a risk that hazardous or toxic substances could be found

on these properties. If previously unknown or undisclosed hazardous or toxic substances are discovered, we may be liable for remediation costs, as well as for personal injury and property damage. Environmental laws may require us to incur substantial expenses which may materially reduce the affected property's value or limit our ability to use or sell the affected property. In addition, future laws or more stringent interpretations or enforcement policies with respect to existing laws may increase our exposure to environmental liability. Although we have policies and procedures to perform an environmental review at the time of underwriting a loan secured by real property, and also before initiating any foreclosure action on real property, these reviews may not be sufficient to detect all potential environmental hazards. The remediation costs and any other financial liabilities associated with an environmental hazard could have a material adverse effect on our financial condition and results of operations.

Our agricultural loans are often dependent upon the health of the agricultural industry in the location of the borrower, and the ability of the borrower to repay may be affected by many factors outside of the borrower’s control.
At December 31, 2018, agricultural real estate loans totaled $239.8 million, or approximately 3%, of our total loan portfolio. Payments on agricultural real estate loans are dependent on the profitable operation or management of the farm property securing the loan. The success of a farm may be affected by many factors outside the control of the borrower, including adverse weather conditions that prevent the planting of a crop or limit crop yields (such as hail, drought and floods), loss of livestock due to disease or other factors, declines in market prices for agricultural products (both domestically and internationally) and the impact of government regulations (including changes in price supports, subsidies and environmental regulations). In addition, many farms are dependent on a limited number of key individuals whose injury or death may significantly affect the successful operation of the farm. If the cash flow from a farming operation is diminished, the borrower's ability to repay the loan may be impaired. The primary crops in our market areas are corn, soybeans, peanuts and wheat. Accordingly, adverse circumstances affecting these crops could have a negative effect on our agricultural real estate loan portfolio.

We also originate agricultural operating loans. At December 31, 2018, these loans totaled $325.6 million, or approximately 4%, of our total loan portfolio. As with agricultural real estate loans, the repayment of operating loans is dependent on the successful operation or management of the farm property. Likewise, agricultural operating loans involve a greater degree of risk than lending on residential properties, particularly in the case of loans that are unsecured or secured by rapidly depreciating assets such as farm equipment or assets such as livestock or crops. The primary livestock in our market areas include dairy cows, hogs and feeder cattle. In these cases, any repossessed collateral for a defaulted loan may not provide an adequate source of repayment of the outstanding loan balance as a result of the greater likelihood of damage to or depreciation in the value of livestock.

We hold one- to four-family first-lien residential mortgage loans in our loan portfolio that may not meet the strict definition of a qualified mortgage.
The residential mortgage loans that we hold in our loan portfolio, which totaled $673.6 million, or approximately 9% of our total loan portfolio as of December 31, 2018, are primarily to borrowers we believe to be credit worthy based on internal standards and guidelines. Repayment is dependent upon the borrower's ability to repay the loan and the underlying value of the collateral. If we have overestimated or improperly calculated the abilities of the borrowers to repay those loans, default rates could be high, and we could face more legal process and costs in order to enforce collection of the loan obligations. If the value of the collateral is incorrect, we could face higher losses on the loans.

Our allowance for loan losses may prove to be insufficient to absorb losses in our loan portfolio.
We establish our allowance for loan losses in consultation with management of the Banks and maintain it at a level considered appropriate by management to absorb probable loan losses that are inherent in the portfolio. The amount of future loan losses is susceptible to changes in economic, operating and other conditions, including changes in interest rates, which may be beyond our control, and such losses may exceed current estimates. Despite the current stable economic and market conditions, there remains a risk of continued asset and economic deterioration. At December 31, 2018, our allowance for loan losses as a percentage of total loans was 0.84% and as a percentage of total

nonperforming loans was approximately 85%. Although we believe that the allowance for loan losses is appropriate to absorb probable losses on any existing loans that may become uncollectible, we cannot predict loan losses with certainty, and we cannot provide assurance that our allowance for loan losses will prove sufficient to cover actual loan losses in the future. Further significant provisions, or charge-offs against our allowance that result in provisions, could have a significant negative impact on our profitability. Loan losses in excess of our reserves may adversely affect our business, financial condition and results of operations.

Liquidity and Interest Rate Risks

Liquidity is essential to our businesses.
We require liquidity to meet our deposit and debt obligations as they come due. Access to liquidity could be impaired by an inability to access the capital markets or unforeseen outflows of deposits. Our ability to meet current financial obligations is a function of our balance sheet structure, ability to liquidate assets and access to alternative sources of funds. Our access to deposits can be impacted by the liquidity needs of our customers as a substantial portion of our deposit liabilities are on demand, while a significant

portion of our assets are loans that cannot be sold in the same timeframe or are securities that may not be readily saleable if there is disruption in capital markets. If we become unable to obtain funds when needed, it could have a material adverse effect on our business, financial condition and results of operations.

The required accounting treatment of loans we acquire through acquisitions, including purchase credit impaired loans, could result in higher net interest margins and interest income in current periods and lower net interest margins and interest income in future periods.
Under United States generally accepted accounting principles ("GAAP"), we are required to record loans acquired through acquisitions, including purchase credit impaired loans, at fair value. Estimating the fair value of such loans requires management to make estimates based on available information and facts and circumstances on the acquisition date. Any discount, which is the excess of the amount of reasonably estimable and probable discounted future cash collections over the purchase price, is accreted into interest income over the weighted average remaining contractual life of the loans. Therefore, our net interest margins may initially increase due to the discount accretion. We expect the yields on the total loan portfolio will decline as our acquired loan portfolios pay down or mature and the corresponding accretion of the discount decreases. We expect downward pressure on our interest income to the extent that the runoff of our acquired loan portfolios is not replaced with comparable high-yielding loans. This could result in higher net interest margins and interest income in current periods and lower net interest margins and interest income in future periods.

Our liability portfolio, including deposits, may subject us to liquidity risk and pricing risk from concentrations.
We strive to maintain a diverse liability portfolio, and we manage deposit portfolio diversification through our asset/liability committee process. However, even with our efforts to maintain diversification, we occasionally accept larger deposit customers, and our typical deposit customers might occasionally carry larger balances. Unanticipated, significant changes in these large balances could affect our liquidity risk and pricing risk, particularly within the deposit portfolio of a single Bank, where the effects of the concentration would be greater than for Heartland as a whole. Our inability to manage deposit concentration risk could have a material adverse effect on our business, financial condition and results of operations.

Revenue from our mortgage lending operations is sensitive to changes in economic conditions, decreased economic activity, a slowdown in the housing market, higher interest rates or new legislation.
We earn revenue from fees we receive for originating mortgage loans through PrimeWest Mortgage Corporation. We earn servicing income for servicing mortgage loans through our servicing units at Dubuque Bank and Trust Company and PrimeWest Mortgage Corporation. Our overall mortgage revenue is highly dependent upon the volume of loans we originate and sell in the secondary market. Mortgage loan production levels are sensitive to changes in economic conditions and activity, strengths or weaknesses in the housing market and interest rate fluctuations. Generally, any sustained period of decreased economic activity or higher interest rates could adversely affect mortgage originations and, consequently, reduce our income from mortgage lending activities.

The value of our mortgage servicing rights can decline during periods of falling interest rates, and we may be required to take a charge against earnings for the decreased value.
A mortgage servicing right ("MSR") is the right to service a mortgage loan for a fee. We capitalize MSRs, primarily at PrimeWest Mortgage Corporation, when we originate mortgage loans and retain the servicing rights after we sell the loans. We carry MSRs at the lower of amortized cost or estimated fair value. Fair value is the present value of estimated future net servicing income, calculated based on a number of variables, including assumptions about the likelihood of prepayment by borrowers. Changes in interest rates can affect prepayment assumptions. When interest rates fall, borrowers are more likely to prepay their mortgage loans by refinancing them at a lower rate. As the likelihood of prepayment increases, the fair value of our MSRs can decrease. Each quarter we evaluate our MSRs for impairment based on the difference between the carrying amount and fair value, and, if temporary impairment exists, we establish a valuation allowance through a charge that negatively affects our earnings.

The derivative instruments that we use to hedge interest rate risk associated with our loans held for sale and rate locks on our mortgage banking business are complex and can result in significant losses.
We typically use derivatives and other instruments, primarily at PrimeWest Mortgage Corporation, to hedge changes in the value of loans held for sale and interest rate lock commitments. We generally do not hedge all of our risk, and we may not be successful in hedging any of the risk. Hedging is a complex process, requiring sophisticated models and constant monitoring, and our hedging models and assumptions may not fully predict or capture market changes. In addition, we may use hedging instruments that may not perfectly correlate with the value or income being hedged. There may be periods where we elect not to use derivatives and other instruments to hedge mortgage banking interest rate risk. We could incur significant losses from our hedging activities.

The market for loans held for sale to secondary purchasers, primarily GSEs, has changed during recent years and further changes could impair the gains we recognize on sale of mortgage loans.
We sell most of the fixed-rate mortgage loans we originate, primarily at PrimeWest Mortgage Corporation, in order to reduce our credit and interest rate risks and to provide funding for additional loans. We rely on GSEs to purchase loans that meet their

conforming loan requirements and on other capital markets investors to purchase loans that do not meet those requirements, which are referred to as "nonconforming" loans. During the past few years investor demand for nonconforming loans has fallen sharply, increasing credit spreads and reducing the ability to sell those loans. In response to the reduced liquidity in the capital markets, we may retain more nonconforming loans. When we retain a loan, not only do we keep the credit risk of the loan, but we also do not receive any sale proceeds that could be used to generate new loans. The absence of these sales proceeds could limit our ability to fund, and thus originate, new mortgage loans, reducing the fees we earn from originating and servicing loans. In addition, we cannot be assured that GSEs will not materially limit their purchases of conforming loans because of capital constraints or changes in their criteria for conforming loans (e.g., maximum loan amount or borrower eligibility). Each of the GSEs to which Heartland sells loans is currently in conservatorship, with its primary regulator, the Federal Housing Finance Agency acting as conservator. We cannot predict if, when or how the conservatorship will end, or any associated changes to the business structure and operations of the GSEs that could result. As noted above, there are various proposals to reform the housing finance market in the U.S., including the role of the GSEs in the housing finance market. The extent and timing of any such regulatory reform regarding the housing finance market and the GSEs, including whether the GSEs will continue to exist in their current form, as well as any effect on Heartland's business and financial results, are uncertain.

Our growth may create the need to raise additional capital in the future, but that capital may not be available when it is needed.
We are required by federal and state regulatory authorities to maintain adequate levels of capital to support our operations. We anticipate that our existing capital resources will satisfy our capital requirements for the foreseeable future. However, from time to time, we raise additional capital to support continued growth, both internally and through acquisitions. Our ability to raise additional capital, if needed, will depend on conditions in the capital markets at that time, which are outside of our control, and on our financial performance. Accordingly, we cannot assure you that we will be able to raise additional capital if needed on terms acceptable to us. If we cannot raise additional capital when needed, our ability to further expand our operations through internal growth and acquisitions could be materially impaired.

We rely on dividends from our subsidiaries for most of our revenue and are subject to restrictions on payment of dividends.
The primary source of funds for Heartland is dividends from the Banks. In general, the Banks may only pay dividends either out of their historical net income after any required transfers to surplus or reserves have been made or out of their retained earnings. The payment of dividends by any financial institution is affected by the requirement to maintain adequate capital pursuant to applicable capital adequacy guidelines and regulations, and a financial institution generally is prohibited from paying any dividends if, following payment thereof, the institution would be undercapitalized. These dividends are the principal source of funds to pay dividends on Heartland's common stock and to pay interest and principal on our debt.

Reduction in the value, or impairment of our investment securities, can impact our earnings and common stockholders' equity.
We maintained a balance of $2.72 billion, or 24% of our assets, in investment securities at December 31, 2018. Changes in market interest rates can affect the value of these investment securities, with increasing interest rates generally resulting in a reduction of value. Although the reduction in value from temporary increases in market rates does not affect our income until the security is sold, it does result in an unrealized loss recorded in other comprehensive income that can reduce our common stockholders’ equity. Further, we must periodically test our investment securities for other-than-temporary impairment in value. In assessing whether the impairment of investment securities is other-than-temporary, we consider the length of time and extent to which the fair value has been less than cost, the financial condition and near-term prospects of the issuer, and the intent and ability to retain our investment in the security for a period of time sufficient to allow for any anticipated recovery in fair value in the

near term.

Operational Risks

We have a continuing need for technological change and we may not have the resources to effectively implement new technology.

The financial services industry is undergoing rapid technological changes with frequent introductions of new technology-driven products and services. In addition to being able to better serve customers, the effective use of technology increases efficiency and enables financial institutions to reduce costs. Our future success will depend, in part, upon our ability to address the needs of our customers by using technology to provide products and services that will satisfy customer demands for convenience, as well as to create additional efficiencies in our operations as we continue to grow and expand our market areas. Many of our larger competitors have substantially greater resources to invest in technological improvements. As a result, they may be able to offer additional or superior products to those that we will be able to offer, which would put us at a competitive disadvantage.

Our operations are affected by risks associated with our use of vendors and other third party service providers.
We rely on vendor and third party relationships for a variety of products and services necessary to maintain our day-to-day activities, particularly in the areas of correspondent relationships, operations, treasury management, information technology and security. This reliance exposes us to risks of those third parties failing to perform financially or failing to perform contractually or to our expectations. These risks could include material adverse impacts on our business, such as credit loss or fraud loss, disruption or interruption of business activities, cyber-attacks and information security breaches, poor performance of services affecting our customer relationships and/or reputation, and possibilities that we could be responsible to our customers for legal or regulatory violations committed by those third parties while performing services on our behalf. While we have implemented an active program of oversight to address this risk, there can be no assurance that our vendor and third party relationships will not have a material adverse impact on our business.

Interruption in or breaches of our network security, including the occurrence of a cyber-incident or a deficiency in our cybersecurity measures, may result in a loss of business, reputational damage, increased operating costs, as well as litigation, regulatory sanctions and other liabilities.
We rely heavily on communications and information systems to conduct our business, and as part of our business, we maintain significant amounts of data about our customers and the products they use. As a result, our operations are dependent upon our ability to protect our computer equipment against damage from physical theft, fire, power loss, telecommunications failure or a similar catastrophic event, as well as from security breaches, denial of service attacks, viruses, worms and other disruptive problems caused by hackers.

Denial of service attacks have been launched against a number of large financial institutions and several large retailers have disclosed substantial cybersecurity breaches affecting debit and credit card accounts of their customers. We have experienced cybersecurity incidents in the past, none of which have been significant. However, we anticipate that, as we grow, we could experience additional and potentially more serious incidents.

We make significant investments in various technology to identify and prevent intrusions into our information systems. Although we, with the help of third-party service providers, intend to continue to implement security technology and establish operational procedures to protect our computer systems, there can be no assurance that these security measures will be successful. We have policies and procedures designed to prevent or limit the effect of a failure, interruption or security breach of our information systems and perform regular audits using both internal and outside resources.

Information security risks continue to increase due to new technologies, the increasing use of the Internet and telecommunication technologies, including mobile devices, to conduct financial and other business transactions, and the increased sophistication and activities of organized crime, perpetrators of fraud, hackers, and others. Specifically, advances in computer capabilities, new discoveries in the field of cryptography or other developments could result in a compromise or breach of the algorithms we and our third-party service providers use to encrypt and protect customer transaction data.

The occurrence of any failure, interruption, or security breach of our information systems could result in violations of privacy and other laws, damage our reputation, result in a loss of customer business, subject us to additional regulatory scrutiny or expose us to civil litigation, any of which could have a material adverse effect on our financial condition and results of operations.

The potential for business interruption exists throughout our organization.
Integral to our performance is the continued efficacy of our technical systems, operational infrastructure, relationships with third parties and the vast array of associates and key executives in our day-to-day and ongoing operations. Failure by any or all of these resources subjects us to risks that may vary in size, scale and scope. These risks include, but are

not limited to, operational or technical failures, ineffectiveness or exposure due to interruption in third party support, as well as the loss of key individuals or failure on the part of key individuals to perform properly. These risks are heightened during necessary data system changes or conversions and system integrations of newly acquired entities. Although management has established policies and procedures to address such failures, the occurrence of any such event could have a material adverse effect on our business, which, in turn, could have a material adverse effect on our financial condition and results of operations.

We are subject to risks from employee errors, customer or employee fraud and data processing system failures and errors.

Employee errors and employee or customer misconduct could subject us to financial losses or regulatory sanctions and seriously harm our reputation. Misconduct by our employees could include hiding unauthorized activities from us, improper or unauthorized activities on behalf of our customers or improper use of confidential information. It is not always possible to prevent employee errors and misconduct, and the precautions we take to prevent and detect this activity may not be effective in all cases. Employee errors could also subject us to financial claims for negligence. We maintain a system of internal controls and insurance coverage to mitigate against operational risks, including data processing system failures and errors and customer or employee fraud. Should our internal controls fail to prevent or detect an occurrence, or if any resulting loss is not insured or exceeds applicable insurance limits, it could have a material adverse effect on our business, financial condition and results of operations.

Our market and growth strategy relies heavily on our management team, and the unexpected loss of key managers may adversely affect our operations.
Much of our success to date has been influenced strongly by our ability to attract and to retain senior management experienced in banking and financial services and familiar with the communities in our different market areas. Because our service areas are spread over such a wide geographical area, our management headquartered in Dubuque, Iowa, is dependent on the effective leadership and capabilities of the management in our local markets for the continued success of Heartland. Our ability to retain executive officers, the current management teams and loan officers of our operating subsidiaries will continue to be important to the successful implementation of our strategy and could be difficult during times of low unemployment. It is also critical, as we grow, to be able to attract and retain qualified additional management and loan officers with the appropriate level of experience and knowledge about our market area to implement our community-based operating strategy. The unexpected loss of services of any key management personnel, or the inability to recruit and retain qualified personnel in the future, could have an adverse effect on our business, financial condition and results of operations.

New lines of business, products and services are essential to our ability to compete but may subject us to additional risks.
We continually implement new lines of business and offer new products and services within existing lines of business to offer our customers a competitive array of products and services. There can be substantial risks and uncertainties associated with these efforts, particularly in instances where the markets for such products and services are still developing. In developing and marketing new lines of business and/or new products or services, we may invest significant time and resources. Initial timetables for the introduction and development of new lines of business and/or new products or services may not be achieved, and price and profitability targets may not prove feasible. External factors, such as compliance with regulations, competitive alternatives, and shifting market preferences, may also impact the successful implementation of a new line of business or a new product or service. Furthermore, any new line of business and/or new product or service could have a significant impact on the effectiveness of our system of internal controls. Failure to successfully manage these risks in the development and implementation of new lines of business or new products or services could have a material adverse effect on our business, financial condition and results of operations.

Our models may be improper or ineffective.
The processes we use to estimate our inherent loan losses and to measure the fair value of financial instruments, as well as the processes used to estimate the effects of changing interest rates and other market measures on our financial condition and results of operations, depends upon the use of analytical and forecasting models. These models could reflect assumptions that may not be accurate, particularly in times of market stress or other unforeseen circumstances. Even if these assumptions are adequate, the models may prove to be inadequate or inaccurate because of other flaws in their design or their implementation. If the models we use for interest rate risk and asset-liability management are inadequate, we may incur increased or unexpected losses upon changes in market interest rates or other market measures. If the models we use for determining our probable loan losses are inadequate, the allowance for loan losses may not be appropriate to support future charge-offs. If the models we use to measure the fair value of financial instruments are inadequate, the fair value of such financial instruments may fluctuate unexpectedly or may not accurately reflect what we could realize upon sale or settlement of such financial instruments. Any such failure in our analytical or forecasting models could have a material adverse effect on our business, financial condition and results of operations.

Our internal controls may be ineffective.

Management regularly reviews and updates our internal controls, disclosure controls and procedures and corporate governance policies and procedures. Any system of controls, however well designed and operated, is based in part on certain assumptions and can provide only reasonable, not absolute, assurances that the objectives of the controls are met. Any failure or circumvention of our controls and procedures or failure to comply with regulations related to controls and procedures could have a material adverse effect on our business, financial condition and results of operation.

We have recorded goodwill as a result of acquisitions, and if it becomes impaired, our earnings could be significantly impacted.

Under current accounting standards, goodwill is not amortized but, instead, is subject to impairment tests on at least an annual basis or more frequently if an event occurs or circumstances change that reduce the fair value of a reporting unit below its carrying amount. Although we do not anticipate impairment charges, if we conclude that some portion of our goodwill may be impaired, a non-cash charge for the amount of such impairment would be recorded against earnings. A goodwill impairment charge could be caused by a decline in our stock price or occurrence of a triggering event that compounds the negative results in an unfavorable quarter. At December 31, 2018, we had goodwill of $391.7 million, representing approximately 30% of stockholders’ equity.

The FASB has recently issued an accounting standard update that will result in a significant change in how we recognize credit losses and may have a material impact on our results of operations, financial condition or liquidity.
In June 2016, the Financial Accounting Standards Board ("FASB") issued an accounting standard update, "Financial Instruments-Credit Losses (Topic 326), Measurement of Credit Losses on Financial Instruments," which replaces the current "incurred loss" model for recognizing credit losses with an "expected loss" model referred to as the Current Expected Credit Loss ("CECL") model. Under the CECL model, we will be required to present certain financial assets carried at amortized cost, such as loans held for investment and held-to-maturity debt securities, at the net amount expected to be collected. The measurement of expected credit losses is to be based on information about past events, including historical experience, current conditions, and reasonable and supportable forecasts that affect the collectability of the reported amount. This measurement will take place at the time the financial asset is first added to the balance sheet and periodically thereafter. This differs significantly from the incurred loss model required under current GAAP, which delays recognition until it is probable a loss has been incurred. Accordingly, we expect that the adoption of the CECL model will materially affect how we determine our allowance for loan losses and could require us to significantly increase our allowance. Moreover, the CECL model may create more volatility in the level of our allowance for loan losses. If we are required to materially increase our level of allowance for loan losses for any reason, such increase could adversely affect our business, financial condition and results of operations.

The new CECL standard will become effective for us for fiscal years beginning after December 15, 2019 and for interim periods within those fiscal years. We are currently evaluating the impact the CECL model will have on our accounting, but we expect to recognize a one-time cumulative-effect adjustment to our allowance for loan losses as of the beginning of the first reporting period in which the new standard is effective, consistent with regulatory expectations set forth in interagency guidance issued at the end of 2016. At this time, we cannot yet determine the magnitude of any such one-time cumulative adjustment or of the overall impact of the new standard on our results of operations, financial position and liquidity.

We have substantial deferred tax assets that could require a valuation allowance and a charge against earnings if we conclude that the tax benefits represented by the assets are unlikely to be realized.
Our consolidated balance sheet reflected approximately $47.1 million of deferred tax assets at December 31, 2018, that represents differences in the timing of the benefit of deductions, credits and other items for accounting purposes and the benefit for tax purposes. To the extent we conclude that the value of this asset is not more likely than not to be realized, we would be obligated to record a valuation allowance against the asset, impacting our earnings during the period in which the valuation allowance is recorded. Assessing the need for, or the sufficiency of, a valuation allowance requires management to evaluate all available evidence, both negative and positive. Positive evidence necessary to overcome the negative evidence includes whether future taxable income in sufficient amounts and character within the carryback and carryforward periods is available under the tax law. When negative evidence (e.g., cumulative losses in recent years, history of operating losses or tax credit carryforwards expiring unused) exists, more positive evidence than negative evidence will be necessary. If the positive evidence is not sufficient to exceed the negative evidence, a valuation allowance for deferred tax assets is established. The creation of a substantial valuation allowance could have a significant negative impact on our reported results in the period in which it is recorded. The impact of the impairment of Heartland's deferred tax assets could have a material adverse effect on our business, results of operations and financial condition.

Strategic and External Risks

The soundness of other financial institutions could adversely affect our liquidity and operations.
Our ability to engage in routine funding transactions could be adversely affected by the actions and commercial soundness of other financial institutions. Financial services institutions are interrelated as a result of trading, clearing, counterparty or other relationships. We have exposure to many different counterparties, and we routinely execute transactions with counterparties in the financial industry, including brokers and dealers, commercial banks, investment

banks, and other institutional clients. As a result, defaults by, or even rumors or questions about, one or more financial services institutions, or the financial services industry generally, have led to market-wide liquidity problems and could lead to losses or defaults by Heartland or the Banks or by other institutions. Many of these transactions expose us to credit risk in the event of default of our counterparty or client. In addition, our credit risk may be exacerbated when the collateral held by us cannot be realized upon or is liquidated at prices not sufficient to recover the full amount of the financial instrument exposure due us. There is no assurance that any such losses would not materially and adversely affect our results of operations.

We may experience difficulties in managing our growth and our growth strategy involves risks that may negatively impact our net income.

As part of our general growth strategy, we recently acquired several banks and may acquire additional banks that we believe provide a strategic and geographic fit with our business. We cannot predict the number, size or timing of acquisitions. To the extent that we grow through acquisitions, we cannot assure you that we will be able to adequately and profitably manage this growth. Acquiring other banks and businesses will involve risks commonly associated with acquisitions, including:

- potential exposure to unknown or contingent liabilities of the banks and businesses we acquire;
- exposure to potential asset quality issues of the acquired bank or related business;
- difficulty and expense of integrating the operations and personnel of banks and businesses we acquire;
- potential disruption to our business;
- potential restrictions on our business resulting from the regulatory approval process;
- inability to realize the expected revenue increases, costs savings, market presence and/or other anticipated benefits;
- potential diversion of our management's time and attention; and
- the possible loss of key employees and customers of the banks and businesses we acquire.

In addition to acquisitions, we may expand into additional communities or attempt to strengthen our position in our current markets by undertaking additional de novo bank formations or branch openings. Based on our experience, we believe that it generally takes three years or more for new banking facilities to first achieve operational profitability, due to the impact of organization and overhead expenses and the start-up phase of generating loans and deposits. To the extent that we undertake additional branching and de novo bank and business formations, we are likely to continue to experience the effects of higher operating expenses relative to operating income from the new operations, which may have an adverse effect on our levels of reported net income, return on average equity and return on average assets.

We face intense competition in all phases of our business and competitive factors could adversely affect our business.
The banking and financial services business in our markets is highly competitive and is currently undergoing significant change. Our competitors include large regional banks, local community banks, online banks, thrifts, securities and brokerage companies, mortgage companies, insurance companies, finance companies, money market mutual funds, credit unions and other non-bank financial service providers, and increasingly these competitors provide integrated financial services over a broad geographic area. Some of our competitors may also have access to governmental programs that impact their position in the marketplace favorably. Increased competition in our markets may result in changes in our business model, sales of certain assets or business units, decreases in the amounts of our loans and deposits, reduced spreads between loan rates and deposit rates or loan terms that are more favorable to the borrower. Any of these results could have a material adverse effect on our ability to grow and remain profitable.

Legal, Compliance and Reputational Risks

Government regulation can result in limitations on our growth strategy.
We operate in a highly regulated environment and are subject to supervision and regulation by a number of governmental regulatory agencies, including the Federal Reserve, the FDIC, the CFPB, Housing and Urban Development ("HUD") and the various state agencies where we have a bank presence. Regulations adopted by these agencies, which are generally intended to provide protection for depositors and customers rather than for the benefit of stockholders, govern a comprehensive range of matters relating to ownership and control of our shares, our acquisition of other companies and businesses, our ability to offer new products, our ability to obtain financing and other aspects of our strategy.

We are subject to extensive and evolving government regulation and supervision, which can increase the cost of doing business and lead to enforcement actions.
Federal and state banking laws impose a comprehensive system of supervision, regulation and enforcement on the operations of FDIC-insured institutions, their holding companies and affiliates that is intended primarily for the protection of the FDIC-insured deposits and depositors of banks, rather than shareholders. These laws, and the regulations of the bank regulatory agencies issued under them, affect, among other things, the scope of our business, the kinds and amounts of investments that we and the Banks may make, reserve requirements, required capital levels relative to assets, the nature and amount of collateral for loans, the establishment of branches, our ability to merge,

consolidate and acquire, dealings with our and the Banks' insiders and affiliates and our payment of dividends.

While it is anticipated that the current administration will not increase the regulatory burden on community banks and may further reduce some of the burdens associated with implementation of the Dodd-Frank Act beyond those enacted in the Economic Growth Act, the ongoing impact of the administration is impossible to predict with any certainty, and changes in existing regulations and their enforcement may require modification to Heartland's existing regulatory compliance and risk management infrastructure.

We have experienced heightened regulatory requirements and scrutiny following the global financial crisis and as a result of the Dodd-Frank Act. Although the reforms primarily targeted systemically important financial service providers, their influence filtered down in varying degrees to community banks over time and the reforms have caused our compliance and risk management processes, and the costs thereof, to increase. The Dodd-Frank Act established the CFPB with broad authority to administer and enforce a new federal regulatory framework of consumer financial regulation, changing the base for deposit insurance assessments, introducing regulatory rate-setting for interchange fees charged to merchants for debit card transactions, enhancing the regulation of consumer mortgage banking, changing the methods and standards for resolution of troubled institutions, and changing the Tier 1 regulatory capital ratio calculations for bank holding companies.

The Board of Governors of the Federal Reserve System regulates the supply of money and credit in the United States. Its fiscal and monetary policies determine, in a large part, our cost of funds for lending and investing and the return that can be earned on those loans and investments, both of which affect our net interest margin. Federal Reserve Board policies can also materially affect the value of financial instruments that we hold, such as debt securities and mortgage servicing rights. Recent changes in the laws and regulations that apply to us have been significant. Further dramatic changes in statutes, regulations or policies could affect us in substantial and unpredictable ways, including limiting the types of financial services and products that we offer and/or increasing the ability of non-banks to offer competing financial services and products.

More stringent requirements related to capital and liquidity may limit our ability to return earnings to stockholders or operate or invest in our business.
The Federal Reserve has adopted capital adequacy guidelines that are used to assess the adequacy of capital in supervising a bank holding company. The federal banking agencies implemented final rules to establish a new comprehensive regulatory capital framework with a phase-in period beginning on January 1, 2015, and ending on January 1, 2019. The final Basel III rules and changes required by the Dodd-Frank Act substantially amended the regulatory risk-based capital rules applicable to Heartland. Under Basel III, the fully-phased in capital conservation buffer is 2.50% above the minimum capital requirement.

Additional requirements may be imposed in the future. The Basel Committee has recently finalized a package of revisions to the Basel III framework, unofficially known as Basel IV. The changes are meant to improve the calculation of risk-weighted assets and the comparability of capital ratios. Federal banking regulators are expected to undertake one or more rulemakings in future years to implement these revisions in the United States. The ultimate impact on our capital and liquidity will depend on the final United States rulemakings and implementation process thereafter.

We are subject to additional regulatory requirements because our total assets exceed $10 billion, and these additional requirements could have an adverse effect on our financial condition or results of operations.
Various federal banking laws and regulations, including rules adopted by the Federal Reserve pursuant to the requirements of the Dodd-Frank Act, impose heightened requirements on certain large banks and bank holding companies. Most of these rules apply primarily to bank holding companies with at least $50 billion in total consolidated assets, but certain rules also apply to banks and bank holding companies with at least $10 billion in total consolidated assets.

Effective July 1, 2019, which is expected to be the fourth consecutive quarter (and any applicable phase-in period) where our total average consolidated assets equals or exceeds $10 billion, we will, among other requirements:

- be subject to comply with the Durbin Amendment, which will reduce interchange income
- calculate our FDIC deposits assessment base using a performance score and loss-severity score system; and
- be subject to more frequent regulatory examinations.

We may be required to repurchase mortgage loans or reimburse investors and others as a result of breaches in contractual representations and warranties.
We sell residential mortgage loans to various parties, including GSEs and other financial institutions that purchase mortgage loans for investment or private label securitization. The agreements under which we sell mortgage loans and

the insurance or guaranty agreements with the FHA and VA contain various representations and warranties regarding the origination and characteristics of the mortgage loans, including ownership of the loan, compliance with loan criteria set forth in the applicable agreement, validity of the lien securing the loan, absence of delinquent taxes or liens against the property securing the loan, and compliance with applicable origination laws. We may be required to repurchase mortgage loans, indemnify the investor or insurer, or reimburse the investor or insurer for credit losses incurred on loans in the event of a breach of contractual representations or warranties that is not remedied within a period (usually 90 days or less) after we receive notice of the breach. Contracts for mortgage loan sales to the GSEs include various types of specific remedies and penalties that could be applied to inadequate responses to repurchase requests. Similarly, the agreements under which we sell mortgage loans require us to deliver various documents to the investor, and we may be obligated to repurchase any mortgage loan as to which the required documents are not delivered or are defective. We establish a mortgage repurchase liability related to the various representations and warranties that reflect management's estimate of losses for loans which we have a repurchase obligation. Our mortgage repurchase liability represents management's best estimate of the probable loss that we may expect to incur for the representations and warranties in the contractual provisions of our sales of mortgage loans. Because the level of mortgage loan repurchase losses depends upon economic factors, investor demand strategies and other external conditions that may change over the life of the underlying loans, the level of the liability for mortgage loan repurchase losses is difficult to estimate and requires considerable management judgment. If economic conditions and the housing market deteriorate or future investor repurchase demand and our success at appealing repurchase requests differ from past experience, we could experience increased repurchase obligations and increased loss severity on repurchases, requiring additions to the repurchase liability.

Litigation and enforcement actions could result in negative publicity and could adversely impact our business and financial results.
We face significant legal and regulatory risks in our business, and the volume of claims and amount of damages and penalties claimed in litigation and governmental proceedings against financial institutions have increased in recent years. Reputation risk, or the risk to our earnings and capital from the resulting negative publicity, is inherent to our business. Current public uneasiness with the United States banking system heightens this risk, as banking customers often transfer news regarding consumer fraud, financial difficulties or even failure of some institutions, to fear of fraud, financial difficulty or failure of even the most secure institutions. In this climate, any negative news may become cause for curtailment of business relationships, withdrawal of funds or other actions that can have a compounding effect, and could adversely affect our operations. Substantial legal liability or significant governmental action against us could materially impact our business and financial results. Also, the resolution of a litigation or regulatory matter could result in additional accruals or exceed established accruals for a particular period, which could materially impact our results from operations for that period.

Risks of Owning Stock in Heartland

Our stock price can be volatile.
Our stock price can fluctuate widely in response to a variety of factors, including: actual or anticipated variations in our quarterly operating results; recommendations by securities analysts; acquisitions or business combinations; capital commitments by or involving Heartland or our Banks; operating and stock price performance of other companies that investors deem comparable to us; new technology used or services offered by our competitors; new reports relating to trends, concerns and other issues in the financial services industry; and changes in government regulations. General market fluctuations, industry factors and general economic and political conditions and events have caused a decline in our stock price in the past, and these factors, as well as, interest rate changes, continued unfavorable credit loss trends, or unforeseen events such as terrorist attacks could cause our stock price to be volatile regardless of our operating results.

Stockholders may experience dilution as a result of future equity offerings and acquisitions.
In order to raise capital for future acquisitions or for general corporate purposes, we may offer additional shares of our common stock or other securities convertible into or exchangeable for our common stock at a price per share that may be lower than the current price. In addition, investors purchasing shares or other securities in the future could have rights superior to existing stockholders. The price per share at which we sell additional shares of our common stock, or securities convertible or exchangeable into common stock, may be higher or lower than the price paid by existing stockholders.

Certain banking laws and the Heartland Stockholder Rights Plan may have an anti-takeover effect.
Certain federal banking laws, including regulatory approval requirements, could make it more difficult for a third party to acquire Heartland, even if doing so would be perceived to be beneficial to Heartland’s stockholders. In addition, Heartland's Amended and Restated Rights Agreement (the "Rights Plan") causes it to be difficult for any person to acquire 15% or more of Heartland's outstanding stock (with certain limited exceptions) without the permission of our board of directors. The combination of these provisions may inhibit a non-negotiated merger or other business combination, which, in turn, could adversely affect the market price of Heartland's common stock.

ITEM 1B. UNRESOLVED STAFF COMMENTS

As of December 31, 2018, Heartland had no unresolved staff comments.

ITEM 2. PROPERTIES

The following table is a listing of Heartland's principal operating facilities and the home offices of each of the Banks and of Citizens Finance Parent Co. as of December 31, 2018:

Name and Main Facility Address	Main Facility Square Footage	Main Facility Owned or Leased	Number of Locations
Heartland Financial USA, Inc. 1398 Central Avenue Dubuque, IA 52001	65,000	Owned	3
Dubuque Bank and Trust Company 1398 Central Avenue Dubuque, IA 52001	65,500	Owned	10
Illinois Bank & Trust 6855 E. Riverside Blvd. Rockford, IL 60114	8,000	Owned	10
Wisconsin Bank & Trust 8240 Mineral Point Road Madison, WI 53719	19,000	Owned	17
New Mexico Bank & Trust 320 Gold NW Albuquerque, NM 87102	11,400	Lease term through 2021	17
Arizona Bank & Trust 2036 E. Camelback Road Phoenix, AZ 85016	14,000	Owned	7
Rocky Mountain Bank 2615 King Avenue West Billings, MT 59102	16,600	Owned	9
Citywide Banks 1800 Larimer Street Suite 100 Denver, CO 80202	8,700	Lease term through 2030	25
Minnesota Bank & Trust 7701 France Avenue South, Suite 110 Edina, MN 55435	6,100	Lease term through 2023	2
Morrill & Janes Bank and Trust Company 6740 Antioch Road Merriam, KS 66204	7,500	Owned	9
Premier Valley Bank 255 East River Park Circle, Suite 180 Fresno, CA 93720	17,600	Lease term through 2023	8
First Bank & Trust[(1)] 9816 Slide Road Lubbock, TX 79424	64,500	Owned	15
Citizens Finance Parent Co.[(2)] 2200 John F. Kennedy Road, Suite 103 Dubuque, IA 52002	5,900	Lease term through 2019	14

(1) Includes PrimeWest Mortgage Corporation loan production offices.

(2) The consumer finance loan portfolios of the Citizens Finance companies were sold on January 11, 2019, and the locations were closed in the first quarter of 2019.

The corporate office of Heartland is located in Dubuque Bank and Trust Company's main office. A majority of the support functions provided to the Banks by Heartland are performed in two leased facilities: one located at 1301 Central Avenue in Dubuque, Iowa, which is leased from Dubuque Bank and Trust Company, and the other located at 700 Locust Street, Suites 300 and 400 in Dubuque, Iowa, which is leased from an unrelated third party.

For information on obligations related to our leased facilities, see Note 15 "Commitments and Contingent Liabilities" of the consolidated financial statements.

ITEM 3. LEGAL PROCEEDINGS

There are no material pending legal proceedings to which Heartland or its subsidiaries are a party at December 31, 2018, other than ordinary routine litigation incidental to their respective businesses. While the ultimate outcome of current legal proceedings cannot be predicted with certainty, it is the opinion of management that the resolution of these legal actions should not have a material effect on Heartland's consolidated financial position or results of operations.

ITEM 4. MINE SAFETY DISCLOSURES

Not applicable

EXECUTIVE OFFICERS

The names and ages of the executive officers of Heartland, the position held by these officers with Heartland, and the positions held with Heartland subsidiaries as of December 31, 2018, are set forth below:

Name	Age	Position with Heartland and Subsidiaries and Principal Occupation
Lynn B. Fuller	69	Executive Operating Chairman and Director of Heartland; Vice Chairman of Dubuque Bank and Trust Company, Wisconsin Bank & Trust, New Mexico Bank & Trust, Arizona Bank & Trust, Rocky Mountain Bank, Citywide Banks, Minnesota Bank & Trust, Morrill & Janes Bank and Trust Company, Premier Valley Bank and First Bank & Trust; Director of Heartland Financial USA, Inc. Insurance Services
Bruce K. Lee	58	Chief Executive Officer, President and Director of Heartland; Director of Citywide Banks and First Bank & Trust; President of Heartland Financial USA, Inc. Insurance Services
Bryan R. McKeag	58	Executive Vice President, Chief Financial Officer of Heartland; Treasurer of Citizens Finance Parent Co.; Director of Heartland Financial USA, Inc. Insurance Services
Andrew E. Townsend	52	Executive Vice President, Chief Credit Officer of Heartland
Brian J. Fox	70	Executive Vice President, Operations, of Heartland
David A. Prince	49	Executive Vice President, Commercial Banking, of Heartland
Janet M. Quick	53	Executive Vice President, Deputy Chief Financial Officer, Principal Accounting Officer of Heartland
Rodney L. Sloan	59	Executive Vice President, Chief Risk Officer of Heartland
Deborah K. Deters	54	Executive Vice President, Chief Human Resources Officer, of Heartland
Michael J. Coyle	73	Executive Vice President, Senior General Counsel, of Heartland; Secretary of Heartland Financial USA, Inc. Insurance Services
Lynn H. Fuller	35	President and Chief Executive Officer of Dubuque Bank and Trust Company

Lynn B. Fuller was named Executive Operating Chairman of Heartland in 2018. Mr. Fuller has been a Director of Heartland and of Dubuque Bank and Trust Company since 1984 and was the Chief Executive Officer of Heartland from 1999 to 2018. He was President of Heartland from 1987 to 2015. Mr. Fuller has been a Director of Wisconsin Bank & Trust since 1997, New Mexico Bank & Trust since 1998, Arizona Bank & Trust since 2003, Rocky Mountain Bank since 2004, Citywide Banks since 2006, Minnesota Bank & Trust since 2008, Heritage Bank, N.A. from 2012 until its merger with Arizona Bank & Trust in 2013, Morrill & Janes Bank and Trust Company since 2013. In 2015, he was named Director of Heartland Financial USA, Inc. Insurance Services and Premier Valley Bank. In 2018, Mr.

Fuller was named a Director of First Bank & Trust. He was a Director of Galena State Bank & Trust Co. from 1992 to 2004 and of Illinois Bank & Trust from 1995 until 2004. Mr. Fuller joined Dubuque Bank and Trust Company in 1971 as a consumer loan officer and was named Dubuque Bank and Trust Company's Executive Vice President and Chief Executive Officer in 1985. Mr. Fuller was President of Dubuque Bank and Trust Company from 1987 until 1999 at which time he was named Chief Executive Officer of Heartland. Mr. Fuller is the father of Lynn H. Fuller, President and Chief Executive Officer of Dubuque Bank and Trust Company.

Bruce K. Lee was named Chief Executive Officer of Heartland in 2018. Mr. Lee joined Heartland in 2015 as President and was elected a Director of Heartland in 2017. Mr. Lee was a Director of Rocky Mountain Bank from 2015 to 2018. Mr. Lee has been a Director of Heartland Financial USA, Inc. Insurance Services in 2015. In 2017, Mr. Lee was named a Director of Citywide Banks, and in 2018, he was named a Director of First Bank & Trust. Prior to joining Heartland, Mr. Lee held various leadership positions at Fifth Third Bancorp from 2001 to 2013, serving most recently as Executive Vice President, Chief Credit Officer from 2011 to 2013. Mr. Lee previously served as President and CEO of a Fifth Third affiliate bank in Ohio where he managed sales and service functions for retail, commercial, residential mortgage, and investments as well as finance, human resources, and marketing. Prior to Fifth Third, Mr. Lee served as an Executive Vice President and board member for Capital Bank, a community bank located in Sylvania, Ohio.

Bryan R. McKeag joined Heartland in 2013 as Executive Vice President, Chief Financial Officer. Mr. McKeag was named Director of Heartland Financial USA, Inc. Insurance Services in 2015. Prior to joining Heartland, Mr. McKeag served as Executive Vice President, Corporate Controller and Principal Accounting Officer with Associated Banc-Corp in Green Bay, Wisconsin. Prior to Associated Banc-Corp, Mr. McKeag spent 9 years in various finance positions at JP Morgan and 9 years in public accounting at KPMG in Minneapolis. He is an inactive holder of the certified public accountant certification.

Andrew E. Townsend was named Executive Vice President, Chief Credit Officer, of Heartland in 2016. Mr. Townsend joined Dubuque Bank and Trust Company in 1993 as a Loan Review Officer and was selected to join Galena State Bank as Executive Vice President, Head of Lending in 1996. In 2003, Mr. Townsend assumed the position of President and CEO of Galena State Bank and joined the bank's board of directors. He was named Deputy Chief Credit Officer of Heartland in 2013. Prior to joining Heartland, he worked at Bank One in the loan review area and had also been an examiner for the Iowa Division of Banking.

Brian J. Fox joined Heartland in 2010 as Executive Vice President, Operations. From 2008 until joining Heartland, Mr. Fox served as Chief Information Officer of First Olathe Bancshares in Overland Park, Kansas. For the eight years prior to joining First Olathe Bancshares, Mr. Fox drew on his 30 years of experience at various banking organizations to provide consulting services to over 100 community banks as Senior Consultant at Vitex, Inc. His areas of responsibility have included strategic planning, credit administration, loan workouts, information technology, project management, mortgage banking, deposit operations and loan operations.

David A. Prince joined Heartland in 2018 as Executive Vice President, Commercial Banking. Prior to joining Heartland, Mr. Prince was the Commercial Banking Group Executive Vice President at Associated Banc-Corp., headquartered in Green Bay, Wisconsin from 2010 until joining Heartland. Mr. Prince has served in leadership roles at GE Capital Commercial Finance and National City Bank and has extensive commercial lending experience.

Janet M. Quick was named Executive Vice President, Deputy Chief Financial Officer and Principal Accounting Officer in January 2016. Ms. Quick had served as Senior Vice President, Deputy Chief Financial Officer since July 2013. Ms. Quick has been with Heartland since 1994, serving in various audit, finance and accounting positions. Prior to joining Heartland, Ms. Quick was with Hawkeye Bancorporation in the corporate finance area. She is an active holder of the certified public accountant certification.

Rodney L. Sloan was named Executive Vice President, Chief Risk Officer in August 2011. Mr. Sloan previously served as Senior Vice President, Credit Administration of Heartland since January 2011. Prior to joining Heartland, he served in various roles with Old Second Bancorp in Aurora, Illinois from 1990 to 2011. Mr. Sloan oversees all facets of the enterprise-wide risk management program and provides executive leadership to the compliance, loan review and BSA/AML functions at Heartland.

Deborah K. Deters joined Heartland in 2017 as Executive Vice President, Chief Human Resource Officer. Ms. Deters most recently served as the Senior Vice President and Chief Human Resources Officer at HUB International, LTD., based in Chicago, Illinois from 2009 until joining Heartland. While at HUB she was named the organization's first Chief Human Resources Officer and transformed its Human Resources function while supporting the company’s growth from 4,000 to over 10,000 employees. Prior to HUB International, LTD., Ms. Deters held several positions over 17 years with Bally Entertainment, finishing as Senior Vice President, Chief Human Resource Officer of Bally Total Fitness.

Michael J. Coyle joined Heartland in 2009 as Executive Vice President, Senior General Counsel. He served as Corporate Secretary from 2013 to 2018. In 2015, Mr. Coyle was named Secretary of Heartland Financial USA, Inc. Insurance Services. Prior to joining Heartland, Mr. Coyle was an attorney with the Dubuque, Iowa based law firm of Fuerste, Carew, Coyle, Juergens & Sudmeier, P.C. for 38 years, including 35 years as a senior partner. He has extensive experience in corporate and contract law.

Lynn H. Fuller was named President and Chief Executive Officer of Dubuque Bank and Trust Company in 2017. Mr. Fuller joined Heartland in 2014 as Executive Vice President, Corporate Director of Retail. In 2016, Mr. Fuller assumed the position of Market President of Dubuque Bank and Trust Company, and in 2017, Mr. Fuller was named President and Chief Executive Officer of Dubuque Bank and Trust Company. He serves on the board of Dubuque Bank and Trust Company. Prior to joining Heartland, from 2010 to 2013, Mr. Fuller was a Case Team Leader at Bain & Company in Chicago, Illinois. He led his team in providing expert advice on client issues and industry topics and recommended solutions.

PART II

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

Heartland's common stock was held by approximately 3,000 stockholders of record as of February 21, 2019, and approximately 19,000 additional stockholders held shares in street name. The common stock of Heartland has been quoted on the Nasdaq Stock Market since May 2003 under the symbol "HTLF" and is a Nasdaq Global Select Market security.

Effective January 24, 2008, Heartland's board of directors authorized management to acquire and hold up to 500,000 shares of common stock as treasury shares at any one time. Heartland and its affiliated purchasers made no purchases of its common stock during the year ended December 31, 2018.

The following table and graph show a five-year comparison of cumulative total returns for Heartland, the Nasdaq Composite Index, the SNL U.S. Bank Nasdaq Index and the SNL Bank and Thrift Index, in each case assuming investment of $100 on December 31, 2013, and reinvestment of dividends. The table and graph were prepared at our request by S&P Global Market Intelligence.

Cumulative Total Return Performance

	12/31/2013	12/31/2014	12/31/2015	12/31/2016	12/31/2017	12/31/2018
Heartland Financial USA, Inc.	$ 100.00	$ 95.67	$ 112.17	$ 174.05	$ 196.62	$ 162.83
Nasdaq Composite Index	100.00	114.75	122.74	133.62	173.22	168.30
SNL U.S. Bank NASDAQ Index	100.00	103.57	111.80	155.02	163.20	137.56
SNL Bank and Thrift Index	100.00	111.63	113.89	143.78	169.07	140.45

COMPARISON OF FIVE YEAR CUMULATIVE TOTAL RETURN*
ASSUMES $100 INVESTED ON DECEMBER 31, 2013
* Total return assumes reinvestment of dividends

ITEM 6. SELECTED FINANCIAL DATA

The following tables contain selected historical financial data for Heartland for the years ended December 31, 2018, 2017, 2016, 2015 and 2014. The selected historical consolidated financial information set forth below is qualified in its entirety by reference to, and should be read in conjunction with, Heartland's consolidated financial statements and notes thereto, included elsewhere in this Annual Report on Form 10-K, and Item 7. "Management's Discussion and Analysis of Financial Condition and Results of Operations."

SELECTED FINANCIAL DATA
(Dollars in thousands, except per share data)

	For the Years Ended December 31,				
	2018	2017	2016	2015	2014
STATEMENT OF INCOME DATA					
Interest income	$465,820	$363,658	$326,479	$265,968	$237,042
Interest expense	51,866	33,350	31,813	31,970	33,969
Net interest income	413,954	330,308	294,666	233,998	203,073
Provision for loan losses	24,013	15,563	11,694	12,697	14,501
Net interest income after provision for loan losses	389,941	314,745	282,972	221,301	188,572
Noninterest income	109,160	102,022	113,601	110,685	82,224
Noninterest expenses	353,888	297,675	279,668	251,046	215,800
Income taxes	28,215	43,820	36,556	20,898	13,096
Net income[1]	116,998	75,272	80,349	60,042	41,900
Preferred dividends and discount	(39)	(58)	(292)	(817)	(817)
Interest expense on convertible preferred debt	—	12	51	—	—
Net income available to common stockholders	$116,959	$75,226	$80,108	$59,225	$41,083
PER COMMON SHARE DATA					
Net income – diluted	$3.52	$2.65	$3.22	$2.83	$2.19
Cash dividends	$0.59	$0.51	$0.50	$0.45	$0.40
Dividend payout ratio	16.76 %	19.25 %	15.53 %	15.90 %	18.26 %
Book value per common share (GAAP)	$38.44	$33.07	$28.31	$25.92	$22.40
Tangible book value per common share (non-GAAP)[2]	$25.70	$23.99	$22.55	$20.60	$20.57
Weighted average shares outstanding-diluted	33,213,148	28,425,652	24,873,430	20,929,385	18,741,921
Tangible common equity ratio (non-GAAP)[3]	8.08 %	7.53 %	7.28 %	6.09 %	6.16 %
Reconciliation of Tangible Book Value Per Common Share (non-GAAP)[4]					
Common stockholders' equity (GAAP)	$1,325,175	$990,519	$739,559	$581,475	$414,619
Less goodwill	391,668	236,615	127,699	97,852	35,583
Less core deposit intangibles and customer relationship intangibles, net	47,479	35,203	22,775	22,020	8,948
Tangible common stockholders' equity (non-GAAP)	$886,028	$718,701	$589,085	$461,603	$370,088
Common shares outstanding, net of treasury stock	34,477,499	29,953,356	26,119,929	22,435,693	18,511,125
Common stockholders' equity (book value) per share (GAAP)	$38.44	$33.07	$28.31	$25.92	$22.40
Tangible book value per common share (non-GAAP)	$25.70	$23.99	$22.55	$20.57	$19.99

Reconciliation of Tangible Common Equity Ratio (non-GAAP)(5)					
Total assets (GAAP)	$11,408,006	$9,810,739	$8,247,079	$7,694,754	$6,051,812
Less goodwill	391,668	236,615	127,699	97,852	35,583
Less core deposit intangibles and customer relationship intangibles, net	47,479	35,203	22,775	22,020	8,948
Total tangible assets (non-GAAP)	$10,968,859	$9,538,921	$8,096,605	$7,574,882	$6,007,281
Tangible common equity ratio (non-GAAP)	8.08 %	7.53 %	7.28 %	6.09 %	6.16 %

(1) For a discussion of the impact of recent acquisitions on our net income, see Item 7. "Management's Discussion and Analysis of Financial Condition."
(2) Refer to the "Reconciliation of Tangible Book Value Per Common Share (non-GAAP)" table.
(3) Refer to the "Reconciliation of Tangible Common Equity Ratio (non-GAAP)" table.
(4) Tangible book value per common share is total common stockholders' equity less goodwill and core deposit and customer relationship intangibles, net, divided by common shares outstanding, net of treasury. This amount is a non-GAAP financial measure but has been included as it is considered to be a critical metric with which to analyze and evaluate the financial condition and capital strength of Heartland. This measure should not be considered a substitute for operating results determined in accordance with GAAP.
(5) The tangible common equity ratio is total common stockholders' equity less goodwill and core deposit intangibles, net divided by total assets less goodwill and core deposit intangibles, net. This ratio is a non-GAAP financial measure but has been included as it is considered to be a critical metric with which to analyze and evaluate the financial condition and capital strength of Heartland. This measure should not be considered a substitute for operating results determined in accordance with GAAP.

SELECTED FINANCIAL DATA (Continued)
(Dollars in thousands, except per share data)

	As of and For the Years Ended December 31,				
	2018	2017	2016	2015	2014
BALANCE SHEET DATA					
Investments	$2,715,388	$2,492,866	$2,131,086	$1,878,994	$1,706,953
Loans held for sale	119,801	44,560	61,261	74,783	70,514
Total loans receivable[(1)]	7,407,697	6,391,464	5,351,719	5,001,486	3,878,003
Allowance for loan losses	61,963	55,686	54,324	48,685	41,449
Total assets	11,408,006	9,810,739	8,247,079	7,694,754	6,051,812
Total deposits[(2)]	9,396,429	8,146,909	6,847,411	6,405,823	4,768,022
Long-term obligations	274,905	285,011	288,534	263,214	395,705
Preferred equity	—	938	1,357	81,698	81,698
Common stockholders' equity	1,325,175	990,519	739,559	581,475	414,619
EARNINGS PERFORMANCE DATA					
Return on average total assets	1.09 %	0.83 %	0.98 %	0.88 %	0.70 %
Return on average common equity (GAAP)	9.93	8.63	11.80	11.92	10.62
Return on average tangible common equity (non-GAAP)[(3)]	14.79	11.45	15.15	13.90	12.04
Net interest margin (GAAP)	4.26	4.04	3.95	3.80	3.77
Net interest margin, fully tax-equivalent (non-GAAP)[(4)]	4.32	4.22	4.13	3.97	3.96
Efficiency ratio, fully tax equivalent[(5)]	63.54 %	65.40 %	66.25 %	69.16 %	71.61 %
Earnings to fixed charges:					
Excluding interest on deposits	8.59x	7.69x	7.27x	5.20x	3.98x
Including interest on deposits	3.65	4.30	4.38	3.33	2.50
ASSET QUALITY RATIOS					
Nonperforming assets to total assets	0.69 %	0.76 %	0.91 %	0.67 %	0.74 %
Nonperforming loans to total loans	0.98	0.99	1.20	0.79	0.65
Net loan charge-offs to average loans	0.25	0.24	0.11	0.12	0.39
Allowance for loan losses to total loans	0.84	0.87	1.02	0.97	1.07
Allowance for loan losses to nonperforming loans	85.27	87.82	84.37	122.77	165.33
CONSOLIDATED CAPITAL RATIOS					
Average equity to average assets	10.94 %	9.69 %	8.53 %	8.55 %	8.00 %
Average common equity to average assets	10.93	9.68	8.31	7.35	6.60
Total capital to risk-adjusted assets	13.72	13.45	14.01	13.74	15.73
Tier 1 capital	12.16	11.70	11.93	11.56	12.95
Common Equity Tier 1[(6)]	10.66	10.07	10.09	8.23	—
Tier 1 leverage	9.73	9.20	9.28	9.58	9.75
Reconciliation of Return on Average Tangible Common Equity (non-GAAP)[(7)]					
Net income available to common stockholders (GAAP)	$116,959	$75,226	$80,108	$59,225	$41,083

Average common stockholders' equity (GAAP)	$1,177,346		$871,683		$678,989		$496,877		$386,844	
Less average goodwill	340,352		184,554		125,724		56,781		35,688	
Less average other intangibles, net	46,206		30,109		24,553		14,153		10,022	
Average tangible common equity (non-GAAP)	$790,788		$657,020		$528,712		$425,943		$341,134	
Annualized return on average common equity (GAAP)	9.93	%	8.63	%	11.80	%	11.92	%	10.62	%
Annualized return on average tangible common equity (non-GAAP)	14.79	%	11.45	%	15.15	%	13.90	%	12.04	%

SELECTED FINANCIAL DATA (Continued)
(Dollars in thousands, except per share data)

	As of and For the Years Ended December 31,				
	2018	2017	2016	2015	2014
Reconciliation of Annualized Net Interest Margin, Fully Tax-Equivalent (non-GAAP)[8]					
Net Interest Income (GAAP)	$413,954	$330,308	$294,666	$233,998	$203,073
Plus tax-equivalent adjustment[9]	6,228	15,139	12,919	10,216	10,298
Net interest income - tax-equivalent (non-GAAP)	$420,182	$345,447	$307,585	$244,214	$213,371
Average earning assets	$9,718,106	$8,181,914	$7,455,217	$6,152,090	$5,384,275
Net interest margin (GAAP)	4.26 %	4.04 %	3.95 %	3.80 %	3.77 %
Net interest margin, fully tax-equivalent (non-GAAP)	4.32 %	4.22 %	4.13 %	3.97 %	3.96 %
Reconciliation of Non-GAAP Measure-Efficiency Ratio[10]					
Net Interest Income (GAAP)	$413,954	$330,308	$294,666	$233,998	$203,073
Plus tax-equivalent adjustment[8]	6,228	15,139	12,919	10,216	10,298
Net interest income - tax-equivalent (non-GAAP)	420,182	345,447	307,585	244,214	213,371
Noninterest income	109,160	102,022	113,601	110,685	82,224
Securities gains, net	(1,085)	(6,973)	(11,340)	(13,143)	(3,668)
Unrealized gain on equity securities, net	(212)	—	—	—	—
Impairment loss on securities	—	—	—	769	—
Gain on extinguishment of debt	—	(1,280)	—	—	—
Adjusted income	$528,045	$439,216	$409,846	$342,525	$291,927
Total noninterest expenses	$353,888	$297,675	$279,668	$251,046	$215,800
Less:					
Core deposit intangibles and customer relationship intangibles amortization	9,355	6,077	5,630	2,978	2,223
Partnership investment in tax credit projects	4,233	1,860	1,051	4,357	2,436
Loss on sales/valuations of assets, net	2,208	2,475	1,478	6,821	2,105
Restructuring expenses	2,564	—	—	—	—
Adjusted noninterest expenses	$335,528	$287,263	$271,509	$236,890	$209,036
Efficiency ratio, fully tax-equivalent (non-GAAP)	63.54 %	65.40 %	66.25 %	69.16 %	71.61 %

(1) Excludes loans held for sale.
(2) Excludes deposits held for sale.
(3) Refer to the "Reconciliation of Return on Average Tangible Common Equity (non-GAAP)" table.
(4) Refer to the "Reconciliation of Annualized Net Interest Margin, Fully Tax-Equivalent (non-GAAP)" table.
(5) Refer to the "Reconciliation of Non-GAAP Measure-Efficiency Ratio (non-GAAP)" table.
(6) Prior to the adoption of Basel III requirements effective January 1, 2015, the common equity Tier 1 capital ratio was not a capital standard required by bank regulatory agencies.

(7) Return on average tangible common equity is net income available to common stockholders divided by average common stockholders' equity less goodwill and core deposit intangibles and customer relationship intangibles, net. This financial measure is included as it is considered to be a critical metric to analyze and evaluate the financial condition and capital strength of Heartland. This measure should not be considered a substitute for operating results determined in accordance with GAAP.
(8) Annualized net interest margin, fully tax-equivalent is a non-GAAP measure, which adjusts net interest income for the tax-favored status of certain loans and securities. Management believes this measure enhances the comparability of net interest income arising from taxable and tax-exempt sources. This measure should not be considered a substitute for operating results determined in accordance with GAAP.
(9) Computed on a tax-equivalent basis using an effective tax rate of 21% beginning January 1, 2018, and 35% for all prior periods.
(10) Efficiency ratio, fully tax-equivalent, expresses noninterest expenses as a percentage of fully tax-equivalent net interest income and noninterest income. This efficiency ratio is presented on a tax-equivalent basis, which adjusts net interest income and noninterest expenses for the tax favored status of certain loans, securities and tax credit projects. Management believes the presentation of this non-GAAP measure provides supplemental useful information for proper understanding of the financial results of Heartland as it enhances the comparability of income and expenses arising from taxable and nontaxable sources and excludes specific items, as noted in the table. This measure should not be considered a substitute for operating results determined in accordance with GAAP.

ITEM 7. MANAGEMENT'S DISCUSSION AND ANALYSIS OF FINANCIAL CONDITION AND RESULTS OF OPERATIONS

Management’s discussion and analysis of the consolidated financial condition and results of operations of Heartland as of the dates and for the periods indicated is presented below. This discussion should be read in conjunction with the Selected Financial Data, the consolidated financial statements and the notes thereto and other financial data appearing elsewhere in this Annual Report on Form 10-K. The consolidated financial statements include the accounts of Heartland and its subsidiaries, all of which are wholly-owned.

CRITICAL ACCOUNTING POLICIES

The preparation of financial statements requires management to make estimates and judgments that affect the reported amounts of assets, liabilities, income and expenses. These estimates are based upon historical experience and on various other assumptions that management believes are reasonable under the circumstances. Among other things, the estimates form the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions. Refer to Note 1, "Summary of Significant Accounting Policies," for further discussion on Heartland's critical accounting policies.

The estimates and judgments that management believes have the most effect on Heartland’s reported financial position and results of operations are as follows:

Allowance For Loan Losses

The process utilized by Heartland to estimate the allowance for loan losses is considered a critical accounting policy for Heartland. The allowance for loan losses represents management’s estimate of identified and unidentified probable losses in the existing loan portfolio. Therefore, the accuracy of this estimate could have a material impact on Heartland’s earnings. The allowance for loan losses is determined using factors that include the overall composition of the loan portfolio, general economic conditions, types of loans, loan collateral values, past loss experience, loan delinquencies and probable losses from identified substandard and doubtful credits.

Our allowance for loan losses methodology includes the establishment of a dual risk rating system, which allows the utilization of a probability of default and loss given default for commercial and agricultural loans in the calculation of the allowance for loan losses. Heartland's allowance for loan losses methodology also utilizes a loss emergence period, which represents the average amount of time from the point that a loss is incurred to the point at which the loss is confirmed. The loss rates used in the allowance calculation are periodically re-evaluated and adjusted to reflect changes in historical loss levels or other risks. In addition to the allowance methodology, our software also has the ability to perform stress testing and migration analysis on various portfolio segments.

For loans individually evaluated and determined to be impaired, the allowance is allocated on a loan-by-loan basis as deemed necessary. These estimates reflect consideration of one of the following impairment measurement methods as of the evaluation date:

- the present value of expected future cash flows discounted at the loan's effective interest rate; or
- the fair value of the collateral if the loan is collateral dependent.

All other loans, including individually evaluated loans determined not to be impaired, are segmented into groups of loans with similar risk characteristics for evaluation and analysis. Loss rates for various collateral types of commercial and agricultural loans are based upon the realizable value historically received on the various types of collateral. For smaller commercial and agricultural loans, residential real estate loans and consumer loans, a historic loss rate is established for each group of loans based upon a twelve-quarter weighted moving average loss rate. The appropriateness of the allowance for loan losses is monitored on an ongoing basis by the loan review staff, senior management and the boards of directors of each Bank.

There can be no assurances that the allowance for loan losses will be adequate to cover all probable loan losses, but management believes that the allowance for loan losses was appropriate at December 31, 2018. While management uses available information to provide for loan losses, the ultimate collectability of a substantial portion of the loan portfolio and the need for future additions to the allowance will be based on changes in economic conditions. Should the economic climate deteriorate, borrowers may experience difficulty, and the level of nonperforming loans, charge-offs, and delinquencies could rise and require further increases in the provision for loan losses. In addition, various regulatory agencies, as an integral part of their examination process, periodically review the allowance for loan losses carried by the Banks. Such agencies may require us to make additional provisions to the allowance based upon their judgment about information available to them at the time of their examinations.

Business Combinations, Goodwill and Core Deposit Intangibles

We record all assets and liabilities purchased in an acquisition, including intangibles, at fair value. Determining the fair value of assets and liabilities acquired often involves estimates based on third-party valuations, such as appraisals, or internal valuations based on discounted cash flow analyses or other valuation techniques that may include the use of estimates. Goodwill and indefinite-lived assets are not amortized but are subject, at a minimum, to annual tests for impairment. In certain situations, interim impairment tests may be required if events occur or circumstances change that would more likely than not reduce the fair value of a reporting unit below its carrying amount. Core deposit intangibles assets are amortized over their estimated useful lives using straight-line and accelerated methods and are subject to impairment if events or circumstances indicate a possible inability to realize the carrying amount.

The initial recognition of loans, goodwill and core deposit intangibles and subsequent impairment analysis require us to make subjective judgments concerning estimates of how the acquired assets will perform in the future using valuation methods, including discounted cash flow analyses. Additionally, estimated cash flows may extend beyond five years and, by their nature, are difficult to determine over an extended timeframe. Events and factors that may significantly affect the estimates include, among others, competitive forces, customer behaviors, changes in revenue growth trends, cost structures, technology, changes in discount rates and market conditions. In determining the reasonableness of cash flow estimates, Heartland reviews historical performance of the underlying assets or similar assets in an effort to assess and validate assumptions utilized in its estimates.

OVERVIEW

Heartland is a multi-bank holding company providing banking, mortgage, wealth management, investments, insurance and consumer finance services to individuals and businesses. As of the date of this Annual Report on Form 10-K, Heartland has eleven banking subsidiaries with 119 locations in Iowa, Illinois, Wisconsin, New Mexico, Arizona, Montana, Colorado, Minnesota, Kansas, Missouri, Texas and California. Our primary objectives are to increase profitability and diversify our market area and asset base by expanding through acquisitions and to grow organically by increasing our customer base in the markets we serve.

Our results of operations depend primarily on net interest income, which is the difference between interest income from interest earning assets and interest expense on interest bearing liabilities. Noninterest income, which includes service charges and fees, loan servicing income, trust income, brokerage and insurance commissions, securities gains and gains on sale of loans held for sale and income on bank owned life insurance also affects our results of operations. Our principal operating expenses, aside from interest expense, consist of the provision for loan losses, salaries and employee benefits, occupancy and equipment costs, professional fees, FDIC insurance premiums, advertising, core deposit intangibles and customer relationship intangibles amortization and other real estate and loan collection expenses.

2018 Overview

Net income recorded for 2018 was $117.0 million compared to $75.3 million recorded in 2017, an increase of $41.7 million or 55%. Net income available to common stockholders was $117.0 million, or $3.52 per diluted common share, for the year ended December 31, 2018, compared to $75.2 million, or $2.65 per diluted common share, earned during the prior year. Return on average common equity was 9.93% and return on average assets was 1.09% for 2018, compared to 8.63% and 0.83%, respectively, for 2017.

The financial impact of the following transactions are included in the results of operations for the year ended December 31, 2018, but not in the results of operations for the year ended December 31, 2017:

- On February 23, 2018, Heartland completed the acquisition of Signature Bancshares, Inc., parent company of Signature Bank, headquartered in Minnetonka, Minnesota. Under the terms of the definitive merger agreement, Heartland acquired Signature Bancshares, Inc. in a transaction valued at approximately $61.4 million, of which $7.8 million was cash, and the remainder was settled by delivery of 1,000,843 shares of Heartland common stock. Simultaneous with the close, Signature Bank merged into Heartland's wholly-owned Minnesota Bank & Trust subsidiary, and the combined entity operates under the Minnesota Bank & Trust brand name. The transaction included, at fair value, total assets of $427.1 million, including $324.5 million of gross loans held to maturity, and deposits of $357.3 million. On the closing date, Heartland provided Signature Bancshares, Inc. the funds necessary to repay outstanding subordinated debt of $5.9 million.

- On May 18, 2018, Heartland completed the acquisition of Lubbock, Texas based First Bank Lubbock Bancshares, Inc., parent company of First Bank & Trust, and PrimeWest Mortgage Corporation, which is a wholly-owned subsidiary of First Bank & Trust. Under the terms of the definitive merger agreement, Heartland acquired First Bank Lubbock Bancshares, Inc. in a transaction valued at approximately $189.9 million, of which $5.5 million was cash, and the remainder was settled by delivery of 3,350,664 shares of Heartland common stock. On the closing date, in addition to this merger consideration, Heartland provided First Bank Lubbock Bancshares, Inc. the funds necessary to repay outstanding debt of $3.9 million, and Heartland assumed $8.2 million of trust preferred securities at fair value. Immediately after the close of the transaction, Heartland paid $13.3 million to the holders of First Bank Lubbock Bancshares, Inc.'s stock appreciation rights. The transaction included, at fair value, total assets of $1.12 billion, including $681.1 million of gross loans held to maturity, and deposits of $893.8 million. Upon closing of the transaction, First Bank & Trust became a wholly-owned subsidiary of Heartland and continues to operate under its current name and management team as Heartland's eleventh state-chartered bank.
- In 2018, Heartland recorded $2.6 million of restructuring expenses related to its legacy retail mortgage lending operation. The restructuring projects were primarily related to fully outsourcing all aspects of its legacy mortgage lending business and included a workforce reduction of approximately 100 employees and the discontinuation of several information systems. Because of the significant reduction in infrastructure and employees, retail mortgage lending is no longer considered a separate business segment as of January 1, 2018. Heartland has partnered with third-party providers to offer residential mortgage loans to customers in many of its markets. PrimeWest Mortgage Corporation continues to serve customers in Texas and has expanded to serve customers in Heartland's Southwestern markets.
- During 2018, Heartland expanded its ongoing branch optimization process, which resulted in the closure of a branch at Dubuque Bank and Trust Company, Arizona Bank & Trust, Rocky Mountain Bank and Citywide Banks. Additionally, Heartland entered into agreements to sell two branches at Wisconsin Bank & Trust, two branches at Illinois Bank & Trust, and one branch at Citywide Banks. The sales are expected to close in the first half of 2019.
- During the fourth quarter of 2018, Heartland decided to exit the consumer finance business and entered into an agreement to sell the loan portfolios of its consumer finance subsidiaries, Citizens Finance Co. and Citizens Finance of Illinois Co. (collectively, "Citizens"). The loan portfolios had a fair value of $67.2 million and were classified as held for sale as of December 31, 2018. The transaction closed on January 11, 2019, and all of the Citizens' locations closed in February 2019.

The pending branch sales and the sale of the Citizens portfolios resulted in the reclassification of $96.0 million of loans and $106.4 million of deposits as held for sale as of December 31, 2018.

Total assets of Heartland were $11.41 billion at December 31, 2018, an increase of $1.60 billion or 16% from $9.81 billion at year-end 2017. Included in this increase, at fair value, were $427.1 million of assets acquired in the Signature Bancshares, Inc. transaction and $1.12 billion of assets acquired in the First Bank Lubbock Bancshares, Inc. transaction. Exclusive of these transactions, total assets increased $52.8 million or 1% since December 31, 2017. Securities represented 24% of Heartland's total assets at December 31, 2018, compared to 25% at year-end 2017.

Total loans held to maturity were $7.41 billion at December 31, 2018, compared to $6.39 billion at year-end 2017, an increase of $1.02 billion or 16%. Excluding $96.0 million of loans that were classified as held for sale in conjunction with the pending branch sales and the Citizens transaction and $1.01 billion of loans acquired in 2018, total loans held to maturity increased $106.7 million or 2% since year-end 2017.

Total deposits were $9.40 billion as of December 31, 2018, compared to $8.15 billion at year-end 2017, an increase of $1.25 billion or 15%. This increase included $1.25 billion of deposits, at fair value, acquired in the Signature Bancshares, Inc. and First Bank Lubbock Bancshares, Inc. transactions. As of December 31, 2018, Heartland had $106.4 million of deposits classified as held for sale in conjunction with the pending branch sales. Exclusive of these transactions, total deposits increased $104.8 million or 1% since year-end 2017.

Common stockholders' equity was $1.33 billion at December 31, 2018, compared to $990.5 million at year-end 2017. Book value per common share was $38.44 at December 31, 2018, compared to $33.07 at year-end 2017. Heartland's unrealized gains and losses on securities available for sale, net of applicable taxes, were at an unrealized loss of $32.5 million at December 31, 2018, compared to an unrealized loss of $24.3 million at December 31, 2017.

2017 Overview

Net income recorded for 2017 was $75.3 million compared to $80.3 million recorded in 2016, a decrease of $5.1 million or 6%. Net income available to common stockholders was $75.2 million, or $2.65 per diluted common share, for the year ended

December 31, 2017, compared to $80.1 million, or $3.22 per diluted common share, earned during 2016. Return on average common equity was 8.63% and return on average assets was 0.83% for 2017, compared to 11.80% and 0.98%, respectively, for 2016.

In response to the enactment of the Tax Cuts and Jobs Act on December 22, 2017, which reduced the corporate federal tax rate from a graduated maximum 35% to a flat 21%, Heartland recorded a $10.4 million non-cash charge to income tax expense to adjust the value of its deferred tax assets and liabilities. Excluding this charge to income tax expense, net income available to common stockholders for 2017 was $85.6 million or $3.01 per diluted common share.

On July 7, 2017, Heartland completed the acquisition of Citywide Banks of Colorado, Inc., parent company of Citywide Banks,
headquartered in Aurora, Colorado. Simultaneous with the close, Citywide Banks merged into Heartland's Centennial Bank and
Trust subsidiary. The aggregate consideration was approximately $211.2 million, of which $58.6 million was cash, and the remainder was settled by delivery of 3,216,161 shares of Heartland common stock. The combined entity operates as Citywide Banks. As of the close date, Citywide Banks of Colorado, Inc. had, at fair value, total assets of $1.49 billion, including $985.4 million in net loans outstanding, and $1.21 billion of deposits. The systems conversion for this transaction occurred on October 13, 2017.

On February 28, 2017, Heartland completed the acquisition of Founders Bancorp, parent company of Founders Community Bank, based in San Luis Obispo, California. Based on Heartland's closing common stock price of $49.55 per share as of February 28, 2017, the aggregate consideration was $31.0 million, with 30% of the consideration paid in cash and 70% by delivery of Heartland common stock. Simultaneous with the closing of the transaction, Founders Community Bank merged into Heartland's Premier Valley Bank subsidiary. As of the close date, Founders Bancorp had, at fair value, total assets of $213.9 million, total loans of $96.4 million and total deposits of $181.5 million. The systems conversion for this transaction occurred two weeks after the closing.

Total assets were $9.81 billion at December 31, 2017, an increase of $1.56 billion or 19% since year-end 2016. Included in this increase, at fair value, were $213.9 million of assets acquired in the Founders Bancorp transaction and $1.49 billion of assets acquired in the Citywide Banks of Colorado, Inc. transaction. Exclusive of these transactions, total assets decreased $144.0 million or 2%. Securities represented 25% of total assets at December 31, 2017, compared to 26% at year-end 2016.

Total loans held to maturity were $6.39 billion at December 31, 2017, compared to $5.35 billion at year-end 2016, an increase of $1.04 billion or 19%. This increase included $1.08 billion of total loans held to maturity, at fair value, acquired in the Founders Bancorp and Citywide Banks of Colorado, Inc. transactions. Exclusive of these transactions, total loans held to maturity decreased $42.1 million or 1% during 2017.

Total deposits were $8.15 billion as of December 31, 2017, compared to $6.85 billion at year-end 2016, an increase of $1.30 billion or 19%. This increase included $1.39 billion of deposits, at fair value, acquired in the Founders Bancorp and Citywide Banks of Colorado, Inc. transactions. Exclusive of these transactions, total deposits decreased $92.0 million or 1% during 2017.

RECENT DEVELOPMENTS

Regulatory Developments

Heartland's total assets exceeded $10.0 billion as of June 30, 2018. Various federal banking laws and regulations, including rules adopted by the Federal Reserve pursuant to the requirements of the Dodd-Frank Act, impose heightened requirements on certain large banks and bank holding companies. Under the Dodd-Frank Act as originally adopted, most of these rules applied primarily to bank holding companies with at least $50 billion in total consolidated assets, but certain rules also apply to banks and bank holding companies with at least $10 billion in total consolidated assets. For example, the Durbin Amendment, which is expected to be effective for Heartland on July 1, 2019, restricts interchange fees to those which are "reasonable and proportionate" for certain debit card issuers and limits the ability of networks and issuers to restrict debit card transaction routing. In the final rules, interchange fees for debit card transactions were capped at $0.21 plus five basis points in order to be eligible for a safe harbor such that the fee is conclusively determined to be reasonable and proportionate. Based on calculations using 2018 debit card volume, the Durbin Amendment would reduce of Heartland’s debit card income by approximately $6.0 million annually.

The Economic Growth Act represents modest reform to the regulation of the financial services industry primarily through certain amendments of the Dodd-Frank Act, in part through increases in the dollar threshold at which certain requirements apply. As amended by the Economic Growth Act, the threshold for required stress testing under the Dodd-Frank Act increased from $10 billion in total consolidated assets to $100 billion in total consolidated assets. In addition, the threshold for requiring a dedicated board risk committee under the Dodd-Frank Act increased from $10 billion in total consolidated assets to $50 billion in total consolidated assets. The Economic Growth Act included additional regulatory relief, much of which benefited banks with less than $10 billion in consolidated assets. Certain of the provisions amended by the Economic Growth Act took effect immediately, while others require that the agencies jointly amend their rulemakings. Of those provisions that require further regulatory action, most of those applicable to bank holding companies with less than $100 billion in total consolidated assets have become effective through the adoption of interim final rules and regulatory policy statements. The federal banking agencies indicated through interagency guidance that the capital planning and risk management practices of institutions with total assets less than $100 billion would continue to be reviewed through the regular supervisory process, which may offset the impact of the changes regarding stress testing and risk management from the Economic Growth Act.

Other provisions of the Dodd-Frank Act, such as the Durbin Amendment, which restricts interchange fees, remain in place.

Management has been in the process of preparing for the requirements under the Dodd-Frank Act over the past several quarters, including additions to staff, enhancing risk management processes and investing to upgrade information systems and technology. However, the potential impacts of the Economic Growth Act are currently under evaluation by management.

For more information on the regulatory developments impacting Heartland's business, see the section entitled, "Supervision and Regulation" in this Annual Report on Form 10-K.

Blue Valley Ban Corp. Merger Agreement

On January 16, 2019, Heartland entered into a definitive merger agreement to acquire Blue Valley Ban Corp., and its wholly-owned subsidiary, Bank of Blue Valley, headquartered in Overland Park, Kansas. As of the announcement date, the transaction, in which all of the issued and outstanding shares of the Blue Valley Ban Corp. stock will be exchanged for shares of Heartland common stock, was valued at approximately $93.9 million. Simultaneous with the closing of the transaction, Bank of Blue Valley will merge into Heartland's Kansas-based subsidiary, Morrill & Janes Bank and Trust Company, and the combined entity will operate as Bank of Blue Valley. The amount of the merger consideration is subject to fluctuations in the price of Heartland common stock and certain potential adjustments, and the transaction is subject to customary closing conditions. The transaction is expected to close in the second quarter of 2019 with a systems conversion planned for the third quarter of 2019. As of December 31, 2018, Bank of Blue Valley had total assets of approximately $715.1 million, which included approximately $561.3 million of gross loans outstanding, and approximately $562.6 million of deposits. Because the merger agreement was signed on January 16, 2019, and the transaction is expected to close in the second quarter of 2019, the transaction has no impact on Heartland's 2018 consolidated financial statements.

Sale of First Community Bank branches

On January 23, 2019, Heartland's Iowa-based subsidiary, Dubuque Bank and Trust Company, announced the sale of two branch locations, which operate as First Community Bank, in Keokuk, Iowa. The loans and deposits associated with this transaction totaled approximately $13.7 million and $82.1 million, respectively, as of the announcement date.

RESULTS OF OPERATIONS

Net Interest Income

Net interest income is the difference between interest income earned on earning assets and interest expense paid on interest bearing liabilities. As such, net interest income is affected by changes in the volume and yields on earning assets and the volume and rates paid on interest bearing liabilities. Net interest margin is the ratio of net interest income to average earning assets.

Net interest margin, expressed as a percentage of average earning assets, was 4.26% (4.32% on a fully tax-equivalent basis) during 2018, compared to 4.04% (4.22% on a fully tax-equivalent basis) during 2017 and 3.95% (4.13% on a fully tax-equivalent basis) during 2016. The Tax Cuts and Jobs Act that passed on December 22, 2017, reduced the corporate federal tax rate from a graduated maximum 35% to a flat 21%. With the new 21% corporate federal tax rate, the conversion factor to a fully tax-equivalent basis decreased in 2018. The decline had no impact on net interest income but caused net interest margin on a fully tax-equivalent basis to decrease.

Our success in maintaining net interest margin has been the result of an increase in average earning assets and a favorable deposit mix. Also contributing to our ability to maintain net interest margin has been the amortization of purchase accounting discounts associated with acquisitions completed since 2015. For the years ended December 31, 2018, 2017 and 2016, our net interest margin included 22 basis points, 18 basis points and 15 basis points, respectively, of purchase accounting discount amortization. The sale of the Citizens' loan portfolios is expected to negatively impact net interest margin by approximately 10 to 15 basis points in future years.

See "Analysis of Average Balances, Tax-Equivalent Yields and Rates" for a description of our use of net interest income on a fully tax-equivalent basis, which is not defined by GAAP, and a reconciliation of annualized net interest margin on a fully tax-equivalent basis to GAAP.

Interest income increased $102.2 million or 28% to $465.8 million in 2018 and increased $37.2 million or 11% from $363.7 million in 2017. The tax-equivalent adjustments for income taxes saved on the interest earned on nontaxable securities and loans were $6.2 million in 2018 and $15.1 million in 2017. With these adjustments, interest income on a tax-equivalent basis was $472.0 million during 2018, an increase of $93.3 million or 25%, and $378.8 million during 2017, an increase of $39.4 million or 12% from $339.4 million in 2016.

The average interest rate earned on total average earning assets was 4.86% during 2018 compared to 4.63% during 2017 and 4.55% during 2016. The overall tax-equivalent yield earned on the securities portfolio was 2.95% in 2018 compared to 3.06% in 2017 and 2.90% in 2016, a decrease of 11 basis points in 2018 and an increase of 16 basis points in 2017. The overall tax-equivalent yield earned on the loan portfolio was 5.60% in 2018 compared to 5.33% in 2017 and 5.20% in 2016, an increase of 27 basis points in 2018 and an increase of 13 basis points in 2017. The percentage of average loans, which are typically the highest yielding asset, to total average earning assets was 73% during 2018 compared to 71% during 2017 and 73% during 2016.

The increases in interest income during both 2018 and 2017 were primarily due to growth in average earning assets, which totaled $9.72 billion during 2018 compared to $8.18 billion during 2017 and $7.46 billion during 2016, and recent increases in market interest rates. The increase in average earning assets was $1.54 billion or 19% for 2018 and $726.7 million or 10% for 2017. A majority of the growth in average earning assets during both years was attributable to the acquisitions completed during 2018 and 2017.

Interest expense increased $18.5 million or 56% during 2018 to $51.9 million compared to $33.4 million during 2017 and increased $1.5 million or 5% during 2017 from $31.8 million during 2016. The average interest rate paid on Heartland's interest bearing deposits and borrowings was 0.83% in 2018 compared to 0.61% in 2017 and 0.60% in 2016. Average savings balances, as a percentage of total average interest bearing deposits, was 82% during 2018 and 2017 compared to 79% during 2016. The average interest rate paid on savings deposits was 0.53% during 2018 compared to 0.27% during 2017 and 0.22% during 2016. The increase in 2018 in the average rate paid on interest bearing deposits is primarily attributable to recent market interest rate increases.

Net interest income totaled $414.0 million during 2018, an increase of $83.6 million or 25% from the $330.3 million recorded during 2017. Net interest income increased $35.6 million or 12% during 2017 from the $294.7 million recorded during 2016. After the tax-equivalent adjustment discussed above, net interest income on a fully tax-equivalent basis increased $74.7 million or 22% during 2018 and $37.9 million or 12% during 2017. Management believes net interest margin in dollars will continue to increase as the amount of earning assets grows.

We attempt to manage our balance sheet to minimize the effect that a change in interest rates has on our net interest margin. We plan to continue to work toward improving both our earning assets and funding mix through targeted organic growth strategies, which we believe will result in additional net interest income. We believe our net interest income simulations reflect a well-balanced and manageable interest rate posture. Item 7A of this Annual Report on Form 10-K contains additional information about the results of our most recent net interest income simulations. Note 12, "Derivative Financial Instruments" to the consolidated financial statements contains a detailed discussion of the derivative instruments we have utilized to manage interest rate risk.

The following table provides certain information relating to our average consolidated balance sheets and reflects the yield on average earning assets and the cost of average interest bearing liabilities for the years indicated, in thousands.

Dividing income or expense by the average balance of assets or liabilities derives such yields and costs. Average balances are derived from daily balances, and nonaccrual loans and loans held for sale are included in each respective loan category. Assets with tax favorable treatment are evaluated on a tax-equivalent basis assuming a federal income tax rate of 21% beginning January 1, 2018, and 35% for all prior periods. Tax favorable assets generally have lower contractual pre-tax yields than fully taxable assets. A tax-equivalent yield is calculated by adding the tax savings to the interest earned on tax favorable assets and dividing by the average balance of the tax favorable assets. Deposits held for sale are included in each respective deposit category.

ANALYSIS OF AVERAGE BALANCES, TAX EQUIVALENT YIELDS AND RATES[1]

	For the Year Ended December 31,								
	2018			2017			2016		
	Average Balance	Interest	Rate	Average Balance	Interest	Rate	Average Balance	Interest	Rate
Earning Assets									
Securities:									
Taxable	$1,999,321	$54,131	2.71%	$1,629,936	$38,365	2.35%	$1,466,062	$32,858	2.24%
Nontaxable[1]	439,894	17,873	4.06	617,267	30,305	4.91	465,178	23,208	4.99
Total securities	2,439,215	72,004	2.95	2,247,203	68,670	3.06	1,931,240	56,066	2.90
Interest bearing deposits with the Federal Reserve Bank and other banks and other short-term investments	197,562	3,698	1.87	136,555	1,547	1.13	78,503	396	0.50
Federal funds sold	430	—	—	5,932	42	0.71	9,464	12	0.13
Loans:[2]									
Commercial and commercial real estate[1]	5,401,683	289,379	5.36	4,256,158	211,316	4.96	3,846,285	190,101	4.94
Residential mortgage	692,310	32,047	4.63	655,515	30,242	4.61	738,634	30,168	4.08
Agricultural and agricultural real estate[1]	549,346	28,331	5.16	498,032	23,651	4.75	480,221	22,576	4.70
Consumer	496,900	37,250	7.50	437,356	35,194	8.05	422,972	32,636	7.72
Fees on loans		9,339	—		8,135	—		7,443	—
Less: allowance for loan losses	(59,340)	—	—	(54,837)	—	—	(52,102)	—	—
Net loans	7,080,899	396,346	5.60	5,792,224	308,538	5.33	5,436,010	282,924	5.20
Total earning assets	9,718,106	472,048	4.86%	8,181,914	378,797	4.63%	7,455,217	339,398	4.55%
Nonearning Assets	1,054,191			827,711			717,359		
Total Assets	$10,772,297			$9,009,625			$8,172,576		
Interest Bearing Liabilities[3]									
Savings	$4,779,977	$25,123	0.53%	$4,044,032	$11,107	0.27%	$3,680,535	$8,000	0.22%
Time, $100,000 and over	499,409	4,789	0.96	377,090	3,016	0.80	424,802	3,178	0.75
Other time deposits	559,360	5,755	1.03	525,165	4,156	0.79	577,908	4,761	0.82
Short-term borrowings	142,295	1,696	1.19	190,040	678	0.36	298,734	1,202	0.40
Other borrowings	272,545	14,503	5.32	290,398	14,393	4.96	284,540	14,672	5.16
Total interest bearing liabilities	6,253,586	51,866	0.83%	5,426,725	33,350	0.61%	5,266,519	31,813	0.60%

Noninterest Bearing Liabilities(3)									
Noninterest bearing deposits	3,265,532			2,643,945			2,130,536		
Accrued interest and other liabilities	75,224			66,248			78,028		
Total noninterest bearing liabilities	3,340,756			2,710,193			2,208,564		
Stockholders' Equity	1,177,955			872,707			697,493		
Total Liabilities and Stockholders' Equity	$10,772,297			$9,009,625			$8,172,576		
Net interest income, fully tax-equivalent (non-GAAP)(1)		$420,182			$345,447			$307,585	
Net interest spread(1)			4.03%			4.02%			3.95%
Net interest income, fully tax-equivalent (non-GAAP) to total earning assets(4)			4.32%			4.22%			4.13%
Interest bearing liabilities to earning assets	64.35 %			66.33 %			70.64 %		
Reconciliation of net interest margin, fully tax-equivalent (non-GAAP)(3)									
Net interest income (GAAP)		$413,954			$330,308			$294,666	
Plus tax-equivalent adjustment(1)		6,228			15,139			12,919	
Net interest income, fully tax-equivalent (non-GAAP)		$420,182			$345,447			$307,585	
Average earning assets	$9,718,106			$8,181,914			$7,455,217		
Net interest margin (GAAP)			4.26%			4.04%			3.95%
Net interest margin, fully tax-equivalent			4.32%			4.22%			4.13%

(non-GAAP)

(1) Computed on a tax-equivalent basis using an effective tax rate of 21% beginning January 1, 2018, and 35% for all prior periods.
(2) Nonaccrual loans and loans held for sale are included in the average loans outstanding.
(3) Includes deposits held for sale.
(4) Net interest margin, fully tax-equivalent is a non-GAAP measure, which adjusts net interest income for the tax-favored status of certain loans and securities. Management believes this measure enhances the comparability of net interest income arising from taxable and tax exempt sources. This measure should not be considered a substitute for operating results determined in accordance with GAAP.

The following table presents the dollar amount of changes in interest income and interest expense for the major components of interest earning assets and interest bearing liabilities, in thousands. It quantifies the changes in interest income and interest expense related to changes in the average outstanding balances (volume) and those changes caused by fluctuating interest rates. For each category of interest earning assets and interest bearing liabilities, information is provided on changes attributable to (i) changes in volume, calculated by multiplying the difference between the average balance for the current period and the average balance for the prior period by the rate for the prior period, and (ii) changes in rate, calculated by multiplying the difference between the rate for the current period and the rate for the prior period by the average balance for the prior period. The unallocated change has been allocated pro rata to volume and rate variances.

ANALYSIS OF CHANGES IN NET INTEREST INCOME[1]

	For the Years Ended December 31,					
	2018 Compared to 2017			2017 Compared to 2016		
	Change Due to			Change Due to		
	Volume	Rate	Net	Volume	Rate	Net
EARNING ASSETS / INTEREST INCOME						
Investment securities:						
Taxable	$9,480	$6,286	$15,766	$3,800	$1,707	$5,507
Nontaxable[1]	(7,770)	(4,662)	(12,432)	7,472	(375)	7,097
Interest bearing deposits	874	1,277	2,151	429	722	1,151
Federal funds sold	(20)	(22)	(42)	(6)	36	30
Loans[1][2]	71,484	16,324	87,808	18,860	6,754	25,614
TOTAL EARNING ASSETS	74,048	19,203	93,251	30,555	8,844	39,399
LIABILITIES / INTEREST EXPENSE						
Interest bearing deposits[3]:						
Savings	2,328	11,688	14,016	847	2,260	3,107
Time, $100,000 and over	1,099	674	1,773	(372)	210	(162)
Other time deposits	285	1,314	1,599	(423)	(182)	(605)
Short-term borrowings	(209)	1,227	1,018	(400)	(124)	(524)
Other borrowings	(914)	1,024	110	298	(577)	(279)
TOTAL INTEREST BEARING LIABILITIES	2,589	15,927	18,516	(50)	1,587	1,537
NET INTEREST INCOME	$71,459	$3,276	$74,735	$30,605	$7,257	$37,862

(1) Computed on a tax-equivalent basis using an effective tax rate of 21% beginning January 1, 2018, and 35% for all prior periods.
(2) Nonaccrual loans and loans held for sale are included in average loans outstanding.
(3) Includes deposits held for sale.

Provision For Loan Losses

A provision for loan losses is charged to expense to provide, in Heartland management’s opinion, an appropriate allowance for loan losses. In determining that the allowance for loan losses is appropriate, management uses factors that include the overall composition of the loan portfolio, general economic conditions, types of loans, loan collateral values, past loss experience, loan delinquencies, substandard credits and doubtful credits. Given the size of Heartland's loan portfolio, the level of organic loan growth, acquired loans that move out of the purchase accounting pool, changes in credit quality and the variability that can occur in the factors considered when determining the appropriateness of the allowance for loan losses, Heartland's provision for loan losses will vary from year to year. For additional details on the specific factors considered, refer to the discussion under the captions "Critical Accounting Policies" and "Allowance For Loan Losses" in this Annual Report on Form 10-K. Heartland believes the allowance for loan losses as of December 31, 2018, was at a level commensurate with the overall risk exposure of the loan portfolio. However, if economic conditions should become more unfavorable, certain borrowers may experience difficulty and the level of nonperforming loans, charge-offs and delinquencies could rise and require further increases in the provision for loan losses.

The provision for loan losses was $24.0 million during 2018 compared to $15.6 million during 2017 and $11.7 million during 2016. Loans covered by the allowance totaled $5.73 billion as of December 31, 2018, compared to $4.89 billion as of December 31, 2017, and $4.40 billion as of December 31, 2016.

The provision expense increase of $8.5 million or 54% during 2018 was impacted by the approximately $854.3 million increase in the loans covered by the allowance. Additionally, two impaired commercial loans from acquired portfolios totaling $5.8 million required provision expense of $4.0 million. The provision expense recorded in 2017 was significantly impacted by charge-offs related to one agricultural relationship and one commercial relationship, which totaled $3.1 million. During 2016, a recovery of $2.3 million was recorded on a previously charged-off loan. There were no similar recoveries recorded in 2018 or 2017.

Provision expense at Citizens Finance Parent Co. totaled $2.2 million in 2018, $4.8 million in 2017 and $4.4 million in 2016. In 2018, Heartland recorded a $953,000 reduction to provision expense associated with the reclassification of the Citizens' loan portfolios to held for sale.

The allowance for loan losses at December 31, 2018, was 0.84% of loans and 85.27% of nonperforming loans compared to 0.87% of loans and 87.82% of nonperforming loans at December 31, 2017, and 1.02% of loans and 84.37% of nonperforming loans at December 31, 2016.

Noninterest Income

The table below summarizes Heartland's noninterest income for the years indicated, in thousands:
NONINTEREST INCOME

	For the Years Ended December 31,			% Change	
	2018	2017	2016	2018/2017	2017/2016
Service charges and fees	$48,706	$39,183	$31,590	24 %	24 %
Loan servicing income	7,292	5,636	4,501	29	25
Trust fees	18,393	15,818	14,845	16	7
Brokerage and insurance commissions	4,513	4,033	3,869	12	4
Securities gains, net	1,085	6,973	11,340	(84)	(39)
Unrealized gain on equity securities, net	212	—	—	100	—
Gains on sale of loans held for sale	21,450	22,251	39,634	(4)	(44)
Valuation allowance on servicing rights	(46)	21	(33)	(319)	164
Income on bank owned life insurance	2,793	2,772	2,275	1	22
Other noninterest income	4,762	5,335	5,580	(11)	(4)
Total Noninterest Income	$109,160	$102,022	$113,601	7 %	(10)%

Noninterest income was $109.2 million in 2018 compared to $102.0 million in 2017, an increase of $7.1 million or 7%. This increase is the result of higher service charges and fees and trust fees, the effect of which was partially offset by reduced securities gains, net. During 2017, noninterest income was $102.0 million compared to $113.6 million in 2016, a decrease of $11.6 million or 10%. This decrease reflected lower net gains on sale of loans held for sale and net securities gains, the effect of which was partially offset by higher service charges and fees.

Service Charges and Fees

The following table summarizes the changes in service charges and fees for the years ended indicated, in thousands:

	For the Years Ended December 31,			% Change	
	2018	2017	2016	2018/2017	2017/2016
Service charges and fees on deposit accounts	$11,291	$9,570	$8,314	18 %	15 %
Overdraft fees	10,796	9,365	8,300	15	13
Customer service fees	327	288	208	14	38
Credit card fee income	11,893	7,968	4,866	49	64
Debit card income	14,396	11,984	9,873	20	21
Other service charges	3	8	29	(63)	(72)

Total service charges and fees	$48,706	$39,183	$31,590	24 %	24 %

Service charges and fees increased $9.5 million or 24% from 2017 to 2018 and $7.6 million or 24% from 2016 to 2017. Service charges on checking and savings accounts totaled $11.3 million during 2018 compared to $9.6 million during 2017 and $8.3 million during 2016. Overdraft fees totaled $10.8 million during 2018, $9.4 million during 2017 and $8.3 million during 2016. Interchange revenue from activity on bank debit cards, along with surcharges on ATM activity, resulted in debit card income of

$14.4 million during 2018, $12.0 million during 2017 and $9.9 million during 2016. These increases are primarily attributable to a larger demand deposit customer base, a portion of which is attributable to acquisitions completed in 2018 and 2017.

Heartland has focused on expanding its card payment solutions for businesses, particularly with its expense management service that provides business customers the ability to more efficiently manage their card-based spending. Fees for these services totaled $11.9 million in 2018, $8.0 million in 2017 and $4.9 million in 2016. Based on estimated calculations using 2018 debit card volume, Heartland estimates the impact of the Durbin Amendment, which Heartland expects to be subject to on July 1, 2019, will reduce debit card income by approximately $6.0 million on an annualized basis.

Loan Servicing Income

The following tables show the changes in loan servicing income for the years indicated, in thousands:

	For the Years Ended December 31,			% Change	
	2018	2017	2016	2018/2017	2017/2016
Commercial and agricultural loan servicing fees[1]	$3,229	$3,118	$2,846	4 %	10 %
Residential mortgage servicing fees[2]	9,931	11,567	12,147	(14)	(5)
Mortgage servicing rights amortization	(5,868)	(9,049)	(10,492)	(35)	(14)
Total loan servicing income	$7,292	$5,636	$4,501	29 %	25 %

(1) Includes servicing fees for commercial, commercial real estate, agricultural and agricultural real estate loans and amortization of capitalized commercial servicing rights.
(2) Heartland's mortgage servicing portfolio totaled $4,095,025, $3,558,090 and $4,308,580 as of December 31, 2018, 2017 and 2016, respectively.

Loan servicing income includes the fees collected for the servicing of commercial, agricultural, and mortgage loans, which are dependent upon the aggregate outstanding balance of these loans, rather than quarterly production and sale of these loans. Loan servicing income totaled $7.3 million for 2018 compared to $5.6 million for 2017 and $4.5 million for 2016. Loan servicing income related to the servicing of commercial and agricultural loans totaled $3.2 million during 2018 compared to $3.1 million during 2017 and $2.8 million during 2016.

Fees collected for the servicing of mortgage loans, primarily for GSEs, were $9.9 million during 2018 compared to $11.6 million during 2017 and $12.1 million during 2016. Heartland sold its GNMA servicing portfolio in the third quarter of 2017, which negatively impacted residential mortgage servicing income in the second half of 2017 as well as for the year ended December 31, 2018. Any GNMA government guaranteed residential real estate loans originated after July 1, 2017 by the Banks are sold into the secondary market with servicing released. Heartland acquired the right to service mortgage loans with the First Bank Lubbock Bancshares, Inc. transaction that closed on May 18, 2018, and the servicing fee income recorded in 2018 related to this portfolio totaled $1.0 million. Included in and offsetting loan servicing income is the amortization of capitalized servicing rights, which was $5.9 million during 2018 compared to $9.0 million during 2017 and $10.5 million during 2016. The decrease in amortization of servicing rights in 2018 as compared to 2017 and 2016 was primarily due to decreased prepayment speeds of mortgage loans.

The portfolio of mortgage loans serviced by Heartland, primarily for GSEs, totaled $4.10 billion at December 31, 2018, compared to $3.56 billion at December 31, 2017, and $4.31 billion at December 31, 2016. The increase in the mortgage servicing portfolio in 2018 was primarily attributable to the servicing portfolio acquired during the year, which totaled $648.9 million at December 31, 2018. The decrease in the mortgage servicing portfolio in 2017 was primarily attributable to the sale of the GNMA servicing portfolio previously discussed. Note 8, "Goodwill, Core Deposit Intangibles and Other Intangible Assets," to the consolidated financial statements contains a discussion of our servicing rights.

Trust Fees
Trust fees increased $2.6 million or 16% to $18.4 million for 2018 compared to $15.8 million for 2017. For the year ended December 31, 2017, trust fees increased $973,000 or 7% from $14.8 million in 2016. A large portion of trust fees are based upon the market value of trust assets under management, which totaled $2.38 billion as of December 31, 2018, compared to $2.31 billion as of December 31, 2017.

Net Gains on Sale of Loans Held for Sale

The following table shows the activity related to the net gains on sales of loans held for sale for the years indicated, in thousands:

	As of and For the Years Ended December 31,		
	2018	2017	2016
Total Residential Mortgage Loan Applications	$983,297	$1,061,149	$1,597,031
Residential Mortgage Loans Originated	$762,752	$762,979	$1,165,301
Residential Mortgage Loans Sold	$682,907	$709,845	$1,108,079
Percentage of residential mortgage loans originated for refinancing	24 %	32 %	40 %
Net gains on sales of residential mortgage loans	$20,871	$21,657	$37,800
Net gains on sale of commercial and agricultural loans(1)	$579	$594	$1,834
Gains on sale of loans held for sale	$21,450	$22,251	$39,634

(1) Includes net gains on sale of commercial, commercial real estate and agricultural and agricultural real estate loans.

Net gains on sale of loans held for sale totaled $21.5 million during 2018 compared to $22.3 million during 2017 and $39.6 million during 2016. These gains result primarily from the gain or loss on sales of mortgage loans into the secondary market, related fees and fair value marks on the associated derivatives. Heartland has experienced weakened demand for mortgage loan refinancings as interest rates have increased, as opposed to a low interest rate environment that existed in prior years, which encouraged mortgage loan refinancings. Mortgage loan applications were $983.3 million during 2018 compared to $1.06 billion during 2017 and $1.60 billion during 2016. The percentage of residential mortgage loans that represented refinancings was 24% during 2018 compared to 32% during 2017 and 40% during 2016. The volume of residential mortgage loans sold totaled $682.9 million during 2018 compared to $709.8 million during 2017 and $1.11 billion during 2016.

Due to changes in Heartland's legacy mortgage lending business, net gains on sales of residential mortgage loans will only reflect PrimeWest Mortgage Corporation mortgage production in 2019. Assuming there are no significant changes in the current interest rate environment, management expects net gains on sales of residential mortgage loans to be $15 million to $16 million in 2019 with normal seasonal patterns.

Net gains on sale of loans held for sale also includes gains on the sale of commercial, commercial real estate, agricultural and agricultural real estate loans, which totaled $579,000 during 2018 compared to $594,000 during 2017 and $1.8 million during 2016.

Securities Gains, Net

Securities gains totaled $1.1 million during 2018 compared to $7.0 million during 2017 and $11.3 million during 2016. During 2017, the remaining three private label Z tranche securities with a book value of $57,000 were sold for a gain of $2.8 million. There were no similar sales in 2018, and Heartland's securities portfolio was in a net unrealized loss position during 2018.

Other Noninterest Income

Other noninterest income was $4.8 million during 2018 compared to $5.3 million during 2017 and $5.6 million during 2016, a decrease of $573,000 or 11% during 2018 and a decrease of $245,000 or 4% during 2017. Included in other noninterest income during 2017 was $464,000 related to recoveries on acquired loans that had been charged off prior to the acquisition dates and $1.3 million was associated with a gain on extinguishment of debt. Included in noninterest income in 2016 was a $1.2 million gain associated with a partnership investment, a $602,000 reimbursement from a customer for loan workout expenses that had been incurred and paid in prior years and a $517,000 recovery on a loan charged-off at Premier Valley Bank prior to acquisition. There were no similar items recorded in 2018.

Noninterest Expenses

The following table summarizes Heartland's noninterest expenses for the years indicated, in thousands:
NONINTEREST EXPENSES

	For the Years Ended December 31,			% Change	
	2018	2017	2016	2018/2017	2017/2016
Salaries and employee benefits	$196,118	$171,407	$163,547	14 %	5 %
Occupancy	25,328	22,244	20,398	14	9
Furniture and equipment	12,529	11,061	10,245	13	8
Professional fees	39,811	32,879	27,676	21	19
FDIC insurance assessments	3,699	3,595	4,185	3	(14)
Advertising	9,565	7,229	6,448	32	12
Core deposit intangibles and customer relationship intangibles amortization	9,355	6,077	5,630	54	8
Other real estate and loan collection expenses	3,038	2,461	2,443	23	1
Loss on sales/valuations of assets, net	2,208	2,475	1,478	(11)	67
Restructuring expenses	2,564	—	—	100	—
Other noninterest expenses	49,673	38,247	37,618	30	2
Total Noninterest Expenses	$353,888	$297,675	$279,668	19 %	6 %

Noninterest expenses totaled $353.9 million in 2018 compared to $297.7 million in 2017, a $56.2 million or 19% increase, with the most significant increases in salaries and employee benefits, professional fees, advertising, restructuring expenses and other noninterest expenses. Noninterest expenses totaled $297.7 million in 2017 compared to $279.7 million in 2016, an $18.0 million or 6% increase, with the most significant increases in salaries and employee benefits, professional fees and loss on sales/valuations of assets, net.

Salaries and Employee Benefits

The largest component of noninterest expense, salaries and employee benefits, increased $24.7 million or 14% to $196.1 million in 2018 and $7.9 million or 5% to $171.4 million in 2017. These increases were primarily attributable to the additional salaries and employee benefits for employees of the acquired entities. Full-time equivalent employees totaled 2,045 on December 31, 2018, compared to 2,008 on December 31, 2017, and 1,864 on December 31, 2016.

Professional Fees

Professional fees increased $6.9 million or 21% to $39.8 million during 2018 and $5.2 million or 19% to $32.9 million during 2017. These increases were primarily attributable to the services provided to Heartland by third-party advisors, including services performed in connection with mergers and acquisitions, model validation expenses and advisory services associated with the increased level of regulation resulting from Heartland having assets over $10 billion.

Advertising

Advertising expense increased $2.3 million or 32% to $9.6 million during 2018 and $781,000 or 12% to $7.2 million during 2017. Advertising expense for First Bank & Trust totaled $805,000 for 2018. For the year ended December 31, 2018, digital advertising expense totaled $792,000, which was an increase of $571,000 or 258% from $221,000 recorded for the year ended December 31, 2017.

Net Losses on Sales/Valuations of Assets

Net losses on sales/valuations of assets totaled $2.2 million during 2018 compared to $2.5 million during 2017 and $1.5 million during 2016. Write-downs and losses of $1.3 million related to three other real estate properties were recorded in 2018. Included in net losses on sales/valuations of assets costs during 2017 were write-downs and losses totaling approximately $900,000 related to the disposal of assets acquired in the Citywide Banks of Colorado, Inc. transaction.

Other Noninterest Expenses
Other noninterest expenses were $49.7 million during 2018, $38.2 million during 2017 and $37.6 million during 2016. Included in other noninterest expenses were write-downs on partnership investments which qualified tax credits totaling $4.2 million in 2018, $1.9 million in 2017 and $1.1 million in 2016.

Restructuring Expenses
In the first quarter of 2018, Heartland recorded $2.6 million of restructuring expenses related to its mortgage lending operation. The restructuring projects were primarily related to outsourcing the loan application processing, underwriting and loan closing functions. The restructuring expenses consisted of severance and retention costs related to the workforce reduction and contract buyouts associated with the discontinued use of several information systems. Management expects to record restructuring expenses of approximately $2 million to $3 million in 2019 related to the completion of the sale of Citizens and the outsourcing of Heartland's legacy mortgage lending business.

Excluding the items noted above, increases in all other noninterest expense categories for the years ended December 31, 2018, and 2017, were primarily attributable to the acquisitions completed since 2016.

Efficiency Ratio

One of Heartland's top priorities has been to improve its efficiency ratio, on a fully tax-equivalent basis, with the goal of reducing it to the low 60% range. The efficiency ratio, fully tax-equivalent, improved during 2018 to 63.54% compared to 65.40% for 2017 and 66.25% for 2016. Management has taken actions to improve its efficiency ratio, including restructuring its mortgage lending operations and optimizing bank branch locations. Additionally, systems conversions of newly acquired entities are completed as soon as possible after the closing of the transaction in order to optimize cost savings. Management expects the efficiency ratio will show variability from year to year as a result of acquisition activities and also from the seasonality and related revenue and expense mismatches that are inherent in the residential mortgage business.

See "Selected Financial Data" in Item 6 of this Annual Report on Form 10-K for a description of the calculation of the efficiency ratio on a fully tax-equivalent basis, which is a non-GAAP financial measure.

Income Taxes

Heartland's effective tax rate was 19.4% for 2018 compared to 36.8% for 2017 and 31.3% for 2016. The lower effective tax rate for 2018 when compared to 2017 and 2016 was primarily the result of the reduced corporate federal tax rate. The Tax Cuts and Jobs Act, which among other provisions, reduced the federal corporate tax rate to 21% from the maximum rate of 35% effective January 1, 2018. In response to the Tax Cuts and Jobs Act, Heartland recorded a $10.4 million non-cash charge to income tax expense in 2017 to adjust the value of its deferred tax assets and liabilities.

Included in Heartland's effective tax rate were solar energy tax credits totaling $2.9 million for 2018 and $449,000 for 2017, federal historic tax rehabilitation tax credits totaling $713,000 for 2017, and federal low-income housing tax credits totaling $1.2 million for each year ended December 31, 2018, 2017 and 2016. Heartland's effective tax rate is also affected by the level of tax-exempt interest income which, as a percentage of pre-tax income, was 16.1% during 2018, 23.6% during 2017 and 20.5% during 2016. The tax-equivalent adjustment for this tax-exempt interest income was $6.2 million during 2018, $15.1 million during 2017 and $12.9 million during 2016.

FINANCIAL CONDITION

Heartland's total assets were $11.41 billion at December 31, 2018, an increase of $1.60 billion or 16% since December 31, 2017. Included in this increase, at fair value, were $427.1 million of assets acquired in the Signature Bancshares, Inc. transaction and $1.12 billion of assets acquired in the First Bank Lubbock Bancshares, Inc. transaction. Heartland's total assets were $9.81 billion at December 31, 2017, an increase of $1.56 billion or 19% since December 31, 2016. Included in this increase, at fair value, were $213.9 million of assets acquired in the Founders Bancorp transaction and $1.49 billion of assets acquired in the Citywide Banks of Colorado, Inc. transaction.

Lending Activities

Heartland has certain lending policies and procedures in place that are designed to provide for an acceptable level of credit risk. The board of directors reviews and approves these policies and procedures on a regular basis. A reporting system supplements the review process by providing management and the board with frequent reports related to loan production, loan quality, concentrations of credit, loan delinquencies and nonperforming loans and potential problem loans.

The commercial and commercial real estate loan portfolio includes a wide range of business loans, including lines of credit for working capital and operational purposes and term loans for the acquisition of equipment and real estate. Although most loans are made on a secured basis, loans may be made on an unsecured basis where warranted by the overall financial condition of the borrower. Terms of commercial business loans generally range from one to five years. Commercial loans are primarily made based on the identified cash flow of the borrower and secondarily on the underlying collateral provided by the borrower. The collateral for most of these loans is based upon a discount from its market value. The primary repayment risks of commercial loans are that the cash flow of the borrowers may be unpredictable, and the collateral securing these loans may fluctuate in value. Heartland seeks to minimize these risks in a variety of ways. The underwriting analysis includes credit verification, analysis of global cash flows, appraisals and a review of the financial condition of the borrower. Personal guarantees are frequently required as a tertiary form of repayment. In addition, when underwriting loans for commercial real estate, careful consideration is given to the property's operating history, future operating projections, current and projected occupancy, location and physical condition. Heartland also utilizes government guaranteed lending through the U.S. Small Business Administration and the USDA Rural Development Business and Industry Program to assist customers with longer-term funding and to reduce risk.

Agricultural loans, many of which are secured by crops, machinery and real estate, are provided to finance capital improvements and farm operations as well as acquisitions of livestock and machinery. Agricultural loans present unique credit risks relating to adverse weather conditions, loss of livestock due to disease or other factors, declines in market prices for agricultural products and the impact of government regulations. The ultimate repayment of agricultural loans is dependent upon the profitable operation or management of the agricultural entity. In underwriting agricultural loans, lending personnel work closely with their customers to review budgets and cash flow projections for the ensuing crop year. These budgets and cash flow projections are monitored closely during the year and reviewed with the customers at least annually. Lending personnel also work closely with governmental agencies, including the Farm Service Agency, to help agricultural customers obtain credit enhancement products such as loan guarantees or interest assistance.

Heartland originates first-lien, adjustable-rate and fixed-rate, one-to-four-family residential real estate loans for the construction, purchase or refinancing of a single family residential property. These loans are principally collateralized by owner-occupied properties and are amortized over 10 to 30 years. Heartland typically sells longer-term, low-rate, residential mortgage loans in the secondary market with servicing rights retained. This practice allows Heartland to better manage interest rate risk and liquidity risk. The Heartland banks participate in lending programs sponsored by U.S. government agencies such as Veterans Administration and Federal Home Administration when justified by market conditions.

Consumer lending includes motor vehicle, home improvement, home equity and small personal credit lines. Consumer loans typically have shorter terms, lower balances, higher yields and higher risks of default than one- to four-family first-lien residential mortgage loans. Consumer loan collections are dependent on the borrower's continuing financial stability, and are therefore more likely to be affected by adverse personal circumstances. Risk is reduced through underwriting criteria, which include credit verification, appraisals, a review of the borrower's financial condition and personal cash flows. A security interest, with title insurance when necessary, is taken in the underlying real estate.

Heartland’s major source of income is interest on loans. The table below presents the composition of Heartland’s loan portfolio at the end of the years indicated, in thousands:

LOAN PORTFOLIO

	As of December 31,									
	2018		2017		2016		2015		2014	
	Amount	%	Amount	%	Amount	%	Amount	%	Amount	%
Loans receivable held to maturity:										
Commercial	$2,020,231	27.26 %	$1,646,606	25.76 %	$1,287,265	24.04 %	$1,279,214	25.56 %	$1,036,080	26.72
Commercial real estate	3,711,481	50.08	3,163,269	49.48	2,538,582	47.42	2,326,360	46.50	1,707,060	44.02
Agricultural and agricultural real estate	565,408	7.63	511,588	8.00	489,318	9.14	471,870	9.43	423,827	10.93
Residential mortgage	673,603	9.09	624,279	9.76	617,924	11.54	539,555	10.78	380,341	9.81
Consumer	440,158	5.94	447,484	7.00	420,613	7.86	386,867	7.73	330,555	8.52
Gross loans receivable held to maturity	7,410,881	100.00 %	6,393,226	100.00 %	5,353,702	100.00 %	5,003,866	100.00 %	3,877,863	100.0
Unearned discount	(1,624)		(556)		(699)		(488)		(90)	
Deferred loan fees	(1,560)		(1,206)		(1,284)		(1,892)		(1,028)	
Total net loans receivable held to maturity	$7,407,697		$6,391,464		$5,351,719		$5,001,486		$3,876,745	
Loans covered under loss share agreements:										
Commercial and commercial real estate	$—	— %	$—	— %	$—	— %	$—	— %	$54	4.29
Agricultural and agricultural real estate	—	—	—	—	—	—	—	—	—	—
Residential mortgage	—	—	—	—	—	—	—	—	1,204	95.71

Consumer	—	—	—	—	—	—	—	—	—	—
Total loans covered under loss share agreements	—	— %	—	— %	—	— %	—	— %	1,258	100.(
Allowance for loan losses	(61,963)		(55,686)		(54,324)		(48,685)		(41,449)	
Loans receivable, net	$7,345,734		$6,335,778		$5,297,395		$4,952,801		$3,836,554	

Loans held for sale totaled $119.8 million at December 31, 2018, which includes $96.0 million of loans to be sold in conjunction with the pending branch sales and Citizens' loan portfolios, and $23.8 million of primarily residential mortgage loans. Loans held for sale totaled $44.6 million at December 31, 2017, and $61.3 million at December 31, 2016, which is primarily affected by mortgage loan origination activity.

The table below sets forth the remaining maturities of loans by category, including loans held for sale and excluding unearned discount and deferred loan fees, as of December 31, 2018, in thousands:
MATURITY AND RATE SENSITIVITY OF LOANS(1)

		Over 1 Year Through 5 Years		Over 5 Years		
	One Year or Less	Fixed Rate	Floating Rate	Fixed Rate	Floating Rate	Total
Commercial	$871,744	$417,238	$245,819	$308,362	$182,105	$2,025,268
Commercial real estate	782,431	1,127,412	585,048	198,576	1,031,171	3,724,638
Residential real estate	104,043	38,833	63,050	166,099	327,617	699,642
Agricultural and agricultural real estate	285,350	174,114	30,603	33,573	43,932	567,572
Consumer	143,275	67,286	43,478	33,757	225,766	513,562
Total	$2,186,843	$1,824,883	$967,998	$740,367	$1,810,591	$7,530,682

(1) Maturities based upon contractual dates.

Total loans held to maturity were $7.41 billion at December 31, 2018, compared to $6.39 billion at year-end 2017, an increase of $1.02 billion or 16%. Excluding $96.0 million of loans that were classified as held for sale in conjunction with the pending branch sales and the Citizens transaction and $1.01 billion of loans acquired from Signature Bancshares, Inc. and First Bank Lubbock Bancshares, Inc. in 2018, total loans held to maturity increased $106.7 million or 2% since year-end 2017. Total loans held to maturity were $6.39 billion at December 31, 2017, compared to $5.35 billion at year-end 2016, an increase of $1.04 billion or 19%. This increase includes $1.08 billion of total loans held to maturity, at fair value, acquired in the Founders Bancorp and Citywide Banks of Colorado, Inc. transactions. Exclusive of these transactions, total loans held to maturity decreased $42.1 million or less than 1% since year-end 2016.

The commercial and commercial real estate loan category continues to be the primary focus for all of the Banks. These loans comprised 77% of the loan portfolio at December 31, 2018 compared to 75% at year-end 2017. Commercial and commercial real estate loans, which totaled $5.73 billion at December 31, 2018, increased $921.8 million or 19% since year-end 2017. Exclusive of $830.0 million of commercial and commercial real estate loans acquired from Signature Bancshares, Inc. and First Bank Lubbock Bancshares, Inc. in 2018, commercial and commercial real estate loans increased $91.8 million or 2% since year-end 2017. Included in loans acquired from Signature Bancshares, Inc. is a lease portfolio with a fair value of $16.0 million as of the acquisition date. The lease portfolio is included with the commercial loan category for disclosure purposes. Commercial and commercial real estate loans increased $984.0 million or 26% to $4.81 billion at December 31, 2017. Exclusive of $988.1 million of commercial and commercial real estate loans acquired in the Founders Bancorp and Citywide Banks of Colorado, Inc. transactions, commercial and commercial real estate loans decreased $4.1 million or less than 1% to $4.81 billion at December 31, 2017.

Residential mortgage loans, which totaled $673.6 million at December 31, 2018, increased $49.3 million or 8% since year-end 2017. Exclusive of $81.6 million of residential mortgage loans acquired from Signature Bancshares, Inc. and First Bank Lubbock Bancshares, Inc. in 2018, residential mortgage loans decreased $32.3 million or 5% from year-end 2017. Residential mortgage loans, which totaled $624.3 million at December 31, 2017, increased $6.4 million or 1% since year-end 2016. Exclusive of $64.4 million of residential mortgage loans acquired in 2017, residential mortgage loans decreased $58.0 million or 9% from year-end 2016.

Agricultural and agricultural real estate loans, which totaled $565.4 million at December 31, 2018, increased $53.8 million or 11% in 2018 from $511.6 million at December 31, 2017, and increased $22.3 million or 5% in 2017 from $489.3 million at December 31, 2016. Excluding $28.6 million of agricultural and agricultural loans acquired in the First Bank Lubbock Bancshares, Inc. transaction in 2018, agricultural and agricultural real estate loans increased $25.2 million or 5% since year-end 2017. Approximately 77% of Heartland's agricultural loans at year-end 2018 were borrowers located in the Midwest. The agricultural loan portfolio is well diversified among loans relating to grain crops, dairy cows, hogs and cattle.

Consumer loans, which totaled $440.2 million at December 31, 2018, decreased $7.3 million or 2% in 2018 from $447.5 million at December 31, 2017, and increased $26.9 million or 6% in 2017 from $420.6 million at December 31, 2016. Exclusive of $65.3 million of consumer loans acquired from Signature Bancshares, Inc. and First Bank Lubbock Bancshares, Inc. and $73.4 million of loans transferred to held for sale, consumer loans increased $800,000 or less than 1% since December 31, 2017. Excluding $30.9 million of acquired loans in 2017, consumer loans decreased $4.1 million or 1% since December 31, 2016.

Loans secured by real estate, either fully or partially, totaled $4.80 billion or 65% of gross loans at December 31, 2018 and $4.23 billion or 66% of total loans at December 31, 2017. Approximately 51% of the non-farm, nonresidential loans are owner occupied. The largest categories within our real estate secured loans are listed below, in thousands:

LOANS SECURED BY REAL ESTATE

	As of December 31,	
	2018	2017
Residential real estate, excluding residential construction and residential lot loans	$1,119,942	$1,080,066
Industrial, manufacturing, business and commercial	805,265	935,614
Agriculture	270,023	256,452
Retail	435,680	348,749
Office	485,262	356,782
Land development and lots	216,665	162,273
Hotel, resort and hospitality	233,735	167,396
Multi-family	311,319	211,862
Food and beverage	130,981	108,977
Warehousing	186,436	125,372
Health services	182,882	155,529
Residential construction	171,116	134,848
All other	255,145	187,508
Total loans secured by real estate	$4,804,451	$4,231,428

Although repayment risk exists on all loans, different factors influence repayment risk for each type of loan. The primary risks associated with commercial and agricultural loans are the quality of the borrower’s management and the health of national and regional economies. Additionally, repayment of commercial and agricultural real estate loans may be influenced by fluctuating property values and concentrations of loans in a specific type of real estate. Repayment on loans to individuals, including those secured by residential real estate, are dependent on the borrower’s continuing financial stability as well as the value of the collateral underlying these credits, and thus are more likely to be affected by adverse personal circumstances and deteriorating economic conditions. These risks are described in more detail in Item 1A. "Risk Factors" of this Annual Report on Form 10-K. We monitor loan concentrations and do not believe we have excessive concentrations in any specific industry.

Our strategy with respect to the management of these types of risks, whether loan demand is weak or strong, is to encourage the Banks to follow tested and prudent loan policies and underwriting practices, which include: (i) making loans on a sound and collectible basis; (ii) ensuring that primary and secondary sources of repayment are adequate in relation to the amount of the loan; (iii) administering loan policies through a board of directors; (iv) developing and maintaining adequate diversification of the loan portfolio as a whole and of the loans within each loan category; and (v) ensuring that each loan is properly documented and, if appropriate, guaranteed by government agencies or adequately insured.

We regularly monitor and continue to develop systems to oversee the quality of our loan portfolio. Under our internal loan review program, loan review officers are responsible for reviewing existing loans, testing loan ratings assigned by loan officers, identifying potential problem loans and monitoring the adequacy of the allowance for loan losses at the Banks. An integral part of our loan review program is a loan rating system, under which a rating is assigned to each loan within the portfolio based on the borrower’s financial position, repayment ability, collateral position and repayment history.

The table below presents the amounts of nonperforming loans and other nonperforming assets on the dates indicated, in thousands:

NONPERFORMING ASSETS

	As of December 31,				
	2018	2017	2016	2015	2014
Not covered under loss share agreements:					
Nonaccrual loans	$71,943	$62,581	$64,299	$39,655	$25,070
Loans contractually past due 90 days or more	726	830	86	—	—
Total nonperforming loans	72,669	63,411	64,385	39,655	25,070
Other real estate	6,153	10,777	9,744	11,524	19,016
Other repossessed assets	459	411	663	485	445
Total nonperforming assets not covered under loss share agreements	$79,281	$74,599	$74,792	$51,664	$44,531
Covered under loss share agreements:					
Nonaccrual loans	$—	$—	$—	$—	$278
Total nonperforming loans	—	—	—	—	278
Other real estate	—	—	—	—	—
Total nonperforming assets covered under loss share agreements	$—	$—	$—	$—	$278
Restructured loans[1]	$4,026	$6,617	$10,380	$11,075	$12,133
Nonperforming loans not covered under loss share agreements to total loans receivable	0.98 %	0.99 %	1.20 %	0.79 %	0.65 %
Nonperforming assets not covered under loss share agreements to total loans receivable plus repossessed property	1.07 %	1.17 %	1.39 %	1.03 %	1.14 %
Nonperforming assets not covered under loss share agreements to total assets	0.69 %	0.76 %	0.91 %	0.67 %	0.74 %

(1) Represents accruing restructured loans performing according to their restructured terms.

The tables below summarize the changes in Heartland's nonperforming assets, including other real estate owned ("OREO") during 2018 and 2017, in thousands:

	Nonperforming Loans	Other Real Estate Owned	Other Repossessed Assets	Total Nonperforming Assets
December 31, 2017	$ 63,411	$10,777	$ 411	$ 74,599
Loan foreclosures	(7,954)	7,866	88	—
Net loan charge offs	(17,736)	—	—	(17,736)
New nonperforming loans	59,097	—	—	59,097
Acquired nonperforming assets	9,246	1,186	—	10,432
Reduction of nonperforming loans[1]	(33,395)	—	—	(33,395)
OREO/Repossessed sales proceeds	—	(11,578)	(74)	(11,652)
OREO/Repossessed assets write-downs, net	—	(2,098)	(27)	(2,125)
Net activity at Citizens Finance Parent Co.	—	—	61	61
December 31, 2018	$ 72,669	$6,153	$ 459	$ 79,281

(1) Includes principal reductions and transfers to performing status.

	Nonperforming Loans	Other Real Estate Owned	Other Repossessed Assets	Total Nonperforming Assets
December 31, 2016	$ 64,385	$9,744	$ 663	$ 74,792
Loan foreclosures	(5,555)	5,294	261	—
Net loan charge offs	(14,201)	—	—	(14,201)
New nonperforming loans	47,547	—	—	47,547
Acquired nonperforming assets	1,075	6,916	—	7,991
Reduction of nonperforming loans(1)	(29,840)	—	—	(29,840)
OREO/Repossessed sales proceeds	—	(10,449)	(245)	(10,694)
OREO/Repossessed assets write-downs, net	—	(728)	(12)	(740)
Net activity at Citizens Finance Parent Co.	—	—	(256)	(256)
December 31, 2017	$ 63,411	$10,777	$ 411	$ 74,599

(1) Includes principal reductions and transfers to performing status.

Nonperforming loans were $72.7 million or 0.98% of total loans at December 31, 2018, compared to $63.4 million or 0.99% of total loans at December 31, 2017. Excluding $9.2 million of acquired nonperforming loans, nonperforming loans remained unchanged from year-end 2017. Exclusive of $1.1 million of acquired nonperforming loans, nonperforming loans decreased $2.0 million or 3% in 2017. Approximately 18%, or $13.1 million, of Heartland's nonperforming loans at December 31, 2018, were in the residential real estate portfolio compared to 33% or $20.9 million at December 31, 2017. At December 31, 2018 and 2017, $7.7 million and $13.5 million, respectively, of the nonperforming residential real estate loans were repurchased loans under various GNMA insured or guaranteed loan programs.

Approximately 50%, or $36.2 million, of Heartland's nonperforming loans at December 31, 2018, had individual loan balances exceeding $1.0 million, the largest of which was $7.2 million. At December 31, 2017, approximately 42%, or $26.7 million, of Heartland's nonperforming loans had individual loan balances exceeding $1.0 million, the largest of which was $8.6 million. The portion of Heartland's nonresidential real estate nonperforming loans covered by government guarantees was $7.7 million at December 31, 2018, compared to $3.0 million at December 31, 2017, and $3.0 million at December 31, 2016.

During the third quarter of 2017, Heartland sold substantially of all of its GNMA loan servicing portfolio, which contained loans with an unpaid principal balance of approximately $773.9 million. The sale effectively eliminates Heartland's obligation, as a GNMA loan servicer, to repurchase any additional non-performing government guaranteed residential real estate loans from the
GNMA loan pools. In addition, any GNMA government guaranteed residential real estate loans originated after July 1, 2017 by Heartland's banks are sold into the secondary market with servicing released.

Delinquencies in each of the loan portfolios continue to be well-managed. Loans delinquent 30 to 89 days as a percent of total loans were 0.21% at December 31, 2018, compared to 0.27% at December 31, 2017, and 0.37% at December 31, 2016.

Other real estate owned was $6.2 million at December 31, 2018, compared to $10.8 million at December 31, 2017, and $9.7 million at December 31, 2016. Liquidation strategies have been identified for all the assets held in other real estate owned. Management continues to market these properties through a systematic liquidation process instead of an immediate liquidation process in order to avoid discounts greater than the projected carrying costs. Proceeds from the sale of other real estate owned totaled $11.6 million in 2018 compared to $10.4 million in 2017 and $4.6 million in

2016.

In certain circumstances, we may modify the terms of a loan to maximize the collection of amounts due. In most cases, the modification is either a reduction in interest rate, conversion to interest only payments, extension of the maturity date or a reduction in the principal balance. Generally, the borrower is experiencing financial difficulties or is expected to experience difficulties in the near-term, so a concessionary modification is granted to the borrower that would otherwise not be considered. Restructured loans accrue interest as long as the borrower complies with the revised terms and conditions and has demonstrated repayment performance at a level commensurate with the modified terms over several payment cycles. Although many of our loan restructurings occur on a case-by-case basis in connection with ongoing loan collection processes, we have also participated in certain restructuring programs for residential real estate borrowers. In general, certain residential real estate borrowers facing an interest rate reset that are current in their repayment status are allowed to retain the lower of their existing interest rate or the market interest rate as of their interest reset date.

We had an aggregate balance of $8.1 million in restructured loans at December 31, 2018, of which $4.1 million were classified as nonaccrual and $4.0 million were accruing according to the restructured terms. At December 31, 2017, we had an aggregate balance of $10.9 million in restructured loans, of which $4.3 million were classified as nonaccrual and $6.6 million were accruing according to the restructured terms.

At December 31, 2018, $240.6 million or 55% of the consumer loan portfolio were in home equity lines of credit ("HELOCs") compared to $223.8 million or 50% at December 31, 2017. Under our policy guidelines for the underwriting of these lines of credit, the customer may receive advances of up to 90% of the value of the property securing the line, provided the customer qualifies for Tier I classification, our internal ranking for customers considered to possess a high credit quality profile. Additionally, to qualify for advances up to 90% of the value of the property securing the line, the first mortgage must be held by Heartland and the customer must escrow for both taxes and insurance. Otherwise, advances under HELOCs cannot exceed 80% of the value of the property securing the loan.

The Banks have not been active in the origination of subprime loans. Consistent with our community banking model, which includes meeting the legitimate credit needs within the communities served, the Banks may make loans to borrowers possessing subprime characteristics if there are mitigating factors present that reduce the potential default risk of the loan.

Allowance For Loan Losses

The process we use to determine the appropriateness of the allowance for loan losses is considered a critical accounting practice for Heartland and has remained consistent over the past several years. The allowance for loan losses represents management’s estimate of identified and unidentified probable losses in the existing loan portfolio. For additional details on the specific factors considered, refer to the critical accounting policies section of this report.

The allowance for loan losses at December 31, 2018, was 0.84% of loans and 85.27% of nonperforming loans compared to 0.87% of loans and 87.82% of nonperforming loans at December 31, 2017, and 1.02% of loans and 84.37% of nonperforming loans at December 31, 2016. Exclusive of acquired loans, for which a valuation reserve is recorded, the allowance for loan losses at December 31, 2018, was 1.03% of loans in comparison with 1.13% of loans at December 31, 2017, and 1.22% of loans at December 31, 2016. The provision for loan losses was $24.0 million during 2018 compared to $15.6 million during 2017 and $11.7 million during 2016. The allowance for loan losses on impaired loans represented $7.6 million at December 31, 2018, in comparison with $4.8 million at December 31, 2017, and $6.8 million at December 31, 2016. The allowance on non-impaired loans was $54.4 million at December 31, 2018, in comparison with $50.9 million at December 31, 2017, and $47.6 million at December 31, 2016. The allowance on non-impaired loans is 0.74% at December 31, 2018 compared to 0.81% of non-impaired loans at December 31, 2017 and 0.91% at December 31, 2016. The increase in allowance for loan losses associated with loans individually evaluated for impairment in 2018 was primarily attributable to one commercial relationship with $2.7 million of total impairment recorded in 2018. Heartland had $1.63 billion of acquired loans, which are net of $40.9 million of valuation reserves that were not subject to the allowance at December 31, 2018. At December 31, 2017, Heartland had $1.47 billion of acquired loans, which are net of $36.4 million of valuation reserves that were not subject to the allowance.

The amount of net charge-offs was $17.7 million during 2018 compared to $14.2 million during 2017 and $6.1 million during 2016. As a percentage of average loans, net charge-offs were 0.25% during 2018 compared to 0.24% during 2017 and 0.11% during 2016. Citizens Finance Parent Co., our consumer finance subsidiary, experienced net charge-offs of $6.4 million during 2018 compared to $4.7 million during 2017 and $4.3 million during 2016. The Citizens' loan portfolios were recorded at fair value due to the held for sale classification, which resulted in a charge-off of $3.1 million in the fourth quarter of 2018. Historically, the Citizens' loan portfolios have accounted for approximately 6 to 8 basis points of net charge-offs.

The $8.1 million increase in net charge-offs in 2017 is primarily attributable to five relationships, which had a combined $6.8 million in charge-offs during the year. Of these charge-offs, $2.5 million had been reserved in prior years. We recognize charge-offs on certain collateral dependent loans by writing down the loan balance to an estimated net realizable value based on the anticipated disposition value.

The table below summarizes activity in the allowance for loan losses for the years indicated, including amounts of loans charged off, amounts of recoveries, additions to the allowance charged to income, additions related to acquisitions and the ratio of net charge-offs to average loans outstanding, in thousands:
ANALYSIS OF ALLOWANCE FOR LOAN LOSSES

	As of December 31,				
	2018	2017	2016	2015	2014
Allowance at beginning of year	$55,686	$54,324	$48,685	$41,449	$41,685
Charge-offs:					
Commercial	7,916	4,640	1,348	1,887	8,749
Commercial real estate	1,977	2,712	2,868	1,368	2,889
Residential real estate	372	800	346	241	342
Agricultural and agricultural real estate	1,437	2,916	214	551	2,251
Consumer	9,583	6,803	6,618	4,967	4,496
Total charge-offs	21,285	17,871	11,394	9,014	18,727
Recoveries:					
Commercial	978	811	930	1,167	753
Commercial real estate	1,047	1,192	3,327	1,200	2,290
Residential real estate	96	358	29	183	148
Agricultural and agricultural real estate	13	18	10	32	11
Consumer	1,415	1,291	1,043	971	788
Total recoveries	3,549	3,670	5,339	3,553	3,990
Net charge-offs(1)(2)	17,736	14,201	6,055	5,461	14,737
Provision for loan losses	24,013	15,563	11,694	12,697	14,501
Allowance at end of year	$61,963	$55,686	$54,324	$48,685	$41,449
Net charge-offs to average loans	0.25 %	0.24 %	0.11 %	0.12 %	0.39 %

(1) Includes net charge-offs at Citizens Finance Parent Co. of $6,397 for 2018, $4,673 for 2017, $4,280 for 2016, $2,902 for 2015, and $3,080 for 2014.
(2) Includes net charge-offs (recoveries) on loans covered under loss share agreements of $0 for 2018, $0 for 2017, $0 for 2016, $0 for 2015, and ($14) for 2014.

The table below shows our allocation of the allowance for loan losses by types of loans and the amount of unallocated reserves, in thousands:
ALLOCATION OF ALLOWANCE FOR LOAN LOSSES

	As of December 31,									
	2018		2017		2016		2015		2014	
	Amount	Loan Category to Gross Loans Receivable	Amount	Loan Category to Gross Loans Receivable	Amount	Loan Category to Gross Loans Receivable	Amount	Loan Category to Gross Loans Receivable	Amount	Loan Category to Gross Loans Receivable
Commercial	$24,505	27.26 %	$18,098	25.76 %	$14,765	24.04 %	$16,095	25.56 %	$11,909	26.72 %
Commercial real estate	25,538	50.08	21,950	49.48	24,319	47.42	19,532	46.50	15,898	44.02
Residential real estate	1,785	9.09	2,224	9.76	2,263	11.54	1,934	10.78	3,741	9.81
Agricultural and agricultural real	4,953	7.63	4,258	8.00	4,210	9.14	3,887	9.43	3,295	10.93

estate										
Consumer	5,182	5.94	9,156	7.00	8,767	7.86	7,237	7.73	6,606	8.52
Total allowance for loan losses	$61,963		$55,686		$54,324		$48,685		$41,449	

Management allocates the allowance for loan losses by pools of risk within each loan portfolio. The allocation of the allowance for loan losses by loan portfolio is made for analytical purposes and is not necessarily indicative of the trend of future loan losses in any particular category. The total allowance for loan losses is available to absorb losses from any segment of the loan portfolio.

Securities

The composition of Heartland's securities portfolio is managed to maximize the return on the portfolio while considering the impact it has on Heartland's asset/liability position and liquidity needs. Securities represented 24% of Heartland's total assets at December 31, 2018, compared to 25% at December 31, 2017, and 26% at December 31, 2016. Whenever possible, management intends to use a portion of the proceeds from maturities, paydowns and sales of securities to fund loan growth and paydown wholesale borrowings. Total securities carried at fair value as of December 31, 2018, were $2.45 billion, an increase of $234.0 million or 11% since December 31, 2017. The increase includes $35.2 million of securities acquired in 2018. Total securities carried at fair value as of December 31, 2017, were $2.22 billion, an increase of $370.9 million or 20% since December 31, 2016. The increase includes $236.4 million of securities acquired in the Founders Bancorp and Citywide Banks of Colorado, Inc. transactions.

The table below presents the composition of the securities portfolio, including carried at fair value, held to maturity and other, by major category, in thousands:

SECURITIES PORTFOLIO COMPOSITION

	As of December 31,					
	2018		2017		2016	
	Amount	% of Portfolio	Amount	% of Portfolio	Amount	% of Portfolio
U.S. government corporations and agencies	$31,951	1.18 %	$5,328	0.21 %	$4,700	0.22 %
Mortgage and asset-backed securities	2,026,698	74.64	1,753,736	70.35	1,290,500	60.56
Obligation of states and political subdivisions	611,257	22.50	694,565	27.86	799,806	37.53
Equity securities	17,086	0.63	16,674	0.67	14,520	0.68
Other securities	28,396	1.05	22,563	0.91	21,560	1.01
Total securities	$2,715,388	100.00%	$2,492,866	100.00%	$2,131,086	100.00%

The percentage of Heartland's securities portfolio comprised of U.S. government corporations and agencies was 1% at December 31, 2018, compared to less than 1% at both December 31, 2017, and December 31, 2016. Mortgage and asset-backed securities comprised 75% of Heartland's securities portfolio at December 31, 2018, compared to 70% at December 31, 2017, and 61% at December 31, 2016.

Approximately 62% of Heartland's mortgage and asset-backed securities were issued by GSEs at December 31, 2018, compared to 75% at December 31, 2017, and 77% at December 31, 2016. Heartland's securities portfolio had an expected modified duration of 4.01 years as of December 31, 2018, compared to 4.71 years as of December 31, 2017, and 4.34 years as of December 31, 2016.

At December 31, 2018, we had $28.4 million of other securities, including capital stock in the various Federal Home Loan Banks ("FHLB") of which the Banks are members. All securities classified as other are held at cost.

The tables below present the contractual maturities for the debt securities in the securities portfolio at December 31, 2018, by major category and classification as available for sale or held to maturity, in thousands. Expected maturities will differ from contractual maturities, as borrowers may have the right to call or prepay obligations with or without call or prepayment penalties.

SECURITIES AVAILABLE FOR SALE PORTFOLIO MATURITIES

	Within One Year		After One But Within Five Years		After Five But Within Ten Years		After Ten Years		Mortgage and asset-backed and equity securities		Total	
	Amount	Yield	Amount	Yield	Amount	Yield	Amount	Yield	Amount	Yield	Amount	Yield
U.S. government corporations and agencies	$22,942	2.09%	$2,472	2.62%	$1,593	2.08%	$4,944	3.84%	$—	— %	$31,951	2.40%
Obligations of states and political subdivisions	7,221	2.69	48,648	2.72	133,830	2.87	185,275	2.97	—	—	374,974	2.84
Mortgage and asset-backed securities	—	—	—	—	—	—	—	—	2,026,698	2.94	2,026,698	2.94
Equity securities	—	—	—	—	—	—	—	—	17,086	—	17,086	—
Total	$30,163	2.24%	$51,120	2.71%	$135,423	2.86%	$190,219	2.99%	$2,043,784	2.45%	$2,450,709	2.92%

SECURITIES HELD TO MATURITY PORTFOLIO MATURITIES

	Within One Year		After One But Within Five Years		After Five But Within Ten Years		After Ten Years		Total	
	Amount	Yield	Amount	Yield	Amount	Yield	Amount	Yield	Amount	Yield
Obligations of states and political subdivisions	$583	3.31%	$31,156	4.05%	$111,690	4.30%	$92,854	3.72%	$236,283	4.04%
Total	$583	3.31%	$31,156	4.05%	$111,690	4.30%	$92,854	3.72%	$236,283	4.04%

The unrealized losses on Heartland's debt securities are the result of changes in market interest rates or widening of market spreads subsequent to the initial purchase of the securities and not related to concerns regarding the underlying credit of the issuers or the underlying collateral. For this reason and because we have the ability and intent to hold those investments until a recovery of fair value, which may be maturity, we did not consider those investments to be other-than-temporarily impaired at December 31, 2018. See Note 4, "Securities" of the consolidated financial statements for further discussion regarding unrealized losses on our securities portfolio.

Deposits

The table below sets forth the distribution of our average deposit account balances and the average interest rates paid on each category of deposits for the years indicated, in thousands:

AVERAGE DEPOSITS

For the Years Ended December 31,

	2018			2017			2016		
	Average Deposits	Percent of Deposits	Average Interest Rate	Average Deposits	Percent of Deposits	Average Interest Rate	Average Deposits	Percent of Deposits	Average Interest Rate
Demand deposits	$3,265,532	35.87 %	— %	$2,643,945	34.83 %	— %	$2,130,536	31.27 %	— %
Savings	4,779,977	52.50	0.53	4,044,032	53.28	0.27	3,680,535	54.02	0.22
Time deposits less than $100,000	559,360	6.14	1.03	525,165	6.92	0.79	577,908	8.48	0.82
Time deposits of $100,000 or more	499,409	5.49	0.96	377,090	4.97	0.80	424,802	6.23	0.75
Total deposits	$9,104,278	100.00 %		$7,590,232	100.00 %		$6,813,781	100.00 %	

Total average deposits increased $1.51 billion or 20% during 2018, which includes approximately $856.7 million of deposits acquired in 2018. Total average deposits increased $776.5 million or 11% during 2017, which includes approximately $739.0 million of deposits acquired with the Founders Bancorp and Citywide of Colorado, Inc. transactions. Excluding acquired deposits, total average deposits increased $657.3 million or 9% during 2018 and $37.5 million or 1% during 2017. The percentage of our total average deposit balances attributable to branch banking offices in our Midwestern markets was 41% during 2018, 46% during 2017 and 53% during 2016.

Average demand deposits increased $621.6 million or 24% during 2018 and $513.4 million or 24% during 2017. Exclusive of approximately $213.7 million of demand deposits acquired in 2018, average demand deposits increased $407.9 million or 15%. Exclusive of approximately $337.3 million of demand deposits acquired in 2017, average demand deposits increased $176.1 million or 8%. The mix of total deposits has continued to improve, with demand deposits representing 35% at both December 31, 2018, and 2017. The percentage of our total average demand deposit balances attributable to branch banking offices in our Midwestern markets was 34% during 2018, 37% during 2017 and 43% during 2016.

Average savings deposit balances increased by $735.9 million or 18% during 2018 and $363.5 million or 10% during 2017. Excluding approximately $428.7 million of average savings deposits acquired in 2018, average savings deposits increased $307.3 million or 8%. Excluding approximately $322.5 million of average savings deposits acquired in 2017, average savings deposits increased $41.0 million or 1%. At year-end 2018, saving deposits represented 54% of total deposits compared to 53% at year-end 2017. The percentage of our total average savings deposit balances attributable to branch banking offices in our Midwestern markets was 46% in 2018, 51% in 2017 and 59% in 2016.

Average time deposits increased $156.5 million or 17% during 2018, and exclusive of approximately $214.4 million of time deposits acquired in 2018, average time deposits decreased $57.9 million or 6%. Average time deposits decreased $100.5 million or 10% during 2017, and exclusive of approximately $79.2 million of time deposits acquired in 2017, average time deposits decreased $179.7 million or 18%. Excluding acquisitions, the decrease in time deposits during both years was attributable to a continued emphasis on growing our customer base in non-maturity deposit products instead of higher-cost certificates of deposit. The Banks priced time deposit products competitively to retain existing relationship-based deposit customers, but not to retain certificate of deposit only customers or to attract new customers with only certificate of deposit accounts. Additionally, due to the low interest rates, many certificate of deposit customers have continued to elect to place their maturing balances in checking or savings accounts. The percentage of our total average time deposit balances excluding brokered time deposits attributable to branch banking offices in our Midwestern markets was 59% during 2018, 46% during 2017 and 51% during 2016. Average brokered time deposits as a percentage of total average deposits were less than 1% during 2018, 1% during 2017 and 2% during 2016.

The following table sets forth the amount and maturities of time deposits of $100,000 or more at December 31, 2018, in thousands:

TIME DEPOSITS $100,000 AND OVER

	December 31, 2018
3 months or less	$ 112,140
Over 3 months through 6 months	119,808
Over 6 months through 12 months	161,970
Over 12 months	191,756
	$ 585,674

Short-Term Borrowings

Short-term borrowings, which Heartland defines as borrowings with an original maturity of one year or less, were as follows as of December 31, 2018, and 2017, in thousands:

	December 31, 2018	December 31, 2017

Securities sold under agreement to repurchase	$80,124	$107,957
Federal funds purchased	35,400	168,250
Advances from the FHLB	100,838	40,000
Other short-term borrowings	10,648	8,484
Total	$227,010	$324,691

Short-term borrowings generally include federal funds purchased, securities sold under agreements to repurchase, short-term FHLB advances and discount window borrowings from the Federal Reserve Bank. These funding alternatives are utilized in varying degrees depending on their pricing and availability. All of the Banks own FHLB stock in one of the Chicago, Dallas, Des Moines, San Francisco or Topeka FHLBs, enabling them to borrow funds from their respective FHLB for short- or long-term purposes under a variety of programs. As of December 31, 2018, the amount of short-term borrowings was $227.0 million compared to $324.7 million at year-end 2017, a decrease of $97.7 million or 30%. Short-term FHLB advances totaled $100.8 million at December 31, 2018, compared to $40.0 million at December 31, 2017, an increase of $60.8 million or 152%. Federal funds purchased totaled $35.4 million at December 31, 2018, and $168.3 million at December 31, 2017, which was a decrease of $132.9 million or 79%.

All of the banks provide retail repurchase agreements to their customers as a cash management tool, which sweep excess funds from demand deposit accounts into these agreements. This source of funding does not increase the bank's reserve requirements. Although the aggregate balance of these retail repurchase agreements is subject to variation, the account relationships represented by these balances are principally local. The balances of retail repurchase agreements were $80.1 million at December 31, 2018, compared to $108.0 million at December 31, 2017, a decrease of $27.8 million or 26%.

Also included in short-term borrowings is a $30.0 million revolving credit line Heartland has with an unaffiliated bank, primarily to provide liquidity to Heartland. During 2018, Heartland borrowed $25.0 million on this revolving credit line and subsequently repaid the amount in full. No balance was outstanding on this line at December 31, 2018, and December 31, 2017.

The following table reflects information regarding our short-term borrowings as of December 31, 2018, 2017, and 2016, in thousands:

SHORT-TERM BORROWINGS	As of and For the Years Ended December 31,		
	2018	2017	2016
Balance at end of period	$227,010	$324,691	$306,459
Maximum month-end amount outstanding	229,890	324,691	399,490
Average month-end amount outstanding	152,391	182,846	287,857
Weighted average interest rate at year-end	1.96 %	1.11 %	0.29 %
Weighted average interest rate for the year	1.19 %	0.36 %	0.40 %

Other Borrowings

The outstanding balances of other borrowings, which Heartland defines as borrowings with an original maturity date of more than one year, are shown in the table below, net of discount and issuance costs amortization, in thousands, as of December 31, 2018, and 2017:

	December 31, 2018	December 31, 2017
Advances from the FHLB	$3,399	$6,702
Wholesale repurchase agreements	—	30,000
Trust preferred securities	130,913	121,886
Senior notes	5,000	11,000
Note payable to unaffiliated bank	58,417	33,667
Contracts payable for purchase of real estate and other assets	1,953	1,881
Subordinated notes	74,143	74,000
Other borrowings	1,080	5,875
Total	$274,905	$285,011

Other borrowings include all debt arrangements Heartland and its subsidiaries have entered into with original maturities that extend beyond one year, including long-term FHLB borrowings, borrowings under term notes, subordinated notes and senior notes, convertible debt and obligations under trust preferred capital securities. As of December 31, 2018, the amount of other borrowings was $274.9 million, a decrease of $10.1 million or 4% since year-end 2017.

Long-term FHLB borrowings with an original term beyond one year totaled $3.4 million at December 31, 2018, compared to $6.7 million at December 31, 2017, a decrease of $3.3 million or 49%. Total long-term FHLB borrowings at December 31, 2018, had an average interest rate of 4.03% and an average remaining maturity of 53 months.

Structured wholesale repurchase agreements totaled $0 and $30.0 million at December 31, 2018, and December 31, 2017, respectively.

Heartland had $130.9 million of trust preferred securities net of deferred issuance costs outstanding at December 31, 2018, compared to $121.9 million net of deferred issuance costs at December 31, 2017, which is an increase of $9.0 million or 7%. This increase includes $8.2 million of trust preferred securities acquired at fair value in the First Bank Lubbock Bancshares, Inc. transaction. In the fourth quarter of 2017, Heartland repurchased and retired $15.0 million of trust preferred securities from Heartland Statutory Trust IV, and a gain of $1.2 million was recorded in other noninterest income in conjunction with this transaction.

A schedule of Heartland's trust preferred offerings outstanding as of December 31, 2018, excluding deferred issuance costs, is as follows, in thousands:

TRUST PREFERRED OFFERINGS

	Amount Issued	Issuance Date	Interest Rate	Interest Rate as of 12/31/18[1]	Maturity Date	Callable Date
Heartland Financial Statutory Trust IV	$10,310	03/17/2004	2.75% over LIBOR	5.54 % [2]	03/17/2034	03/17/2019
Heartland Financial Statutory Trust V	20,619	01/27/2006	1.33% over LIBOR	3.77 % [3]	04/07/2036	04/07/2019
Heartland Financial Statutory Trust VI	20,619	06/21/2007	6.75%	4.27 % [4]	09/15/2037	03/15/2019
Heartland Financial Statutory Trust VII	20,619	06/26/2007	1.48% over LIBOR	4.22 % [5]	09/01/2037	03/01/2019
Morrill Statutory Trust I	8,994	12/19/2002	3.25% over LIBOR	6.07 % [6]	12/26/2032	03/26/2019
Morrill Statutory Trust II	8,642	12/17/2003	2.85% over LIBOR	5.64 % [7]	12/17/2033	03/17/2019
Sheboygan Statutory Trust I	6,440	09/17/2003	2.95% over LIBOR	5.74 %	09/17/2033	03/17/2019
CBNM Capital Trust I	4,359	09/10/2004	3.25% over LIBOR	6.04 %	12/15/2034	03/15/2019
Citywide Capital Trust III	6,383	12/19/2003	2.80% over LIBOR	5.32 %	12/19/2033	04/23/2019
Citywide Capital Trust IV	4,238	09/30/2004	2.20% over LIBOR	4.85 %	09/30/2034	05/23/2019
Citywide Capital Trust V	11,523	05/31/2006	1.54% over LIBOR	4.33 %	07/25/2036	03/15/2019
OCGI Statutory Trust III	2,989	06/27/2002	3.65% over LIBOR	6.44 % [8]	09/30/2032	03/30/2019
OCGI Capital Trust IV	5,286	09/23/2004	2.50% over LIBOR	5.29 % [9]	12/15/2034	03/15/2019
	$131,021					

(1) Effective weighted average interest rate as of December 31, 2018, was 5.56% due to interest rate swap transactions as discussed in Note 12 to Heartland's consolidated financial statements.
(2) Effective interest rate as of December 31, 2018, was 5.01% due to an interest rate swap transaction as discussed in Note 12 to Heartland's consolidated financial statements.
(3) Effective interest rate as of December 31, 2018, was 4.69% due to an interest rate swap transaction as discussed in Note 12 to Heartland's consolidated financial statements.
(4) Effective interest rate as of December 31, 2018, was 3.87% due to an interest rate swap transaction as discussed in Note 12 to Heartland's consolidated financial statements.

(5) Effective interest rate as of December 31, 2018, was 3.83% due to an interest rate swap transaction as discussed in Note 12 to Heartland's consolidated financial statements.
(6) Effective interest rate as of December 31, 2018, was 4.92% due to an interest rate swap transaction as discussed in Note 12 to Heartland's consolidated financial statements.
(7) Effective interest rate as of December 31, 2018, was 4.51% due to an interest rate swap transaction as discussed in Note 12 to Heartland's consolidated financial statements.
(8) Effective interest rate as of December 31, 2018, was 5.53% due to an interest rate swap transaction as discussed in Note 12 to Heartland's consolidated financial statements.
(9) Effective interest rate as of December 31, 2018, was 4.37% due to an interest rate swap transaction as discussed in Note 12 to Heartland's consolidated financial statements.

Heartland has a non-revolving credit facility with an unaffiliated bank to provide borrowing capacity not to exceed $70.0 million. At December 31, 2018, $58.4 million was outstanding on the note payable with an unaffiliated bank compared to $33.7 million at December 31, 2017. This non-revolving credit facility is being amortized over five years, and the balance is due in April 2021. At December 31, 2018, Heartland had $8.3 million of available borrowing capacity, of which no balance was outstanding.

Heartland also had senior notes totaling $5.0 million and $11.0 million at December 31, 2018, and 2017, respectively. These senior notes mature with respect to $5.0 million in 2019. The senior notes are unsecured and bear interest at 5.00% per annum payable quarterly.

In 2014, Heartland issued $75.0 million of subordinated notes with a maturity date of December 30, 2024. The notes were issued at par with an underwriting discount of $1.1 million. The interest rate on the notes is fixed at 5.75% per annum payable semi-annually. The notes were sold to qualified institutional buyers, and the proceeds were used for general corporate purposes. For regulatory purposes, $74.1 million of the subordinated notes qualified as Tier 2 capital as of December 31, 2018.

CAPITAL RESOURCES

The Federal Reserve has adopted capital adequacy guidelines that are used to assess the adequacy of capital in supervising a bank holding company. The federal banking agencies implemented final rules to establish a new comprehensive regulatory capital framework with a phase-in period beginning on January 1, 2015, and ending on January 1, 2019. The Final Rules implemented the third installment of the Basel Accords ("Basel III") regulatory capital reforms and changes required by the Dodd-Frank Wall Street Reform and Consumer Protection Act ("Dodd-Frank Act") and substantially amended the regulatory risk-based capital rules applicable to Heartland. Under Basel III, Heartland must hold a conservation buffer above the minimum capital requirement.

The most recent notification from the FDIC categorized Heartland and each of its banks as well capitalized under the regulatory framework for prompt corrective action. There are no conditions or events since that notification that management believes have changed the categorization of any of these entities.

Heartland's capital ratios are calculated in accordance with Federal Reserve Board instructions and are required regulatory financial measures. The following table illustrates Heartland's capital ratios and the Federal Reserve's current capital adequacy guidelines for the dates indicated, in thousands:

	Total Capital (to Risk-Weighted Assets)		Tier 1 Capital (to Risk-Weighted Assets)		Common Equity Tier 1 (to Risk-Weighted Assets)		Tier 1 Capital (to Average Assets)	
December 31, 2018	13.72	%	12.16	%	10.66	%	9.73	%
Minimum capital requirement	8.00	%	6.00	%	4.50	%	4.00	%
Well capitalized requirement	10.00	%	8.00	%	6.50	%	5.00	%
Minimum capital requirement, including fully-phased in capital conservation buffer (2019)	10.50	%	8.50	%	7.00	%	N/A	
Risk-weighted assets	$8,756,130		$8,756,130		$8,756,130		N/A	
Average assets	N/A		N/A		N/A		$10,946,440	
December 31, 2017	13.45	%	11.70	%	10.07	%	9.20	%
Minimum capital requirement	8.00	%	6.00	%	4.50	%	4.00	%
Well capitalized requirement	10.00	%	8.00	%	6.50	%	5.00	%
Minimum capital requirement, including fully-phased in capital conservation buffer (2019)	10.50	%	8.50	%	7.00	%	N/A	
Risk-weighted assets	$7,511,544		$7,511,544		$7,511,544		N/A	
Average assets	N/A		N/A		N/A		$9,552,227	
December 31, 2016	14.01	%	11.93	%	10.09	%	9.28	%
Minimum capital requirement	8.00	%	6.00	%	4.50	%	4.00	%
Well capitalized requirement	10.00	%	8.00	%	6.50	%	5.00	%
	10.50	%	8.50	%	7.00	%	N/A	

Minimum capital requirement, including fully-phased in capital conservation buffer (2019)				
Risk-weighted assets	$6,335,807	$6,335,807	$6,335,807	N/A
Average assets	N/A	N/A	N/A	$8,147,357

On February 23, 2018, Heartland completed the acquisition of Signature Bancshares, Inc., parent company of Signature Bank, headquartered in Minnetonka, Minnesota. Under the terms of the definitive merger agreement, Heartland acquired Signature

Bancshares, Inc. in a transaction valued at approximately $61.4 million, of which $7.8 million was cash, and the remainder was settled by delivery of 1,000,843 shares of Heartland common stock.

On May 18, 2018, Heartland completed the acquisition of Lubbock, Texas based First Bank Lubbock Bancshares, Inc., parent company of First Bank & Trust, and PrimeWest Mortgage Corporation, which is a wholly-owned subsidiary of First Bank & Trust. Under the terms of the definitive merger agreement, Heartland acquired First Bank Lubbock Bancshares, Inc. in a transaction valued at approximately $189.9 million, of which $5.5 million was cash, and the remainder was settled by delivery of 3,350,664 shares of Heartland common stock.
On February 28, 2017, Heartland completed the acquisition of Founders Bancorp, parent company of Founders Community Bank, based in San Luis Obispo, California. Based on Heartland's closing common stock price of $49.55 per share on February 28, 2017, the aggregate consideration was approximately $31.0 million, which was paid by delivery of 455,877 shares of Heartland common stock and cash of $8.4 million.

During the first quarter of 2017, 333 shares of the Heartland Series D convertible preferred stock issued in the CIC Bancshares, Inc. acquisition were converted into 13,283 shares of Heartland common stock, and $167,000 of the subordinated convertible notes assumed in the acquisition were converted into 6,128 shares of Heartland common stock. The remaining subordinated convertible debt balance of $391,100 related to the CIC Bancshares, Inc., acquisition were converted to 14,353 shares of common stock during the third quarter of 2017.

On July 7, 2017, Heartland completed the acquisition of Citywide Banks of Colorado, Inc., parent company of Citywide Banks,
headquartered in Aurora, Colorado. Simultaneous with the close, Citywide Banks merged into Heartland's Centennial Bank and
Trust subsidiary. The aggregate consideration was approximately $211.2 million, of which $58.6 million was cash, and the remainder was settled by delivery of 3,216,161 shares of Heartland common stock.

On July 29, 2016, Heartland filed a universal shelf registration statement with the SEC to register debt or equity securities. This shelf registration statement, which was effective immediately, provides Heartland with the ability to raise capital, subject to market conditions and SEC rules and limitations, if Heartland's board of directors decides to do so. This registration statement permits Heartland, from time to time, in one or more public offerings, to offer debt securities, subordinated notes, common stock, preferred stock, rights or any combination of these securities. The amount of securities that may be offered is not specified in the registration statement, and the terms of any future offerings will be established at the time of the offering. The registration statement expires in July 2019.

Common stockholders' equity was $1.33 billion at December 31, 2018, compared to $990.5 million at year-end 2017. Book value per common share was $38.44 at December 31, 2018, compared to $33.07 at year-end 2017. Changes in common stockholders' equity and book value per common share are the result of earnings, dividends paid, stock transactions and mark-to-market adjustments for unrealized gains and losses on securities available for sale. Heartland's unrealized gains and losses on securities available for sale, net of applicable taxes, were at an unrealized loss of $32.5 million at December 31, 2018, compared to an unrealized loss of $24.3 million at December 31, 2017.

COMMITMENTS, CONTRACTUAL OBLIGATIONS AND OFF-BALANCE SHEET ARRANGMENTS

Commitments and Contractual Obligations
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 many of the commitments are expected to expire without being drawn upon, the total commitment amounts do not necessarily represent future cash requirements. The Banks evaluate the creditworthiness of customers to which they extend a credit commitment on a case-by-case basis and may require collateral to secure

any credit extended. The amount of collateral obtained is based upon management's credit evaluation of the counterparty. Collateral held varies but may include accounts receivable, inventory, property, plant and equipment and income-producing commercial properties. Standby letters of credit and financial guarantees written are conditional commitments issued by the Banks to guarantee the performance of a customer to a third party. Those guarantees are primarily issued to support public and private borrowing arrangements. The credit risk involved in issuing letters of credit is essentially the same as that involved in extending loan facilities to customers. At December 31, 2018, and December 31, 2017, commitments to extend credit aggregated $2.47 billion and $1.96 billion, and standby letters of credit aggregated $71.9 million and $55.5 million, respectively.

The following table summarizes our significant contractual obligations and other commitments as of December 31, 2018, in thousands:

CONTRACTUAL OBLIGATIONS AND OTHER COMMITMENTS

		Payments Due By Period			
	Total	Less than One Year	One to Three Years	Three to Five Years	More than Five Years
Contractual obligations:					
Time certificates of deposit	$1,023,730	$666,994	$281,538	$59,224	$15,974
Long-term debt obligations	274,905	13,612	33,317	7,694	220,282
Operating lease obligations	34,328	5,776	10,595	5,538	12,419
Purchase obligations	8,598	4,808	3,387	403	—
Other long-term liabilities	4,146	650	630	112	2,754
Total contractual obligations	$1,345,707	$691,840	$329,467	$72,971	$251,429
Other commitments:					
Lines of credit	$2,471,466	$1,729,816	$300,475	$157,059	$284,116
Standby letters of credit	71,903	50,765	20,748	390	—
Total other commitments	$2,543,369	$1,780,581	$321,223	$157,449	$284,116

On January 16, 2019, Heartland entered into a definitive merger agreement to acquire Blue Valley Ban Corp., and its wholly-owned subsidiary, Bank of Blue Valley, headquartered in Overland Park, Kansas. As of the announcement date, the transaction, in which all of the issued and outstanding shares of the Blue Valley Ban Corp. stock will be exchanged for shares of Heartland common stock, was valued at approximately $93.9 million. Simultaneous with the closing of the transaction, Bank of Blue Valley will merge into Heartland's Kansas-based subsidiary, Morrill & Janes Bank and Trust Company, and the combined entity will operate as Bank of Blue Valley. The amount of the merger consideration is subject to fluctuations in the price of Heartland common stock and certain potential adjustments, and the transaction is subject to customary closing conditions. The transaction is expected to close in the second quarter of 2019 with a systems conversion planned for the third quarter of 2019. As of December 31, 2018, Bank of Blue Valley had total assets of approximately $715.1 million, which included approximately $561.3 million of gross loans outstanding, and approximately $562.6 million of deposits. Because the merger agreement was signed on January 16, 2019, and the transaction is expected to close in the second quarter of 2019, the transaction has no impact on Heartland’s 2018 consolidated financial statements.

On a consolidated basis, Heartland maintains a large balance of short-term securities that, when combined with cash from operations, Heartland believes are adequate to meet its funding obligations.

At the parent company level, routine funding requirements consist primarily of dividends paid to stockholders, debt service on revolving credit arrangements and trust preferred securities issuances, repayment requirements under other debt obligations and payments for acquisitions. The parent company obtains the funding to meet these obligations from dividends collected from its subsidiaries and the issuance of debt securities. At December 31, 2018, Heartland’s revolving credit agreement with an unaffiliated bank provided a maximum borrowing capacity of $30.0 million, of which no balance was outstanding. Heartland also has a non-revolving credit line with the same unaffiliated bank. At December 31, 2018, $8.3 million was available on this non-revolving credit line. These credit agreements contain specific financial covenants, all of which Heartland was in compliance with as of December 31, 2018.

The ability of Heartland to pay dividends to its stockholders is dependent upon dividends paid by its subsidiaries. The Banks are subject to statutory and regulatory restrictions on the amount they may pay in dividends. To maintain acceptable capital ratios in the Heartland banks, certain portions of their retained earnings are not available for the payment of dividends. Retained earnings that could be available for the payment of dividends to Heartland under the regulatory capital requirements to remain well-capitalized totaled approximately $311.3 million as of December 31, 2018.

We continue to explore opportunities to expand our footprint of independent community banks. In the current banking industry environment, we seek these opportunities for growth through acquisitions. We are primarily focused on possible acquisitions in the markets we currently serve, in which there would be an opportunity to grow market share, achieve efficiencies and provide greater convenience for current customers. Future expenditures relating to expansion efforts, in addition to those identified above, cannot be estimated at this time.

Off-Balance Sheet Arrangements
We enter into mortgage banking derivatives, which are classified as free standing derivatives. These derivatives include interest rate lock commitments provided to customers to fund certain mortgage loans to be sold into the secondary market and forward commitments for the future delivery of such loans. We enter into forward commitments for the future delivery of residential mortgage loans when interest rate lock commitments are entered into in order to economically hedge the effect of future interest rate changes on the commitments to fund the loans as well as on the residential mortgage loans available for sale. See Note 12, "Derivative Financial Instruments," to the consolidated financial statements for additional information on our derivative financial instruments.

We also enter into financial instruments with off-balance sheet risk in the normal course of business to meet the financing needs of our customers. These financial instruments include commitments to extend credit and standby letters of credit, and are described in Note 15, "Commitments," to the consolidated financial statements for additional information on these commitments.

LIQUIDITY

Liquidity refers to our ability to maintain a cash flow that is adequate to meet maturing obligations and existing commitments, to withstand fluctuations in deposit levels, to fund operations and to provide for customers' credit needs. The liquidity of Heartland principally depends on cash flows from operating activities, investment in and maturity of assets, changes in balances of deposits and borrowings and its ability to borrow funds in the money or capital markets.

Management of investing and financing activities, and market conditions, determine the level and the stability of net interest cash flows. Management attempts to mitigate the impact of changes in market interest rates to the extent possible, so that balance sheet growth is the principal determinant of growth in net interest cash flows.

Our short-term borrowing balances are dependent on commercial cash management and smaller correspondent bank relationships and, as a result, will normally fluctuate. We believe these balances, on average, to be stable sources of funds; however, we intend to rely on deposit growth and additional FHLB borrowings as needed in the future.

In the event of short-term liquidity needs, the Banks may purchase federal funds from each other or from correspondent banks and may also borrow from the Federal Reserve Bank. Additionally, the Banks' FHLB memberships give them the ability to borrow funds for short- and long-term purposes under a variety of programs, and at December 31, 2018, Heartland had $1.35 billion of borrowing capacity under these programs.

At December 31, 2018, Heartland's revolving credit agreement with an unaffiliated bank provided a maximum borrowing capacity of $30.0 million, of which no balance was outstanding. Heartland also has a non-revolving credit facility with the same unaffiliated bank. At December 31, 2018, $8.3 million was available on this non-revolving credit facility, of which no balance was outstanding.

Heartland has filed a universal shelf registration statement with the SEC that provides Heartland the ability to raise capital, subject to SEC rules and limitations, if Heartland's board of directors decides to do so. This registration statement expires in July 2019.

EFFECTS OF INFLATION

Consolidated financial data included in this report has been prepared in accordance with U.S. GAAP. Presently, these principles require reporting of financial position and operating results in terms of historical dollars, except for available for sale securities, trading securities, derivative instruments, certain impaired loans and other real estate which require reporting at fair value. Changes in the relative value of money due to inflation or recession are generally not considered.

In management’s opinion, changes in interest rates affect the financial condition of a financial institution to a far greater degree than changes in the inflation rate. While interest rates are greatly influenced by changes in the inflation rate, they do not change at the same rate or in the same magnitude as the inflation rate. Rather, interest rate volatility is based on changes in the expected rate of inflation, as well as on changes in monetary and fiscal policies. A financial institution’s ability to be relatively unaffected by changes in interest rates is a good indicator of its capability to perform in today’s volatile economic environment. Heartland seeks to insulate itself from interest rate volatility by ensuring that rate-sensitive assets and rate-sensitive liabilities respond to changes in interest rates in a similar time frame and to a similar degree. See Item 7A of this Annual Report on Form 10-K for a discussion on the process Heartland utilizes to mitigate market risk.

ITEM 7A. QUANTITATIVE AND QUALITATIVE DISCLOSURES ABOUT MARKET RISK

Market risk is the risk of loss arising from adverse changes in market prices and rates. Heartland's market risk is comprised primarily of interest rate risk resulting from its core banking activities of lending and deposit gathering. Interest rate risk measures the impact on earnings from changes in interest rates and the effect on current fair market values of Heartland's assets, liabilities and off-balance sheet contracts. The objective is to measure this risk and manage the balance sheet to avoid unacceptable potential for economic loss.

Management continually develops and applies strategies to mitigate market risk. Exposure to market risk is reviewed on a regular basis by the asset/liability committees of Heartland's bank subsidiaries and, on a consolidated basis, by Heartland's executive management and board of directors. At least quarterly, a detailed review of the balance sheet risk profile is performed for Heartland and each of its bank subsidiaries. Included in these reviews are interest rate sensitivity analyses, which simulate changes in net interest income in response to various interest rate scenarios. These analyses consider current portfolio rates, existing maturities, repricing opportunities and market interest rates, in addition to prepayments and growth under different interest rate assumptions. Selected strategies are modeled prior to implementation to determine their effect on Heartland's interest rate risk profile and net interest income. Heartland believes its primary market risk exposures did not change significantly in 2018 when compared to 2017.

The core interest rate risk analysis utilized by Heartland examines the balance sheet under increasing and decreasing interest rate scenarios that are neither too modest nor too extreme. All rate changes are ramped over a 12-month horizon based upon a parallel shift in the yield curve and then maintained at those levels over the remainder of the simulation horizon. Using this approach, management is able to see the effect that both a gradual change of rates (year 1) and a rate shock (year 2 and beyond) could have on Heartland's net interest income. Starting balances in the model reflect actual balances on the "as of" date, adjusted for material and significant transactions. Pro-forma balances remain static. This methodology enables interest rate risk embedded within the existing balance sheet structure to be isolated from the interest rate risk often caused by growth in assets and liabilities. Due to the low interest rate environment, the simulations under a decreasing interest rate scenario were prepared using a 100 basis point shift in rates. The most recent reviews at December 31, 2018, and 2017, provided the results below, in thousands.

	2018		2017	
	Net Interest Margin	% Change From Base	Net Interest Margin	% Change From Base
Year 1				
Down 100 Basis Points	$440,218	(2.67)%	$341,575	(3.27)%
Base	$452,284		$353,131	
Up 200 Basis Points	$471,792	4.31 %	$356,452	0.94 %
Year 2				
Down 100 Basis Points	$426,429	(5.72)%	$324,951	(7.98)%
Base	$459,871	1.68 %	$357,124	1.13 %
Up 200 Basis Points	$502,386	11.08 %	$381,394	8.00 %

We use derivative financial instruments to manage the impact of changes in interest rates on our future interest income or interest expense. We are exposed to credit-related losses in the event of nonperformance by the counterparties to these derivative instruments, but believe we have minimized the risk of these losses by entering into the contracts with large, stable financial institutions. The estimated fair market values of these derivative instruments are presented in Note 12 to the consolidated financial statements.

We enter into financial instruments with off balance sheet risk in the normal course of business to meet the financing needs of our customers. These financial instruments include commitments to extend credit and standby letters of credit. These instruments involve, to varying degrees, elements of credit and interest rate risk in excess of the amount recognized in the consolidated balance sheets. 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 relating to the commitment. Commitments generally have fixed expiration dates and may require collateral from the borrower. Standby letters of credit are conditional commitments issued by Heartland to guarantee the performance of a customer to a third party up to a stated amount and with specified terms and conditions. These commitments to extend credit and standby letters of credit are not recorded on the balance sheet until the loan is made or the letter of credit is issued. Heartland periodically holds a securities trading portfolio that would also be subject to elements of market risk. These securities are carried on the balance sheet at fair value. At both December 31, 2018, and December 31, 2017, Heartland held no securities in its securities trading portfolio.

ITEM 8. FINANCIAL STATEMENTS AND SUPPLEMENTARY DATA
HEARTLAND FINANCIAL USA, INC.
CONSOLIDATED BALANCE SHEETS
(Dollars in thousands, except per share data)

	Notes	As of December 31, 2018	2017
ASSETS			
Cash and due from banks	3	$ 223,135	$ 168,723
Interest bearing deposits with the Federal Reserve Bank and other banks and other short-term investments		50,495	27,280
Cash and cash equivalents		273,630	196,003
Time deposits in other financial institutions		4,672	9,820
Securities:			
Carried at fair value (cost of $2,492,620 at December 31, 2018, and cost of $2,248,181 at December 31, 2017)	4	2,450,709	2,216,753
Held to maturity, at cost (fair value of $245,341 at December 31, 2018, and $265,494 at December 31, 2017)	4	236,283	253,550
Other investments, at cost	4	28,396	22,563
Loans held for sale		119,801	44,560
Loans receivable:	5		
Held to maturity		7,407,697	6,391,464
Allowance for loan losses	5, 6	(61,963)	(55,686)
Loans receivable, net		7,345,734	6,335,778
Premises, furniture and equipment, net	7	187,418	172,324
Premises, furniture and equipment held for sale	2	7,258	1,977
Other real estate, net		6,153	10,777
Goodwill	2, 8	391,668	236,615
Core deposit intangibles and customer relationship intangibles, net	8	47,479	35,203
Servicing rights, net	8	31,072	25,857
Cash surrender value on life insurance		162,892	142,818
Other assets		114,841	106,141
TOTAL ASSETS		$ 11,408,006	$ 9,810,739
LIABILITIES AND EQUITY			
LIABILITIES:			
Deposits:	9		
Demand		$ 3,264,737	$ 2,983,128
Savings		5,107,962	4,240,328
Time		1,023,730	923,453
Total deposits		9,396,429	8,146,909
Deposits held for sale		106,409	—
Short-term borrowings	10	227,010	324,691
Other borrowings	11	274,905	285,011
Accrued expenses and other liabilities		78,078	62,671
TOTAL LIABILITIES		10,082,831	8,819,282
STOCKHOLDERS' EQUITY:	16, 17, 18		
Preferred stock (par value $1 per share; authorized 17,604 shares; none issued or outstanding at both December 31, 2018, and December 31, 2017)		—	—

Series A Junior Participating preferred stock (par value $1 per share; authorized 16,000 shares; none issued or outstanding at both December 31, 2018, and December 31, 2017)	—	—
Series C Senior Non-Cumulative Perpetual Preferred Stock (par value $1 per share; 81,698 shares authorized at both December 31, 2018, and December 31, 2017, none issued or outstanding at both December 31, 2018, and December 31, 2017)	—	—
Series D Senior Non-Cumulative Perpetual Convertible Preferred Stock (par value $1 per share; 3,000 shares authorized at both December 31, 2018, and December 31, 2017; no shares issued or outstanding at December 31, 2018, and 745 shares issued and outstanding at December 31, 2017)	—	938
Common stock (par value $1 per share; 40,000,000 shares authorized at both December 31, 2018 and December 31, 2017; issued 34,477,499 shares at December 31, 2018, and 29,953,356 shares at December 31, 2017)	34,477	29,953
Capital surplus	743,095	503,709
Retained earnings	579,252	481,331
Accumulated other comprehensive loss	(31,649)	(24,474)
Treasury stock at cost (0 shares at both December 31, 2018, and December 31, 2017)	—	—
TOTAL STOCKHOLDERS' EQUITY	1,325,175	991,457
TOTAL LIABILITIES AND EQUITY	$ 11,408,006	$ 9,810,739

See accompanying notes to consolidated financial statements.

HEARTLAND FINANCIAL USA, INC.
CONSOLIDATED STATEMENTS OF INCOME
(Dollars in thousands, except per share data)

	Notes	For the Years Ended December 31, 2018	2017	2016
INTEREST INCOME:				
Interest and fees on loans	5	$393,871	$304,006	$278,128
Interest on securities:				
Taxable		54,131	38,365	32,858
Nontaxable		14,120	19,698	15,085
Interest on federal funds sold		—	42	12
Interest on interest bearing deposits in other financial institutions		3,698	1,547	396
TOTAL INTEREST INCOME		465,820	363,658	326,479
INTEREST EXPENSE:				
Interest on deposits	9	35,667	18,279	15,939
Interest on short-term borrowings		1,696	678	1,202
Interest on other borrowings (includes $179, $1,290 and $1,914 of interest expense related to derivatives reclassified from accumulated other comprehensive loss for the years ended December 31, 2018, 2017, and 2016, respectively)	12	14,503	14,393	14,672
TOTAL INTEREST EXPENSE		51,866	33,350	31,813
NET INTEREST INCOME		413,954	330,308	294,666
Provision for loan losses	5, 6			