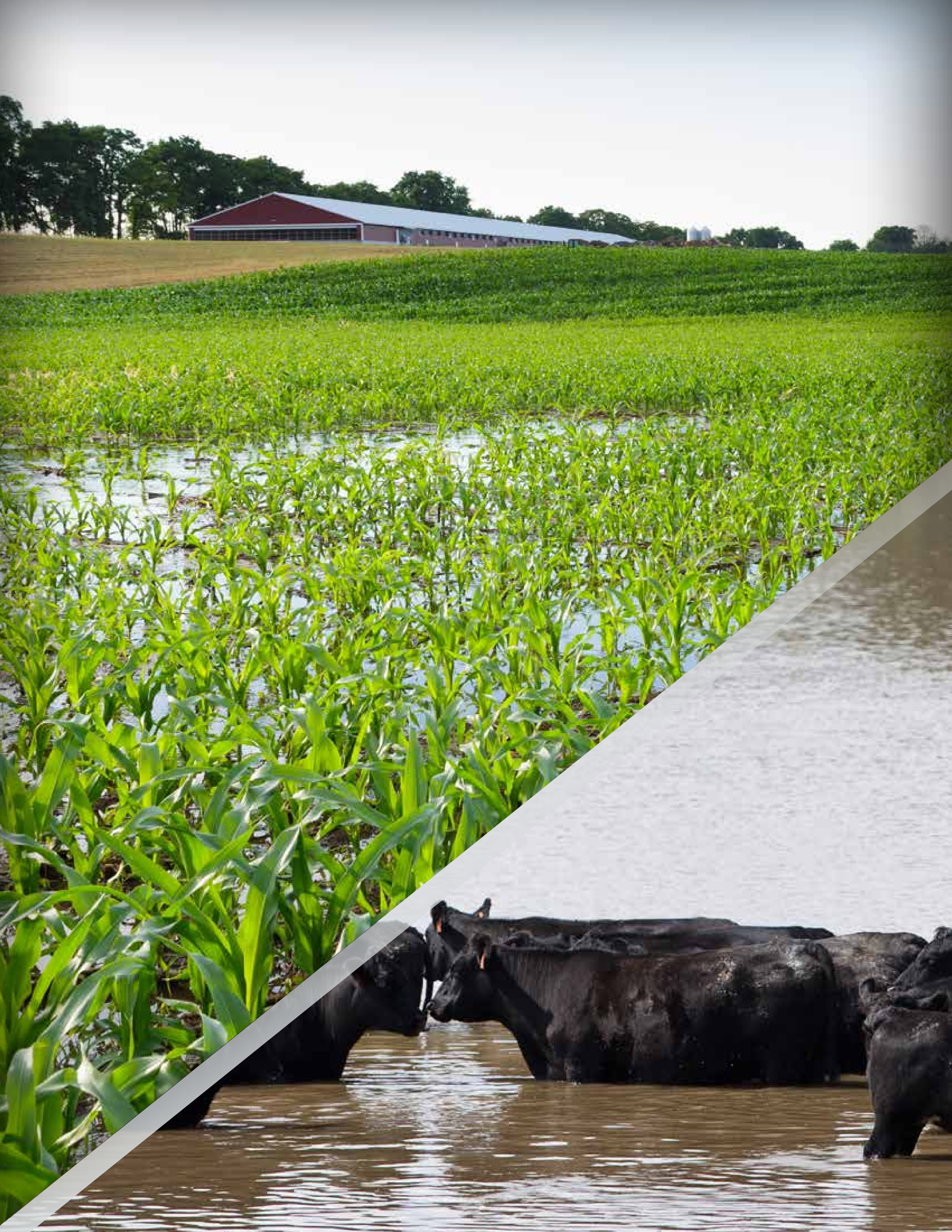
STANDING **FIRM**

Through good times and bad

AGFIRST
FARM CREDIT BANK

2018 ANNUAL REPORT



MESSAGE FROM THE CHIEF EXECUTIVE OFFICER & THE CHAIRMAN OF THE BOARD

STANDING **FIRM**

Through good times and bad

LEON T. AMERSON
CHIEF EXECUTIVE OFFICER

CURTIS R. HANCOCK, JR.
CHAIRMAN OF THE BOARD

Last year, like every year, AgFirst Farm Credit Bank worked hard to empower the Associations we serve to operate efficiently so they can focus on their customers' needs. Our full-service model is the core of our operations. In addition to funding for 19 Associations, we offer 20 Associations a package of products and services – from loan systems to security to human resources and marketing support – that allow them to operate efficiently and effectively while remaining intimately connected to their local markets.

We all share the same purpose: to support agriculture and rural communities through good times and bad. Our dedication to that mission resonates in the communities we serve every day, but it's never more apparent than when disaster strikes.

The Associations served by AgFirst have been strong partners for more than a century to their customers: farmers, agribusinesses and rural residents. With severe weather events and low commodity prices, 2018 gave Associations plenty of opportunities to stand firm in their support.

OVERCOMING CHALLENGES

Associations in the AgFirst District stood shoulder-to-shoulder with rural customers in 2018 to weather adversity, and there was no shortage of challenges for farmers and rural residents to overcome. Trade wars slashed agricultural exports and forced many farmers to rely on government subsidies. Projections show that net farm income nationwide plunged more than $9 billion in 2018 – a drop of more than 12 percent from 2017. One major story of the year was the enormous impact severe weather caused in communities throughout the Southeast. Last year's Atlantic hurricane season brought higher-than-normal activity for the third year in a row and caused $33 billion in damage. The following are a few of many examples of how Associations came to the aid of their customers, neighbors and friends in 2018.

CAPE FEAR

Hurricane Florence made landfall in the heart of Cape Fear's territory, flooding homes and farms. Some Association members were still trying to recover from Hurricane Matthew in 2016 and low commodity prices.

As soon as they were able, loan officers called nearly every single member to ensure they were safe and to see if they needed help. One family was trapped by flood waters and had run out of food and water. Cape Fear staff got in touch with another nearby customer, who came to their rescue.

Even before the waters receded, it became clear that members would need financial help. Cape Fear's board immediately set in motion an early patronage distribution to help struggling members. A few weeks later when the funds were released, one customer said the money would help him fix the washed out road to his hog farm so he could get his hogs the supplies and care they needed.

The Association also authorized a 90-day payment deferral plan that helped customers get back on their feet without having to worry about making their loan payments for a few months. One couple that had financed a home just before the storm took advantage of the program because they would have to miss work and paychecks due to roads being shut down. They were back at work by the time the deferral paperwork was ready and couldn't get to the office to sign during business hours so Cape Fear staff – in what they said was a very humbling experience – took the paperwork to them on a Saturday to make sure they would not fall behind.

ARBORONE

ArborOne in South Carolina also felt the sting of hurricane season. The Association reached out to members in the days following Hurricane Florence with free lunch gatherings to give them a break during a difficult time and let them know the Association was there for them. Relationship managers used those lunches to check in with members to find out what kind of help they needed.

ArborOne soon delivered that help. Many customers needed cash to start their recovery in earnest. ArborOne organized an early patronage distribution. Their relationship managers hand-delivered checks to help get the money in the hands of struggling farmers and homeowners as quickly as possible. They also organized food and cleaning supply drives and sent waves of volunteers to help clean out flooded homes in the rural areas they serve.

Associations throughout our District have similar stories of how they have helped their customers through challenging times so they could continue to produce food, fiber and fuel for the world. Responses like the ones described above are reassurance that, amid all of the uncertainty, our District's dedication to the rural customers we serve holds steady.

FINANCIALS

AgFirst's commitment to Associations starts with a rock-solid financial foundation.

Strong earnings in 2018 allowed us to declare patronage refunds of more than $282 million to our Associations. This reduced their net cost of funds, technology and services provided by AgFirst by 158 basis points to only 154 basis points for the year.

In 2018, AgFirst enjoyed continued growth in loan volume and solid credit quality as economic conditions remained favorable in our service territory.

AgFirst's profitability is likely to gradually return to a lower, more sustainable level over the next several years due to an increase in costs of funds relative to yields on assets. Low prices in certain commodity segments may challenge the credit quality of impacted borrowers. Nonetheless, earnings are expected to remain well above amounts needed to meet patronage expectations.

AgFirst is well capitalized, which will enable us to continue to stand strong with our Associations and deliver highly competitive funding, products and services.

FULL-SERVICE MODEL

While AgFirst's core function is providing competitive funding to the Associations we serve, the foundation of our business model lies in the broad bundle of services we offer Associations and our strong relationships that help shape those offerings.

Our services run the gamut from infrastructure and network support to customer account management tools to powerful data warehousing and analysis. We strive to work collaboratively with Associations to ensure we are meeting their needs in a way that benefits them the most. While the bundle of services we provide to Associations is comprehensive, we continually monitor emerging technology and other products that become available in the marketplace to ensure we are providing a high level of offerings.

The robust set of services we offer gives Associations the advantage of economies of scale, allowing them to operate more efficiently in partnership with AgFirst than they could individually. The efficiencies created through this system give Associations more freedom to provide personalized attention to their customers and support them through good times and bad.

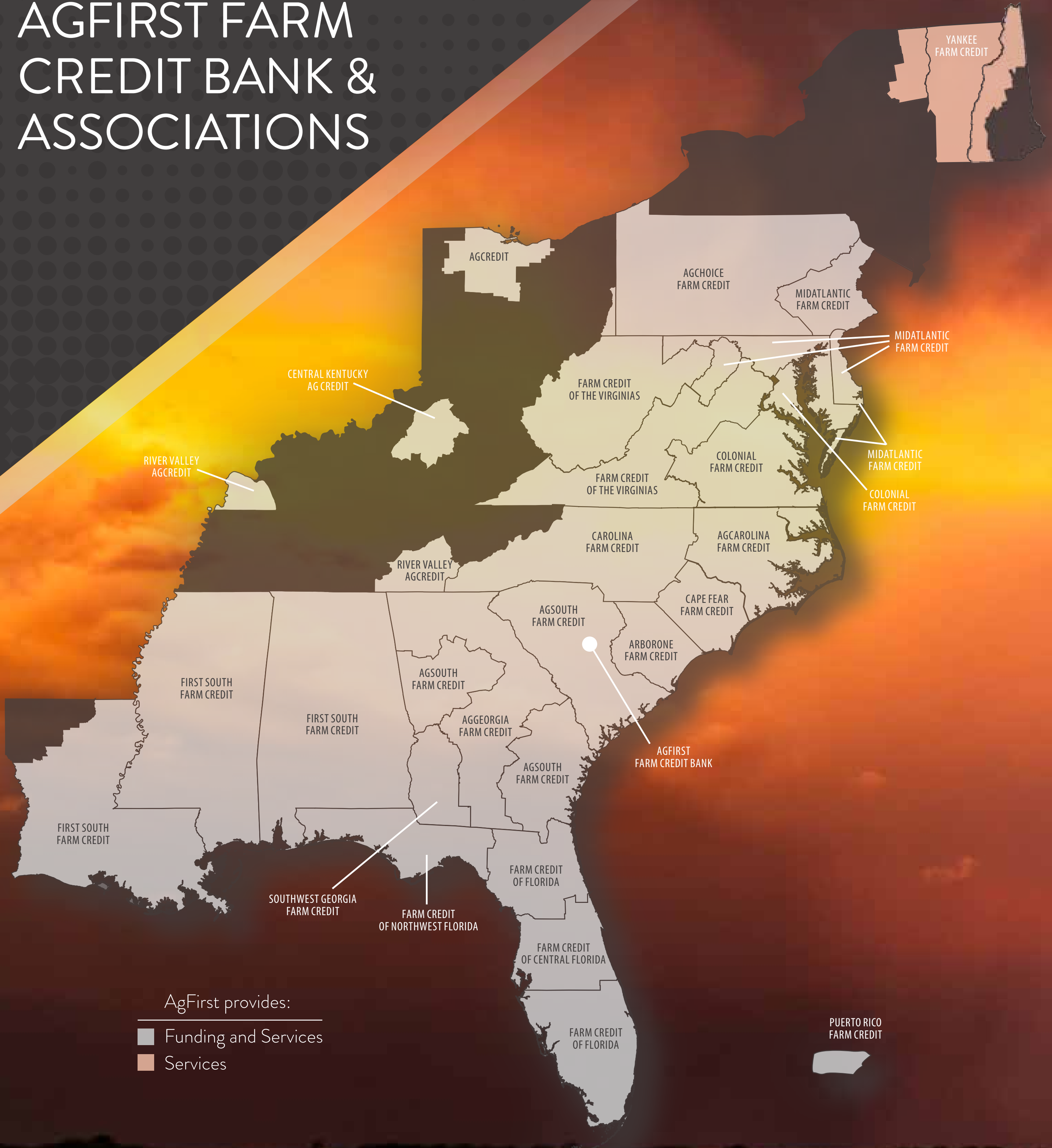
We will strive to remain a trusted partner that helps agriculture and rural America grow throughout 2019 – and beyond.

Curtis R. Hancock, Jr.
Chairman of the Board

Leon T. Amerson
Chief Executive Officer

March 13, 2019

AGFIRST FARM CREDIT BANK & ASSOCIATIONS



AgFirst is a member of the Farm Credit System, the largest agricultural lending organization in the United States. As one of the four Banks in the Farm Credit System, we provide funding to 19 affiliated Associations and provide services to 20 Associations in 18 states and Puerto Rico. Our Associations, in turn, provide financing to more than 90,000 farmers, ranchers, rural homeowners and agribusinesses.

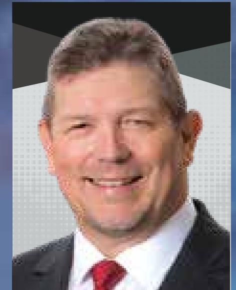
BOARD OF DIRECTORS

Curtis R. Hancock, Jr.
Chairman
RIVER VALLEY AGCREDIT

Ellis W. Taylor
Vice Chairman
AGCAROLINA FARM CREDIT

Jack W. Bentley, Jr.
AGGEORGIA FARM CREDIT

Jenny R. Black
FARM CREDIT OF CENTRAL FLORIDA

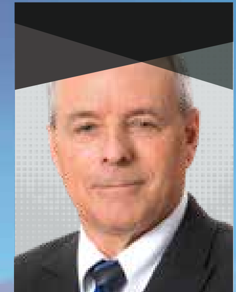

William J. Franklin, Jr.
FARM CREDIT OF THE VIRGINIAS

Bonnie V. Hancock
OUTSIDE DIRECTOR

Dale R. Hershey
MIDATLANTIC FARM CREDIT

Walter C. Hopkins, Sr.
MIDATLANTIC FARM CREDIT

William K. Jackson
AGCHOICE FARM CREDIT


J. Alvin Lyons
CENTRAL KENTUCKY AGCREDIT

S. Alan Marsh
FIRST SOUTH FARM CREDIT

Fred R. Moore, Jr.
MIDATLANTIC FARM CREDIT

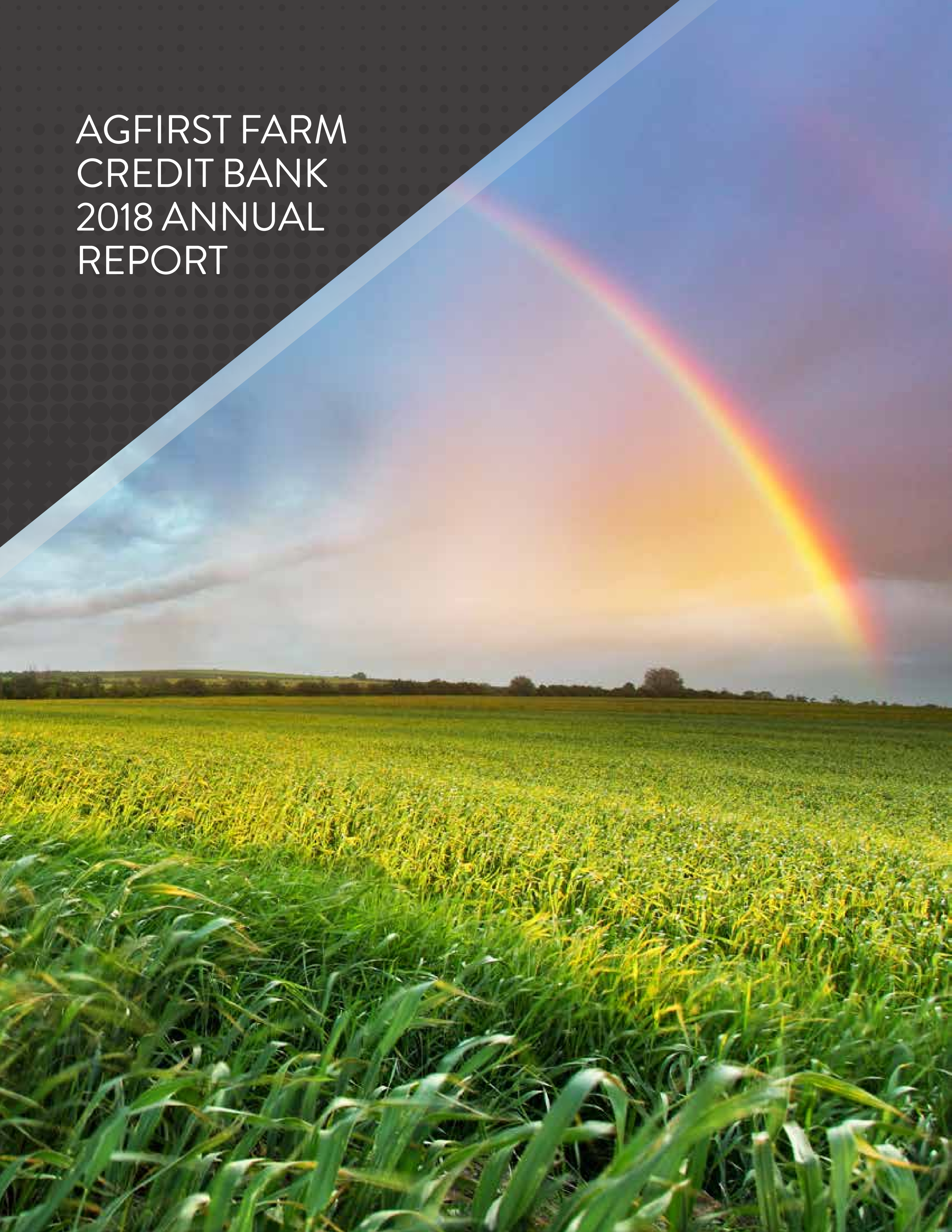
James M. Norsworthy, III
FIRST SOUTH FARM CREDIT

Katherine A. Pace
OUTSIDE DIRECTOR

Thomas E. Porter, Jr.
CAROLINA FARM CREDIT

William T. Robinson
AGSOUTH FARM CREDIT

Michael T. Stone
CAPE FEAR FARM CREDIT



AGFIRST FARM CREDIT BANK 2018 ANNUAL REPORT

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Management

Leon T. Amerson .... President and Chief Executive Officer
Charl L. Butler .... Executive Vice President and Chief Operating Officer
Isvara M. A. Wilson .... Executive Vice President and Chief Administrative Officer
William E. Brown .... Senior Vice President and Chief Credit Officer
Sam Esfahani .... Senior Vice President and Chief Information Officer
Stephen Gilbert .... Senior Vice President and Chief Financial Officer
Frances S. Griggs .... Senior Vice President and General Counsel
Daniel E. LaFreniere .... Senior Vice President and Chief Audit Executive

Board of Directors

Curtis R. Hancock, Jr. .... Chairman
Ellis W. Taylor .... Vice Chairman
Jack W. Bentley, Jr. .... Director
Jenny R. Black .... Director
William J. Franklin, Jr. .... Director
Bonnie V. Hancock .... Director
Dale R. Hershey .... Director
Walter C. Hopkins, Sr. .... Director
William K. Jackson .... Director
J. Alvin Lyons .... Director
S. Alan Marsh .... Director
Fred R. Moore, Jr. .... Director
James M. Norsworthy, III .... Director
Katherine A. Pace .... Director
Thomas E. Porter, Jr. .... Director
William T. Robinson .... Director
Michael T. Stone .... Director

Report of Management

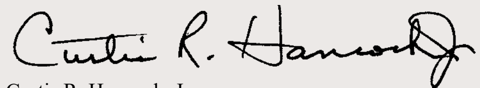
The accompanying Financial Statements and related financial information appearing throughout this Annual Report have been prepared by management of AgFirst Farm Credit Bank (Bank) in accordance with generally accepted accounting principles appropriate in the circumstances. Amounts which must be based on estimates represent the best estimates and judgments of management. Management is responsible for the integrity, objectivity, consistency, and fair presentation of the Financial Statements and financial information contained in this report.

Management maintains and depends upon an internal accounting control system designed to provide reasonable assurance that transactions are properly authorized and recorded, that the financial records are reliable as the basis for the preparation of all Financial Statements, and that the assets of the Bank are safeguarded. The design and implementation of all systems of internal control are based on judgments required to evaluate the costs of controls in relation to the expected benefits and to determine the appropriate balance between these costs and benefits. The Bank maintains an internal audit program to monitor compliance with the systems of internal accounting control. Audits of the accounting records, accounting systems and internal controls are performed and internal audit reports, including appropriate recommendations for improvement, are submitted to the Audit Committee of the Board of Directors and to the Chief Executive Officer.

AgFirst has a Code of Ethics for its Chief Executive Officer, Senior Financial Officers, and other Senior Officers who are involved with preparation and distribution of financial statements and maintenance of the records supporting the financial statements. A copy of the AgFirst Code of Ethics may be viewed on the Bank's website at www.agfirst.com.

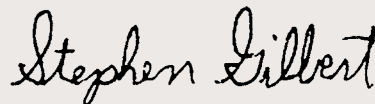
The Financial Statements have been audited by an independent registered public accounting firm, whose report appears elsewhere in this Annual Report. The Bank is also subject to examination by the Farm Credit Administration.

The Financial Statements, in the opinion of management, fairly present the financial condition of the Bank. The undersigned certify that we have reviewed the 2018 Annual Report of AgFirst Farm Credit Bank, that the report has been prepared under the oversight of the Audit Committee of the Board of Directors and in accordance with all applicable statutory or regulatory requirements, and that the information contained herein is true, accurate, and complete to the best of our knowledge and belief. The FCA has authorized the Bank to replace the regulatory required inclusion of condensed, unaudited districtwide statements of condition and statements of income in the footnotes to the Financial Statements with a separate document containing the same districtwide financial information.



Curtis R. Hancock, Jr.
Chairman of the Board

Leon T. Amerson
President and Chief Executive Officer



Stephen Gilbert
Senior Vice President and Chief Financial Officer

March 13, 2019

Five-Year Summary of Selected Financial Data

(dollars in thousands)	As of or for the Year Ended December 31, 2018	2017	2016	2015	2014
Balance Sheet Data					
Cash and cash equivalents	$ 521,485	$ 713,287	$ 811,748	$ 672,622	$ 847,350
Investments in debt securities	7,981,248	8,122,228	8,032,195	7,511,810	7,413,939
Loans	24,275,881	23,359,160	22,914,682	22,140,758	20,893,619
Allowance for loan losses	(18,049)	(14,381)	(14,783)	(15,113)	(15,535)
Net loans	24,257,832	23,344,779	22,899,899	22,125,645	20,878,084
Other property owned	2,842	154	3,346	13,411	2,808
Other assets	315,055	307,009	310,409	297,112	340,764
Total assets	$ 33,078,462	$ 32,487,457	$ 32,057,597	$ 30,620,600	$ 29,482,945
Obligations with maturities of one year or less	$ 11,764,284	$ 12,438,144	$ 12,740,594	$ 10,202,141	$ 10,977,525
Obligations with maturities of greater than one year	19,090,481	17,806,498	17,091,755	18,163,438	16,298,013
Total liabilities	30,854,765	30,244,642	29,832,349	28,365,579	27,275,538
Perpetual preferred stock	49,250	49,250	49,250	115,000	125,250
Capital stock and participation certificates	317,840	313,752	301,905	307,483	303,180
Additional paid-in-capital	58,883	58,883	58,883	39,988	36,580
Retained earnings					
Allocated	440	492	559	656	692
Unallocated	1,848,936	1,845,194	1,817,004	1,731,972	1,639,757
Accumulated other comprehensive income (loss)	(51,652)	(24,756)	(2,353)	59,922	101,948
Total shareholders' equity	2,223,697	2,242,815	2,225,248	2,255,021	2,207,407
Total liabilities and shareholders' equity	$ 33,078,462	$ 32,487,457	$ 32,057,597	$ 30,620,600	$ 29,482,945
Statement of Income Data					
Net interest income	$ 410,167	$ 447,067	$ 465,004	$ 454,061	$ 484,192
Provision for (reversal of) loan losses	3,542	(551)	(5,283)	(3,157)	(8,451)
Noninterest income (expense), net	(100,637)	(102,869)	(128,324)	(120,410)	(112,294)
Net income	$ 305,988	$ 344,749	$ 341,963	$ 336,808	$ 380,349
Key Financial Ratios					
Rate of return on average:					
Total assets	0.95%	1.09%	1.08%	1.14%	1.34%
Total shareholders' equity	13.03%	14.36%	14.45%	14.36%	16.49%
Net interest income as a percentage of average earning assets	1.29%	1.44%	1.53%	1.59%	1.76%
Net (chargeoffs) recoveries to average loans	0.00%	0.00%	0.02%	0.01%	0.01%
Total shareholders' equity to total assets	6.72%	6.90%	6.94%	7.36%	7.49%
Debt to shareholders' equity (:1)	13.88	13.49	13.41	12.58	12.36
Allowance for loan losses to loans	0.07%	0.06%	0.06%	0.07%	0.07%
Permanent capital ratio	21.67%	22.21%	21.31%	20.71%	21.83%
Total surplus ratio	*	*	21.21%	20.64%	21.80%
Core surplus ratio	*	*	19.13%	18.48%	19.38%
Collateral ratio	*	*	106.69%	106.93%	106.79%
Common equity tier 1 capital ratio	21.20%	21.73%	*	*	*
Tier 1 capital ratio	21.64%	22.18%	*	*	*
Total regulatory capital ratio	21.79%	22.31%	*	*	*
Tier 1 leverage ratio	7.53%	7.67%	*	*	*
Unallocated retained earnings (URE) and URE equivalents leverage ratio	6.58%	6.72%	*	*	*
Net Income Distribution					
Cash patronage declared	$ 298,223	$ 312,456	$ 252,659	$ 241,079	$ 315,218
Perpetual preferred stock dividend	1,622	1,146	1,548	1,743	1,729
Stock dividend patronage declared	2,635	2,766	2,633	1,771	1,324

** Not applicable due to changes in regulatory capital requirements effective January 1, 2017.*

Management's Discussion & Analysis of Financial Condition & Results of Operations

AgFirst Farm Credit Bank (the Bank or AgFirst) is one of the banks of the Farm Credit System (the System), a federally chartered network of borrower-owned lending institutions comprised of cooperatives and related service organizations. Cooperatives are organizations that are owned and controlled by their members who use the cooperatives' products or services. The U.S. Congress authorized the creation of the first System institutions in 1916. The System was created to provide support for the agricultural sector because of its significance to the well-being of the U.S. economy and the U.S. consumer. The mission of the System is to support rural communities and agriculture with reliable, consistent credit and financial services. The System does this by making appropriately structured loans to qualified individuals and businesses at competitive rates and providing financial services and advice to those persons and businesses. Consistent with the mission of supporting rural America, the System also makes rural residential real estate loans, finances rural communication, power and water infrastructures and makes loans to support agricultural exports and to finance other eligible entities.

The nation is currently served by three Farm Credit Banks (FCBs) and one Agricultural Credit Bank (ACB), each of which has specific lending authorities within its chartered territory. The ACB also has certain additional specific nationwide lending authorities. AgFirst is chartered to serve the states of Pennsylvania, Delaware, Maryland, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, the Commonwealth of Puerto Rico and portions of the states of Ohio, Tennessee, Kentucky and Louisiana.

Each FCB and the ACB serves one or more of either Production Credit Associations (PCAs) that originate and service short- and intermediate-term loans, Federal Land Credit Associations (FLCAs) that originate and service long-term real estate mortgage loans, and/or Agricultural Credit Associations (ACAs) that originate and service both long-term real estate mortgage loans and short- and intermediate-term loans. PCAs, FLCAs and ACAs are collectively referred to as associations. AgFirst (Bank) and its related associations (Associations or District Associations) are collectively referred to as the AgFirst District (District). The Associations are structured as cooperatives in which each Association is owned by its borrowers. AgFirst also operates as a cooperative. The District Associations, certain Other Financing Institutions (OFIs), other System institutions, and preferred stockholders jointly own AgFirst. As of December 31, 2018, the District consisted of the Bank and nineteen District Associations. All nineteen were structured as ACA holding companies, with FLCA and PCA subsidiaries. The Bank and District Associations are regulated by the Farm Credit Administration (FCA).

The following commentary reviews the Financial Statements of condition and results of operations of AgFirst as of and for the years ended December 31, 2018, 2017, and 2016. This information should be read in conjunction with the accompanying Financial Statements, the Notes to the Financial Statements and other sections of this Annual Report. The Financial Statements were prepared under the oversight of the Audit Committee of the Bank's Board of Directors. For a list of the Audit Committee members, refer to the "Report of the Audit Committee" included in this Annual Report. See Note 1, *Organization and Operations*, in the Notes to the Financial Statements for a discussion of the operations of AgFirst.

FORWARD-LOOKING INFORMATION

Certain sections of this Annual Report contain forward-looking statements concerning financial information and statements about future economic performance and events, plans and objectives and assumptions underlying these projections and statements. These projections and statements are not based on historical facts but instead represent the Bank's current assumptions and expectations regarding the Bank's business, the economy and other future conditions. However, actual results and developments may differ materially from the Bank's expectations and predictions due to a number of risks and uncertainties, many of which are beyond the Bank's control. Forward-looking statements can be identified by words such as "anticipates," "believes," "could," "estimates," "may," "should," "will," or other variations of these terms that are intended to reference future periods.

These statements are not guarantees of future performance and involve certain risks and uncertainties, and actual results may differ from those in the forward-looking statements as a result of various factors. These risks and uncertainties include, but are not limited to:

- political (including trade policies), legal, regulatory, financial markets, and economic conditions and developments in the United States (U.S.) and abroad;
- economic fluctuations in the agricultural, rural infrastructure, international, and farm-related business sectors, as well as in the general economy;
- weather-related, disease, and other adverse climatic or biological conditions that periodically occur that impact agricultural productivity and income of District borrowers;
- changes in U.S. government support of the agricultural industry and the System as a government-sponsored enterprise (GSE), as well as investor and rating agency reactions to events involving the U.S. government, other GSEs and other financial institutions;
- actions taken by the Federal Reserve System in implementing monetary and fiscal policy, as well as other policies and actions of the federal government that impact the financial services industry and the debt markets;
- credit, interest rate and liquidity risk inherent in lending activities; and
- changes in the Bank's assumptions for determining the allowance for loan losses, other-than-temporary impairment and fair value measurements.

AGRICULTURAL OUTLOOK

The following United States Department of Agriculture (USDA) analysis provides a general understanding of the U.S. agricultural economic outlook. However, this outlook does not take into account all aspects of AgFirst's business. References to USDA information in this section refer to the U.S. agricultural market data and are not limited to information/data in the AgFirst District.

Production agriculture is a cyclical business that is heavily influenced by commodity prices, weather, tax and trade policies, interest rates and various other factors. From 2010 through 2014, the U.S. farm sector generally experienced favorable economic conditions driven by high commodity and livestock prices and increasing farmland values. This generally fostered improved financial strength across the farm sector, with farmer working capital peaking in 2012. Working capital is defined as the amount of cash and cash convertible assets minus liabilities due to

creditors within 12 months. However, since 2014, the agricultural environment has been more challenging. Currency fluctuations, large inventories and current U.S. trade policies, including the retaliatory action by other countries, have begun to adversely impact demand and prices for agricultural exports, which have reduced net farm income (a broad measure of profits) and eroded farmer working capital. Higher interest rates could exacerbate the reduction in net farm income by increasing interest expense for farmers with floating-rate loans or other liabilities that reprice periodically to current market interest rates. The following table illustrates USDA data on net farm income and farmer working capital:

	Year Ended December 31,			
(dollars in billions)	2018*	2017	2016	2015
Net Farm Income	$66.295	$75.381	$61.542	$81.053
Farmer Working Capital	$49.879	$72.279	$65.197	$82.657

**Forecasted*

The substantial risk-bearing capacity, gained prior to 2015, has afforded U.S. crop producers time to transition their operations to the new environment of lower commodity prices, compressed margins and higher interest rates. Optimal input usage, adoption of cost-saving technologies, negotiation of adjustments to various business arrangements, such as rental cost of agriculture real estate, and effective use of hedging and other price risk management strategies are all critical in yielding positive net farm income for producers. Producers who are able to realize cost of production efficiencies and market their farm products effectively are most likely to adapt to the current price environment. However, if these current market conditions persist, farm sector financial strength will continue to weaken, challenging a greater number of producers who may not be able to sufficiently adjust their operations to avoid loan repayment challenges.

The February 2019 USDA forecast estimates 2018 farmers' net cash income, which is a measure of the cash income after payment of business expenses, at $95.0 billion, down $9.0 billion from 2017. The forecasted decrease in farmers' net cash income for 2018 is primarily due to an expected increase in cash expenses of $11.9 billion, led by increases in fuels/oil, interest, feed, and hired labor.

The February 2019 USDA outlook for the farm economy, as a whole, projects 2019 farmers' net cash income to increase to $97.7 billion, a $2.7 billion increase from 2018. The forecasted increase in farmers' net cash income for 2019 is primarily due to an expected decrease in cash expenses of $4.4 billion and increase in cash receipts for crops of $2.2 billion, partially offset by a decrease in direct government payments of $2.8 billion.

As estimated by the USDA in November 2018, the System's market share of farm business debt (defined as debt incurred by those involved in on-farm agricultural production) decreased slightly to 40.4 percent at December 31, 2017 (the latest available data), as compared with 40.9 percent at December 31, 2016.

While 2018 net farm income and working capital have declined, a healthy U.S. economy is expected to support domestic demand for most agricultural commodities in the foreseeable future. The primary area of risk will remain the export component of the demand for U.S. agricultural commodities, with a stronger dollar and ongoing uncertainty surrounding the future of U.S. trade policy. Major cash crops in the U.S. are projected to remain at elevated supply levels resulting from a combination of factors, including overall excellent crop conditions, tariffs and strong harvests in recent years. In addition to cash crops, pork and dairy are heavily dependent upon exports and most susceptible to foreign trade-related disruptions. The risk in the export component of the demand for U.S. agricultural commodities has been minimally mitigated by Market Facilitation Program assistance to producers impacted by retaliatory tariffs. Additionally, the revised Dairy Margin Protection Program in the 2018 Farm Bill and the new Dairy Revenue Protection Program will provide some support for dairy farmers. Mid-sized dairies, especially operations that are more highly leveraged or have high relative costs, will continue to face financial challenges at least into mid-2019.

The following table sets forth the commodity prices per bushel for certain crops, by hundredweight for hogs, milk, and beef cattle, and by pound for broilers and turkeys from December 31, 2015 to December 31, 2018:

Commodity	12/31/18	12/31/17	12/31/16	12/31/15
Hogs	$43.40	$48.60	$43.10	$42.80
Milk	$16.40	$17.20	$18.90	$17.30
Broilers	$0.51	$0.50	$0.48	$0.47
Turkeys	$0.50	$0.53	$0.74	$0.89
Corn	$3.54	$3.23	$3.32	$3.65
Soybeans	$8.57	$9.30	$9.64	$8.76
Wheat	$5.28	$4.50	$3.90	$4.75
Beef Cattle	$117.00	$118.00	$111.00	$122.00

In a prolonged period of less favorable conditions in agriculture, AgFirst's financial performance and credit quality measures would likely be negatively impacted. Any negative impact from these less favorable conditions should be lessened by geographic and commodity diversification across the District and the influence of off-farm income sources supporting agricultural-related debt. However, agricultural borrowers who are more reliant on off-farm income sources may be more adversely impacted by a weakened general economy.

CRITICAL ACCOUNTING POLICIES

The Bank's financial statements are reported in conformity with accounting principles generally accepted in the United States of America. Consideration of AgFirst's significant accounting policies is critical to the understanding of the Bank's results of operations and financial position because some accounting policies require complex or subjective judgments and estimates that may affect the reported amount of certain assets or liabilities as well as the recognition of certain income and expense items. In many instances, management has to make judgments about matters that are inherently uncertain. For a complete discussion of the Bank's significant accounting policies, see Note 2, *Summary of Significant Accounting Policies*, in the Notes to the Financial Statements. The following is a summary of the Bank's most critical accounting policies:

- *Allowance for loan losses* — The allowance for loan losses is management's best estimate of the amount of probable losses existing in and inherent in the Bank's loan portfolio as of the report date. The allowance for loan losses is increased through provisions for loan losses and loan recoveries and is decreased through loan charge-offs and allowance reversals.

  Significant individual loans are evaluated based on the borrower's overall financial condition, resources, and payment record, the prospects for support from any financially responsible guarantor, and, if appropriate, the estimated net realizable value of any collateral. The allowance for loan losses attributable to these loans is established by a process that estimates the probable loss inherent in the loans, taking into account various historical and current factors, internal risk ratings, regulatory oversight, and geographic, industry, and other factors.

  In addition to the allowance for loan losses attributable to specific loans, the Bank may also establish a general allowance for loan losses based on management's assessment of risk inherent in the loans in the Bank's portfolio that were not specifically evaluated. In establishing general reserves, factors affecting certain commodity types or industries may be taken into consideration, as well as other factors previously discussed. Certain loan pools purchased from various Associations are analyzed in accordance with the selling Associations' allowance methodologies for assigning general and specific allowances. Allowances are established on these pools based on that analysis after Bank management's determination that the methodologies employed are appropriate.

  Assessing the appropriateness of the allowance for loan losses is a dynamic process. Changes in the factors considered by management in the evaluation of losses in the loan portfolios could result in a change in the level of the allowance for loan losses and have a

direct impact on the provision for loan losses and the results of operations.

The overall adequacy of the allowance for loan losses is validated further through periodic evaluations of the loan portfolio, which generally consider historical charge-off experiences adjusted for relevant factors. These factors include types of loans, credit quality, specific industry conditions, collateral value, general economic and political conditions, and changes in the character, composition, and performance of the portfolio, among other factors.

- *Valuation methodologies* — Management applies various valuation methodologies to assets and liabilities that often involve a significant degree of judgment, particularly when active markets do not exist for the particular items being valued. Quoted market prices are referred to when estimating fair values for certain assets for which an observable active market exists. Management utilizes third-party valuation services to obtain fair value prices for the majority of the Bank's investment securities. Management also utilizes significant estimates and assumptions to value items for which an observable active market does not exist. Examples of these items include: impaired loans, other property owned, pension obligations, certain derivatives, certain investment securities and other financial instruments. These valuations require the use of various assumptions, including, among others, discount rates, rates of return on assets, repayment rates, cash flows, default rates, costs of servicing, and liquidation values. The use of different assumptions could produce significantly different asset or liability values, which could have material positive or negative effects on the Bank's results of operations.

LOAN PORTFOLIO

The Bank's loan portfolio consists primarily of direct loans to District Associations (Direct Notes), loan participations/syndications purchased, Correspondent Lending loans (primarily first lien rural residential mortgages), and loans to OFIs as shown below at December 31:

AgFirst Loan Portfolio *(dollars in thousands)*	2018		2017		2016	
Direct Notes*	$ 16,414,045	67.61%	$ 15,838,709	67.81%	$ 15,480,715	67.56%
Participations/Syndications Purchased, net*	4,465,453	18.40	4,289,545	18.36	4,442,524	19.39
Correspondent Lending	3,261,996	13.44	3,099,334	13.27	2,868,870	12.52
Loans to OFIs	134,387	0.55	131,572	0.56	122,573	0.53
Total	$ 24,275,881	100.00%	$ 23,359,160	100.00%	$ 22,914,682	100.00%

**Net of participations sold.*

The diversification of the Bank's loan volume by type for each of the past three years at December 31 is shown below:

(dollars in thousands)	2018		2017		2016	
Direct Notes	$ 16,414,045	67.61 %	$ 15,838,709	67.81 %	$ 15,480,715	67.56 %
Rural Residential Real Estate	3,104,737	12.79	2,956,332	12.65	2,754,273	12.02
Production and Intermediate-Term	1,137,422	4.69	1,123,633	4.81	1,247,467	5.44
Real Estate Mortgage	1,107,077	4.56	1,096,159	4.69	1,056,241	4.61
Processing and Marketing	977,274	4.03	763,024	3.27	848,750	3.70
Power and Water/Waste Disposal	532,649	2.20	556,165	2.38	543,052	2.37
Loans to Cooperatives	441,510	1.82	527,654	2.26	480,944	2.10
Communication	295,833	1.22	226,371	0.97	239,580	1.05
Loans to OFIs	134,387	0.55	131,572	0.56	122,573	0.53
International	71,141	0.29	52,637	0.23	54,837	0.24
Farm-Related Business	51,393	0.21	71,471	0.31	68,903	0.30
Other (including Mission Related)	8,413	0.03	15,433	0.06	17,347	0.08
Total	$ 24,275,881	100.00 %	$ 23,359,160	100.00 %	$ 22,914,682	100.00 %

Total loans outstanding were $24.276 billion at December 31, 2018. Compared to the prior year, total loans outstanding increased $916.7 million, or 3.92 percent. Loans outstanding at the end of 2017 had increased $444.5 million, or 1.94 percent, compared to December 31, 2016. Correspondent Lending loans of $83.6 million were sold during 2018 in order to remain within regulatory limits pertaining to the percentage of the Bank's portfolio that can be invested in rural home loans. Excluding these sales, loan volume at December 31, 2018 increased 4.28 percent compared to December 31, 2017.

In 2018, loan demand benefitted from moderate growth in the poultry, rural home loans, cotton, field crops, and grains segments. Modest demand in rural home loans, poultry, grains, beef, and timber contributed to the loan growth in 2017. Sales of participation interests (see *Direct Notes* and *Participations/Syndications* sections below) reduce Bank loan volume. Future loan demand is difficult to predict; however, modest growth is expected.

Each loan in the Bank's portfolio is classified according to a Uniform Classification System, which is used by all System institutions. Below are the classification definitions:

- *Acceptable* – Assets are expected to be fully collectible and represent the highest quality. In addition, these assets may include loans with properly executed and structured guarantees that might otherwise be classified as Other Assets Especially Mentioned (OAEM) or adverse.
- *OAEM* – Assets are currently collectible but exhibit some potential weakness.
- *Substandard* – Assets exhibit some serious weakness in repayment capacity, equity, and/or collateral pledged on the loan.
- *Doubtful* – Assets exhibit similar weaknesses to substandard assets. However, doubtful assets have additional weaknesses in existing facts, conditions, and values that make collection in full highly questionable.
- *Loss* – Assets are considered uncollectible.

The following table presents selected statistics related to the credit quality of AgFirst loans including accrued interest at December 31:

AgFirst Total Loans Credit Quality	2018	2017	2016
Acceptable	93.80%	99.60%	98.89%
OAEM	6.07	0.15	0.67
Adverse*	0.13	0.25	0.44
Total	100.00%	100.00%	100.00%

* *Adverse loans include substandard, doubtful, and loss loans.*

The decline in credit quality in 2018 reflected in the table above was primarily due to a decline in the credit quality of a single Direct Note which is discussed in the *Direct Notes* section below. Bank credit quality, primarily in the participation/syndication and Correspondent

Lending portfolios, is expected to slightly deteriorate given expected reduced farm income, higher interest rates, recent weather events, and uncertainty surrounding global trade issues.

In September and October 2018, hurricanes Florence and Michael caused damage in several southeastern states within the AgFirst District. These hurricanes did not have a significant impact on the Bank's overall financial condition and results of operations.

The credit conditions discussed above affect the credit quality of loan portfolios and earnings performance of the individual District Associations, which impacts the quality of the Bank's Direct Notes.

Direct Notes

AgFirst's primary business is to provide funding, operational support, and technology services to District Associations. AgFirst provides a revolving line of credit, referred to as a Direct Note, to each of the District Associations. Each of the Associations funds its lending and general corporate activities primarily by borrowing under its Direct Note. Lending terms are specified in a separate General Financing Agreement (GFA) between AgFirst and each Association. Each GFA contains minimum borrowing base margin, capital, and earnings requirements that must be maintained by the Association. Refer to Note 1, *Organization and Operations*, in the Notes to the Financial Statements for further discussion.

At December 31, 2018, total Direct Note volume outstanding was $16.414 billion, an increase of $575.3 million, or 3.63 percent, compared to December 31, 2017. Direct Note volume of $15.839 billion at December 31, 2017, increased $358.0 million, or 2.31 percent, compared to December 31, 2016. From time to time, the Bank sells participation interests in certain of its Direct Notes to another System bank. Excluding the sale of a participation interest of approximately $290.5 million in 2017, Direct Note volume increased 4.19 percent when compared to 2016 year-end. At December 31, 2018, Direct Note volume totaling $1.045 billion have been sold to another System bank. See the *Loan Portfolio* section above for the primary reasons for the improved Direct Note volume.

AgFirst provides each Association with core operating systems and support, including a loan origination system, loan accounting and servicing systems, general ledger and related financial accounting systems, and a human resources/payroll system. With AgFirst providing such systems and other services, the Associations are able to achieve operating efficiencies ordinarily afforded to much larger organizations. In addition, having common systems supported by AgFirst provides an opportunity to automate the AgFirst/Association lending process. One of the most significant advantages of this is a match-funding mechanism that automatically creates Direct Note advances that match the repricing and maturity characteristics of each underlying Association loan. The Association's interest rate risk and operational risks are significantly reduced by employing these systems.

Ultimately, the Associations' ability to repay their Direct Note obligations is significantly dependent upon the repayment of loans made to their borrowers. Accordingly, AgFirst's direct and indirect credit exposure depends upon the creditworthiness of both the Associations that are direct borrowers and the underlying borrowers of the Associations whose loans, as well as the other assets of the Associations, secure their Direct Notes.

AgFirst continually monitors the risk-bearing capacity of each Association through a variety of mechanisms, including testing of the reliability of the Association's risk ratings assigned to each of its loans, periodic meetings with the Association's management and board of directors, regular formalized risk assessments, and prior approval of loan transactions that exceed the Association's delegated lending authority as determined by AgFirst.

All Associations are subject to an annual audit by an independent registered public accounting firm and periodic examination by the FCA. Each Association is required by regulatory mandate to perform continuous internal credit, appraisal, and audit reviews. Litigation in which Associations are involved is typically loan related and poses no material threat to their viability.

All Associations met all of the regulatory minimum capital requirements at December 31, 2018. See *Regulatory Ratios* in the *Capital* section below for a discussion of the calculation of these ratios.

The following table presents selected statistics related to the credit quality of the Bank's Direct Note portfolio including accrued interest at December 31:

Direct Note Credit Quality

	2018		2017		2016	
	% Total	# Total	% Total	# Total	% Total	# Total
Acceptable	91.33%	18	100.00%	19	100.00%	19
OAEM	8.67	1	–	–	–	–
Adverse*	–	–	–	–	–	–
Total	100.00%	19	100.00%	19	100.00%	19

* *Adverse loans include substandard, doubtful, and loss loans.*

As reflected in the table above, one Direct Note was classified as OAEM at December 31, 2018.

At December 31, 2018, no District Associations were operating under a written agreement with the FCA. As of January 16, 2019, one Association, which had total assets of $1.910 billion, was operating under a special credit agreement pursuant to its GFA. The GFA events of default are not expected to have a significant adverse impact on the Bank's or District's financial condition or results of operations.

Presently, collection of the full Direct Note amount due is expected from all Associations in accordance with the contractual terms of the debt arrangements, and no allowance has been recorded for Direct Notes. Virtually all assets of the various Associations are pledged as collateral for their respective Direct Notes. In the opinion of management, all Association Direct Notes are adequately collateralized. The risk funds of an Association, including both capital and the allowance for loan losses, also protect the interest of the Bank should a Direct Note default.

Associations employ a number of risk management techniques to limit credit exposures. Each Association has adopted underwriting standards, individual borrower exposure limits, commodity exposure limits, and other risk management techniques. AgFirst and the Associations actively purchase and sell loan participations to enhance the diversification of their portfolios. Some Associations utilize guarantees from U.S. government agencies/departments, including the Farm Service Agency, the Small Business Administration, and the Federal Agricultural Mortgage Corporation (Farmer Mac), to further limit credit exposures. At December 31, 2018, Associations collectively had $1.709 billion (7.85 percent of the total Association loan portfolio) under such government or GSE guarantees, compared to $1.723 billion (8.21 percent) and $1.641 billion (8.18 percent), at December 31, 2017 and 2016, respectively.

At year-end, the combined Associations' loans including accrued interest were classified as follows:

District Associations Credit Quality	2018	2017	2016
Acceptable	94.03%	94.04%	94.43%
OAEM	3.34	3.37	3.16
Adverse*	2.63	2.59	2.41
Total	100.00%	100.00%	100.00%

* *Adverse loans include substandard, doubtful, and loss loans.*

Total Association loan delinquencies (loans 90 days or more past due) were 0.47 percent of the combined Association total loan assets at year-end 2018, compared to 0.47 percent and 0.50 percent at year-end 2017 and 2016, respectively.

Nonperforming assets for the combined Associations represented 1.70 percent of total loans and other property owned or $369.7 million,

compared to 1.62 percent or $339.9 million for 2017, and 1.79 percent or $359.0 million for 2016. Nonperforming assets consist of nonaccrual loans, accruing restructured loans, accruing loans 90 days or more past due and other property owned.

Associations recognized net loan charge-offs of $6.8 million for 2018, $3.1 million for 2017, and $780 thousand for 2016. As a percentage of total average loans, net charge-offs for the combined Associations were 0.03 percent for 2018 compared to 0.01 percent for 2017 and 0.00 percent for 2016. Each Association maintains an allowance for loan losses determined by its management based upon its unique circumstances.

Affiliated Associations serve primarily all or a portion of fifteen states and Puerto Rico. The District's large footprint results in geographic diversity, which is a natural credit risk-reducing factor for AgFirst. The following table illustrates the geographic distribution of the Associations' loan volume outstanding by state for the past three years at December 31:

District Associations

	Percent of Portfolio		
State	**2018**	**2017**	**2016**
North Carolina	16%	16%	16%
Georgia	11	11	11
Virginia	10	11	11
Pennsylvania	10	10	9
Ohio	8	8	9
Florida	8	8	8
Maryland	7	7	7
South Carolina	6	6	6
Alabama	5	5	4
Kentucky	4	4	4
Mississippi	3	3	2
Louisiana	2	2	2
Delaware	2	2	2
West Virginia	2	2	2
Other	6	5	7
Total	100%	100%	100%

Only four states have loan volume representing 10.00 percent or greater of the total at December 31, 2018. Commodity diversification, guarantees, and borrowers with significant reliance on non-farm income further mitigate the geographic concentration risk in these states.

The diversity of commodity types also mitigates credit risk to AgFirst. The Associations' credit portfolios are comprised of a number of segments having varying, and in some cases complementary, agricultural characteristics. Commodity and industry categories are based on the Standard Industrial Classification system published by the federal government. This system is used to assign commodity or industry categories based on the largest agricultural commodity of the customer.

The following table illustrates the aggregate credit portfolio of the Associations by major commodity segments based on borrower eligibility at December 31:

District Associations

	Percent of Portfolio		
Commodity Group	**2018**	**2017**	**2016**
Forestry	14%	14%	14%
Poultry	14	14	13
Field Crops	12	12	11
Cattle	9	9	9
Grains	9	8	8
Corn	6	6	7
Dairy	5	5	6
Other Real Estate	5	5	5
Cotton	3	3	3
Tree Fruits and Nuts	3	3	3
Nursery/Greenhouse	3	3	3
Swine	3	3	3
Rural Home	3	3	3
Processing	2	2	2
Other	9	10	10
Total	100%	100%	100%

As illustrated in the above chart, Associations had concentrations of 10.00 percent or greater in only three commodities: forestry, poultry, and field crops. All three commodities have geographic dispersion over the entire AgFirst District footprint. Also, many of these borrowers have significant secondary income from off-farm employment by a family member.

Forestry is divided principally into hardwood and softwood production and value-added processing. The timber from hardwood production is further processed into furniture, flooring, and high-grade paper and is generally located at the more northern latitudes and higher elevations of the AgFirst District. Softwood timber production is typically located in the coastal plains of the AgFirst District footprint and is used for building materials for the housing market and pulp to make paper and hygiene products. Timber producers at the Associations range in size from less than fifty acres to thousands of acres, with value-added processing being conducted at sawmills, planer mills, and paper mills.

Poultry concentrations within the Associations are further limited through the number of farm units producing poultry. Poultry concentration is further dispersed as production is segregated among chicken, turkey, and egg production.

The field crops commodity group represents a diverse group of commodities, including fruits, vegetables, and other non-grain crops, which are grown throughout the AgFirst District.

The diversity of income sources supporting Association loan repayments, including a prevalence of non-farm income among the borrowers, further mitigates credit risk to AgFirst as demonstrated by the following table as of December 31 of each year:

District Associations

	Percent of Portfolio		
Commodity Group	**2018**	**2017**	**2016**
Non-Farm Income	32%	32%	31%
Grains	15	15	15
Poultry	13	13	12
Timber	6	6	6
Dairy	5	5	6
Fruit & Vegetables	4	4	4
Beef	4	4	4
Cotton	3	3	3
Swine	3	3	3
Landlords	2	2	2
Tobacco	2	2	2
Farm-Related Business	2	2	2
Nursery	2	2	2
Other	7	7	8
Total	100%	100%	100%

As mentioned previously, loans exceeding an Association's delegated lending authority must be pre-approved by AgFirst. As a result, larger agribusiness loans are typically analyzed by AgFirst's commercial lending staff as well as the Association's own lending staff prior to an Association committing to such loans.

Exposure to losses is reduced further through collateralization and other credit enhancements, including federal government guarantees. Typically, multiple loans to the same borrower are cross-collateralized and cross-defaulted.

By law, all long-term loans must be secured by a first lien on real estate with an initial loan to appraised value not exceeding 85.00 percent. As of December 31, 2018, long-term loans represent 63.05 percent of District Association loans.

Participations/Syndications

AgFirst has a Capital Markets Unit that purchases and sells loan participations and syndications. The Bank's credit officers work with the Associations to originate loans within the District's territory, provide commercial loan expertise to augment the Associations' staff, as needed, and provide an outlet for loans that exceed Associations' various hold limits. Additionally, the Capital Markets Unit actively

pursues the purchase of participations and syndications originated outside of the District's territory by other System institutions, commercial banks, and other lenders. These loans may be held as earning assets of AgFirst or sub-participated to the Associations. The Capital Markets Unit also sells participations outside of the District to manage AgFirst's and the District Associations' loan concentrations and hold positions.

AgFirst's participation volume outstanding increased by 4.10 percent from December 31, 2017 to December 31, 2018 and decreased by 3.44 percent from December 31, 2016 to December 31, 2017. The increase in participation volume in 2018 was primarily due to additional capital markets transactions coming to market in the fourth quarter of 2018 which more than offset the impact of several large unscheduled payoffs and paydowns during the year. The decrease in participation volume in 2017 was primarily due to fewer capital markets transactions coming to market combined with several large unscheduled payoffs and paydowns.

The following table shows total participations/syndications portfolio credit exposures at December 31 of each year:

	AgFirst Participations		
(dollars in thousands)	**2018**	**2017**	**2016**
Participations Purchased	$ 6,135,958	$ 5,902,675	$ 5,999,514
Less: Participations Sold	1,670,505	1,613,130	1,556,990
Net Outstanding	4,465,453	4,289,545	4,442,524
Available Unused Commitments	2,787,278	2,758,104	2,912,526
Letters of Credit and Guarantees	57,628	63,981	69,922
Total Exposure	$ 7,310,359	$ 7,111,630	$ 7,424,972

Like the Associations, AgFirst employs a number of management techniques to limit credit risk, including underwriting standards, limits on the amounts of loans purchased from a single originator, and maximum hold positions to a single borrower and commodity. Although the participations/syndications portfolio is comprised of a small number of relatively large loans, it is diversified both geographically and on a commodity basis. Management makes adjustments to credit policy and underwriting standards when appropriate as a part of the ongoing risk management process.

The following table illustrates AgFirst's participation/syndication portfolio by geographic distribution at December 31:

	AgFirst Participations					
(dollars in thousands)	**2018**		**2017**		**2016**	
Georgia	$ 620,851	14 %	$ 637,365	15 %	$ 653,460	15 %
Florida	450,727	10	410,831	10	471,773	11
North Carolina	428,467	10	394,070	9	391,469	9
Texas	315,173	7	286,539	7	303,893	7
California	210,530	5	168,544	4	176,711	4
New York	190,780	4	160,457	4	152,046	3
Ohio	151,372	3	138,766	3	163,882	3
Minnesota	142,849	3	203,347	5	182,022	4
Kansas	128,313	3	10,820	–	5,604	–
Pennsylvania	126,895	3	153,884	4	164,449	4
South Carolina	122,840	3	92,770	2	51,901	1
Washington	103,435	2	95,792	2	110,518	2
Missouri	102,513	2	81,240	2	87,965	2
Louisiana	102,187	2	95,262	2	120,165	3
Illinois	102,158	2	80,264	2	127,494	3
Connecticut	98,866	2	71,096	2	80,591	2
Kentucky	98,736	2	92,408	2	95,248	2
Virginia	98,342	2	92,732	2	73,591	2
New Jersey	87,462	2	108,058	3	118,708	3
Colorado	85,111	2	93,693	2	102,476	2
North Dakota	75,018	2	82,135	2	87,096	2
Mississippi	74,876	2	60,131	1	48,090	1
Massachusetts	72,046	2	73,519	2	77,556	2
Nebraska	67,212	2	67,915	2	50,944	1
Other	408,694	9	537,907	11	544,872	12
	$ 4,465,453	100 %	$ 4,289,545	100 %	$ 4,442,524	100 %

The following participation/syndication table shows the various major commodity groups in the portfolio based on borrower eligibility and their percentage of the outstanding portfolio volume at December 31:

AgFirst Participations Commodity Group	Percent of Portfolio 2018	2017	2016
Forestry	19%	21%	21%
Utilities	17	16	16
Processing	16	15	16
Field Crops	7	6	5
Tree Fruits and Nuts	5	5	5
Swine	4	4	4
Nursery/Greenhouse	4	3	3
Dairy	4	3	2
Cattle	4	4	3
Poultry	2	2	1
Tobacco	2	2	2
Grains	2	2	2
Other	14	17	20
Total	100%	100%	100%

The following table segregates loans based upon repayment dependency by commodity at December 31:

AgFirst Participations Commodity Group	Percent of Portfolio 2018	2017	2016
Rural Utilities	17%	16%	16%
Timber	16	17	18
Fruit & Vegetables	10	9	9
Grains	8	8	7
Non-Farm Income	8	7	8
Swine	8	6	6
Processing and Marketing	5	9	9
Dairy	4	4	4
Poultry	3	3	2
Beef	3	4	3
Nursery	3	3	3
Wine	3	3	3
Fisheries	2	2	2
Tobacco	2	2	2
Turkey	2	2	1
Other	6	5	7
Total	100%	100%	100%

The following table represents the participation/syndication credit quality as of December 31:

Participation/Syndication Credit Quality	2018	2017	2016
Acceptable	98.37%	97.98%	94.34%
OAEM	1.17	0.82	3.46
Adverse*	0.46	1.20	2.20
Total	100.00%	100.00%	100.00%

* *Adverse loans include substandard, doubtful, and loss loans.*

Favorable credit quality in the participations/syndications portfolio reflects continued positive general economic performance.

Correspondent Lending

The Correspondent Lending portfolio (Correspondent Lending) consists primarily of first lien rural residential mortgages. Volume of this portfolio increased by 5.25 percent from year-end 2017 to 2018 and 8.03 percent from year-end 2016 to 2017. Excluding sales of $83.6 million during 2018 referenced in the *Loan Portfolio* section above, the Correspondent Lending portfolio increased 7.95 percent when compared to December 31, 2017. The increase in the Correspondent Lending portfolio is primarily due to fewer unscheduled payoffs and paydowns resulting from increased interest rates and improved demand for construction-to-permanent lending.

As of December 31, 2018, $1.310 billion, or 40.15 percent, of loans in the Correspondent Lending portfolio were guaranteed and $1.952 billion, or 59.85 percent, were non-guaranteed. The guarantees, from the Federal National Mortgage Association (Fannie Mae) and/or Federal Agricultural Mortgage Corporation (Farmer Mac), are in the form of Long-Term Standby Commitments to Purchase which give AgFirst the right to deliver delinquent loans to the guarantor at par. This guarantee program ended in 2013. Non-guaranteed loans are reflected in the Bank's allowance for loan losses methodology related to this portfolio.

Correspondent Lending loans consist of the following at December 31:

(dollars in thousands)	AgFirst Correspondent Lending 2018		2017		2016	
Rural Home Loans – Guaranteed	$ 1,157,742	35.49%	$ 1,311,079	42.30%	$ 1,481,683	51.65%
Part-time Farm Loans – Guaranteed	151,976	4.66	138,957	4.49	112,380	3.91
Non-guaranteed Loans	1,952,278	59.85	1,649,298	53.21	1,274,807	44.44
Total	$ 3,261,996	100.00%	$ 3,099,334	100.00%	$ 2,868,870	100.00%

Rural home loans are underwritten to conform to Fannie Mae underwriting standards. Part-time farm loans conform to Farmer Mac underwriting standards. During 2018, AgFirst purchased $547.8 million of rural home and part-time farm loans from various System associations.

Part-time farm loans represent first lien mortgages on homes with property characteristics (such as acreage or agricultural improvements) that may not conform to Fannie Mae standards. These loans are guaranteed by Farmer Mac.

The total volume owned as of December 31, 2018 was $3.262 billion. The total volume serviced but not owned as of December 31, 2018 was $135.8 million. The Correspondent Lending loans are sub-serviced through agreements with third parties.

At December 31, 2018, 99.68 percent of the total Correspondent Lending loans including accrued interest was classified as acceptable and 0.32 percent was classified adverse. There were none classified as OAEM.

Rural home loans, combined with Rural Home Mortgage-backed Securities (RHMS), are limited to 15 percent of total loans outstanding as defined by the FCA. Based upon FCA guidelines, at December 31, 2018, the Bank's outstanding rural home loans were 12.94 percent of total loans outstanding. The Bank monitors and manages the rural home asset level within the regulatory limit. As discussed in the *Loan Portfolio* section above, during 2018, the Bank sold $83.6 million of rural home loans in order to remain within this limit. See *Mission Related Investments* section below and Note 4, *Investments*, for further discussion of Rural Home Mortgage-backed Securities.

MISSION RELATED INVESTMENTS

The FCA initiated an Investment in Rural America program in 2004 to allow System institutions to make and hold investments that stimulate economic growth and development in rural areas. The FCA approved the RHMS and Rural America Bonds pilot programs as described below. Effective December 31, 2014, the FCA ended these pilot

programs, but each institution participating in such programs may continue to hold its investments through the maturity dates for the investments, provided the institution continues to meet all approval conditions. Beginning in 2015, mission related investments are subject to approval by the FCA on a case-by-case basis.

Rural Housing Mortgage-backed Securities

RHMS must be fully guaranteed by a government agency or GSE. The rural housing loans backing the RHMS must be conforming first-lien residential mortgage loans originated by non-System lenders in "rural areas" as defined by the Farm Security and Rural Investment Act of 2002, or eligible rural housing loans originated by System lenders under FCA regulations.

As noted above, rural home loans combined with RHMS are limited by regulation to 15 percent of total loans, as defined by the FCA. During 2018, the FCA approved the Bank's request to include its held-to-maturity RHMS securities, which totaled approximately $341.4 million at December 31, 2018, in its liquidity portfolio and exclude such RHMS from the 15 percent rural home loan limit. The Bank reclassified these securities to available-for-sale.

At December 31, 2018, total investment securities included $426.0 million in RHMS, all of which were classified as available-for-sale. At December 31, 2017, investment securities included RHMS of $399.5 million held-to-maturity and $94.5 million available-for-sale compared to $460.2 million held-to-maturity and $100.3 million available-for-sale at December 31, 2016.

Rural America Bonds

In recognition of the economic interdependence between agricultural and rural communities, AgFirst and the Associations hold investments in debt obligations that support farmers, ranchers, agribusinesses, and their rural communities and businesses. In doing so, AgFirst and the Associations hope to increase the well-being and prosperity of American farmers, ranchers, and rural residents.

The Bank had $48.4 million invested in this program as of December 31, 2018, a decrease of $17.1 million from December 31, 2017. Of the $48.4 million, the Bank had $40.4 million reflected in investment securities and $8.0 million reflected as loans on the Balance Sheets at December 31, 2018.

RISK MANAGEMENT

The organizational structure of AgFirst facilitates communication of operational and risk management issues throughout all layers of management and across all functional areas. The Bank's Executive Committee is responsible for risk management, including:

- Providing overall leadership, vision, and direction for enterprise risk management;
- Establishing an integrated risk management framework for all aspects of risk across the organization;
- Ensuring development of risk management policies, including the quantification of management's risk appetite through specific risk limits;
- Implementing a set of risk metrics and reports, including key risk exposures and early warning indicators;
- Reviewing and approving recommendations for the allocation of capital to business activities based on risk, and optimizing the Bank's risk portfolio through business activities and risk transfer strategies;
- Improving the Bank's risk management readiness through coordination of communication and training programs, risk-based performance measurement and incentives, and other change management programs;
- Assigning responsibility for development of analytical systems and data management capabilities to support the risk management program; and
- Reporting periodically to the Board of Directors on actions taken to strengthen the Bank's system of internal control.

Overview

The Bank is in the business of making agricultural and other loans that requires accepting certain risks in exchange for compensation for the risks undertaken. Proper management of the risks inherent in AgFirst's business is essential for current and long-term financial performance. Prudent and disciplined risk management includes an enterprise risk management structure to identify emerging risks and evaluate risk implications of decisions and actions taken. The objectives of risk management are to identify and assess risks, and to properly and effectively mitigate, measure, price, monitor, and report risks in the Bank's business activities. Stress testing represents a critical component of the Bank's risk management process. Stress testing is primarily an analysis performed under a wide range of economic scenarios, including unlikely but plausible economic scenarios, and is designed to determine whether the Bank has enough capital to withstand the impact of adverse developments. The Bank is required by regulation to perform stress tests with a level of sophistication appropriate to its size and complexity. The Executive Committee provides oversight of the Bank's risk management functions through an integrated management committee structure, including the Bank's Asset/Liability Management Committee (ALCO), Loan Committee, Special Assets Committee, and Senior Management Committee.

Types of risk to which the Bank has exposure include:

- *structural risk* — risk inherent in the business and related to the System structures comprised of interdependent networks of cooperative lending institutions;
- *credit risk* — risk of loss arising from an obligor's failure to meet the terms of its contract or failure to perform as agreed;
- *interest rate risk* — risk that changes in interest rates may adversely affect the Bank's operating results and financial condition;
- *liquidity risk* — risk arising from the inability to meet obligations when they come due without incurring unacceptable losses, including the ability to access the debt market;
- *operational risk* — risk of loss resulting from inadequate or failed internal processes, systems, or controls; errors by employees; fraud; or external events;
- *reputational risk* — risk of loss resulting from events, real or perceived, that shape the image of the Bank, the System, or any of its entities, including the impact of investors' perceptions about agriculture and rural financing, the reliability of Bank or System financial information, or the actions of any System institution; and
- *political risk* — risk of loss of support for the System and agriculture by federal and state governments.

Structural Risk Management

Structural risk results from the fact that AgFirst, along with its related Associations, is part of the System, which is comprised of banks and associations that are cooperatively owned, directly or indirectly, by their borrowers. Each System institution is responsible for its own risk management, and there are no formal processes or procedures in place to mandate Systemwide risk mitigation actions. Because System institutions are financially and operationally interdependent, this structure at times requires action by consensus or contractual agreement. The Federal Farm Credit Banks Funding Corporation (Funding Corporation) provides for the issuance, marketing, and processing of Systemwide Debt Securities using a network of investment dealers and dealer banks. The System banks fund association loans with Systemwide debt. Refer to Note 6, *Debt*, in the Notes to the Financial Statements for further discussion. The banks are jointly and severally liable for the repayment of Systemwide Debt Securities, exposing each bank to the risk of default of the others. Although capital at the association level reduces the banks' credit exposures with respect to their related associations, that capital may not be available to support the payment of principal and interest on Systemwide Debt Securities.

In order to mitigate this risk, the System utilizes two integrated contractual agreements executed by and among the banks— the Amended and Restated Contractual Interbank Performance Agreement (CIPA) and the Third Amended and Restated Market Access Agreement (MAA). Under provisions of the CIPA, a score is calculated quarterly that measures the financial condition and performance of each district using various ratios that take into account each district's and bank's capital, asset quality, earnings, interest-rate risk, and liquidity. Based on these measures, the CIPA establishes an agreed-upon standard of financial condition and performance that each district must achieve and maintain. The CIPA also establishes monetary penalties if the performance standard is not met. These penalties will occur at the same point at which a bank would be required to provide additional monitoring information under the MAA.

The MAA establishes criteria and procedures for the banks that provide operational oversight and control over a bank's access to System funding if the creditworthiness of the bank declines below certain agreed-upon levels. The MAA provides for the identification and resolution of individual bank financial problems in a timely manner and discharges the Funding Corporation's statutory responsibility for determining conditions for each bank's participation in each issuance of Systemwide Debt Securities.

Credit Risk Management

Credit risk arises from the potential inability of an obligor to meet its repayment obligation and exists in outstanding loans, leases, letters of credit, unfunded loan commitments, the investment portfolio and derivative counterparty credit exposures. The Bank manages credit risk associated with lending activities through an assessment of the credit risk profile of individual obligors. The Bank sets underwriting standards and lending policies consistent with FCA regulations, which provide direction to loan officers and are approved by the Board of Directors.

The credit risk management process begins with an analysis of a potential obligor's credit history, repayment capacity and financial position. Repayment capacity focuses on the obligor's ability to repay the obligation based on cash flows from operations or other sources of income. Real estate mortgage loans must be secured by first liens on the real estate collateral. As required by FCA regulations, each institution that makes loans on a secured basis must have collateral evaluation policies and procedures.

The credit risk rating process for loans uses a two-dimensional loan rating structure, incorporating a 14-point risk rating scale to identify and track a borrower's probability of default and a separate scale addressing loss given default. The loan rating structure reflects estimates of loss through two components, borrower risk and transaction risk. Borrower risk is the risk of loss driven by factors intrinsic to the borrower. The transaction risk or facility risk is related to the structure of a credit (tenor, terms, and collateral).

Through their participation in loans or interests in loans to/from other institutions within the System and outside the System, the Bank and Associations limit their exposure to both borrower and commodity concentrations. This also allows the Bank and Associations to manage growth and capital, and to improve geographic diversification. Concentration risk is reviewed and measured by industry, product, geography and customer limits.

Although neither the Bank nor any other System institution receives any direct government support, credit quality is indirectly enhanced by government support in the form of program payments to borrowers, which improve their ability to honor their commitments. However, due to the geographic location of the District and the resulting types of agriculture, government programs account for a relatively small percentage of net farm income in the territory served by the District Associations.

As a result of the improved economy and the Bank's efforts to resolve problem assets, the Bank's high-risk assets continue to be a small percentage of total loan volume and total assets. High-risk assets, including accrued interest, at December 31, are detailed in the following table:

(dollars in thousands)	2018	2017	2016
AgFirst High-risk Assets			
Nonaccrual loans	$ 24,743	$ 21,303	$ 28,978
Restructured loans	15,782	15,978	15,671
Accruing loans 90 days past due	145	–	–
Total high-risk loans	40,670	37,281	44,649
Other property owned	2,842	154	3,346
Total high-risk assets	$ 43,512	$ 37,435	$ 47,995
Ratios			
Nonaccrual loans to total loans	0.10%	0.09%	0.13%
High-risk assets to total assets	0.13%	0.12%	0.15%

Nonaccrual Loans

Nonaccrual loans represent all loans for which there is a reasonable doubt as to the collection of principal and/or interest under the contractual terms of the loan. Nonaccrual loans for the Bank at December 31, 2018 were $24.7 million compared to $21.3 million at December 31, 2017. Nonaccrual loans increased $3.4 million during 2018 due to loan balances transferred to nonaccrual status of $21.0 million, predominantly one loan relationship in the field crops segment totaling $8.2 million. This increase was partially offset by repayments of $9.0 million, Correspondent Lending loans sold to a guarantor (see *Correspondent Lending* section above) of $4.1 million, properties transferred to other property owned of $3.1 million, and reinstatements to accrual status of $2.7 million. At December 31, 2018, total nonaccrual loans were primarily classified in the rural home loan (67.22 percent of the total) and field crops (31.89 percent) segments. Nonaccrual loans were 0.10 percent of total loans outstanding at December 31, 2018 compared to 0.09 percent and 0.13 percent at December 31, 2017 and 2016, respectively.

Troubled Debt Restructurings

A troubled debt restructuring (TDR) occurs when a borrower is experiencing financial difficulties and a concession is granted to the borrower that the Bank would not otherwise consider. Concessions are granted to borrowers based on either an assessment of the borrower's ability to return to financial viability or a court order. The concessions can be in the form of a modification of terms, rates, or amounts owed. Acceptance of other assets and/or equity as payment may also be considered a concession. The type of alternative financing granted is chosen in order to minimize the loss incurred by the Bank. TDRs increased $325 thousand since December 31, 2017 and totaled $25.4 million at December 31, 2018. This total was comprised of $15.8 million of accruing restructured loans and $9.6 million of nonaccrual restructured loans. Restructured loans were primarily in the nursery/greenhouse (31.60 percent of the total), field crops (29.12 percent), and rural home loan (18.91 percent) segments.

Other Property Owned

Other property owned (OPO) consists primarily of assets once pledged as loan collateral that were acquired through foreclosure or deeded to the Bank (or a lender group) in satisfaction of secured loans. OPO may be comprised of real estate, equipment, and equity interests in companies or partnerships. OPO increased $2.7 million since December 31, 2017 and totaled $2.8 million at December 31, 2018. The increase was due primarily to one real estate property in the forestry segment totaling $2.6 million which transferred to OPO during 2018. See discussion of OPO expense in the *Noninterest Expenses* section below.

ALLOWANCE FOR LOAN LOSSES

The Bank maintains an allowance for loan losses at a level management considers adequate to provide for probable and estimable credit losses within the loan portfolio as of each reported balance sheet date. The Bank increases the allowance by recording a provision for loan losses in the income statement. Loan losses are recorded against and serve to

decrease the allowance when management determines that any portion of a loan is uncollectible. Any subsequent recoveries are added to the allowance. Impaired and certain other significant loans were reviewed individually to determine that appropriate reserves were in place at year-end. All other loans were analyzed collectively and general reserves were established based on that collective analysis including the risk rating and potential for loss given default of the underlying loans.

The following table presents the activity in the allowance for loan losses for the most recent three years at December 31:

AgFirst Allowance for Loan Losses Activity

(dollars in thousands)	2018	2017	2016
Balance at beginning of year	$ 14,381	$ 14,783	$ 15,113
Charge-offs:			
Real Estate Mortgage	–	–	(54)
Production and Intermediate-Term	(49)	–	(8)
Agribusiness	–	–	–
Rural Residential Real Estate	(160)	(177)	(117)
Total charge-offs	(209)	(177)	(179)
Recoveries:			
Real Estate Mortgage	–	34	4,511
Production and Intermediate-Term	267	292	309
Agribusiness	62	–	312
Rural Residential Real Estate	6	–	–
Total recoveries	335	326	5,132
Net (charge-offs) recoveries	126	149	4,953
Provision for (reversal of allowance for) loan losses	3,542	(551)	(5,283)
Balance at end of year	$ 18,049	$ 14,381	$ 14,783
Ratio of net (charge-offs) recoveries during the period to average loans outstanding during the period	0.00%	0.00%	0.02%

The allowance for loan losses was $18.0 million at December 31, 2018, as compared with $14.4 million and $14.8 million at December 31, 2017 and 2016, respectively. The $3.7 million allowance increase during 2018 was due primarily to specific provision expense of $4.0 million related to one loan relationship in the field crops segment. See *Provision for Loan Losses* section below for details regarding loan loss provision expense and reversals. During 2018, the rural home loan segment accounted for the majority of the charge-offs (76.43 percent of the total) and the nursery/greenhouse segment accounted for the majority of recoveries (69.93 percent of the total). The allowance at December 31, 2018 included specific reserves of $4.8 million (26.62 percent of the total) and $13.2 million of general reserves (73.38 percent), related primarily to participation loans. The general reserves at December 31, 2018 included $4.1 million of allowance provided by the Bank for non-guaranteed loans in the Correspondent Lending portfolio. See further discussion in the *Correspondent Lending* section above. None of the allowance relates to the Direct Note portfolio. See further discussion in the *Direct Notes* section above. The total allowance at December 31, 2018 was comprised primarily of reserves for the rural home loan (26.64 percent of the total), field crops (25.02 percent), utilities (8.09 percent), and processing (6.30 percent) segments.

The allowance for loan losses by loan type for the most recent three years, at December 31, is presented in the following table:

AgFirst Allowance for Loan Losses by Loan Type

(dollars in thousands)	2018	2017	2016
Real Estate Mortgage	$ 1,518	$ 1,635	$ 2,569
Production and Intermediate-Term	2,614	3,040	3,039
Agribusiness	6,959	3,633	3,287
Communication	784	744	899
Power and Water/Waste Disposal	794	1,128	1,997
Rural Residential Real Estate	4,808	3,908	2,688
Loans to OFIs	299	95	72
International	134	28	58
Other (including Mission Related)	139	170	174
Total	$ 18,049	$ 14,381	$ 14,783

The allowance for loan losses as a percentage of loans outstanding and as a percentage of certain other credit quality indicators, at December 31, is shown below:

	2018	2017	2016
Allowance for loan losses to loans	0.07%	0.06%	0.06%
Allowance for loan losses to nonaccrual loans	72.95%	67.51%	51.01%
Allowance for loan losses to participation loans, Correspondent Lending loans, and loans to OFIs	0.23%	0.19%	0.20%

Due to positive economic conditions impacting borrowers in economically sensitive segments combined with management's emphasis on underwriting standards, the credit quality of the Bank loan portfolio has remained sound. Periods of uncertainty in the general economic environment create the potential for prospective risks in the loan portfolio. See Note 3, *Loans and Allowance for Loan Losses*, in the Notes to the Financial Statements and the *Critical Accounting Policies* section above for further information concerning the allowance for loan losses.

Interest Rate Risk Management

Interest rate risk is the risk of loss of future earnings or long-term market value of equity that may result from changes in interest rates. This risk can produce variability in Bank earnings (net interest spread achieved and net interest income earned) and, ultimately, the long-term capital position of the Bank. The objective of interest rate risk management is to generate a reliable level of net interest income in any interest rate environment and to preserve the long-term market value of equity. AgFirst uses a variety of analytical techniques to manage the complexities associated with offering numerous loan options. Interest rate sensitivity gap analysis is used to monitor the repricing and maturity characteristics of AgFirst's interest-earning assets and interest-bearing liabilities. Simulation analysis is used to determine the potential change in net interest income and in the market value of equity under various possible future market interest rate environments.

AgFirst and the District Associations adhere to a philosophy that loans should be priced competitively in the market and that loan rates and spreads should be contractually established at loan closing such that a borrower is not subject to rate changes at the discretion of management or boards of directors. Therefore, District Association variable rate and adjustable rate loans are generally indexed to market rates, and fixed rate loans are priced based on market rates. Loan products offered by the Associations include Prime-indexed variable rate loans, LIBOR-indexed variable rate loans, one-, three-, and five-year Treasury-indexed adjustable rate loans, and fixed rate loans. Variable rate and adjustable rate loans are offered with or without caps. Terms are available for up to 30 years. A variety of repayment options are offered, with the ability to pay on a monthly, quarterly, semi-annual or annual frequency. In addition, customized repayment schedules may be negotiated to fit a borrower's unique circumstances.

The following tables represent AgFirst's market value of equity and projected change over the next twelve months in net interest income for various rate movements as of December 31, 2018. The upward and downward shocks are generally based on movements in interest rates which are considered significant enough to capture the effects of embedded options and convexity within the assets and liabilities so that underlying risk may be revealed.

Net Interest Income
(dollars in thousands)

Scenarios	Net Interest Income	% Change
+4.0% Shock	$358,750	(9.58)%
+2.0% Shock	$384,517	(3.09)%
Base line **	$396,774	– %
-50% of 3M Tbill ***	$401,217	1.12 %

Market Value of Equity
(dollars in thousands)

Scenarios	Assets	Liabilities*	Equity*	% Change
Book Value	$ 33,078,462	$ 30,904,015	$ 2,174,447	– %
+4.0% Shock	$ 29,898,664	$ 28,378,248	$ 1,520,416	(33.45)%
+2.0% Shock	$ 31,366,852	$ 29,463,836	$ 1,903,016	(16.70)%
Base line **	$ 32,888,876	$ 30,604,358	$ 2,284,518	– %
-50% of 3M Tbill ***	$ 33,615,374	$ 31,140,757	$ 2,474,617	8.32 %

* *For interest rate risk management, the $49.3 million perpetual preferred stock is included in liabilities rather than equity.*

** *Base line uses rates as of the balance sheet date before application of any interest rate shocks.*

*** *When the three-month Treasury bill interest rate is less than 4 percent, both the minus 200 and minus 400 basis point shocks are replaced with a downward shock which is equal to one-half of the three-month Treasury bill rate. At December 31, 2018, this downward shock was 120 basis points.*

The following table sets forth the repricing characteristics of interest-earning assets and interest-bearing liabilities outstanding at December 31, 2018. The amount of assets and liabilities shown in the table, which reprice or mature during a particular period, were determined in accordance with the earlier of term-to-repricing or contractual maturity, anticipated prepayments, and, in the case of liabilities, the exercise of call options. Anticipated loan prepayments are based on AgFirst's historical prepayment activity during various interest rate cycles.

Repricing/Maturity Gap Analysis

(dollars in thousands)	0 to 6 Months	6 Months to 1 Year	1 to 5 Years	Over 5 Years	Total
Floating Rate Loans					
Adjustable/Indexed Loans	$ 6,088,591	$ 20,675	$ 11,241	$ 19	$ 6,120,526
Fixed Rate Loans					
Fixed Rate Loans	20,975	18,931	104,248	50,403	194,557
Fixed Rate Prepayable	3,124,796	2,425,530	8,579,837	3,805,892	17,936,055
Nonaccrual Loans					
Nonaccrual Loans	–	–	–	24,743	24,743
Total Loans	**9,234,362**	**2,465,136**	**8,695,326**	**3,881,057**	**24,275,881**
Total Investments *	**4,056,218**	**1,057,098**	**2,161,290**	**806,642**	**8,081,248**
Other Interest-earning Assets	**176,807**	**–**	**–**	**–**	**176,807**
TOTAL INTEREST-EARNING ASSETS	**$ 13,467,387**	**$ 3,522,234**	**$ 10,856,616**	**$ 4,687,699**	**$ 32,533,936**
Interest-Bearing Liabilities					
Systemwide Bonds and Notes	$ 12,014,899	$ 3,341,496	$ 10,633,178	$ 4,392,128	$ 30,381,701
Interest Rate Swaps	–	–	–	–	–
TOTAL INTEREST-BEARING LIABILITIES	**$ 12,014,899**	**$ 3,341,496**	**$ 10,633,178**	**$ 4,392,128**	**$ 30,381,701**
Interest Rate Sensitivity Gap	**$ 1,452,488**	**$ 180,738**	**$ 223,438**	**$ 295,571**	
Sensitivity Gap as a % of Total Earning Assets	4.46%	0.56%	0.69%	0.91%	
Cumulative Gap	$ 1,452,488	$ 1,633,226	$ 1,856,664	$ 2,152,235	
Cumulative Gap as a % of Total Earning Assets	4.46%	5.02%	5.71%	6.62%	
Rate Sensitive Assets/Rate Sensitive Liabilities	1.12	1.05	1.02	1.07	

* *Includes cash equivalents.*

At December 31, 2018, the Cumulative Repricing/Maturity Gap position of the Bank was asset sensitive (interest rates earned by the Bank on interest-earning assets may change or be changed more quickly than interest rates on interest-bearing liabilities used to fund these assets) as repricing/maturing assets exceeded liabilities that mature or reprice during all time periods. Asset sensitivity implies an increase in net interest income in rising interest rate scenarios and lower net interest income in falling interest rate scenarios. However, the Repricing/Maturity Gap Analysis is a "point in time" view and is representative of the interest rate environment at December 31, 2018.

The Repricing/Maturity Gap Analysis must be used with other analysis methods as the repricing and maturity attributes of balance sheet accounts react differently in changing interest rate environments. During a period of rising interest rates, call options on fixed rate debt are not exercised and the debt terms extend to reflect the longer original maturity dates. Prepayment optionality on fixed rate assets also slows as the economic incentive for borrowers to refinance decreases and extends the asset's term.

To supplement the Repricing/ Maturity Gap Analysis, the Bank utilizes a financial simulation model for measuring interest rate sensitivity of

net interest income and market value of equity. These two interest rate risk metrics are measured and reported on a monthly basis to the Bank's ALCO and quarterly to the Board of Directors. They are also calculated periodically during the month as the management of interest rate risk is an on-going function embedded in the funding operations. The simulations reflected a decrease of 3.09 percent in net interest income for a +200 basis point parallel shift in interest rates which was within the Bank's policy limit of -16.00 percent. The Bank's net interest income sensitivity to falling interest rates was not significantly impacted. Market value of equity reflected a negative sensitivity in rising interest rate scenarios due to the Bank's strategy of utilizing equity as a long-term funding source. When equity is used as long-term funding, its market value behaves similarly to a fixed rate bond. The simulations reflected a decrease of 16.70 percent in market value of equity for a +200 basis point parallel shift in interest rates which was within the Bank's policy limit of -20.00 percent and appropriate for this funding structure. The Bank's market value of equity sensitivity to falling interest rates was not significantly impacted due to the current low level of interest rates.

At December 31, 2018, AgFirst had no outstanding interest rate swaps. The Bank may, under certain conditions, also use derivatives for asset/liability management purposes to reduce interest rate risk.

AgFirst policy prohibits the use of derivatives for speculative purposes. See Note 14, *Derivative Financial Instruments and Hedging Activities*, in the Notes to the Financial Statements for additional information. The following table shows the activity in derivatives during the year ended December 31, 2018:

Notional Amounts *(dollars in millions)*	**Receive Fixed**	**Forward Contracts**
Balance at December 31, 2017	$ –	$ –
Additions	–	122
Maturities/amortizations	–	(122)
Terminations	–	–
Balance at December 31, 2018	$ –	$ –

Liquidity Risk Management

Liquidity risk management is necessary to ensure the Bank's ability to meet its financial obligations. One of AgFirst's primary responsibilities is to maintain sufficient liquidity to fund the lending operations of the District Associations, in addition to its own needs. Along with normal cash flows associated with lending operations, AgFirst has two primary sources of liquidity: the capacity to issue Systemwide Debt Securities through the Federal Farm Credit Banks Funding Corporation; and cash and investments. The Bank also maintains several repurchase agreement facilities. In addition, the System has established lines of credit in the event contingency funding is needed to meet obligations of System banks.

Cash, Cash Equivalents and Investments

As of December 31, 2018, AgFirst exceeded all applicable regulatory liquidity requirements. FCA regulations require that the Bank have a liquidity policy that establishes a minimum total "coverage" level of 90 days and that short-term liquidity requirements must be met by certain high quality investments or cash. "Coverage" is defined as the number of days that maturing debt could be funded with eligible cash, cash equivalents, and available-for-sale investments maintained by the Bank.

Eligible liquidity investments are classified according to three liquidity quality levels with level 1 being the most liquid. The first 15 days of minimum liquidity coverage are met using only level 1 instruments, which include cash and cash equivalents. Days 16 through 30 of minimum liquidity coverage are met using level 1 and level 2 instruments. Level 2 consists primarily of U.S. government guaranteed securities. Days 31 through 90 are met using level 1, level 2, and level 3 securities. Level 3 consists primarily of U.S. agency investments. Additionally, a supplemental liquidity buffer in excess of the 90-day minimum liquidity reserve is set to provide coverage to at least 120 days.

At December 31, 2018, AgFirst met all individual level criteria and had a total of 217 days of maturing debt coverage. The Bank's cash and cash equivalents position provided 22 days of the total liquidity coverage. Investment securities fully backed by the U.S. government provided an additional 170 days of liquidity. An additional 25 days of coverage were provided by a supplemental liquidity buffer. Cash provided by the Bank's operating activities, primarily generated from net interest income in excess of operating expenses and maturities in the loan portfolio, is an additional source of liquidity for the Bank that is not reflected in the coverage calculation.

Cash, cash equivalents and investment securities as of December 31, 2018 totaled $8.503 billion compared to $8.836 billion and $8.844 billion at December 31, 2017 and 2016, respectively.

An agreement with a commercial bank requires AgFirst to maintain $50.0 million as a compensating balance. At December 31, 2018, the Bank held $42.2 million in U.S. Treasury securities for that purpose. The remainder of the compensating balance is held in cash in a demand deposit account. These securities are excluded when calculating the amount of eligible liquidity investments.

AgFirst's cash, cash equivalents and investment portfolio consisted of the following security types as of December 31:

	AgFirst Cash, Cash Equivalents and Investment Securities					
(dollars in thousands)	**2018**		**2017**		**2016**	
Investment Securities Available-for-Sale						
U.S. Govt. Treasury Securities	$ 389,611	4.88%	$ 490,097	6.03%	$ 341,948	4.26%
U.S. Govt. Guaranteed	4,499,597	56.38	4,535,213	55.84	4,274,286	53.21
Rural Housing U.S. Govt. Agency Guaranteed	425,953	5.33	94,549	1.16	100,334	1.25
Other U.S. Govt. Agency Guaranteed	1,846,796	23.14	1,912,294	23.54	2,150,289	26.77
Non-Agency Asset-Backed Securities	777,239	9.74	631,452	7.78	623,984	7.77
Total Available-for-Sale	$ 7,939,196	99.47%	$ 7,663,605	94.35%	$ 7,490,841	93.26%
Held to Maturity						
Rural Housing U.S. Govt. Agency Guaranteed	$ –	–%	$ 399,513	4.92%	$ 460,222	5.73%
Farmer Mac Guaranteed	1,679	0.02	2,297	0.03	2,666	0.03
Other Mission Related Investments	40,373	0.51	56,813	0.70	78,466	0.98
Total Held to Maturity	42,052	0.53	458,623	5.65	541,354	6.74
Total Investment Securities	$ 7,981,248	100.00%	$ 8,122,228	100.00%	$ 8,032,195	100.00%
Cash and Cash Equivalents						
Cash	$ 244,678	46.92%	$ 440,768	61.79%	$ 549,124	67.65%
Interest-earning Cash	176,807	33.90	–	–	–	–
Repurchase Agreements	100,000	19.18	150,000	21.03	262,624	32.35
Money Market Funds	–	–	122,519	17.18	–	–
Total Cash and Cash Equivalents	$ 521,485	100.00%	$ 713,287	100.00%	$ 811,748	100.00%
Total Investment Securities and Cash and Cash Equivalents	$ 8,502,733		$ 8,835,515		$ 8,843,943	

Cash and cash equivalents, which decreased $191.8 million from December 31, 2017 to a total of $521.5 million at December 31, 2018, consist primarily of noninterest-earning cash on deposit, interest-earning cash, and money market securities that are short-term in nature (from overnight maturities to maturities that range up to 90 days). Money market securities must carry one of the two highest short-term ratings from a rating agency. Incremental movements in cash balances are due primarily to changes in liquidity needs in relation to upcoming debt maturities between reporting periods.

FCA regulations provide that a System bank may hold certain eligible available-for-sale investments in an amount not to exceed 35.00 percent of its total loans outstanding. Based upon FCA guidelines, at December 31, 2018, the Bank's eligible available-for-sale investments were 33.76 percent of the total loans outstanding. These investments serve to provide liquidity to the Bank's operations, to manage short-term funds, and to manage interest rate risk. AgFirst maintains an investment portfolio for these purposes comprised primarily of short-duration, high-quality investments. During 2018, the FCA approved the Bank's request to include its held-to-maturity RHMS securities, which totaled approximately $341.4 million at December 31, 2018, in its liquidity portfolio. The Bank then reclassified these securities to available-for-sale. See *Mission Related Investments* section above for further discussion.

Investment securities totaled $7.981 billion, or 24.13 percent of total assets at December 31, 2018, compared to $8.122 billion, or 25.00 percent, as of December 31, 2017. Investment securities decreased $141.0 million, or 1.74 percent, compared to December 31, 2017. Management maintains the available-for-sale liquidity investment portfolio size generally proportionate with that of the loan portfolio and within regulatory and policy guidelines. During 2018, the Bank sold investment securities totaling $11.7 million which resulted in a realized net gain of $13 thousand. During 2017, the Bank sold investment securities totaling $77.4 million which resulted in a realized net loss of $258 thousand. These transactions benefitted the Bank by reducing costs and improving liquidity.

Investment securities classified as being available-for-sale totaled $7.939 billion at December 31, 2018. As of December 31, 2018, all of these non-agency asset-backed securities were rated in the top category (AAA/Aaa) by Nationally Recognized Statistical Rating Organizations (NRSROs). Since the majority of the portfolio is invested in agency securities, the portfolio is highly liquid and potential credit loss exposure is limited.

AgFirst also maintains a portfolio of investments that are not held for liquidity purposes and are accounted for as a held-to-maturity portfolio. These investments are authorized by FCA regulations that allow investments in Farmer Mac securities and also in investments approved by the FCA as Mission Related Investments. Investment securities classified as being held-to-maturity totaled $42.1 million at December 31, 2018.

Net unrealized losses related to investment securities were $49.4 million at December 31, 2018, compared to $20.0 million at December 31, 2017. These net unrealized losses are reflected in Accumulated Other Comprehensive Income (AOCI) in the Financial Statements. The net unrealized losses stem from normal market factors such as the current interest rate environment.

The Bank performs periodic credit reviews, including other-than-temporary impairment analyses, on its entire investment securities portfolio. Based on the results of all analyses, the Bank did not recognize any other-than-temporary credit related impairment during the year ended December 31, 2018. See *Noninterest Income* section below; Note 2, *Summary of Significant Accounting Policies*; and Note 4, *Investments,* in the Notes to the Financial Statements for further information.

Systemwide Debt Securities

The U.S. government does not guarantee, directly or indirectly, Systemwide Debt Securities. However, the Farm Credit System, as a GSE, has benefited from broad access to the domestic and global capital markets. This access has provided the System with a dependable source of competitively priced debt which is critical for supporting the System's mission of providing credit to agriculture and rural America. The implied link between the credit rating of the System and the U.S. government, given the System's status as a GSE and continued concerns regarding the government's borrowing limit and budget imbalances, could pose risk to the System in the future.

AgFirst's primary source of liquidity comes from its ability to issue Systemwide Debt Securities, which are the general unsecured joint and several obligations of the System banks. AgFirst continually raises funds in the debt markets to support its mission, to repay maturing Systemwide Debt Securities, and to meet other obligations.

The System does not have a guaranteed line of credit from the U.S. Treasury or the Federal Reserve. However, the Farm Credit System Insurance Corporation (FCSIC) has an agreement with the Federal Financing Bank (FFB), a federal instrumentality subject to the supervision and direction of the U.S. Treasury, pursuant to which the FFB could advance funds to the FCSIC. Under its existing statutory authority, the FCSIC may use these funds to provide assistance to the System banks in exigent market circumstances which threaten the banks' ability to pay maturing debt obligations. The agreement provides for advances of up to $10 billion and terminates on September 30, 2019, unless otherwise renewed. The decision whether to seek funds from the FFB is at the discretion of the FCSIC. Each funding obligation of the FFB is subject to various terms and conditions and, as a result, there can be no assurance that funding would be available if needed by AgFirst or the System.

Currently, Moody's Investors Service and Fitch Ratings have assigned long-term debt ratings for the System of Aaa and AAA, and short-term debt ratings of P-1 and F1, respectively. These are the highest ratings available from these rating agencies. S&P Global Ratings (S&P) maintains the long-term sovereign credit rating of the U.S. government at AA+, which directly corresponds to its AA+ long-term debt rating of the System. These rating agencies base their ratings on many quantitative and qualitative factors, including the System's status as a GSE. Negative changes to the System's credit ratings could reduce earnings by increasing debt funding costs, and could also have a material adverse effect on liquidity, the ability to conduct normal business operations, and the Bank's overall financial condition and results of operations. However, AgFirst anticipates continued access to funding necessary to support the District's and Bank's needs.

AgFirst's year-to-date average balance of Systemwide Debt Securities at December 31, 2018, was $29.656 billion. At December 31, 2018, AgFirst had $30.382 billion in total System debt outstanding compared to $29.763 billion at December 31, 2017 and $29.408 billion at December 31, 2016. Total interest-bearing liabilities increased primarily due to additional funding needs related to a higher level of loans as discussed elsewhere in this report.

AgFirst's recorded liability for outstanding Systemwide Debt Securities as of December 31, 2018 is shown in the following table:

	December 31, 2018					
	Bonds		Discount Notes		Total	
Maturities	Amortized Cost	Weighted Average Interest Rate	Amortized Cost	Weighted Average Interest Rate	Amortized Cost	Weighted Average Interest Rate
			(dollars in thousands)			
2019	$ 6,729,405	1.90%	$ 4,574,334	2.41%	$ 11,303,739	2.11%
2020	6,359,623	2.08	–	–	6,359,623	2.08
2021	3,440,190	2.15	–	–	3,440,190	2.15
2022	2,281,959	2.35	–	–	2,281,959	2.35
2023	1,576,605	2.42	–	–	1,576,605	2.42
2024 and after	5,419,585	2.92	–	–	5,419,585	2.92
Total	$ 25,807,367	2.26%	$ 4,574,334	2.41%	$ 30,381,701	2.29%

In the preceding table, weighted average interest rates include the effect of any related derivative financial instruments, if applicable.

Refer to Note 6, *Debt*, in the Notes to the Financial Statements, for additional information related to debt.

Operational Risk Management

Operational risk is the risk of loss resulting from inadequate or failed processes or systems, human factors or external events, including the execution of unauthorized transactions by employees, errors relating to transaction processing and technology, breaches of the internal control system and the risk of fraud by employees or persons outside the System. AgFirst's and the Associations' boards of directors are required, by regulation, to adopt internal control policies that provide adequate direction to their respective institutions in establishing effective controls over and accountability for operations, programs, and resources. The policies must include, at a minimum, the following items:

- direction to management that assigns responsibility for the internal control function to an officer of the institution,
- adoption of internal audit and control procedures,
- direction for the operation of a program to review and assess an institution's assets,
- adoption of loan, loan-related assets and appraisal review standards, including standards for scope of review selection and standards for work papers and supporting documentation,
- adoption of asset quality classification standards,
- adoption of standards for assessing credit administration, including the appraisal of collateral, and
- adoption of standards for the training required to initiate a program.

In addition, AgFirst has implemented a Risk Management Policy to ensure that business exposures to risk are identified, measured and controlled, using the most effective and efficient methods to mitigate such exposures. AgFirst's risk management structure was designed to ensure that an effective enterprise-wide risk management program is in place. Exposure to operational risk is typically identified with the assistance of senior management, and internal audit plans are developed with higher risk areas receiving more attention. AgFirst's operations rely on the secure processing, transmission and storage of confidential information in its computer systems and networks. Although AgFirst believes that it has robust information security procedures and controls, its technologies, systems, networks and customers' devices may be the target of cyber-attacks or information security breaches. Failure in or breach of AgFirst's operational or security systems or infrastructure, or those of its third-party vendors and other service providers, including as a result of cyber-attacks, could disrupt AgFirst's businesses or the businesses of its customers, result in the unintended disclosure or misuse of confidential or proprietary information, damage the Bank's reputation, increase costs, and cause losses.

No control system, no matter how well designed and operated, can provide absolute assurance that the objectives of the control systems are met. Also, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud or errors can be detected. These inherent limitations include, but are not limited to, the realities that judgments in decision-making can be faulty and breakdowns can occur because of simple error or mistake. Additionally, controls can be circumvented by individual acts of some persons, collusion of two or more people, or management override of the control. The design of any system of controls also is based in part on certain assumptions about the likelihood of future events and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions. Over time, controls may be inadequate because of changes in conditions, or compliance with policies or procedures may deteriorate.

Reputational Risk Management

Reputation risk is defined as the negative impact resulting from events, real or perceived, that shape the image of the Bank, System or any of its entities. Such risks include impacts related to investors' perceptions about agriculture, the reliability of the Bank, System, or other System institution financial information or actions by the Bank or any other System institution. Entities that serve the System at the national level, including the Coordinating Committee, the Presidents' Planning Committee and The Farm Credit Council, will communicate guidance to the System for reputational issues that have broader consequences for the System as a whole. These entities support those business and other practices that are consistent with the Bank's mission.

Political Risk Management

Political risk to the System is the risk of loss of support for the System or agriculture by the U.S. government. System institutions are instrumentalities of the federal government and are intended to further governmental policy concerning the extension of credit to or for the benefit of agriculture and rural America. The System and its borrowers may be significantly affected by federal legislation that impacts the System directly, such as changes to the Farm Credit Act of 1971, as amended (the Farm Credit Act), or indirectly, such as agricultural appropriations bills. However, government programs account for a relatively small percentage of net farm income in the territory served by the District Associations.

The District addresses political risk by actively supporting The Farm Credit Council, which is a full-service, federal trade association representing the System before Congress, the Executive Branch, and others. The Farm Credit Council provides the mechanism for "grassroots" involvement in the development of System positions and policies with respect to federal legislation and government actions that impact the System. Additionally, the District takes an active role in representing the individual interests of System institutions and their borrowers before Congress. Each district has its own Council, which is a member of The Farm Credit Council. The district Councils represent the interests of their members on a local and state level, as well as on a federal level.

RESULTS OF OPERATIONS

Net Income

AgFirst net income totaled $306.0 million for the year ended December 31, 2018, a decrease of $38.8 million from 2017. Net income of $344.7 million for the year ended December 31, 2017 was an increase of $2.8 million from 2016. Major components of the changes in net income for the referenced periods are outlined in the following table and discussion:

Change in Net Income *(dollars in thousands)*	**Year Ended December 31, 2018**	**2017**
Net income (for prior year)	$ 344,749	$ 341,963
Increase (decrease) due to:		
Total interest income	150,141	80,370
Total interest expense	(187,041)	(98,307)
Net interest income	(36,900)	(17,937)
Provision for loan losses	(4,093)	(4,732)
Noninterest income	13,101	19,979
Noninterest expense	(10,869)	5,476
Total increase (decrease) in net income	(38,761)	2,786
Net income	$ 305,988	$ 344,749

Key Results of Operations Comparisons

Key results of operations comparisons for years ended December 31 are shown in the following table:

	For the Year Ended December 31,		
Key Results of Operations Comparisons	**2018**	**2017**	**2016**
Return on average assets	0.95%	1.09%	1.08%
Return on average shareholders' equity	13.03%	14.36%	14.45%
Net interest income as a percentage of average earning assets	1.29%	1.44%	1.53%
Operating expense as a percentage of net interest income and noninterest income	30.61%	26.72%	28.56%
Net (charge-offs) recoveries to average loans	0.00%	0.00%	0.02%

A decline in net interest income in 2018 compared to the prior year, discussed below, was the primary driver of the decreases in return on average assets, return on average shareholders' equity, and net interest income as a percentage of average earning assets. In 2017, the return on average assets increased primarily as a result of an increase in net income while higher average shareholders' equity resulted in a decline in the return on average shareholders' equity. Lower net interest income in 2017 resulted in lower net interest income as a percentage of average earning assets.

For the operating expense as a percentage of net interest income and noninterest income ratio, operating expense consists primarily of noninterest expense excluding losses (gains) from other property owned. This ratio was negatively impacted by the decline in net interest income in 2018. In 2017, the ratio was positively impacted by lower operating expenses resulting from a reduction in postretirement benefits costs due to a change in accounting estimate related to the Bank's multiemployer benefit plans.

The net (charge-offs) recoveries to average loans ratio remained relatively constant for all periods presented due to minimal net (charge-offs) recoveries.

See *Allowance for Loan Losses, Net Interest Income, Noninterest Income*, and *Noninterest Expenses* sections for further discussion.

Interest Income

Total interest income for the year ended December 31, 2018 was $1.011 billion, an increase of $150.1 million, as compared to the same period of 2017. Total interest income for 2017 was $860.6 million, an increase of $80.4 million, as compared to the same period of 2016. The increases in interest income in 2018 and 2017 resulted primarily from higher yields on interest earning assets. The average yield on interest earning assets increased 42 basis points from 2017 to 2018 and 20 basis points from 2016 to 2017.

The following table illustrates the impact of volume and yield changes on interest income:

Net Change in Interest Income *(dollars in thousands)*	**Year Ended December 31, 2018-2017**	**2017-2016**
Current year increase (decrease) in average earning assets	$ 651,374	$ 613,272
Prior year average yield	2.77%	2.57%
Interest income variance attributed to change in volume	18,065	15,731
Current year average earning assets	31,680,701	31,029,327
Current year increase (decrease) in average yield	0.42%	0.20%
Interest income variance attributed to change in yield	132,076	64,639
Net change in interest income	$ 150,141	$ 80,370

Interest Expense

Total interest expense for the year ended December 31, 2018 was $600.5 million, an increase of $187.0 million, as compared to the same period of 2017. Total interest expense for the year ended December 31, 2017 was $413.5 million, an increase of $98.3 million, as compared to the same period of 2016. The increases in both 2018 and 2017 were primarily due to higher rates paid on System debt obligations.

The following table illustrates the impact of volume and rate changes on interest expense:

Net Change in Interest Expense *(dollars in thousands)*	**Year Ended December 31, 2018-2017**	**2017-2016**
Current year increase (decrease) in average interest-bearing liabilities	$ 656,762	$ 49,926
Prior year average rate	1.43%	1.09%
Interest expense variance attributed to change in volume	9,365	544
Current year average interest-bearing liabilities	29,656,422	28,999,660
Current year increase (decrease) in average rate	0.60%	0.34%
Interest expense variance attributed to change in rate	177,676	97,763
Net change in interest expense	$ 187,041	$ 98,307

Net Interest Income

Net interest income decreased both from 2017 to 2018 and 2016 to 2017, as illustrated by the following table:

AgFirst Analysis of Net Interest Income
Year Ended December 31,

(dollars in thousands)	2018			2017			2016		
	Avg. Balance	Interest	Avg. Yield	Avg. Balance	Interest	Avg. Yield	Avg. Balance	Interest	Avg. Yield
Loans	$ 23,398,668	$ 813,109	3.48%	$ 22,776,555	$ 710,835	3.12%	$ 22,320,250	$ 655,393	2.94%
Investments	8,240,538	196,553	2.39	8,252,772	149,737	1.81	8,095,805	124,809	1.54
Other	41,495	1,051	2.53	–	–	–	–	–	–
Total earning assets	31,680,701	1,010,713	3.19	31,029,327	860,572	2.77	30,416,055	780,202	2.57
Interest-bearing liabilities	29,656,422	(600,546)	2.03	28,999,660	(413,505)	1.43	28,949,734	(315,198)	1.09
Spread			1.16			1.34			1.48
Impact of capital	$ 2,024,279		0.13	$ 2,029,667		0.10	$ 1,466,321		0.05
Net Interest Income (NII) & NII to average earning assets		$ 410,167	1.29%		$ 447,067	1.44%		$ 465,004	1.53%

Net interest income for the year ended December 31, 2018 was $410.2 million compared to $447.1 million for the same period of 2017, a decrease of $36.9 million or 8.25 percent. The net interest margin, which is net interest income as a percentage of average earning assets, was 1.29 percent and 1.44 percent in the current year and previous year, respectively, a decrease of 15 basis points. The decline in the net interest margin resulted primarily from higher rates paid on interest-bearing liabilities.

No debt was called during the year ended December 31, 2018. The Bank called debt totaling $2.297 billion and $16.597 billion for the years ended December 31, 2017 and 2016, respectively, and was able to lower the cost of funds. Over time, as interest rates change and as assets prepay or reprice, the positive impact on the net interest margin that the Bank has experienced over the last several years from calling debt will continue to diminish.

Provision for Loan Losses

AgFirst measures risks inherent in its portfolio on an ongoing basis and, as necessary, recognizes provision for loan loss expense so that appropriate reserves for loan losses are maintained. Loan loss provision was a net expense of $3.5 million, a net reversal of $551 thousand, and a net reversal or $5.3 million for the years ended December 31, 2018, 2017, and 2016, respectively.

The $3.5 million in net provision expense for the year ended December 31, 2018 consisted of $4.0 million of net provision expense for specific reserves, offset by $430 thousand of net provision reversals for general reserves. Provision for loan losses for 2018 primarily resulted from expense in the field crops segment of $3.1 million, predominantly driven by expense related to one loan relationship that was transferred to nonaccrual in 2018, and $1.1 million in the rural home loan segment.

The $551 thousand in net provision reversals for the year ended December 31, 2017 consisted of $787 thousand of net provision reversals for general reserves, offset by $236 thousand of net provision expense for specific reserves. Total net provision reversals for 2017 primarily related to borrowers in the utilities ($1.1 million), forestry ($646 thousand), and tree fruits and nuts ($303 thousand) segments, partially offset by provision expense in the rural home loan ($1.4 million) and field crops ($712 thousand) segments.

The $5.3 million in net reversals of loan loss expense for the year ended December 31, 2016 consisted of $6.0 million of reversals related to reserves for specific credits, offset by $685 thousand of provision expense related to general reserves. Total net provision reversals for 2016 primarily related to borrowers in the other real estate ($4.8 million) and tree fruits and nuts ($1.7 million) segments, partially offset by provision expense in the rural home loan ($1.0 million) segment.

The increase in provision expense for 2018 was primarily due to an increase in specific reserves on one loan relationship that transferred to nonaccrual during 2018. The net provision reversals for 2017 and 2016 resulted primarily from a reduction in the overall level of problem assets. See the *Allowance for Loan Losses* section above and Note 3, *Loans and Allowance for Loan Losses*, in the Notes to the Financial Statements for further information.

Noninterest Income

Noninterest income for each of the three years ended December 31 is shown in the following table:

Noninterest Income	For the Year Ended December 31,			Increase (Decrease)	
(dollars in thousands)	2018	2017	2016	2018/ 2017	2017/ 2016
Loan fees	$ 8,894	$ 8,595	$ 8,963	$ 299	$ (368)
Building lease income	3,287	3,543	3,516	(256)	27
Net impairment losses	–	–	(14,947)	–	14,947
Gains (losses) on investments, net	13	(258)	23,822	271	(24,080)
Gains (losses) on debt extinguishment	150	(4,528)	(29,900)	4,678	25,372
Gains (losses) on other transactions	1,462	1,802	419	(340)	1,383
Insurance premium refund	6,330	–	–	6,330	–
Other noninterest income	16,340	14,221	11,523	2,119	2,698
Total noninterest income	$ 36,476	$ 23,375	$ 3,396	$ 13,101	$ 19,979

Total noninterest income increased $13.1 million from 2017 to 2018 primarily due to an insurance premium refund received in 2018 and lower losses on debt extinguishment. Total noninterest income increased $20.0 million from 2016 to 2017 primarily due to lower debt extinguishment and impairment losses, partially offset by lower gains on investments. Significant line item variances are discussed further below.

Net impairment losses on investments of $14.9 million recorded in 2016 resulted primarily from $13.2 million in impairment losses which

were recognized as a result of the sale in August, 2016 of all of the Bank's ineligible available-for-sale investment securities which totaled $129.4 million. The additional $1.7 million of impairment recorded in 2016 also related to these ineligible securities. No impairment losses were recorded during 2018 and 2017. See the *Cash, Cash Equivalents and Investments* section and Note 4, *Investments*, in the Notes to the Financial Statements for further information.

Gains (losses) on investments during 2018, 2017, and 2016 were the result of investment activities related to managing the composition and overall size of the investment portfolio. These transactions benefitted the Bank by reducing carrying costs and improving liquidity. Gains on investments totaled $13 thousand for the year ended December 31, 2018, losses on investments totaled $258 thousand for the year ended December 31, 2017 and gains on investments totaled $23.8 million for the year ended December 31, 2016. During 2018, the Bank sold securities totaling $11.7 million which resulted in a net gain of $13 thousand. During 2017, the Bank sold securities totaling $77.4 million which resulted in a net loss of $258 thousand. Gains of $23.2 million were recognized in August 2016 on the sale of the Bank's ineligible available-for-sale securities which totaled $129.4 million as discussed above. These transactions also benefitted the Bank by eliminating future costs related to third-party impairment modeling, and reducing FCSIC premium and safekeeping expenses. Also during 2016, the Bank sold agency mortgage-backed securities totaling $15.0 million which resulted in gains totaling $620 thousand. See the *Cash, Cash Equivalents and Investments* section above and Note 4, *Investments*, in the Notes to the Financial Statements for further information.

Losses on debt extinguishment decreased $4.7 million and $25.4 million for the years ended December 31, 2018 and 2017, respectively. No debt was called during the year ended December 31, 2018. The gain of $150 thousand in 2018 resulted from discount notes extinguished totaling $450.0 million. In 2017 and 2016, losses on called debt were $4.5 million and $29.9 million, respectively. Debt issuance expense is amortized over the life of the underlying debt security, so when debt securities are called prior to maturity, any unamortized issuance costs are recognized as losses on debt extinguishment. Call options were exercised on bonds totaling $2.297 billion in 2017 and $16.597 billion in 2016. Debt is called to take advantage of favorable market interest rate changes. The amount of debt issuance cost expensed is dependent upon both the volume and remaining maturity of the debt when called. Losses on called debt are more than offset by interest expense savings realized as called debt is replaced by new debt issued at a lower rate of interest.

Gains on other transactions increased $1.4 million for the year ended December 31, 2017 compared to the prior year. The increase resulted primarily from $1.3 million in higher market value gains on certain retirement plan trust assets and a $669 thousand loss recorded in 2016 due to a negotiated termination of a vendor contract. These increases were partially offset by $502 thousand in higher provision expense for unfunded commitments. Changes in the reserve for unfunded commitments resulted from fluctuations in both the balance and composition of unfunded commitments.

In the first quarter of 2018, the Bank received an insurance premium refund of $6.3 million from the FCSIC, which insures the System's debt obligations. This refund is nonrecurring and resulted from the assets of the FCSIC exceeding the secure base amount as defined by the Farm Credit Act.

For the years ended December 31, 2018 and 2017, other noninterest income increased $2.1 million and $2.7 million, respectively. The increase in 2018 resulted primarily from an increase of $1.2 million in income from services provided to Farm Credit entities outside the AgFirst District and an increase of $844 thousand in patronage received from other Farm Credit institutions, primarily due to the receipt of special patronage resulting from recently enacted federal tax legislation. The increase in 2017 was due primarily to an increase in patronage received from other Farm Credit institutions of $3.5 million, primarily from the sale of Direct Notes as mentioned in the *Direct Notes* section above. For 2017, the increase was partially offset by decreases of $332 thousand in services provided to associations and $421 thousand in previously forfeited earnest money received in 2016 on the sale of OPO properties.

Noninterest Expenses

Noninterest expenses for each of the three years ended December 31 are shown in the following table:

Noninterest Expenses	**For the Year Ended December 31,**			**Increase/(Decrease)**	
(dollars in thousands)	**2018**	**2017**	**2016**	**2018/ 2017**	**2017/ 2016**
Salaries and employee benefits	$ 63,546	$ 58,282	$ 58,359	$ 5,264	$ (77)
Occupancy and equipment	22,597	22,834	22,098	(237)	736
Insurance Fund premiums	8,265	13,868	16,229	(5,603)	(2,361)
Other operating expenses	42,289	30,698	37,085	11,591	(6,387)
Losses (gains) from other property owned	416	562	(2,051)	(146)	2,613
Total noninterest expenses	$ 137,113	$ 126,244	$ 131,720	$ 10,869	$ (5,476)

Total noninterest expenses increased $10.9 million and decreased $5.5 million in 2018 and 2017, respectively. The increase in 2018 was primarily due to an increase in other operating expenses while the decrease in 2017 was primarily due to a decrease in other operating expenses. Significant line item variances are discussed below.

Salaries and employee benefits expenses increased $5.3 million for the year ended December 31, 2018. The increase resulted primarily from an increase of $3.5 million in salaries and incentives due mainly to normal salary administration and an increase in headcount. Increases of $559 thousand in pension expense, which resulted primarily from higher service costs, and $474 thousand in group health insurance, which was primarily due to an additional premium holiday in 2017 compared to 2018, also contributed to the increase.

Occupancy and equipment expense increased $736 thousand for the year ended December 31, 2017 compared to the prior year. The increase was primarily due to higher software maintenance costs of $2.3 million, partially offset by $1.2 million lower depreciation expense and a decrease in hardware maintenance costs of $264 thousand. Building lease income offset a portion of these expenses for all three years. See *Noninterest Income* section for additional information.

Insurance Fund premiums decreased $5.6 million and $2.4 million for the years ended December 31, 2018 and 2017, respectively, compared to the prior years. These decreases resulted primarily from decreases in the base annual premium rate. The base annual premium rate was 9 basis points in 2018, 15 basis points in 2017, 16 basis points in the first half of 2016, and 18 basis points in the second half of 2016. The FCSIC Board makes premium rate adjustments, as necessary, to maintain the secure base amount which is based upon insured debt outstanding at System banks. The insurance fund premium rate will remain at 9 basis points for at least the first half of 2019.

Other operating expenses increased $11.6 million and decreased $6.4 million in 2018 and 2017, respectively, compared to the prior years. The increase in 2018 and the decrease in 2017 resulted primarily from

an $8.1 million reduction in other operating expenses in 2017 due to a change in the method of recording expenses at participating District entities for the multiemployer pension and postretirement benefits plans in which the Bank participates. Prior to 2017, expense was recorded based on allocations of actuarially-determined costs and any differences between recorded expense and actual contributions were recorded in Other Assets or Other Liabilities on the Balance Sheets. For 2017 and future years, participating entities will record postretirement benefit costs based on the actual contributions to the plans. This change caused the Bank to modify its accounting estimates recorded in Other Assets and Other Liabilities since the assets and liabilities do not impact future contributions to the plans. The change in estimate resulted in the reduction of Other Assets by $9.1 million and the reduction of Other Liabilities by $17.2 million on the Bank's Balance Sheets, and a total reduction of other operating expenses on the Bank's Statements of Income of $8.1 million during 2017.

Excluding the $8.1 million reduction in other operating expenses discussed above, other operating expenses would have increased $3.5 million in 2018 and $1.7 million in 2017. The increase in 2018 was primarily due to a $3.1 million increase in consultant and professional fees predominantly related to technology initiatives. In 2017, a $2.2 million increase in professional fees primarily related to technology initiatives was partially offset by $909 thousand in lower periodic costs related to nonaccrual loans, primarily legal fees and property taxes, as the balance of nonaccrual loans decreased from 2016 to 2017.

Losses from other property owned decreased by $146 thousand in 2018 compared to 2017. For 2017 compared to 2016, gains from other property owned decreased $2.6 million primarily due to a $2.3 million gain recognized in 2016 on the sale of one real estate property. See additional discussion in the *Other Property Owned* section above and Note 5, *Real Estate and Other Property*, in the Notes to the Financial Statements.

CAPITAL

Capital serves to support future asset growth, investment in new products and services, and to provide protection against credit, interest rate, and other risks, as well as operating losses. A sound capital position is critical to provide protection to investors in Systemwide Debt Securities and to ensure long-term financial success.

The AgFirst Capitalization Plan (the "Plan") approved by the Bank's Board of Directors establishes guidelines to ensure that adequate capital is maintained for continued financial viability, to provide for growth necessary to meet the needs of members/borrowers, and to ensure that all stockholders are treated equitably. The Bank's capital objectives are considered adequate to support inherent risk. There were no significant changes to the Plan for 2018. See *Regulatory Matters* section below for further discussion.

Total shareholders' equity at December 31, 2018 was $2.224 billion, compared to $2.243 billion and $2.225 billion at December 31, 2017 and 2016, respectively. The decrease in 2018 of $19.1 million primarily resulted from an increase in unrealized losses on investments of $29.4 million, partially offset by an increase in retained earnings from net income of $306.0 million, net of cash patronage declared of $298.2 million. The increase in 2017 of $17.6 million primarily resulted from an increase in retained earnings from net income of $344.7 million and the net issuance of $9.1 million in capital stock and participation certificates, partially offset by cash patronage declared of $312.5 million and an increase in unrealized losses on investments of $22.6 million.

The Bank's patronage declared in 2018, 2017, and 2016 was based on paying Associations and OFIs a dividend equal to 75 basis points relative to their average Direct Note balance, paying Associations and OFIs a dividend equal to 75 basis points relative to their patronage-based Capital Markets participations, and paying a dividend to participants in Association capitalized participation pools in an amount of 100 percent of pool net income. Also, favorable earnings and modest balance sheet growth in recent years have resulted in stronger than historical Bank capital levels. After considering current capital levels and projected capital needs, during 2018, 2017, and 2016, the Bank's Board of Directors declared additional patronage totaling $142.0 million, $160.0 million and $100.0 million, respectively. Patronage is paid in the year following declaration.

The Associations are required to maintain ownership in the Bank in the form of Class B and Class C stock. At December 31, 2018, 2017, and 2016, the Associations' minimum stock requirement was 1.40 percent of Association Direct Note balances. A stock equalization computation is made annually. OFIs are required to capitalize their loans at the same level as District Associations. The Bank's capital stock and participation certificates totaled $317.8 million at December 31, 2018, compared to $313.8 million and $301.9 million at December 31, 2017 and 2016, respectively. The net increases of $4.1 million and $11.8 million in 2018 and 2017, respectively, were due to the issuance of stock to Associations as a result of higher Direct Note balances and the issuance of stock patronage to another System bank.

During 2016, the Bank repurchased through privately negotiated transactions, and subsequently cancelled, Class B Perpetual Non-Cumulative Fixed-to-Floating Rate Subordinated Preferred Stock with a par value totaling $65.8 million. The effect of the repurchases on shareholders' equity was to reduce preferred stock outstanding by $65.8 million and to increase additional paid-in capital by $18.9 million. There were no repurchases of preferred stock during 2018 and 2017.

See Note 7, *Shareholders' Equity*, in the Notes to the Financial Statements for further information.

Regulatory Ratios

The Bank's regulatory ratios (calculated using a three-month average daily balance) are shown in the following table:

	Regulatory Minimum, Including Buffer**	AgFirst Ratio as of December, 31,		
		2018	2017	2016
Permanent Capital Ratio	7.00%	21.67%	22.21%	21.31%
Common Equity Tier 1 (CET1) Capital Ratio	7.00%	21.20%	21.73%	*
Tier 1 Capital Ratio	8.50%	21.64%	22.18%	*
Total Regulatory Capital Ratio	10.50%	21.79%	22.31%	*
Tier 1 Leverage Ratio	5.00%	7.53%	7.67%	*
Unallocated Retained Earnings (URE) and URE Equivalents Leverage Ratio	1.50%	6.58%	6.72%	*
Total Surplus Ratio	7.00%	*	*	21.21%
Core Surplus Ratio	3.50%	*	*	19.13%
Net Collateral Ratio	103.00%	*	*	106.69%

**Not applicable due to changes in regulatory capital ratio requirements effective January 1, 2017.*
*** Includes fully phased-in capital conservation buffers which will be effective January 1, 2020.*

The FCA sets minimum regulatory capital adequacy requirements for System banks and associations. Effective January 1, 2017, these requirements were modified to make System regulatory requirements more transparent and to ensure that the System's capital requirements are comparable with the Basel III framework and the standardized approach of federal banking regulatory agencies. The new requirements are based on regulatory ratios as defined by the FCA and include common equity tier 1 (CET1), tier 1, and total capital ratios which replace the total surplus and core surplus ratios. The net collateral ratio is also replaced by the tier 1 leverage ratio and the unallocated retained earnings (URE) and URE equivalents leverage ratio under the new regulations. The permanent capital ratio remains in effect under the Farm Credit Act with minor modifications to risk-adjusted assets.

The permanent capital, CET1, tier 1, and total capital ratios are calculated by dividing the three-month average daily balance of the capital numerator, as defined by the FCA, by a risk-adjusted asset base as were the total surplus and core surplus ratios prior to 2017. Unlike these ratios, the tier 1 leverage, URE and URE equivalents, and collateral ratios do not incorporate any risk-adjusted weighting of assets. Risk-adjusted assets refer to the total dollar amount of the institution's assets adjusted by an appropriate credit conversion factor as defined by regulation. Generally, higher credit conversion factors are applied to assets with more inherent risk. The tier 1 leverage and URE and URE equivalents leverage ratios are calculated by dividing the three-month average daily balance of the capital numerator, as defined by the FCA, by the three-month average daily balance of total assets adjusted for regulatory deductions. The collateral ratio was calculated by dividing the Bank's period-end collateral, as defined by FCA regulations, by period-end total liabilities.

For all periods presented, AgFirst exceeded minimum regulatory standards for all of the ratios. At December 31, 2018, the Bank's permanent capital, CETI, tier 1, and total capital ratios and the tier 1 leverage ratio declined compared to December 31, 2017 due to higher average risk-weighted asset and total asset levels in the 2018 period. The decline in the URE and URE equivalents leverage ratio at December 31, 2018 compared to December 31, 2017 was also impacted by lower average URE and URE equivalents in the 2018 period.

See *Regulatory Matters* section below and Note 7, *Shareholders' Equity*, in the Notes to the Financial Statements for additional information regarding regulatory capitalization requirements and restrictions.

THE DISTRICTWIDE YOUNG, BEGINNING, AND SMALL (YBS) FARMERS AND RANCHERS PROGRAM

The District is committed to providing sound and dependable credit to young, beginning, and small (YBS) farmers and ranchers. Because of the unique needs of these individuals, and their importance to the future growth of the Associations, the Associations have established annual marketing goals to increase market shares of loans to YBS farmers. Specific marketing plans have been developed to target these groups, and resources have been designated to help ensure YBS borrowers' access to a stable source of credit. AgFirst and the District Associations recognize that YBS farmers are vitally important to the future of agriculture and are committed to continue offering programs to help educate, assist, and provide quality financial services to YBS farmers.

The FCA regulatory definitions for YBS farmers and ranchers are as follows:

Young Farmer – A farmer, rancher, or producer or harvester of aquatic products who was age 35 or younger as of the date the loan was originally made.
Beginning Farmer – A farmer, rancher, or producer or harvester of aquatic products who had 10 years or less farming or ranching experience as of the date the loan was originally made.
Small Farmer – A farmer, rancher, or producer or harvester of aquatic products who normally generated less than $250 thousand in annual gross sales of agricultural or aquatic products at the date the loan was originally made.

It is important to note that, due to the regulatory definitions, a farmer/rancher may be included in multiple categories as he/she would be included in each category in which the definition was met.

The following table summarizes information regarding the combined District's loans outstanding to Young and Beginning Farmers and Ranchers as of December 31, 2018:

Young and Beginning Farmers and Ranchers
Number/Volume of Loans Outstanding
(dollars in thousands)

Category	Number of Loans	Percent of Total	Volume Outstanding	Percent of Total
1. Total loans and commitments outstanding at year-end	154,231		$ 31,335,994	
2. Young farmers and ranchers	28,152	18.25%	$ 3,368,190	10.75%
3. Beginning farmers and ranchers	44,833	29.07%	$ 5,573,714	17.79%

The following table summarizes information regarding the combined District's loans outstanding to Small Farmers and Ranchers as of December 31, 2018:

Small Farmers and Ranchers
Number/Volume of Loans Outstanding by Loan Size
(dollars in thousands)

Number/Volume Outstanding	$0-$50,000	$50,001-$100,000	$100,001-$250,000	$250,001-and greater
1. Total number of loans and commitments outstanding at year-end	75,002	27,610	28,925	22,694
2. Total number of loans to small farmers and ranchers	51,307	16,274	14,559	6,466
3. Number of loans to small farmers and ranchers as a % of total number of loans	68.41%	58.94%	50.33%	28.49%
4. Total loan volume outstanding at year-end	$ 1,560,674	$ 1,994,512	$ 4,585,624	$ 23,195,184
5. Total loan volume to small farmers and ranchers	$ 1,017,201	$ 1,165,830	$ 2,265,167	$ 3,215,506
6. Loan volume to small farmers and ranchers as a % of total loan volume	65.18%	58.45%	49.40%	13.86%

The following table summarizes information regarding the combined District's new loans made to Young and Beginning Farmers and Ranchers for the year ended December 31, 2018:

Young and Beginning Farmers and Ranchers
Gross New Business During 2018, Number/Volume of Loans
(dollars in thousands)

Category	Number of Loans	Percent of Total	Volume Outstanding	Percent of Total
1. Total gross new loans and commitments made during 2018	45,765		$ 10,807,410	
2. Total loans and commitments made during 2018 to young farmers and ranchers	8,556	18.70%	$ 1,142,740	10.57%
3. Total loans and commitments made during 2018 to beginning farmers and ranchers	12,773	27.91%	$ 1,763,764	16.32%

The following table summarizes information regarding the combined District's new loans made to Small Farmers and Ranchers for the year ended December 31, 2018:

Small Farmers and Ranchers
Gross New Business by Loan Size, Number/Volume of Loans
(dollars in thousands)

Number/Volume	$0-$50,000	$50,001 - $100,000	$100,001-$250,000	$250,001-and greater
1. Total number of new loans and commitments made during 2018	20,817	8,113	8,567	8,268
2. Total number of loans made to small farmers and ranchers during 2018	14,923	4,540	3,806	1,833
3. Number of loans to small farmers and ranchers as a % of total number of loans	71.69%	55.96%	44.43%	22.17%
4. Total gross loan volume of all new loans and commitments made during 2018	$ 494,735	$ 603,322	$ 1,394,884	$ 8,314,469
5. Total gross loan volume to small farmers and ranchers	$ 337,637	$ 330,242	$ 593,388	$ 956,891
6. Loan volume to small farmers and ranchers as a % of total gross new loan volume	68.25%	54.74%	42.54%	11.51%

COMMITMENTS AND CONTINGENCIES

On the basis of information presently available, management and legal counsel are of the opinion that the ultimate liability, if any, from legal actions pending against AgFirst would be immaterial in relation to the financial position of AgFirst. Refer to Note 11, *Commitments and Contingencies*, in the Notes to the Financial Statements for additional information.

REGULATORY MATTERS

On May 10, 2018, the Farm Credit Administration adopted a final rule that amends the regulations governing investments of System banks and associations. The final rule strengthens eligibility criteria for the investments the banks may purchase and hold. It also implements Section 939A of the Dodd-Frank Act by removing references to and requirements for credit ratings and substitutes the eligibility requirement with other appropriate standards of credit worthiness. In addition, it grants associations greater flexibility regarding the risk management purposes for investments and limits the type and amount of investments that an association may hold. Only securities that are issued by, or are unconditionally guaranteed or insured as to the timely payment of principal and interest by, the U.S. government or its agencies are eligible for association risk management purposes. An association may purchase and hold investments not to exceed 10 percent of its 90-day average daily balance of outstanding loans on the last business day of the quarter. The final rule became effective January 1, 2019.

Farm Bill

The Agricultural Improvement Act of 2018 (Farm Bill) was signed into law on December 20, 2018. This new Farm Bill will govern an array of federal farm and food programs, including commodity price support payments, farm credit, conservation programs, research, rural development and foreign and domestic food programs for five years through 2023. The new Farm Bill continues to provide support for crop insurance and commodity support programs, strengthen livestock disaster programs, and provides dairy producers with an updated voluntary margin protection program that will provide additional risk management options to dairy operations.

The Farm Bill also clarifies and updates the Insurance Corporation's authorities to act as conservator or receiver of a System institution. The Congressional Conference Committee report states that Congress intends "for the authorities of the Corporation to be functionally equivalent to the parallel authorities of the Federal Deposit Insurance Corporation." In addition, the Farm Bill provides, among other authorities, the Insurance Corporation with the authority to organize, and the Farm Credit Administration to charter, a System bridge bank, which has all the powers of a System bank with a maximum life span of five years.

Many provisions of the Farm Bill will require the United States Department of Agriculture to develop rules and procedures to fully implement these authorities. The timing for the issuance of those rules is uncertain.

LIBOR TRANSITION

On July 27, 2017, the United Kingdom Financial Conduct Authority (the Conduct Authority) announced that it will no longer persuade or compel such banks to submit rates for the calculation of the LIBOR rates after 2021. The Conduct Authority regulates the panel banks that submit quotes for the purpose of calculating LIBOR to the Intercontinental Exchange (ICE) Benchmark Administration (the entity that is responsible for calculating LIBOR). Accordingly, it is uncertain whether the ICE Benchmark Administration will continue to quote LIBOR after 2021. Furthermore, in the United States, efforts to identify a set of alternative U.S. dollar reference interest rates include proposals by the Alternative Reference Rates Committee (ARRC) of the Federal Reserve Board and the Federal Reserve Bank of New York. Specifically, the ARRC has proposed the Secured Overnight Financing Rate (SOFR) as the recommended alternative to LIBOR and the Federal Reserve Bank of New York began publishing SOFR in April of 2018. SOFR is based on a broad segment of the overnight Treasury repurchase market and is a broad measure of the cost of borrowing cash overnight collateralized by Treasury securities.

At this time, it is not possible to predict, among other uncertainties, whether (i) LIBOR will be discontinued, (ii) the effect of any changes to the methodology for calculating LIBOR, or (iii) any establishment of alternative reference rates or any other reforms to LIBOR that may be enacted in the United Kingdom, in the United States or elsewhere. Uncertainty as to the nature of such potential changes, alternative reference rates or other reforms may adversely affect the trading market for LIBOR based instruments, including certain of the Systemwide Debt Securities, System borrowings, loans, investments, derivatives, other System assets and liabilities and preferred stock that are indexed to LIBOR. Accordingly, reform of, or the replacement or disappearance

of, LIBOR and the proposed regulation of LIBOR and other "benchmarks" may adversely affect the rates of interest the System pays on its Systemwide Debt Securities (including changes to their value and liquidity, return, and usefulness for intended purpose), on other borrowings and preferred stock, as well as the value of and return on loans and investments and the value and effectiveness of derivatives. This could adversely affect the System's cash flows. Moreover, if LIBOR is replaced, System institutions will need to take steps to restructure their debt and derivatives, which could adversely affect operations.

The System institutions are currently evaluating the potential impact of the eventual replacement of the LIBOR benchmark interest rate, including the possibility of using SOFR as the alternative to LIBOR. While each system institution is required by the regulator to have a transition plan, the transition from LIBOR to SOFR is expected to be complex and to include the development of term and credit adjustments to minimize, to the extent possible, discrepancies between LIBOR and SOFR. Accordingly, the transition may introduce additional basis risk for market participants, including when an alternative index, e.g., SOFR, exists in conjunction with LIBOR. There can be no guarantee that SOFR will become the dominant alternative to U.S. dollar LIBOR or that SOFR will be widely used. In addition, other alternatives may or may not be developed with additional complications.

Changes in LIBOR may result in interest rates and/or payments that are higher or lower than, or that do not otherwise correlate over time with, the interest rates and/or payments that would have been associated with LIBOR-based Systemwide Debt Securities, or loans or investments that are based on LIBOR, which may increase or decrease the payments to be made on such LIBOR-based Systemwide Debt Securities, or loans or investments that are based on LIBOR.

RECENTLY ISSUED ACCOUNTING PRONOUNCEMENTS

Please refer to Note 2, *Summary of Significant Accounting Policies*, in the Notes to the Financial Statements for a comprehensive listing of recently issued accounting pronouncements.

The following ASUs were issued by the Financial Accounting Standards Board (FASB):

Summary of Guidance	Adoption and Potential Financial Statement Impact
ASU 2016-13 – Financial Instruments – Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments	
• Replaces multiple existing impairment standards by establishing a single framework for financial assets to reflect management's estimate of current expected credit losses (CECL) over the complete remaining life of the financial assets. • Changes the present incurred loss impairment guidance for loans to a CECL model. • The Update also modifies the other-than-temporary impairment model for debt securities to require an allowance for credit impairment instead of a direct writedown, which allows for reversal of credit impairments in future periods based on improvements in credit. • Eliminates existing guidance for purchased credit impaired (PCI) loans, and requires recognition of an allowance for expected credit losses on these financial assets. • Requires a cumulative-effect adjustment to retained earnings as of the beginning of the reporting period of adoption. • Effective for fiscal years beginning after December 15, 2020, and interim periods within those fiscal years. Early application will be permitted for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2018.	• The Bank has begun implementation efforts by establishing a cross-discipline governance structure and will implement a third-party model. The Bank is currently identifying key interpretive issues and assessing processes against the new guidance to determine what modifications may be required. • The Bank expects that the new guidance will result in an increase in its allowance for credit losses due to several factors, including: 1. The allowance related to loans and commitments will most likely increase to cover credit losses over the full remaining expected life of the portfolio, and will consider expected future changes in macroeconomic conditions, 2. An allowance will be established for estimated credit losses on any debt securities, 3. The nonaccretable difference on any PCI loans will be recognized as an allowance, offset by an increase in the carrying value of the related loans. • The extent of the increase is under evaluation, but will depend upon the nature and characteristics of the Bank's portfolio at the adoption date, and the macroeconomic conditions and forecasts at that date. • The Bank expects to adopt the guidance in first quarter 2021.
ASU 2016-02 – Leases (Topic 842)	
• Requires lessees to recognize leases on the balance sheet with lease liabilities and corresponding right-of-use assets based on the present value of lease payments. • Lessor accounting activities are largely unchanged from existing lease accounting. • The Update also eliminates leveraged lease accounting but allows existing leveraged leases to continue their current accounting until maturity, termination or modification. • Also, expands qualitative and quantitative disclosures of leasing arrangements. • Requires adoption using a modified cumulative-effect approach wherein the guidance is applied to all periods presented. A recent amendment provides an additional (and optional) transition method to adopt the new leases standard. Under this new transition method, an entity initially applies the new leases standard at the adoption date and recognizes a cumulative-effect adjustment to the opening balance of retained earnings in the period of adoption. • Effective for fiscal years beginning after December 15, 2018, including interim periods within those fiscal years. Early adoption is permitted.	• The practical expedients allow entities to largely account for existing leases consistent with current guidance, except for the incremental balance sheet recognition for lessees. • The Bank completed its evaluation of leasing contracts and activities and developed its methodology to estimate the right-of-use assets and lease liabilities, which is based on the present value of lease payments. There will not be a material change to the timing of expense recognition. • Given the limited changes to lessor accounting, there were no material changes to recognition or measurement for the Bank. • The Bank will need to provide additional disclosure information as a result of adopting the Update. • The Bank will adopt the guidance in first quarter 2019 using the optional modified retrospective method and practical expedients for transition. • Upon adoption, the Bank will record a cumulative-effect adjustment to equity of approximately $(143) thousand. In addition, a Right of Use Asset in the amount of $702 thousand and Lease Liability in the amount of $845 thousand will be recorded.

Additional Disclosure Required by Farm Credit Administration Regulations

Description of Business

Descriptions of the territory served, persons eligible to borrow, types of lending activities engaged in, financial services offered and related Farm Credit organizations are incorporated herein by reference to Note 1, *Organization and Operations,* to the Financial Statements included in this Annual Report to shareholders.

The description of significant developments that had or could have a material impact on earnings or interest rates to borrowers, acquisitions or dispositions of material assets, material changes in the manner of conducting the business, seasonal characteristics and concentrations of assets, if any, is incorporated in *Management's Discussion & Analysis of Financial Condition & Results of Operations* included in this Annual Report to shareholders.

Unincorporated Business Entities

The Bank holds an equity investment at December 31, 2018 in the following Unincorporated Business Entities (UBEs) as an equity interest holder of the limited liability company (LLC). The LLCs were organized for the stated purpose of holding and managing unusual or complex collateral associated with former loans, until such time as the assets may be sold or otherwise disposed of pursuant to the terms of Operating Agreements of the respective LLCs. At December 31, 2018, there were no assets held by these entities.

Entity Name	Entity Type	Entity Purpose
Sequoyah Marina & Resort, LLC	LLC	Manage Acquired Property
Hardee Peaceful Horse Acquisition, LLC	LLC	Manage Acquired Property
Desoto Peaceful Acquisition, LLC	LLC	Manage Acquired Property
Desoto County Land Holding Acquisition, LLC	LLC	Manage Acquired Property
Ethanol Holding Company, LLC	LLC	Manage Acquired Property
First Kentucky Land, LLC	LLC	Manage Acquired Property
RAAC Land, LLC	LLC	Manage Acquired Property

Description of Property

The following table sets forth certain information regarding the properties owned by the Bank at December 31, 2018, all of which are located in Columbia, South Carolina:

Location	Description
1115 Calhoun Street	Bank operations facility
1901 Main Street	Bank office building and adjacent parking facility, partially leased to tenants

Legal Proceedings

Information, if any, to be disclosed in this section is incorporated herein by reference to Note 11, *Commitments and Contingencies,* to the Financial Statements included in this Annual Report to shareholders.

Description of Capital Structure

Information to be disclosed in this section is incorporated herein by reference to Note 7, *Shareholders' Equity,* to the Financial Statements included in this Annual Report to shareholders.

Description of Liabilities

The description of liabilities and contingent liabilities to be disclosed in this section is incorporated herein by reference to Notes 2, 6, 9, 11 and 13 to the Financial Statements included in this Annual Report to shareholders.

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

Management's Discussion & Analysis of Financial Condition & Results of Operations, which appears in this Annual Report to shareholders and is to be disclosed in this section, is incorporated herein by reference.

Senior Officers

The following represents certain information regarding the directors and senior officers of the Bank.

The chief executive officer and all other senior officers of the Bank, together with their length of service at their present position, as well as positions held currently and during the last five years, are as follows:

Name and Title	Time in Position	Prior Experience	Other Business Interests
Leon T. Amerson, *President and Chief Executive Officer*	6.5 years		Member on the Executive Council and Business Practices Committee of the Presidents Planning Committee of the Farm Credit System; Member of the Board of Directors of the Federal Farm Credit Banks Funding Corporation serving as Chairman of the Board* and Member of the Governance Committee; Member of the Farm Credit System Coordinating Committee; Member of the Executive Council of the National Council of Farmer Cooperatives; Member of the Board of Directors for Palmetto Agribusiness Council; Member of the Finance Committee for United Way of the Midlands; Member of the AgFirst Plan Sponsor Committee and the AgFirst/FCBT Plan Sponsor Committee; Member of the University of South Carolina Risk and Uncertainty Management Advisory Board.
Charl L. Butler, *Executive Vice President and Chief Operating Officer*	1.75 years	Senior Vice President and Chief Financial Officer March 2007 to March 2017	Board Member of the Farm Credit System Captive Insurance Company; Chairman of the AgFirst/FCBT Plan Fiduciary Committee; Board Member of City Center Partnership; Member of the Midlands Business Leadership Group.
Isvara M. A. Wilson, *Executive Vice President and Chief Administrative Officer*	1.75 years	Senior Vice President and General Counsel December 2012 to March 2017	Board Member of the Farm Credit System Captive Insurance Company; Board Member of the Columbia Urban League, Inc.; Board Member of the Columbia Museum of Art; Board Member of the Boys and Girls Club of the Crescent Region.
William E. Brown, *Senior Vice President and Chief Credit Officer*	1.5 years	Manager, Credit Integration / Commercial Credit Executive at First Citizens Bank and Trust of North Carolina 2014 to 2016, Executive Vice President and Chief Credit Officer at First Citizens Bank of South Carolina 2011 to 2014	
Sam Esfahani, *Senior Vice President and Chief Information Officer*	1.5 years	Technology Consultant at Danske Bank A/S 2016 to 2017, Chief Technology Officer at PSCU 2012 to 2016	
Stephen Gilbert, *Senior Vice President and Chief Financial Officer*	1.75 years	Vice President and Controller August 2009 to March 2017	
Frances S. Griggs, *Senior Vice President and General Counsel*	1.75 years	Vice President and Assistant General Counsel July 2013 to March 2017, General Counsel and Corporate Secretary at Howden North America, Inc. from 2007 to 2013	Board Member of the Girl Scouts of South Carolina – Mountains to Midlands.
Daniel E. LaFreniere, *Senior Vice President and Chief Audit Executive*	5.5 years		

** Effective March 7, 2019, Mr. Amerson is no longer serving as Chairman of the Board of Directors of the Federal Farm Credit Banks Funding Corporation.*

The total amount of compensation earned by the Chief Executive Officer (CEO) and the senior officers and other highly compensated employees as a group during the years ended December 31, 2018, 2017 and 2016, is as follows:

Name of Individual or Number in Group	Year	Salary	Incentives	Deferred Comp.	Change in Pension Value *(c)*	Perq./ Other*	Total
Leon T. Amerson	2018	$ 800,031	$ 792,987	$ 34,833	$ (124,251)	$ 24,996	$ 1,528,596
Leon T. Amerson	2017	$ 766,029	$ 838,564	$ 30,903	$ 1,061,268	$ 25,292	$ 2,722,056
Leon T. Amerson	2016	$ 735,028	$ 717,691	$ 29,417	$ 1,016,907	$ 21,141	$ 2,520,184
7 Officers *(a)*	2018	$ 2,333,198	$ 1,670,874	$ 146,751	$ –	$ 237,893	$ 4,388,716
9 Officers *(b)*	2017	$ 2,469,284	$ 2,030,766	$ 115,011	$ 213,388	$ 349,841 *(d)*	$ 5,178,290
6 Officers	2016	$ 1,781,534	$ 1,404,502	$ 90,234	$ 144,389	$ 177,993	$ 3,598,652

* *Includes company contributions to 401(k) plan (see Note 9, Employee Benefit Plans, to the Financial Statements), group life insurance premiums, spousal travel and bank-provided automobile.*

(a) *Disclosure of information on the total compensation paid during 2018 to any senior officer, or to any other individual included in the aggregate, is available to shareholders upon request.*

(b) *2017 includes two senior officers who retired during the year.*

(c) *The changes in pension values as reflected in the table above resulted primarily from an additional year of benefit accrual and changes in the actuarial assumptions for mortality and discount rate. See further discussion in Note 9, Employee Benefit Plans, of the Financial Statements.*

(d) *Includes payment of accrued annual leave of $73,441, a one-time pension benefits differential payment of $15,607 and reimbursement of insurance premiums of $13,783 upon retirement of two senior officers.*

Pension Benefits Table
As of December 31, 2018

Name of Individual or Number in Group	Year	Plan Name	Number of Years Credited Service	Actuarial Present Value of Accumulated Benefits	Payments During 2018
CEO:					
Leon T. Amerson	2018	AgFirst Farm Credit Retirement Plan	32.58	$ 2,365,557	$ –
Leon T. Amerson	2018	AgFirst Farm Credit Bank Supplemental Retirement Plan	32.58	5,380,596	–
				$ 7,746,153	$ –

Executive Incentive Compensation Plan

In addition to a base salary, certain named senior officers may earn additional compensation under the Bank's Executive Incentive Plan, which has a short-term and a long-term component. Participation in the plan is at the sole discretion of the CEO or in the case of the CEO at the sole discretion of the Board of Directors. The objectives of this plan are to provide a market-competitive financial rewards package to executives, provide incentive for the achievement of the AgFirst short- and long-term business objectives and to provide the Bank the ability to attract and retain key executives. The plan's payments are based upon the Bank's achievement of minimum performance thresholds for capital adequacy, net income sufficient to pay patronage and dividend distributions, achievement of a targeted threshold customer satisfaction score and the senior officers' overall performance achievement as determined by an individual performance rating. Short-term incentive awards are shown in the year earned and payments are made in the first quarter of the following year.

Effective with the 2014 plan year, the long-term component of the plan is subject to forfeiture based upon AgFirst's performance during the three-year performance period immediately following the plan year. Specifically, the long-term award for a particular plan year will be reduced by an amount equal to one-third of the original award for each subsequent year during the three-year performance period in which any one of the performance thresholds is not achieved.

Long-term incentive award amounts are shown in the year accrued and are vested over a period of time composed of the plan year and the performance period subsequent to the end of the plan year. Incentive awards are forfeited if the participant fails to remain employed until the end of the performance period subsequent to the end of the plan year, unless the end of employment is due to the participant's death or disability, or the Board of Directors, in its sole discretion, determines that the participant should be paid all or a portion of the incentive awards.

Retirement and Deferred Compensation Plans

The Bank's compensation programs include retirement and deferred compensation plans designed to provide income following an employee's retirement. Although retirement benefits are paid following an employee's retirement, the benefits are earned while employed. The objective of the Bank is to offer benefit plans that are market competitive and aligned with the Bank's strategic objectives. The plans are designed to enable the Bank to proactively attract, retain, recognize and reward a highly skilled, motivated and diverse staff that supports the Bank's mission and that allows the Bank to align the human capital needs with the Bank's overall strategic plan.

Employees hired prior to January 1, 2003 participate in the AgFirst Farm Credit Retirement Plan. Employees are eligible to retire and begin drawing unreduced pension benefits at age 65 or when years of credited service plus age equal "85" once age 55 is reached. Upon retirement, annual payout is equal to 2 percent of the highest three years average compensation times years of credited service, subject to the Internal Revenue Code limitations. For purposes of determining the payout, "average compensation" is defined as regular salary (i.e., does not include incentive awards compensation). At the election of the retiree, benefits are paid based upon various annuity terms or on a lump sum basis. Benefits under the plan are not subject to an offset for Social Security.

Employees hired on or after January 1, 2003, but prior to November 4, 2014, previously participated in the AgFirst Farm Credit Cash Balance Retirement Plan. Benefit accruals in the plan were frozen as of December 31, 2014, at which time active participants were fully vested regardless of years of credited service. The plan was terminated effective as of December 31, 2015, was submitted to the Internal Revenue Service for review and received a favorable determination letter from the Internal Revenue Service. Benefits in the plan were distributed to plan participants during March 2017.

Employees participate in the Farm Credit Benefits Alliance 401(k) Plan, a qualified 401(k) defined contribution plan which has an employer matching contribution determined by the employee's date of hire. Employees hired prior to January 1, 2003 receive a maximum employer matching contribution equal to $0.50 for each $1.00 of employee compensation contributed up to 6 percent, subject to the Internal Revenue Code limitation on compensation. Employees hired on or after January 1, 2003 receive a maximum employer matching contribution equal to $1.00 for each $1.00 of employee compensation contributed up to 6 percent, subject to the Internal Revenue Code limitation on compensation. As a result of the termination of the AgFirst Farm Credit Cash Balance Retirement Plan, beginning January 1, 2015, employees hired on or after January 1, 2003 also receive an employer nonelective contribution equal to 3 percent of employee compensation, subject to the Internal Revenue Code limitation on compensation.

Senior officers and other highly compensated employees participate in the Farm Credit Benefits Alliance Nonqualified Supplemental 401(k) Plan, a nonqualified deferred compensation plan that allows certain key employees to defer compensation and which restores the benefits limited in the qualified 401(k) plan as a result of restrictions in the Internal Revenue Code. The plan also includes a provision for discretionary contributions to be made by the Bank.

Chief Executive Officer

Mr. Amerson participates in the AgFirst Farm Credit Retirement Plan, as described above.

Mr. Amerson participates in the AgFirst Farm Credit Bank Supplemental Retirement Plan, a nonqualified supplemental executive retirement plan. Benefits that would have accrued in the qualified defined benefit retirement plan in the absence of Internal Revenue Code limitations are made up through the nonqualified supplemental executive retirement plan. At the election of the retiree, benefits are paid based upon various annuity terms.

Mr. Amerson participates in the Farm Credit Benefits Alliance 401(k) Plan and the Farm Credit Benefits Alliance Nonqualified Supplemental 401(k) Plan, as described above.

Senior Officers

Senior officers hired before November 4, 2014 participated in the AgFirst Farm Credit Cash Balance Plan, as described above.

Senior officers participate in the Farm Credit Benefits Alliance 401(k) Plan and the Farm Credit Benefits Alliance Nonqualified Supplemental 401(k) Plan, as described above.

Additionally, senior officers as well as all employees are reimbursed for all direct travel expenses incurred when traveling on Bank business. A copy of the travel policy is available to shareholders upon written request.

Bank compensation plans are reviewed annually by the Board of Directors' Compensation Committee.

AgFirst Farm Credit Bank Board of Directors

Name	Position	Year Term Expires
Curtis R. Hancock, Jr.	Chairman	December 31, 2020
Ellis W. Taylor	Vice Chairman	December 31, 2019
Jack W. Bentley, Jr.	Director	December 31, 2022**
Jenny R. Black	Director	December 31, 2019***
James C. Carter, Jr.	Director	December 31, 2018
William J. Franklin, Jr.	Director	December 31, 2021
Bonnie V. Hancock	Director	December 31, 2021
Dale R. Hershey	Director	December 31, 2019
Walter C. Hopkins, Sr.	Director	December 31, 2020
William K. Jackson	Director	December 31, 2020
S. Jerry Layman	Director	December 31, 2018
J. Alvin Lyons	Director	December 31, 2021
S. Alan Marsh	Director	December 31, 2021
Fred R. Moore, Jr.	Director	December 31, 2021
James M. Norsworthy, III	Director	December 31, 2019
Katherine A. Pace	Director	December 31, 2019
Thomas E. Porter, Jr.	Director	December 31, 2022**
William T. Robinson	Director	December 31, 2019
Michael T. Stone	Director	December 31, 2022*

* *Re-elected to a 4-year term commencing January 1, 2019.*
** *Newly elected in 2018 to a 4-year term commencing January 1, 2019.*
*** *Newly elected to fill the remaining term of a vacancy commencing August 2018.*

Curtis R. Hancock, Jr., 72, Chairman of the Board, is from Fulton, Kentucky and is owner and operator of Hancock Farms. His operations consist of row crops including corn, wheat and soybeans. He serves on the board of The Farm Credit Council, a trade organization; and Kentucky Small Grain Growers, a grain cooperative, and is a member of River Valley, ACA. Mr. Hancock received a Bachelor of Science in Agriculture from the University of Tennessee-Martin and a Master of Science in Agricultural Economics from the University of Tennessee. As Chairman of the Board for 2018 and 2019, he serves as chair of the Board Coordinating Committee and as an ex-officio member of all Board Committees.

Ellis W. Taylor, 49, Vice Chairman of the Board, from Roanoke Rapids, North Carolina, is the owner/operator of a row crop operation, Mush Island Farms, which consists of cotton, soybeans, wheat, corn and timber. Mr. Taylor is also a partner in Mush Island Farms, LLC, a trucking operation. He is also part owner of Roanoke Cotton Company, LLC, which operates cotton gins and a warehouse. He is a director on the boards of AgCarolina Farm Credit, ACA, and Northampton County Farm Bureau, which promotes agriculture, and the Federal Farm Credit Banks Funding Corporation. Mr. Taylor has a Bachelor of Science in Agronomy, a Bachelor of Science in Agricultural Business Management and a Master of Science in Economics from North Carolina State University. Mr. Taylor serves on the Board Coordinating, the Board Compensation and Board Governance Committees.

Jack W. Bentley, Jr., 61, from Tignall, Georgia, owns and operates A&J Dairy, a dairy, pasture, crop and timberland operation. Mr. Bentley is a director of AgGeorgia Farm Credit, ACA. Mr. Bentley also serves on the boards of the following agricultural and dairy trade and promotion organizations: USDA Farm Service Agency, Southeast United Dairy Industry Association, American Dairy Association, Lone Star Milk Producers and the Wilkes County Farm Bureau. Mr. Bentley has a Bachelor of Science in Ag Mechanics and Business from Clemson University. Mr. Bentley will serve on the AgFirst Plan Sponsor Committee in 2019. Mr. Bentley became a director in 2019 and will serve on the Board Audit Committee.

Jenny R. Black, 44, from Lakeland, Florida, is a Certified Project Manager and owns and operates Jenny Black Consulting, LLC, an information technology consulting company. Ms. Black also serves as the manager for the following citrus and agricultural operations: Ridge Investments, LLC, Black & Myers Properties, and BHB Holdings, LLC. She is a director of Farm Credit of Central Florida, ACA. She also serves as a director for the Polk County Florida 4-H Foundation Board, a youth agricultural organization, the Volunteers in Service to the Elderly Advisory Board, a non-profit whose mission is to assist the elderly with independent living, and All Saints Academy Independent School, an education organization. Ms. Black has Bachelor of Arts degrees in English and Liberal Studies and a Master of Business Administration with a concentration in Information Technology, Finance and Marketing from the University of South Florida. Ms. Black served on the Board Audit Committee in 2018 and will serve on the Board Risk Policy Committee in 2019. Ms. Black became a director in August 2018.

James C. Carter, Jr., 72, from McDonough, Georgia, owns and operates Southern Belle Farm, Inc., as well as JC Carter Family Farm, LLC, beef cattle and hay farms that include fruit and vegetable crops and provide agriculturally related educational activities. Mr. Carter also operates a feed business from the farm. Mr. Carter is an independent sales representative for ABS Global, Inc., which provides artificial insemination services and supplies for cattle. Mr. Carter is chairman of the board for AgSouth Farm Credit, ACA, and he serves on the board of The Farm Credit Council, a trade organization. He serves as chairman of the Henry County Water and Sewerage Authority, a provider of water and sewer services and he is a representative on the Ocmulgee River Basin Advisory Council, a water resource management council. Mr. Carter serves as vice president of the Henry County Farm Bureau, which focuses on the promotion of agriculture. He is a member of the board for the Henry County Cattleman's Association, a cattle industry trade association. Mr. Carter has a Bachelor of Science in Agriculture and Master of Science in Animal Nutrition from the University of Georgia. Mr. Carter served on the Board Audit Committee. Mr. Carter's term expired December 31, 2018.

William J. Franklin, Jr., 61, from Duffield, Virginia, owns and operates Franklin Farms, a beef cattle and hay farm. Mr. Franklin is also Chief Executive Officer of Scott County Telephone Cooperative, a telecommunications company. He serves on the boards of the Scott County Cattle Association, a trade organization, and the Southwest Virginia Workforce Development Board, which offers re-employment and training programs. Mr. Franklin also serves on the following telecommunications boards: Carolina-Virginia Telephone Membership Association, National Rural Broadband PAC Board, IRIS Networks Board, and LIT Networks Board. He is a member of Farm Credit of the Virginias, ACA. Mr. Franklin has a Bachelor of Science in Ag Education from Virginia Tech. Mr. Franklin serves on the Board Risk Policy Committee.

Bonnie V. Hancock, 57, outside director for the Board, is from Wake Forest, North Carolina. Ms. Hancock is Professor of Practice and Executive Director of the Enterprise Risk Management Initiative at North Carolina State University (NCSU) where she teaches courses in financial management, enterprise risk management, and strategy and financial statement analysis. Prior to joining NCSU, she worked with Progress Energy, as senior vice president of finance and information technology and later as president of Progress Fuels, a subsidiary that produced and marketed gas, coal and synthetic fuels, and operated fuel terminals and ash management facilities. Ms. Hancock has a Bachelor of Business Administration with an accounting major from the College of William and Mary and a Master of Science in Taxation from Georgetown University. She is a member of the boards of Powell Industries, designer and manufacturer of electrical equipment systems for industrial facilities, where she serves on the compensation committee; the Office of Mortgage Settlement Oversight, which monitors servicers' obligations related to distressed borrowers, where she serves as chair of the audit committee; the North Carolina Coastal Pines Girl Scout Council, a leadership development organization for girls, where she serves as chair of the audit committee; and the National Association of Corporate Directors – Research Triangle Chapter, an organization for the advancement of exemplary board leadership. Ms. Hancock served on the Board Risk Policy Committee in 2018 and will

serve on the Board Coordinating Committee and as Chair of the Board Risk Policy Committee in 2019.

Dale R. Hershey, 71, is from Manheim, Pennsylvania, where he is a partner in Hershey Brothers Dairy Farms. Mr. Hershey has served as senior partner in the ownership and management of the dairy and cropping enterprises since 1980. He serves on the board of directors of MidAtlantic Farm Credit, ACA, The Farm Credit Council, a trade organization, and Farm Credit Council Services, a service provider. He also serves on the AgAdvisory Committee for his local municipal township and is a member of Pennsylvania Farm Bureau and the National Holstein Association. Mr. Hershey has a Bachelor of Science in Community Development and a Master of Science in Ag Economics and Rural Sociology from Penn State University. Mr. Hershey serves on the Board Audit Committee.

Walter C. Hopkins, Sr., 71, from Lewes, Delaware, is the owner and operator of Green Acres Farm, Inc., a dairy and grain farming operation. He also manages Lyons LLC, a land holding company. He serves on the board of directors of MidAtlantic Farm Credit, ACA. Mr. Hopkins has a Bachelor of Science in Agricultural Engineering from the University of Delaware. Mr. Hopkins serves on the Board Compensation Committee, the Board Coordinating Committee, and as chair of the Board Governance Committee.

William K. Jackson, 63, from New Salem, Pennsylvania, is a partner in Jackson Farms, a dairy operation with other farming interests, including corn, soybeans, and alfalfa. He is president of Jackson Farms 2, LLC, a small dairy processing facility that produces milk and makes ice cream marketed to area stores and sold via an on-site convenience store. Mr. Jackson is also president of Jackson Farms 3, LLC and Jackson Farms Limited Partnership, which are involved in the production of natural gas. He serves on the boards of AgChoice Farm Credit, ACA; the Fay Penn Economic Development Council, a local economic development committee; president of the Fayette County Agricultural Improvement Association Board, a local county fair; and the Penn State Fayette, Eberly Campus Advisory Board, which oversees campus community involvement. Mr. Jackson has a Bachelor of Science in Agricultural Business Management from Penn State University. Mr. Jackson served on the Board Coordinating Committee and as chair of the Board Risk Policy Committee in 2018 and will serve on the Board Audit Committee in 2019.

S. Jerry Layman, 70, from Kenton, Ohio, is the owner and operator of Little Bit Farm, a corn and soybean operation. Mr. Layman also serves as a part-time farm drainage contractor through Layman Farm Drainage, an agricultural tile installation business and as Chairman of the Grove Cemetery Association, which provides the sale of personal graves. Mr. Layman currently serves as a board member of AgCredit, ACA. He represented AgCredit on the Independent Associations' Retirement Plan Sponsor Committee in 2018. Mr. Layman is a stockholder in the agricultural cooperative Heritage Farm Coop. Mr. Layman serves on the following boards: Buck Township Trustees, sale of personal graves; and as chairman of the Hardin County Fair Foundation Board, which financially supports the mission of the county fair. Mr. Layman has a Bachelor of Science in Agriculture Education from the Ohio State University and a Master of Science of Education Leadership from the University of Dayton. Mr. Layman served on the Board Risk Policy Committee in 2018. Mr. Layman's term expired December 31, 2018.

J. Alvin Lyons, 61, from Georgetown, Kentucky, is owner and operator of Lyons Family Farms, a farming operation of row crops including corn, soybeans, wheat, tobacco and hay. His farm also includes a commercial cow calf herd and stockers. Mr. Lyons also serves as Magistrate of Scott County Fiscal Court, the legislative body for the county government. Mr. Lyons is a director of Central Kentucky AgCredit, ACA. He represents Central Kentucky on the Independent Associations' Retirement Plan Sponsor Committee and serves as chair in 2018 and 2019. He is a director on the boards of the Scott County Farm Bureau, an agricultural promotion organization, the Scott County Rural Land Management Board, which focuses on land preservation, and the Scott County Beef Improvement Association, which provides beef promotion and education. He also serves as a member and advisor for the University of Kentucky Ag Leadership Development Steering Committee, which focuses on education. Mr. Lyons has completed the University of Kentucky Ag Leadership Development and Master Cattleman Programs. Mr. Lyons serves on the Board Audit Committee.

S. Alan Marsh, 64, from Madison, Alabama, is a partner in Marsh Farms, Inc., an operation consisting of row crops including cotton, soybeans, wheat and corn. Mr. Marsh is a director of First South Farm Credit, ACA, and Limestone County Farmers Federation, an agricultural trade organization and he is president and stockholder of South Limestone Co-op Gin, a cotton ginning operation and an association borrower. He is also an advisory board member for Staplcotn, a cotton cooperative association. Mr. Marsh received a Business Management Certification from Stratford Career Institute. Mr. Marsh serves on both the Board Compensation and Board Governance Committees.

Fred R. Moore, Jr., 66, from Eden, Maryland, is president of Fred R. Moore & Son, Inc. d/b/a Collins Wharf Sod, a turf and grain operation, which grows sod (turf), corn, soybeans and wheat. He is also partner of F&E Properties, LLC, a rental business. He currently serves on the boards of MidAtlantic Farm Credit, ACA, Wicomico Soil Conservation District, an environmental and conservation entity and Wicomico County Farm Bureau, an agricultural promotion organization. He currently serves as an active life member of the Allen Volunteer Fire Company. Mr. Moore has a Bachelor of Science in Agriculture Education from the University of Maryland Eastern Shore. Mr. Moore serves on both the Board Compensation and Board Governance Committees.

James M. Norsworthy, III, 68, from Jackson, Louisiana, runs 100 Cedars Cattle Farm, a cow-calf operation with other farming interests including a commercial hay operation and a pine and hardwood timber operation. He is a member of the board of directors of First South Farm Credit, ACA. Mr. Norsworthy is a member of the board of directors for Centreville Academy, an educational institution, and served as a former mayor of the town of Jackson, Louisiana. Mr. Norsworthy also serves on the local board for Feliciana Farm Bureau, which promotes agriculture. Mr. Norsworthy has a Bachelor of Science in Vocational Agriculture Education from Louisiana State University. He serves on the Board Risk Policy Committee.

Katherine A. Pace, 57, outside director for the Board, is from Orlando, Florida. Ms. Pace is a certified public accountant and principal of Family Business Consulting, LLC, which provides financial and strategic planning for closely held businesses. In addition to her work through Family Business Consulting, she is Chief Financial Officer/Treasurer of NASCAR Holdings, Inc., a motorsports business. Effective January 1, 2019, Ms. Pace will also serve as CEO, President, and Chairman of the Board for Trivergent Trust Company, LLC, a trust company. Prior to forming her company, she was a tax partner with KPMG, LLP, from 1985-2005. While at KPMG, her practice included a variety of cooperative and agribusiness clients as well as participation in trade associations such as the National Society of Accountants for Cooperatives. Ms. Pace obtained her Bachelor of Science in Accounting from Furman University. She is a member of the American Institute of Certified Public Accountants and the Florida Institute of Certified Public Accountants and she is a current and past member and director of numerous trade and charitable organizations. Ms. Pace is the board designated financial expert and serves on the Board Audit Committee.

Thomas E. Porter, Jr., 65, from Concord, North Carolina, is president of Porter Farms, Inc., a farming operation consisting of a sow farrow unit and a wean swine operation, pullet houses, layer houses and a cow/calf operation. He also manages The Farm at Brush Arbor, LLC, an agritourism business on his farm. He currently serves on the Carolina Farm Credit, ACA, board of directors. Mr. Porter also holds board and leadership positions with the following agricultural trade and promotion organizations: board member on the Cabarrus County Ag advisory board, president of Cabarrus County Farm Bureau, chairman of Cabarrus County Extension Advisory Board, Cabarrus County Soil and Water Conservation District, the Water Committee for the American Farm Bureau, and the Food Innovation Committee. Mr. Porter also serves as a member of the Union Power Cooperative Board. He also serves on the Commissioners Circle for the North Carolina Commissioner of

Agriculture. Mr. Porter became a director in 2019 and will serve on the Board Risk Policy Committee.

William T. Robinson, 51, from St. Matthews, South Carolina, is the owner/operator of Robinson Family Farm, which consists of row crops, hay, cattle and timber. Mr. Robinson is currently employed as Executive Director for the SEFA group, an engineering, construction and transportation company and he retired from the department of Treasury and Corporate Financial Planning at Santee Cooper, South Carolina's state owned electric and water utility. He serves on the board of the South Carolina Palmetto AgriBusiness Council, the Orangeburg Area Cattleman's Association, Tri-County Electric Cooperative, and the Lexington County Chamber of Commerce. Mr. Robinson obtained a Bachelor of Science and a Master of Science in Civil Engineering from Clemson University and a Master of Business Administration from Charleston Southern University. He currently serves on the board of AgSouth Farm Credit, ACA. Mr. Robinson is a member of both the AgFirst Plan Sponsor Committee and the AgFirst/FCBT Plan Sponsor Committee and serves as chair of both committees in 2018 and 2019. Mr. Robinson serves on the Board Coordinating Committee and as chair of the Board Audit Committee.

Michael T. Stone, 47, from Rowland, North Carolina, owns and operates P & S Farms, Inc. and Bo Stone Farms, LLC. The row crop units produce corn, wheat, and soybeans and the operations include a swine finishing unit under contract with Murphy Brown, a cow/calf herd, timber management and small produce for a roadside stand. Mr. Stone is a director of Cape Fear Farm Credit, ACA, a director of Southeastern Health hospital, a director of Dillon Christian School, and a member of the North Carolina Farm Bureau Energy and Transportation Committee. He also serves on the board of The Farm Credit Council, a trade organization. Mr. Stone has a Bachelor of Science in Agricultural Business Management (with a minor in Animal Science) and a Master of Science in Agriculture from North Carolina State University. He serves as chair of the Board Compensation Committee and as a member of the Board Coordinating Committee and the Board Governance Committee. Mr. Stone is the Board-appointed member of both the AgFirst Plan Sponsor Committee and the AgFirst/FCBT Plan Sponsor Committee in 2018 and 2019.

Committees

The Board has established an Audit Committee, Compensation Committee, Risk Policy Committee, Governance and Coordinating Committee. All members of the Board, other than the Chairman, serve on a committee. The Chairman of the Board serves as an ex-officio member of all Board committees and the Vice Chairman serves as a member of the Board Compensation Committee. The Board has one designated financial expert who serves on the Audit Committee. The responsibilities for each committee are set forth in its respective Board approved charter.

Compensation of Directors

Directors were compensated in 2018 in cash at the rate of $59,353 per year, payable at $4,946 per month. This is compensation for attendance at Board meetings, Board committee meetings, certain other meetings pre-approved by the Board and other duties as assigned. Farm Credit Administration (FCA) regulations also allow additional compensation to be paid to a director in exceptional circumstances where extraordinary time and effort are involved. In this regard, additional compensation was paid for certain leadership positions on the Board, including the Chairman of the Board, Vice Chairman of the Board, Chair of each Board standing committee as well as to members of the Board Audit Committee in recognition of greater than normal participation in Board activities. Total cash compensation paid to all directors as a group during 2018 was $1,038,047. Directors received no non-cash compensation during 2018. Additional information for each director who served during 2018 is provided in the following table.

	Number of Days Served			
Name of Director	**Board Meetings**	**Other Official Activities***	**Farm Credit Council Bd. Activities**	**Total Comp. Paid During 2018**
Jenny R. Black	7.25	9.25	.50	$ 26,815
James C. Carter, Jr.	14.25	13.75	4.50	63,937
William J. Franklin, Jr.	14.25	15.75	4.50	59,353
Bonnie V. Hancock	14.25	13.00	4.50	59,353
Curtis R. Hancock, Jr.	14.25	27.25	4.50	71,353
Dale R. Hershey	14.25	14.50	4.50	64,353
Walter C. Hopkins, Sr.	14.25	15.75	4.50	63,937
William K. Jackson	14.25	15.50	4.50	64,353
S. Jerry Layman	14.25	13.00	4.50	59.353
J. Alvin Lyons	14.25	13.75	4.50	64,353
S. Alan Marsh	14.25	11.50	4.50	59,353
Fred R. Moore, Jr.	14.25	13.25	4.50	59,769
James M. Norsworthy, III	14.25	10.75	4.50	59,353
Katherine A. Pace	14.25	13.75	4.50	64,353
William T. Robinson	14.25	16.50	4.50	69,353
Michael T. Stone**	14.25	15.75	4.50	64,353
Ellis W. Taylor	14.25	12.25	4.50	64,353
Total				$ 1,038,047

* *Other official activities include Board committee meetings and Board training.*
** *Does not include 4.5 days served as Board-appointed member of the AgFirst and AgFirst/FCBT Plan Sponsor Committees.*

Directors are reimbursed on an actual cost basis for all expenses incurred in the performance of official duties. Such expenses may include transportation, lodging, meals, tips, tolls, parking of cars, laundry, registration fees and other expenses associated with travel on official business. A copy of the policy is available to shareholders upon request.

The aggregate amount of reimbursement for travel, subsistence and other related expenses for all directors as a group was $153,844 for 2018, $180,174 for 2017, and $193,742 for 2016.

Transactions with Senior Officers and Directors

The Bank's disclosure on loans to and transactions with its officers and directors, to be disclosed in this section, is incorporated herein by reference to Note 10, *Related Party Transactions,* to the Financial Statements included in this Annual Report to shareholders. Such loans are subject to special approval requirements contained in the FCA regulations and were made on the same terms, including interest rate, amortization schedule and collateral, as those prevailing at the time for comparable transactions with unaffiliated persons. No loan to a director or to any organization affiliated with such person, or to any immediate family member who resides in the same household as such person or in whose loan or business operation such person has a material financial or legal interest, involved more than the normal risk of collectability.

There have been no transactions between the Bank and senior officers or directors which require reporting per FCA regulations.

Involvement in Certain Legal Proceedings

There were no matters which came to the attention of management or the Board of Directors regarding involvement of current directors or senior officers in specified legal proceedings which should be disclosed in this section. No directors or senior officers have been involved in any legal proceedings during the last five years which require reporting per FCA regulations.

Relationship with Independent Registered Public Accounting Firm

There were no changes in or material disagreements with the Bank's independent registered public accounting firm on any matter of accounting principles or financial statement disclosure during this period.

Aggregate fees expensed by the Bank for services rendered by its independent registered public accounting firm for the year ended December 31, 2018 were as follows:

	2018
Independent Registered Public Accounting Firm	
PricewaterhouseCoopers LLP (PwC)	
Audit services	$ 924,044
Audit-related services	4,189
Non-audit services	52,242
Total	$ 980,775

Audit fees of $924,044 were for the annual audits of financial statements of the Bank and District, of which $66,416 related to the 2017 audit. Audit-related fees were for benefit plan audits. Non-audit fees were for Farmer Mac minimum servicing standards attestation and board election tabulations. Out-of-pocket expenses are included in the fee amounts reported above.

All non-audit services provided by PwC require pre-approval by the Audit Committee.

Financial Statements

The Financial Statements, together with the report thereon of PricewaterhouseCoopers LLP, dated March 13, 2019, and the Report of Management, which appear in this Annual Report to shareholders are incorporated herein by reference.

Borrower Information Regulations

FCA regulations require that borrower information be held in strict confidence by Farm Credit institutions, their directors, officers and employees. These regulations provide Farm Credit institutions clear guidelines for protecting their borrowers' nonpublic personal information.

On November 10, 1999, the FCA Board adopted a policy that requires Farm Credit institutions to formally inform new borrowers at loan closing of the FCA regulations on releasing borrower information and to address this information in the annual report to shareholders. The implementation of these measures ensures that new and existing borrowers are aware of the privacy protections afforded them through FCA regulations and Farm Credit System institution efforts.

Shareholder Investment

Shareholder investment in a District Association is materially affected by the financial condition and results of operations of AgFirst Farm Credit Bank. Copies of AgFirst's Annual and Quarterly Reports and combined information concerning AgFirst Farm Credit Bank and District Associations are available upon request free of charge by calling 1-800-845-1745, ext. 2764, or writing Matthew Miller, Controller, AgFirst Farm Credit Bank, P.O. Box 1499, Columbia, SC 29202. This information can also be obtained at the Bank's website, **www.agfirst.com**.The Bank prepares an electronic version of the Annual Report, which is available on the website, within 75 days after the end of the fiscal year. The Bank prepares an electronic version of each Quarterly Report within 40 days after the end of each fiscal quarter, except that no report is prepared for the fiscal quarter that coincides with the end of the fiscal year of the Bank.

Additional Required Regulatory Capital Disclosures

The following disclosures contain regulatory disclosures as required for the Bank under Regulation 628.62 and 628.63 for risk-adjusted ratios: common equity tier 1, tier 1 capital and total capital ratios. As required, these disclosures are made available for at least three years and can be accessed via AgFirst's website at www.agfirst.com.

DISCLOSURE MAP

Disclosure Requirement	Description	2018 Annual Report Reference
Scope of Application	Corporate entity and structure	Note 1
	Restrictions of capital	Note 7, section F
Capital Structure	Terms and conditions of capital instruments	Note 7, sections A through E
Credit Risk: General	Qualitative disclosures	Note 2, section B; Note 3
	Distribution of risk exposure	Note 3; Note 4
	Loans by loan type	Note 3
	Major industry type	Note 3
	Composition of Direct Notes	Direct Notes section of MD&A
	Allowance for Loan Loss Reconciliation	Note 3
	Contractual maturity delineation	Note 3
Counterparty Credit Risk-Related Exposures	Qualitative Disclosures	Note 14
	Counterparty Exposures	Note 14
Interest Rate Risk for Non-Trading Activities	Quantitative & qualitative disclosure requirements	Interest Rate Risk Management section of MD&A

SCOPE OF APPLICATION

AgFirst Farm Credit Bank (AgFirst or the Bank) is one of the four banks of the Farm Credit System (System), a nationwide system of cooperatively owned banks and associations, established by Congress and subject to the provisions of the Farm Credit Act of 1971, as amended. The Bank prepares financial statements in conformity with accounting principles generally accepted in the United States of America (GAAP) and prevailing practices within the financial services industry.

As of December 31, 2018, the AgFirst District consisted of the Bank and 19 District Associations. All 19 were structured as Agricultural Credit Association (ACA) holding companies, with Production Credit Association (PCA) and Federal Land Credit Association (FLCA) subsidiaries. AgFirst is owned by these 19 Associations. The Bank does not have any subsidiaries requiring consolidation; therefore, there are no consolidated entities for which the total capital requirement is deducted, there are no restrictions on transfer of funds or total capital with other consolidated entities and no subsidiary exists which is below the minimum total capital requirement individually or when aggregated at the Bank's level. In conjunction with other System entities, the Bank jointly owns certain service organizations: the Federal Farm Credit Banks Funding Corporation (Funding Corporation), the FCS Building Association (FCSBA), and the Farm Credit Association Captive Insurance Corporation (Captive). Certain of the Bank's investments in other System institutions, including the investment in the Funding Corporation and FCSBA, are deducted from capital as only the institution that issued the equities may count the amount as capital.

CAPITAL STRUCTURE

Descriptions of the Bank's capitalization requirements, protection mechanisms, regulatory capitalization requirements and restrictions, and equities are included in Note 7, *Shareholders' Equity,* of the Notes to the Financial Statements.

The table below outlines the Bank’s capital structure for the capital adequacy calculations as of December 31, 2018:

(dollars in thousands)	Ending Balance	3-Month Average Daily Balance
Common Equity Tier 1 Capital (CET1)		
Common Cooperative Equities:		
Statutory minimum purchased borrower stock	$ 23	$ 23
Other required member purchased stock	130,254	125,244
Allocated equities:		
Qualified allocated equities subject to retirement	187,563	184,956
Nonqualified allocated equities subject to retirement	440	441
Nonqualified allocated equities not subject to retirement	–	–
Unallocated retained earnings	1,848,936	2,112,076
Paid-in capital	58,883	58,883
Regulatory adjustments and deductions made to CET1	(71,189)	(69,861)
Total CET1	$ 2,154,910	$ 2,411,762
Additional Tier 1 Capital (AT1)		
Non-cumulative perpetual preferred stock	$ 49,250	$ 49,250
Regulatory adjustments and deductions made to AT1	–	–
Total AT1	$ 49,250	$ 49,250
Total Tier 1 Capital	$ 2,204,160	$ 2,461,012
Tier 2 Capital		
Allowance for loan losses	$ 18,049	$ 17,187
Reserve for unfunded commitments	36	33
Regulatory adjustments and deductions made to total capital	–	–
Total Tier 2 Capital	$ 18,085	$ 17,220
Total Capital	$ 2,222,245	$ 2,478,232
Reconciliation to Balance Sheets:		
Allowance for loan losses	(18,049)	
Reserve for unfunded commitments	(36)	
Intra-system investments	71,189	
Accumulated other comprehensive income (loss)	(51,652)	
Total Capital per Balance Sheets	$ 2,223,697	

CAPITAL ADEQUACY AND CAPITAL BUFFERS

In conjunction with the annual business and financial planning process, the Board of Directors reviews and approves a capital adequacy plan which includes target levels for capital and capital ratio baselines. When reviewing the capital adequacy plan and setting an appropriate target equity level, the Board considers the following: credit risk and allowance levels; quality and quantity of earnings; sufficiency of liquid funds; operational risk; interest rate risk; growth in determining optimal capital levels; the Bank’s overall risk profile; capability of management; quality of operating policies, procedures, and internal controls; capital composition; loan volume projections; anticipated future capital needs; and the Bank’s capital levels in comparison to regulatory minimum capital standards.

The Board also evaluates the amount required to properly capitalize the Bank and address the needs of each Association’s customer base with the desire to distribute a level of patronage that provides appropriate returns to our customer owners. The Board may increase or decrease these patronage levels based on its ongoing evaluation of the Bank’s business. As a result, there is no assurance that patronage will remain at current levels.

As part of its business planning process, the Bank performs stress tests to examine the Bank’s financial condition and performance, including capital levels, under a variety of market and economic environments, including unanticipated loan growth and prolonged periods of financial and loan quality stress. These stress tests illustrate the Bank’s ability to continue to maintain compliance with regulatory requirements through severe market conditions while continuing to fulfill the Bank’s mission. Results of these stress tests are reviewed with the Board of Directors and the FCA.

The table below outlines the Bank’s risk-weighted assets by exposure (including accrued interest of that exposure) as of December 31, 2018. Risk-weighted assets are calculated on a three-month average daily balance.

(dollars in thousands)	Ending Balance	Risk-Weighted Assets
Exposures to:		
Government-sponsored entities, including Direct Notes to Associations	$ 25,025,107	$ 4,002,370
Depository institutions	421,497	35,088
Corporate exposures	4,821,568	4,588,108
Residential mortgage loans	1,847,600	905,926
Past due > 90 days and nonaccrual loans	18,600	22,628
Securitizations	784,465	277,013
Equity investments	–	8,606
Exposures to obligors and other assets	155,914	112,949
Off-balance sheet exposures	4,872,068	1,422,080
Total	$ 37,946,819	$ 11,374,768
Reconciliation to Balance Sheets:		
Off-balance sheet exposures	(4,872,068)	
Allowance for loan losses not risk-weighted	(18,049)	
Intra-system investments not risk-weighted	71,189	
AFS mark to market not risk-weighted	(49,429)	
Total Assets per Balance Sheets	$ 33,078,462	

As of December 31, 2018, the Bank was well-capitalized and exceeded all capital requirements to which it was subject, including applicable capital buffers. The Bank's risk-adjusted capital ratios exceeded the regulatory minimum levels, including the conservation buffer by a minimum of 12.54 percent. Additionally, the Bank's leverage ratio was 2.53 percent in excess of its required minimum leverage ratio, including the buffer. If the capital ratios fall below the minimum regulatory requirements, including the buffer amounts, capital distributions (equity redemptions, dividends, and patronage) and discretionary senior executive bonuses are restricted or prohibited without prior FCA approval. The aggregate amount of eligible retained income was $2.0 million as of December 31, 2018.

The following sets forth the regulatory capital ratios:

Ratio	Minimum Requirement	Capital Conservation Buffer*	Minimum Requirement with Capital Conservation Buffer	Capital Ratios as of December 31, 2018	2017
Risk-adjusted ratios:					
CET1 Capital	4.5%	1.25%	5.75%	21.20%	21.73%
Tier 1 Capital	6.0%	1.25%	7.25%	21.64%	22.18%
Total Capital	8.0%	1.25%	9.25%	21.79%	22.31%
Permanent Capital	7.0%	0.0%	7.0%	21.67%	22.21%
Non-risk-adjusted ratios:					
Tier 1 Leverage	4.0%	1.0%	5.0%	7.53%	7.67%
URE and UREE Leverage	1.5%	0.0%	1.5%	6.58%	6.72%

* *The capital conservation buffers have a 3 year phase-in period and will become fully effective January 1, 2020. Risk-adjusted ratio minimums will increase 0.625% each year until fully phased in. There is no phase-in period for the tier 1 leverage ratio.*

The following sets forth regulatory capital ratios as previously reported:

	Regulatory Minimum	2016	2015	2014	2013	2012
Permanent Capital Ratio	7.00%	21.31%	20.71%	21.83%	22.85%	23.58%
Total Surplus Ratio	7.00%	21.21%	20.64%	21.80%	22.81%	23.55%
Core Surplus Ratio	3.50%	19.13%	18.48%	19.38%	19.98%	20.04%
Net Collateral Ratio	103.00%	106.69%	106.93%	106.79%	106.83%	107.03%

CREDIT RISK: GENERAL

System entities have specific lending authorities within their chartered territories. The Bank is subject to credit risk by lending to the District's Federal Land Credit Associations (FLCAs), Production Credit Associations (PCAs) and Agricultural Credit Associations (ACAs) as well as Other Financing Institutions (OFIs). The Bank also purchases participations and syndications and first lien residential mortgage loans. The allowance for loan losses is determined based on a periodic evaluation of the loan portfolio, which identifies loans that may be impaired based on characteristics such as probability of default (PD) and loss given default (LGD). Allowance needs by geographic region are only considered in rare circumstances that may not otherwise be reflected in the PD and LGD (flooding, drought, etc.). There was no allowance attributed to a geographic area as of December 31, 2018.

Refer to Note 2, *Summary of Significant Accounting Policies*, of the accompanying financial statements for the Bank's policy for determining past due or delinquency status, policy for placing loans on nonaccrual status, policy for returning loans to accrual status, definition of and policy for identifying impaired loans, description of the methodology used to estimate allowance for loan losses, and policy for charging-off uncollectible amounts. Refer to Note 3, *Loans and Allowance for Loan Losses*, and Note 4, *Investments*, in the Notes to the Financial Statements for quantitative disclosures related to the Bank's credit risk.

CREDIT RISK MITIGATION

Credit Risk Mitigation Related to Loans

The Bank uses various strategies to mitigate credit risk in its lending portfolio. As described in Note 1 of the Bank's Annual Report, a substantial portion of the loan balance is concentrated in notes receivables from the District Associations to fund their earning assets, which collateralize the notes. In addition, the earnings, capital and loan loss reserves of the Associations provide additional layers of protection against losses in their respective retail loan portfolios.

Through the District Associations' and Bank's participation in loans or interests in loans to/from other institutions within the System and outside the System, the Bank and District Associations limit their exposure to both borrower and commodity concentrations. This also allows the Bank and District Associations to manage growth and capital, and to improve geographic diversification. Concentration risk is reviewed and measured by industry, product, geography and customer limits.

Although neither the Bank nor any other System institution receives any direct government support, credit quality is indirectly enhanced by government support in the form of program payments to borrowers, which improve their ability to honor their commitments.

The following table illustrates credit risk mitigants within AgFirst's loan portfolio which reduce capital requirements as of December 31, 2018:

(dollars in thousands)	Amortized Cost	Risk-Weighted Exposures	% of Total Loans
Loans with unconditional guarantee	$ 5,942	$ –	–%
Loans with conditional guarantee	1,314,741	266,886	5%
Direct Notes	16,459,760	3,269,820	68%
Total	$ 17,780,443	$ 3,536,706	73%

An additional technique to reduce credit risk is AgFirst's monitoring for commodity and geographic concentrations. The Associations' credit portfolios are comprised of a number of segments having varying, and in some cases complementary, agricultural characteristics. Commodity and industry categories are based on the Standard Industrial Classification system published by the federal government. This system is used to assign commodity or industry categories based on the largest agricultural commodity of the customer.

The following table illustrates AgFirst's loan portfolio by geographic distribution at December 31, 2018. This table excludes the Bank's Direct Notes and loans to OFI portfolios.

AgFirst Participations and Correspondent Lending Portfolios by State

(dollars in thousands)	Total Loans	Percent of Total
North Carolina	$ 1,461,054	19 %
Georgia	969,613	13
Florida	617,973	8
Virginia	560,338	7
Texas	423,663	5
South Carolina	407,954	5
Maryland	320,162	4
Pennsylvania	242,176	3
California	217,752	3
Kentucky	200,352	3
New York	195,475	3
Missouri	187,385	2
Ohio	163,843	2
Minnesota	155,953	2
Kansas	132,615	2
Other (1% and below)	1,471,141	19
Total	$ 7,727,449	100 %

The following table shows the various major commodity groups in the portfolio based on borrower eligibility and their percentage of the outstanding portfolio volume at December 31, 2018. This table excludes the Bank's Direct Notes and loans to OFI portfolios.

AgFirst Participations and Correspondent Lending Portfolios by Commodity Group

(dollars in thousands)	Total Loans	Percent of Total
Rural Home Loan	$ 3,104,592	40 %
Forestry	849,351	11
Utilities	763,694	10
Processing	701,299	9
Field Crops	305,965	4
Tree Fruits and Nuts	238,537	3
Other Real Estate	224,371	3
Swine	194,196	3
Nursery/Greenhouse	189,738	2
Dairy	165,746	2
Cattle	157,496	2
Other	832,464	11
Total	$ 7,727,449	100 %

The following table segregates loans based upon repayment dependency by commodity at December 31, 2018. This table excludes the Bank's Direct Notes and loans to OFI portfolios.

AgFirst Participations and Correspondent Lending Portfolios by Commodity Group

(dollars in thousands)	Total Loans	Percent of Total
Non-Farm Income	$ 3,447,335	45 %
Rural Utilities	763,694	10
Timber	709,197	9
Fruit & Vegetables	450,462	6
Grains	349,288	4
Swine	337,790	4
Processing and Marketing	244,202	3
Farm-Related Business	201,269	3
Dairy	166,445	2
Poultry	155,140	2
Beef	153,159	2
Nursery	144,886	2
Wine	119,782	2
Other	484,800	6
Total	$ 7,727,449	100 %

The tables above exclude $4.886 billion of off-balance sheet exposures, primarily unfunded lines of credit and letters of credit.

The Bank does not use credit default swaps as part of its credit risk management approach.

Credit Risk Mitigation Related to Investments

Credit risk in AgFirst's investment portfolio is largely mitigated by investing primarily in securities issued or guaranteed by the U.S. government or one of its agencies.

The following table shows the investment exposures covered by a guarantee as of December 31, 2018:

(dollars in thousands)		Amortized Cost		Fair Value	% of Total Investments		Risk-Weighted Exposures
Unconditional Guarantee:							
U.S. Govt. Treasury Securities	$	389,948	$	389,611	5%	$	–
U.S. Govt. Guaranteed		4,518,703		4,499,597	56%		–
Conditional Guarantee:							
U.S. Govt. Agency Guaranteed		2,298,813		2,274,392	29%		465,663
Total	$	7,207,464	$	7,163,600	90%	$	465,663

The remaining credit risk in the Bank's investment portfolio primarily relates to the 10 percent of the portfolio composed of asset-backed securities (ABS), Rural Housing Mortgage-Backed Securities (RHMS) and Rural America Bonds (RABs). The ABS securities must meet the applicable FCA regulatory guidelines, which require them to be high quality, senior class, and rated in the top category (AAA/Aaa) by Nationally Recognized Statistical Rating Organizations (NRSROs) at the time of purchase. To achieve these ratings, the securities may have a guarantee of timely payment of principal and interest, credit enhancements achieved through over-collateralization or other means, priority of payments for senior classes over junior classes, or bond insurance.

All of the non-agency securities owned have one or more credit enhancement features. The RHMS portfolio must be fully guaranteed by a government agency or government sponsored enterprise. RABs are private placement securities, which generally have some form of credit enhancement.

Credit risk in the investment portfolio also arises from the inability of guarantors and third-party providers of other credit enhancements, such as bond insurers or Farmer Mac, to meet their contractual obligations to the Bank.

COUNTERPARTY CREDIT RISK

Counterparty credit risk exposures consist primarily of derivative instruments and repurchase-style transactions. By using derivative instruments, the Bank exposes itself to credit and market risk. The amount of this exposure depends on the value of underlying market factors (e.g. interest rates and foreign exchange rates), which can be volatile and uncertain in nature. If a counterparty fails to fulfill its performance obligations under a derivative contract, the Bank's credit risk will equal the fair value gain in the derivative. Generally, when the fair value of a derivative contract is positive, this indicates that the counterparty owes the Bank, thus creating a repayment risk for the Bank. When the fair value of the derivative contract is negative, the Bank owes the counterparty and, therefore, assumes no repayment risk.

To minimize the risk of credit losses, the Bank transacts with counterparties that have an investment grade credit rating from a major rating agency and also monitors the credit standing of, and levels of exposure to, individual counterparties. The Bank typically enters into master agreements that contain netting provisions. These provisions allow the Bank to require the net settlement of covered contracts with the same counterparty in the event of default by the counterparty on one or more contracts.

Financial instruments qualifying as eligible collateral are specifically defined under individual counterparty credit support agreements, but generally include cash, U.S. Treasury debt obligations, debt obligations of certain federal agencies and mortgage-backed securities guaranteed by certain federal agencies. Federal agencies include Government National Mortgage Association, Federal National Mortgage Association, Federal Home Loan Mortgage Corporation, and the Federal Home Loan Banks. The value of the instrument when used as collateral may be discounted from its market price up to 10 percent, depending on the security type, issuer and term. Such discounts are defined in the credit support agreement.

See Note 14, *Derivative Financial Instruments and Hedging Activities*, in the Notes to the Financial Statements for further information on counterparty exposures related to derivatives as of December 31, 2018.

SECURITIZATION

Securitizations are transactions in which:

- The credit risk of the underlying exposure is transferred to third parties, and has been separated into two or more tranches;
- The performance of the securitization depends upon the performance of the underlying exposures or reference assets; and
- All or substantially all of the underlying exposures or reference assets are financial exposures.

Securitizations include on- or off-balance sheet exposures (including credit enhancements) that arise from a securitization or re-securitization transaction; or an exposure that directly or indirectly references a securitization (e.g., credit derivative). A re-securitization is a securitization transaction in which one or more of the underlying exposures that have been securitized is itself a securitization.

The Bank currently only participates in securitizations as an investor through the purchase of mortgage-backed securities (MBS) and ABS as included in its investment portfolio. As of December 31, 2018, the Bank did not retain any re-securitization exposures.

The Bank is subject to liquidity risk with respect to securitization exposures. In volatile market conditions, it could be difficult to sell such investments, if the need arises, and the discounts from face value would likely be significant. In addition, because of the inherent uncertainty of determining the fair value of investments that do not have a readily available market value, the fair value of these investments may differ significantly from the values that would have been used had a ready market existed for the investments.

For securitization exposures, the Bank has elected to utilize the simplified supervisory formula approach (SSFA) risk-based capital approach. As such, the Bank's ABS portfolio is risk weighted on an individual security level. As of December 31, 2018, the ABS risk-weights ranged from 20.00 percent to 126.14 percent, with a weighted average risk-weight of 35.93 percent. Total risk-weighted assets for the securitization portfolio utilizing a 3-month average daily balance was $277.0 million at December 31, 2018.

The following table shows the risk-weight distribution as of December 31, 2018 for ABS securities which are risk weighted using the SSFA approach:

	Fair Value by SSFA Risk Weight Classification		
(dollars in thousands)	**Automobile ABSs**	**Credit Card ABSs**	**Total**
0% – 50%	$ 183,406	$ 445,939	$ 629,345
Greater than 50% – 100%	81,498	–	81,498
Greater than 100% – 150%	71,996	–	71,996
Total Exposure	$ 336,900	$ 445,939	$ 782,839

As of December 31, 2018, the Bank did not hold any off-balance sheet securitization exposures nor were any securitization exposures deducted from capital. For the year ended December 31, 2018, there were no sales of ABS securities that resulted in realized gains or losses.

Refer to Note 4, *Investments*, in the Notes to the Financial Statements for additional information related to purchases and sales of securitization exposures as well as the amortized cost, unrealized gains/(losses) and fair value of MBS and ABS held in the Bank's investment portfolio.

EQUITIES

At December 31, 2018, the Bank had no equity investments.

INTEREST RATE RISK

See the *Interest Rate Risk Management* subsection of the *Risk Management* section in Management's Discussion and Analysis for the disclosures on the Bank's interest rate risk management practices.

Report on Internal Control Over Financial Reporting

The Bank's principal executives and principal financial officers, or persons performing similar functions, are responsible for establishing and maintaining adequate internal control over financial reporting. For purposes of this report, "internal control over financial reporting" is defined as a process designed by or under the supervision of the Bank's principal executives and principal financial officers, or persons performing similar functions, and effected by its Board of Directors, management and other personnel. This process is designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of the financial statements for external purposes in accordance with generally accepted accounting principles in the United States of America (GAAP).

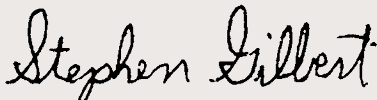
Internal control over financial reporting includes those policies and procedures that: (1) pertain to the maintenance of records that in reasonable detail accurately and fairly reflect the transactions and dispositions of the assets of the Bank, (2) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with GAAP and that receipts and expenditures are being made only in accordance with authorizations of management and directors of the Bank, and (3) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of the Bank's assets that could have a material effect on its Financial Statements.

The Bank's management has completed an assessment of the effectiveness of internal control over financial reporting as of December 31, 2018. In making the assessment, management used the framework in *Internal Control — Integrated Framework* (2013), promulgated by the Committee of Sponsoring Organizations of the Treadway Commission, commonly referred to as the "COSO" criteria.

Based on the assessment performed, the Bank's management concluded that as of December 31, 2018, the internal control over financial reporting was effective based upon the COSO criteria. Additionally, based on this assessment, the Bank's management determined that there were no material weaknesses in the internal control over financial reporting as of December 31, 2018.

The Bank's internal control over financial reporting as of December 31, 2018 has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in the Report of Independent Registered Public Accounting Firm which expresses an unqualified opinion on the effectiveness of the Bank's internal control over financial reporting as of December 31, 2018.

Leon T. Amerson
President and Chief Executive Officer



Stephen Gilbert
Senior Vice President and Chief Financial Officer

March 13, 2019

Report of the Audit Committee

The Audit Committee of the Board of Directors (the Committee) is comprised of the directors named below. None of the directors who serve on the Committee is an employee of AgFirst Farm Credit Bank (the Bank) and in the opinion of the Board of Directors, each is free of any relationship with the Bank or management that would interfere with the director's independent judgment on the Committee.

The Committee has adopted a written charter that has been approved by the Board of Directors. The Committee has reviewed and discussed the Bank's audited financial statements with management, which has primary responsibility for the financial statements. The financial statements were prepared under the oversight of the Committee.

PricewaterhouseCoopers LLP (PwC), the Bank's independent registered public accounting firm for 2018, is responsible for expressing an opinion on the conformity of the Bank's audited financial statements with accounting principles generally accepted in the United States of America. The Committee has discussed with PwC the matters that are required to be discussed by Statement on Auditing Standards No. 114 *(The Auditor's Communication With Those Charged With Governance)*. The Committee discussed with PwC its independence from the Bank. The Committee also reviewed the non-audit services provided by PwC and concluded that these services were not incompatible with maintaining PwC's independence.

Based on the considerations referred to above, the Committee recommended to the Board of Directors that the audited financial statements be included in the Bank's Annual Report for 2018. The foregoing report is provided by the following independent directors, who constitute the Committee:

William T. Robinson
Chairman of the Audit Committee

Members of Audit Committee

Jack W. Bentley, Jr.
Dale R. Hershey
William K. Jackson
J. Alvin Lyons
Katherine A. Pace

March 13, 2019

Report of Independent Registered Public Accounting Firm

To the Board of Directors and Shareholders
of AgFirst Farm Credit Bank

Opinions on the Financial Statements and Internal Control over Financial Reporting

We have audited the accompanying balance sheets of AgFirst Farm Credit Bank (the "Company") as of December 31, 2018, 2017, and 2016, and the related statements of income, comprehensive income, changes in shareholders' equity and cash flows, for the years then ended, including the related notes (collectively referred to as the "financial statements"). We also have audited the Company's internal control over financial reporting as of December 31, 2018, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2018, 2017, and 2016, and the results of its operations and its cash flows for the years then ended in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained in all material respects, effective internal control over financial reporting as of December 31, 2018, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the COSO.

Basis for Opinions

The Company's management is responsible for these financial statements, for maintaining effective internal control over financial reporting, and for its assessment of the effectiveness of internal control over financial reporting, included in the accompanying Report on Internal Control Over Financial Reporting. Our responsibility is to express opinions on the Company's financial statements and on the Company's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Company Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Company in accordance with the relevant ethical requirements relating to our audit, which include standards of the American Institute of Certified Public Accountants (AICPA) *Code of Professional Conduct* and the Farm Credit Administration's independence rules set forth in 12 CFR Part 621, *Accounting and Reporting Requirements*, Subpart E, *Auditor Independence*.

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

Our audits of the financial statements included performing procedures to assess the risks of material misstatement of the financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the financial statements. Our audit of internal control over financial reporting included obtaining an understanding of internal control over financial reporting, assessing the risk that a material weakness exists, and testing and evaluating the design and operating effectiveness of internal control based on the assessed risk. Our audits also included performing such other procedures as we considered necessary in the circumstances. We believe that our audits provide a reasonable basis for our opinions.

PricewaterhouseCoopers LLP, 333 SE 2nd Avenue, Suite 3000, Miami, FL 33301
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Definition and Limitations of Internal Control over Financial Reporting

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

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

PricewaterhouseCoopers LLP

March 13, 2019

We have served as the Company's auditor since 1985.

Balance Sheets

(dollars in thousands)	As of December 31, 2018	2017	2016
Assets			
Cash	**$ 421,485**	$ 440,768	$ 549,124
Cash equivalents	**100,000**	272,519	262,624
Investments in debt securities:			
Available-for-sale (amortized cost of $7,988,624, $7,683,631, and $7,488,279, respectively)	**7,939,196**	7,663,605	7,490,841
Held-to-maturity (fair value of $44,894, $463,340, and $545,926, respectively)	**42,052**	458,623	541,354
Total investments in debt securities	**7,981,248**	8,122,228	8,032,195
Loans	**24,275,881**	23,359,160	22,914,682
Allowance for loan losses	**(18,049)**	(14,381)	(14,783)
Net loans	**24,257,832**	23,344,779	22,899,899
Accrued interest receivable	**90,794**	74,979	66,120
Accounts receivable	**71,061**	80,267	89,466
Equity investments in other Farm Credit institutions	**74,798**	72,593	70,255
Premises and equipment, net	**55,865**	59,369	60,046
Other property owned	**2,842**	154	3,346
Other assets	**22,537**	19,801	24,522
Total assets	**$ 33,078,462**	$ 32,487,457	$ 32,057,597
Liabilities			
Systemwide bonds payable	**$ 25,807,367**	$ 24,829,679	$ 22,660,317
Systemwide notes payable	**4,574,334**	4,933,312	6,748,166
Accrued interest payable	**109,659**	81,471	58,524
Accounts payable	**327,610**	356,446	302,720
Other liabilities	**35,795**	43,734	62,622
Total liabilities	**30,854,765**	30,244,642	29,832,349
Commitments and contingencies (Note 11)			
Shareholders' Equity			
Perpetual preferred stock	**49,250**	49,250	49,250
Capital stock and participation certificates	**317,840**	313,752	301,905
Additional paid-in-capital	**58,883**	58,883	58,883
Retained earnings			
Allocated	**440**	492	559
Unallocated	**1,848,936**	1,845,194	1,817,004
Accumulated other comprehensive income (loss)	**(51,652)**	(24,756)	(2,353)
Total shareholders' equity	**2,223,697**	2,242,815	2,225,248
Total liabilities and equity	**$ 33,078,462**	$ 32,487,457	$ 32,057,597

The accompanying notes are an integral part of these financial statements.

Statements of Income

(dollars in thousands)	For the year ended December 31, 2018	2017	2016
Interest Income			
Investment securities	**$ 196,553**	$ 149,737	$ 124,809
Loans	**813,109**	710,835	655,393
Other	**1,051**	—	—
Total interest income	**1,010,713**	860,572	780,202
Interest Expense	**600,546**	413,505	315,198
Net interest income	**410,167**	447,067	465,004
Provision for (reversal of allowance for) loan losses	**3,542**	(551)	(5,283)
Net interest income after provision for loan losses	**406,625**	447,618	470,287
Noninterest Income			
Loan fees	**8,894**	8,595	8,963
Building lease income	**3,287**	3,543	3,516
Total other-than-temporary impairment losses	—	—	(4,665)
Portion of loss recognized in other comprehensive income	—	—	(10,282)
Net other-than-temporary impairment losses	—	—	(14,947)
Gains (losses) on investments, net	**13**	(258)	23,822
Gains (losses) on debt extinguishment	**150**	(4,528)	(29,900)
Gains (losses) on other transactions	**1,462**	1,802	419
Insurance premium refund	**6,330**	—	—
Other noninterest income	**16,340**	14,221	11,523
Total noninterest income	**36,476**	23,375	3,396
Noninterest Expenses			
Salaries and employee benefits	**63,546**	58,282	58,359
Occupancy and equipment	**22,597**	22,834	22,098
Insurance Fund premiums	**8,265**	13,868	16,229
Other operating expenses	**42,289**	30,698	37,085
Losses (gains) from other property owned	**416**	562	(2,051)
Total noninterest expenses	**137,113**	126,244	131,720
Net income	**$ 305,988**	$ 344,749	$ 341,963

The accompanying notes are an integral part of these financial statements.

Statements of Comprehensive Income

(dollars in thousands)	For the year ended December 31, 2018	2017	2016
Net income	**$ 305,988**	$ 344,749	$ 341,963
Other comprehensive income:			
Unrealized gains (losses) on investments:			
Other-than-temporarily impaired	**—**	—	(15,973)
Not other-than-temporarily impaired	**(29,403)**	(22,587)	(46,451)
Change in value of cash flow hedges	**868**	856	119
Employee benefit plans adjustments	**1,639**	(672)	30
Other comprehensive income (Note 7)	**(26,896)**	(22,403)	(62,275)
Comprehensive income	**$ 279,092**	$ 322,346	$ 279,688

The accompanying notes are an integral part of these financial statements.

Statements of Changes in Shareholders' Equity

(dollars in thousands)	Perpetual Preferred Stock	Capital Stock and Participation Certificates	Additional Paid-In-Capital	Retained Earnings Allocated	Retained Earnings Unallocated	Accumulated Other Comprehensive Income	Total Shareholders' Equity
Balance at December 31, 2015	$ 115,000	$ 307,483	$ 39,988	$ 656	$ 1,731,972	$ 59,922	$ 2,255,021
Comprehensive income					341,963	(62,275)	279,688
Capital stock/participation certificates issued/(retired), net		(8,224)					(8,224)
Redemption of perpetual preferred stock (Note 7)	(65,750)		18,895				(46,855)
Stock dividends declared/paid		2,633			(2,633)		—
Dividends paid on perpetual preferred stock					(1,548)		(1,548)
Cash patronage declared					(252,659)		(252,659)
Retained earnings retired				(97)			(97)
Patronage distribution adjustment		13			(91)		(78)
Balance at December 31, 2016	$ 49,250	$ 301,905	$ 58,883	$ 559	$ 1,817,004	$ (2,353)	$ 2,225,248
Comprehensive income					344,749	(22,403)	322,346
Capital stock/participation certificates issued/(retired), net		9,079					9,079
Stock dividends declared/paid		2,766			(2,766)		—
Dividends paid on perpetual preferred stock					(1,146)		(1,146)
Cash patronage declared					(312,456)		(312,456)
Retained earnings retired				(67)			(67)
Patronage distribution adjustment		2			(191)		(189)
Balance at December 31, 2017	$ 49,250	$ 313,752	$ 58,883	$ 492	$ 1,845,194	$ (24,756)	$ 2,242,815
Comprehensive income					**305,988**	**(26,896)**	**279,092**
Capital stock/participation certificates issued/(retired), net		**1,453**					**1,453**
Stock dividends declared/paid		**2,635**			**(2,635)**		**—**
Dividends paid on perpetual preferred stock					**(1,622)**		**(1,622)**
Cash patronage declared					**(298,223)**		**(298,223)**
Retained earnings retired				**(52)**			**(52)**
Patronage distribution adjustment					**234**		**234**
Balance at December 31, 2018	**$ 49,250**	**$ 317,840**	**$ 58,883**	**$ 440**	**$ 1,848,936**	**$ (51,652)**	**$ 2,223,697**

The accompanying notes are an integral part of these financial statements.

Statements of Cash Flows

(dollars in thousands)	For the year ended December 31, 2018	2017	2016
Cash flows from operating activities:			
Net income	**$ 305,988**	$ 344,749	$ 341,963
Adjustments to reconcile net income to net cash provided by operating activities:			
Depreciation on premises and equipment	**7,988**	8,844	10,041
Amortization of net deferred loan (fees) costs and premium amortization (discount accretion)	**1,277**	1,101	1,980
Premium amortization (discount accretion) on investment securities	**4,310**	10,764	12,458
(Premium amortization) discount accretion on bonds and notes	**97,097**	59,705	45,619
Provision for (reversal of allowance for) loan losses	**3,542**	(551)	(5,283)
(Gains) losses on other property owned, net	**122**	567	(2,183)
Net impairment losses on investments	**—**	—	14,947
(Gains) losses on investments, net	**(13)**	258	(23,822)
(Gains) losses on debt extinguishment	**(150)**	4,528	29,900
(Gains) losses on other transactions	**(1,462)**	(1,802)	(419)
Net change in loans held for sale	**3,421**	6,852	9,164
Changes in operating assets and liabilities:			
(Increase) decrease in accrued interest receivable	**(15,815)**	(8,859)	(3,964)
(Increase) decrease in accounts receivable	**9,206**	9,199	(16,809)
Increase (decrease) in accrued interest payable	**28,188**	22,947	2,184
Increase (decrease) in accounts payable	**(14,505)**	(6,071)	9,194
Change in other, net	**(6,619)**	(12,982)	10,353
Total adjustments	**116,587**	94,500	93,360
Net cash provided by (used in) operating activities	**422,575**	439,249	435,323
Cash flows from investing activities:			
Investment securities purchased	**(2,346,736)**	(2,861,553)	(3,000,497)
Investment securities sold or matured	**2,454,884**	2,738,767	2,414,224
Net (increase) decrease in loans	**(925,315)**	(452,539)	(781,127)
(Increase) decrease in investments in other Farm Credit System institutions	**(2,205)**	(2,338)	(419)
Purchase of premises and equipment, net	**(4,484)**	(8,175)	(8,705)
Proceeds from sale of other property owned	**257**	2,743	13,193
Net cash provided by (used in) investing activities	**(823,599)**	(583,095)	(1,363,331)
Cash flows from financing activities:			
Bonds and notes issued	**15,456,988**	18,049,164	33,637,958
Bonds and notes retired	**(14,935,225)**	(17,758,797)	(32,273,019)
Capital stock and participation certificates issued/retired, net	**1,453**	9,079	(8,224)
Distribution to shareholders	**(312,320)**	(252,848)	(241,081)
Redemption of perpetual preferred stock	**—**	—	(46,855)
Dividends paid on perpetual preferred stock	**(1,622)**	(1,146)	(1,548)
Retained earnings retired	**(52)**	(67)	(97)
Net cash provided by (used in) financing activities	**209,222**	45,385	1,067,134
Net increase (decrease) in cash and cash equivalents	**(191,802)**	(98,461)	139,126
Cash and cash equivalents, beginning of period	**713,287**	811,748	672,622
Cash and cash equivalents, end of period	**$ 521,485**	$ 713,287	$ 811,748
Supplemental schedule of non-cash activities:			
Receipt of property in settlement of loans	**$ 3,067**	$ 289	$ 945
Change in unrealized gains (losses) on investments, net	**(29,403)**	(22,587)	(62,424)
Employee benefit plans adjustments	**(1,639)**	672	(30)
Non-cash changes related to derivatives:			
Increase (decrease) in bonds and notes	**$ —**	$ (92)	$ (5,082)
Decrease (increase) in other assets	**—**	92	5,082
Supplemental information:			
Interest paid	**$ 475,261**	$ 330,853	$ 267,395

The accompanying notes are an integral part of these financial statements.

Notes to the Financial Statements

Note 1 — Organization and Operations

Organization: AgFirst Farm Credit Bank (the Bank or AgFirst) is a member-owned cooperative that provides credit and credit-related services to qualified borrowers. The Bank is chartered to serve the states of Pennsylvania, Delaware, Maryland, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, the Commonwealth of Puerto Rico and portions of Ohio, Tennessee, Kentucky and Louisiana.

AgFirst is a lending institution in the Farm Credit System (the System), a nationwide network of cooperatively owned banks, associations and related service organizations. It was established by Acts of Congress and is subject to the provisions of the Farm Credit Act of 1971, as amended (the Farm Credit Act).The System specializes in providing financing and related services to qualified borrowers for agricultural and rural purposes.

The nation is served by three Farm Credit Banks (FCBs) and one Agricultural Credit Bank (ACB) (collectively, the System Banks), each of which has specific lending authorities within its chartered territory. The ACB also has additional specific nationwide lending authorities. The System Banks obtain a substantial majority of the funds for their lending operations through the sale of consolidated Systemwide bonds and notes to the public, but also obtain a portion from internally generated earnings, the issuance of common and preferred stock and, to a lesser extent, the issuance of subordinated debt.

Each System Bank serves one or more Agricultural Credit Associations (ACAs) that originate long-term, short-term and intermediate-term loans, Production Credit Associations (PCAs) that originate and service short- and intermediate-term loans, and/or Federal Land Credit Associations (FLCAs) that originate and service long-term real estate mortgage loans. These associations borrow a majority of the funds for their lending activities from their related bank. System Banks are also responsible for supervising the activities of associations within their districts. AgFirst and its related associations (Associations or District Associations) are collectively referred to as the AgFirst District. The District Associations, certain Other Financing Institutions (OFIs), other System institutions, and preferred stockholders jointly own AgFirst. As of year end, the AgFirst District consisted of the Bank and nineteen District Associations. All nineteen were structured as ACA holding companies, with PCA and FLCA subsidiaries.

The Farm Credit Administration (FCA) is delegated authority by Congress to regulate the System banks and associations. The FCA examines the activities of System institutions to ensure their compliance with the Farm Credit Act, FCA regulations, and safe and sound banking practices.

The Farm Credit Act also established the Farm Credit System Insurance Corporation (FCSIC) to administer the Farm Credit Insurance Fund (Insurance Fund). The Insurance Fund is required to be used: (1) to ensure the timely payment of principal and interest on Systemwide debt obligations (Insured Debt), (2) to ensure the retirement of protected borrower capital at par or stated value, and (3) for other specified purposes. The Insurance Fund is also available for discretionary uses by the FCSIC to provide assistance to certain troubled System institutions and to cover the operating expenses of the FCSIC. Each System bank has been required to pay premiums, which may be passed on to the Associations, into the Insurance Fund until the assets in the Fund reach the "secure base amount." The secure base amount is defined in the Farm Credit Act as 2.0 percent of the aggregate insured obligations (adjusted to reflect the reduced risk on loans or investments guaranteed by federal or state governments) or such other percentage of the aggregate obligations as the FCSIC at its sole discretion determines to be actuarially sound. When the amount in the Insurance Fund exceeds the secure base amount, the FCSIC is required to reduce premiums and may return excess funds above the secure base amount to System institutions. However, it must still ensure that reduced premiums are sufficient to maintain the level of the Insurance Fund at the secure base amount.

Premiums are charged based upon each bank's pro rata share of outstanding Insured Debt. Premiums of up to 20 basis points on average adjusted Insured Debt obligations can be assessed along with a risk surcharge of 10 basis points on nonaccrual loans and other-than-temporarily impaired investments. For 2018 and 2017, the premium was 9 and 15 basis points, respectively. For 2016, the premium was 16 basis points from January 1, 2016 to June 30, 2016, and increased to 18 basis points from July 1, 2016 to December 31, 2016. The premium will remain at 9 basis points for the first half of 2019.

AgFirst, in conjunction with other System Banks, jointly owns organizations that were created to provide a variety of services for the System:

- Federal Farm Credit Banks Funding Corporation (Funding Corporation) – provides for the issuance, marketing and processing of Systemwide Debt Securities using a network of investment dealers and dealer banks. The Funding Corporation also provides financial management and reporting services.
- FCS Building Association – leases premises and equipment to the FCA.
- Farm Credit System Association Captive Insurance Company – being a reciprocal insurer, provides insurance services to its member organizations.

In addition, The Farm Credit Council acts as a full-service federated trade association, which represents the System before Congress, the Executive Branch and others, and provides support services to System institutions on a fee basis.

Operations: The Farm Credit Act sets forth the types of authorized lending activity and financial services that can be offered by the Bank, and the persons eligible to borrow.

The Associations borrow from the Bank and in turn may originate and service both long-term real estate mortgage and short- and intermediate-term loans to their members.

The Bank primarily lends to the District Associations in the form of a line of credit to fund the Associations' earning assets. These lines of credit (or Direct Notes) are collateralized by a pledge of substantially all of each Association's assets. The terms of the Direct Notes are governed by a lending agreement between the Bank and Association. Each advance is structured such that the principal cash flow, repricing characteristics, and underlying index (if any) of the advance match those of the assets being funded. By match-funding the Association loans, their exposure to interest rate risk is minimized.

In addition to providing loan funds, the Bank provides District Associations with banking and support services such as accounting, human resources, information systems, and marketing. The costs of these support services are included in the interest charges to the Associations, or in some cases billed directly to certain Associations that use a specific service.

The Bank is also authorized to provide, in participation with other lenders and the secondary market, credit, credit commitments, and related services to eligible borrowers. Eligible borrowers include farmers, ranchers, producers or harvesters of aquatic products, rural residents, and farm-related businesses. The Bank may also lend to OFIs qualified to engage in lending to eligible borrowers.

Note 2 — Summary of Significant Accounting Policies

The accounting and reporting policies of the Bank conform to accounting principles generally accepted in the United States of America (GAAP) and prevailing practices within the banking industry. The preparation of financial statements in conformity with GAAP requires the management of the Bank to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. Significant estimates are discussed in these footnotes, as applicable. Actual results may differ from these estimates.

The accompanying Financial Statements include the accounts of the Bank, and reflect the investments in and allocated earnings of the service organizations in which the Bank has partial ownership interests.

Certain amounts in the prior year financial statements have been reclassified to conform to the current period presentation. Such reclassifications had no effect on the prior period net income or total capital as previously reported.

A. **Cash and Cash Equivalents:** Cash and Cash Equivalents include cash on hand and short-term investments with original maturities of three months or less. Certain highly liquid equity securities, such as money market funds, may also be included.

B. **Loans and Allowance for Loan Losses:** The loan portfolio includes Direct Notes, loan participations/syndications purchased, Correspondent Lending loans (primarily first lien rural residential mortgages), and loans to OFIs.

Long-term real estate mortgage loans generally have original maturities up to 30 years. Substantially all short- and intermediate-term loans for agricultural production or operating purposes have maturities of 10 years or less.

Loans are carried at their principal amount outstanding adjusted for charge-offs, premiums, discounts, deferred loan fees or costs, and derivative instruments and hedging valuation adjustments, if any. Interest on loans is accrued and credited to interest income based upon the daily principal amount outstanding. The difference in the total investment in a loan and its principal amount is deferred as part of the carrying amount of the loan and the net difference is amortized over the life of the related loan as an adjustment to interest income using the interest method.

Impaired loans are loans for which it is probable that all principal and interest will not be collected according to the contractual terms of the loan and are generally considered substandard or doubtful, which is in accordance with the loan rating model, as described below. Impaired loans include nonaccrual loans, restructured loans, and loans past due 90 days or more and still accruing interest. A loan is considered contractually past due when any principal repayment or interest payment required by the loan instrument is not received on or before the due date. A loan remains contractually past due until the entire amount past due, including principal, accrued interest, and penalty interest incurred as the result of past due status, is collected or otherwise discharged in full. A formal restructuring may also cure a past due status.

Loans are generally classified as nonaccrual when principal or interest is delinquent for 90 days or more (unless adequately secured and in the process of collection) or circumstances indicate that collection of principal and/or interest is in doubt. When a loan is placed in nonaccrual status, accrued interest deemed uncollectible is reversed (if accrued in the current year) and/or charged against the allowance for loan losses (if accrued in prior years).

When loans are in nonaccrual status, payments are applied against the recorded investment in the loan asset. If collection of the recorded investment in the loan is fully expected and the loan does not have a remaining unrecovered prior charge-off associated with it, the interest portion of payments received in cash may be recognized as interest income. Nonaccrual loans may be returned to accrual status when principal and interest are current, prior charge-offs have been recovered, the ability of the borrower to fulfill the contractual repayment terms is fully expected, and the loan is not classified "doubtful" or "loss." Loans are charged off at the time they are determined to be uncollectible.

In cases where a borrower experiences financial difficulties and the Bank makes certain monetary concessions to the borrower through modifications to the contractual terms of the loan, the loan is classified as a restructured loan. A restructured loan constitutes a troubled debt restructuring (TDR) if, for economic or legal reasons related to the debtor's financial difficulties, the Bank grants a concession to the debtor that it would not otherwise consider. If the borrower's ability to meet the revised payment schedule is uncertain, the loan is classified as a nonaccrual loan.

The allowance for loan losses is maintained at a level considered adequate by management to provide for probable and estimable losses inherent in the loan portfolio as of the report date. The allowance for loan losses is increased through provisions for loan losses and loan recoveries and is decreased through loan charge-offs and allowance reversals. A review of individual loans in each respective portfolio is performed periodically to determine the appropriateness of risk ratings and to ensure loss exposure to the Bank has been identified. The allowance for loan losses is a valuation account used to reasonably estimate loan losses as of the financial statement date. Determining the appropriate allowance for loan losses balance involves significant judgment about when a loss has been incurred and the amount of that loss.

The Bank considers the following factors, among others, when determining the allowance for loan losses:

- Credit risk classifications,
- Collateral values,
- Risk concentrations,
- Weather-related conditions,
- Current production and economic conditions, and
- Prior loan loss experience.

A specific allowance may be established for impaired loans. Impairment of these loans is measured based on the present value of expected future cash flows discounted at the loan's effective interest rate, the loan's observable market price, or fair value of the collateral if the loan is collateral dependent.

A general allowance may also be established to reflect estimated probable credit losses incurred in the remainder of the loan portfolio at the financial statement date, which excludes loans included under the specific allowance discussed above. A general allowance can be evaluated on a pool basis for those loans with similar characteristics. The level of the general allowance may be based on management's best estimate of the likelihood of default adjusted for other relevant factors reflecting the current environment.

Allowances for certain loan pools acquired from District Associations may incorporate the selling Association's methodologies for assigning general and/or specific allowances.

The credit risk rating methodology is a key component of the Bank's allowance for loan losses evaluation, and is generally incorporated into the institution's loan underwriting standards and internal lending limit. The Bank uses a two-dimensional loan rating model based on internally generated combined system risk rating guidance that incorporates a 14-point risk rating scale to identify and track the probability of borrower default and a separate scale addressing loss given default over a period of time. Probability of default is the probability that a borrower will experience a default within 12 months from the date of the determination of the risk rating. A default is considered to have occurred if the lender believes the borrower will not be able to pay its obligation in full or the borrower is past due more than 90 days.

The loss given default is management's estimate as to the anticipated economic loss on a specific loan assuming default has occurred or is expected to occur within the next 12 months.

Each of the 14 categories carries a distinct percentage of default probability. The 14-point risk rating scale provides for granularity of the probability of default, especially in the acceptable ratings. There are nine acceptable categories that range from a borrower of the highest quality to a borrower of minimally acceptable quality. The probability of default between "1" and "9" is very narrow and would reflect almost no default to a minimal default percentage. The probability of default grows significantly as a loan moves from a "9" to "10" (other assets especially mentioned) and grows more significantly as a loan moves to a substandard (viable) level ("11"). A substandard (non-viable) rating ("12") indicates that the probability of default is almost certain. Loans risk rated "13" or "14" are generally written off.

C. **Loans Held for Sale:** Loans are classified as held for sale when there is intent to sell the loans within a reasonable period of time. Loans intended for sale are carried at the lower of cost or fair value.

Generally, only home loans that are to be sold on the secondary mortgage market through various lenders or into a securitization are held for sale.

D. **Other Property Owned (OPO):** Other property owned, consisting of real estate, personal property and other assets acquired through a collection action, is recorded upon acquisition at fair value less estimated selling costs. Any initial reduction in the carrying amount of a loan to the fair value of the collateral received is charged to the allowance for loan losses. Revised estimates to the fair value less cost to sell are reported as adjustments to the carrying amount of the asset, provided that such adjusted value is not in excess of the carrying amount at acquisition. Income, expenses and carrying value adjustments related to other property owned are included in Losses (Gains) from Other Property Owned in the Statements of Income.

E. **Premises and Equipment:** Land is carried at cost. Premises and equipment are carried at cost less accumulated depreciation. Depreciation is provided on the straight-line method over the estimated useful lives of the assets, which range from 3 to 40 years. Gains and losses on dispositions are reflected in current operations. Maintenance and repairs are charged to operating expense and improvements that extend the useful life of the asset are capitalized. Premises and equipment are evaluated for impairment whenever events or circumstances indicate that the carrying value of the asset may not be recoverable.

From time to time, assets classified as premises and equipment are transferred to held for sale for various reasons. These assets are carried in Other Assets at the lower of the recorded investment in the asset or fair value less estimated cost to sell based upon the property's appraised value at the date of transfer. Any writedown of property held for sale is recorded as a loss in the period identified.

F. **Investments:** The Bank holds investments and investment securities as described below.

Equity Investments in Other Farm Credit System Institutions
Investments in other Farm Credit System institutions are generally nonmarketable investments consisting of stock and participation certificates, allocated surplus, and reciprocal investments in other institutions regulated by the FCA. These investments are carried at cost and evaluated for impairment based on the ultimate recoverability of the par value rather than by recognizing temporary declines in value.

Investments in Debt Securities
The Bank holds certain investment securities, as permitted under the FCA regulations. These investments are classified based on management's intention on the date of purchase and are generally recorded in the Balance Sheets as securities on the trade date.

Securities for which the Bank has the intent and ability to hold to maturity are classified as held-to-maturity (HTM) and carried at amortized cost. Investment securities classified as available-for-sale (AFS) are carried at fair value with net unrealized gains and losses included as a component of other comprehensive income (OCI). Equity securities with a readily determinable fair value are carried at fair value with unrealized gains and losses included in earnings. Purchase premiums and discounts are amortized or accreted ratably over the term of the respective security using the interest method. The amortization of premiums on certain purchased callable debt securities that have explicit, noncontingent call features and that are callable at fixed prices on preset dates are amortized to the earliest call date.

Other Equity Securities
Certain equity securities with high turnover rates and high volume amounts, such as money market funds, may be considered cash equivalents but are subject to the accounting and disclosure requirements for investment securities.

Impairment
The Bank reviews all investments that are in a loss position in order to determine whether the unrealized loss, which is considered an impairment, is temporary or other-than-temporary. As mentioned above, changes in the fair value of AFS investments are reflected in OCI, unless the investment is deemed to be other than temporarily impaired. Impairment is considered to be other-than-temporary if the present value of cash flows expected to be collected from the debt security is less than the amortized cost basis of the security (any such shortfall is referred to as a "credit loss"). If the Bank intends to sell an impaired debt security or is more likely than not to be required to sell the security before recovery of its amortized cost basis less any current-period credit loss, the impairment is other-than-temporary and recognized currently in earnings in an amount equal to the entire difference between fair value and amortized cost. If a credit loss exists, but the Bank does not intend to sell the impaired debt security and is not more likely than not to be required to sell before recovery, the impairment is other-than-temporary and is separated into (i) the estimated amount relating to credit loss, and (ii) the amount relating to all other factors. Only the estimated credit loss amount is charged to current earnings, with the remainder of the loss amount recognized in OCI.

In subsequent periods, if the present value of cash flows expected to be collected is less than the amortized cost basis, the Bank will record an additional other-than-temporary impairment (OTTI) and adjust the yield of the security prospectively. The amount of total OTTI for an AFS security that previously was impaired is determined as the difference between its carrying amount prior to the determination of OTTI and its fair value.

Investment Income
Interest on investment securities, including amortization of premiums and accretion of discounts, is included in Interest Income. Realized gains and losses from the sales of investment securities are recognized in current earnings using the specific identification method.

Dividends from Equity Investments in Other Farm Credit Institutions are generally recorded as patronage income and included in Noninterest Income.

G. **Debt:** Any discount or premium resulting from cash or noncash debt transactions is not an asset or liability separable from the instrument that gives rise to it. Therefore, the discount or premium is reported in the balance sheet as a direct deduction from or addition to the face amount of the note. Direct expenses incurred in

issuing debt and mandatorily redeemable preferred stock are deferred and amortized using the interest method over the term of the related indebtedness or mandatorily redeemable preferred stock. Debt issuance costs are presented in the Balance Sheets as a direct deduction from the carrying amount of the respective debt liability. All amortization and accretion of reductions or additions to the face amount of debt instruments is reported in Interest Expense.

The Bank issues both callable and noncallable debt instruments. A call feature is an agreement, stated in a financial instrument's terms, detailing how an issuance may be retired fully, or in part, before its original maturity date. The first call option date, and whether the instrument is continuously callable, or callable only on certain dates, is also explicitly stated. When a call option is exercised, it is accounted for as an extinguishment of debt. Any difference between the reacquisition price and the net carrying amount of the extinguished debt is recognized as losses or gains in current period earnings. Gains and losses are not amortized to future periods.

H. **Employee Benefit Plans:** Employees participate in District and multi-District sponsored benefit plans. These plans may include defined benefit final average pay retirement, defined benefit other postretirement benefits, and defined contribution plans.

Defined Contribution Plans
Substantially all employees are eligible to participate in a defined contribution plan, which qualifies as a 401(k) plan as defined by the Internal Revenue Code. Employee deferrals are not to exceed the maximum deferral as determined and adjusted by the Internal Revenue Service. Company contributions to the plan are expensed as funded.

Additional information may be found in Note 9.

Multiemployer Defined Benefit Plans
Certain employees may participate in one or more defined benefit plans. The Plans are noncontributory and include eligible Bank and District employees. The "Projected Unit Credit" actuarial method is used for financial reporting purposes.

The Bank provides certain health care and life insurance benefits for retired employees (Other Postretirement Benefits) through a retiree healthcare plan. Substantially all employees are eligible for those benefits when they reach early retirement age while working for the Bank. Authoritative accounting guidance requires the accrual of the expected cost of providing these benefits to an employee, their beneficiaries and covered dependents during the years the employee renders service necessary to become eligible for benefits. This Other Postretirement Benefits plan is unfunded with expenses paid as incurred.

Since the foregoing plans are multiemployer, the Bank does not apply the provisions of Financial Accounting Standards Board (FASB) guidance on employers' accounting for defined benefit pension and other postretirement plans in its stand-alone financial statements. Rather, the effects of this guidance are reflected in the Annual Information Statement of the Farm Credit System.

Additional information may be found in Note 9 and in the Notes to the Annual Information Statement of the Farm Credit System.

Single-Employer Defined Benefit Plans
The Bank also sponsors a defined benefit plan for certain key employees. These plans are nonqualified; therefore, the associated liabilities are included in the Bank's Balance Sheets in Other Liabilities.

The foregoing defined benefit plan is considered single employer, therefore the Bank applies the provisions of FASB guidance on employers' accounting for defined benefit pension plans in its stand-alone financial statements.

Additional information may be found in Note 9.

I. **Income Taxes:** The Bank evaluates tax positions taken in previous and current years according to FASB guidance. A tax position can result in a permanent reduction of income taxes payable, a deferral of income taxes otherwise currently payable to future years, or a change in the expected realizability of deferred tax assets. The term tax position also encompasses, but is not limited to, an entity's status, including its status as a pass-through or tax-exempt entity.

J. **Derivative Instruments and Hedging Activity:** The Bank may be party to derivative financial instruments, primarily interest rate swaps, which are principally used to reduce funding costs. The Bank may also enter into forward contracts to create a fixed purchase price. Derivatives are included in the Balance Sheets as assets and liabilities and reflected at fair value.

Changes in the fair value of a derivative are recorded in current period earnings or Accumulated Other Comprehensive Income (AOCI) depending on the risk being hedged. For fair-value hedge transactions, which hedge the changes in the fair value of assets, liabilities, or firm commitments, changes in the fair value of the derivative will generally be offset by changes in the hedged item's fair value and changes reported in earnings. For cash-flow hedge transactions, which hedge the variability of future cash flows related to a variable-rate asset, liability, or a forecasted transaction, changes in the fair value of the derivative will generally be deferred and reported in AOCI. The gains and losses on the derivative that are deferred and reported in AOCI will be reclassified into earnings in the periods during which earnings are impacted by the variability of the cash flows of the hedged item. The ineffective portion of all hedges is recorded in current period earnings. For derivatives not designated as a hedging instrument, if any, the related change in fair value is recorded in current period earnings.

The Bank formally documents all relationships between hedging instruments and hedged items, as well as its risk management objective and strategy for undertaking various hedge transactions. This process includes linking all derivatives that are designated as fair value or cash flow hedges to (1) specific assets or liabilities on the balance sheet or (2) firm commitments or forecasted transactions. The Bank also formally assesses at the hedge's inception whether the derivatives that are used in hedging transactions will be highly effective in offsetting changes in the fair value or cash flows of hedged items and whether those derivatives may be expected to remain highly effective in future periods. The Bank uses regression analysis (or other statistical analysis) to assess the effectiveness of its hedges on an ongoing basis. The Bank discontinues hedge accounting prospectively when the Bank determines that a derivative has not been or is not expected to be effective as a hedge. For cash flow hedges, any remaining AOCI would be amortized into earnings over the remaining life of the original hedged item. For fair value hedges, changes in the fair value of the derivative would be recorded in current period earnings. In all situations in which hedge accounting is discontinued and the derivative remains outstanding, the Bank will carry the derivative at its fair value on the balance sheet, recognizing changes in fair value in current period earnings.

The Bank may occasionally purchase a financial instrument in which a derivative instrument is "embedded." Upon purchasing the financial instrument, the Bank assesses whether the economic characteristics of the embedded derivative are clearly and closely related to the economic characteristics of the remaining component of the financial instrument and whether a separate, non-embedded instrument with the same terms as the embedded instrument would meet the definition of a derivative instrument. When it is determined that (1) the embedded derivative possesses economic characteristics that are not clearly and closely related to the economic characteristics of the host contract and (2) a separate, stand-alone instrument with the same terms would qualify as a derivative instrument, the embedded derivative is separated from

the host contract, carried at fair value, and may be designated as either a fair value or cash flow hedge. However, if the entire contract were to be measured at fair value, with changes in fair value reported in current earnings, or if the Bank could not reliably identify and measure the embedded derivative for purposes of separating that derivative from its host contract, the entire contract would be carried on the balance sheet at fair value and not be designated as a hedging instrument.

K. **Valuation Methodologies:** FASB guidance defines fair value as the exchange price that would be received for an asset or paid to transfer a liability in an orderly transaction between market participants in the principal or most advantageous market for the asset or liability. This guidance also establishes a fair value hierarchy, which requires an entity to maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value. It prescribes three levels of inputs that may be used to measure fair value.

Level 1 inputs to the valuation methodology are unadjusted quoted prices for identical assets or liabilities in active markets. Level 1 assets and liabilities could include investment securities and derivative contracts that are traded in an active exchange market, in addition to certain U.S. Treasury securities that are highly-liquid and are actively traded in over-the-counter markets.

Level 2 inputs to the valuation methodology include quoted prices for similar assets and liabilities in active markets; quoted prices in markets that are not active; and inputs that are observable, or can be corroborated, for substantially the full term of the asset or liability. Level 2 assets and liabilities could include investment securities that are traded in active, non-exchange markets and derivative contracts that are traded in active, over-the-counter markets.

Level 3 inputs to the valuation methodology are unobservable and supported by little or no market activity. Level 3 assets and liabilities could include investments and derivative contracts whose value is determined using pricing models, discounted cash flow methodologies, or similar techniques, and other instruments for which the determination of fair value requires significant management judgment or estimation. Level 3 assets and liabilities could also include investments and derivative contracts whose price has been adjusted based on dealer quoted pricing that is different than a third-party valuation or internal model pricing.

The Bank may use internal resources or third parties to obtain fair value prices. Quoted market prices are generally used when estimating fair values of any assets or liabilities for which observable, active markets exist.

A number of methodologies may be employed to value items for which an observable active market does not exist. Examples of these items include: impaired loans, other property owned, and certain derivatives, investment securities and other financial instruments. Inputs to these valuations can involve estimates and assumptions that require a substantial degree of judgment. Some of the assumptions used include, among others, discount rates, rates of return on assets, repayment rates, cash flows, default rates, costs of servicing, and liquidation values. The use of different assumptions could produce significantly different asset or liability values, which could have material positive or negative effects on results of operations.

Any transfers between fair value levels occur at the end of the period.

Additional information may be found in Note 8.

L. **Off-Balance-Sheet Credit Exposures:** The credit risk associated with commitments to extend credit and letters of credit is essentially the same as that involved with extending loans to customers and is subject to normal credit policies. Collateral may be obtained based on management's assessment of the customer's creditworthiness.

Unfunded commitments, and other commitments to extend credit, are agreements to lend to customers, generally having fixed expiration dates or other termination clauses that may require payment of a fee.

Letters of credit are commitments issued to guarantee the performance of a customer to a third party. These letters of credit are issued to facilitate commerce and typically result in the commitment being funded when the underlying transaction is consummated between the customer and third party.

M. **Revenue Recognition:** The Bank generates income from multiple sources.

Financial Instruments
The largest source of revenue for the Bank is interest income. Interest income is recognized on an accrual basis driven by nondiscretionary formulas based on written contracts, such as loan agreements or securities contracts. Credit-related fees, including letter of credit fees, finance charges and other fees are recognized in Noninterest Income when earned.

Contracts with Customers
In May 2014, the FASB issued ASU 2014-09 Revenue from Contracts with Customers (Topic 606). This guidance, which became effective January 1, 2018, changed the recognition of revenue from contracts with customers. The core principle of the guidance is that an entity should recognize revenue to reflect the transfer of goods and services to customers in an amount equal to the consideration the entity receives or expects to receive. The guidance also included expanded disclosure requirements that result in an entity providing users of financial statements with comprehensive information about the nature, amount, timing, and uncertainty of revenue and cash flows arising from the entity's contracts with customers. Based on input received from stakeholders, the FASB issued several additional Updates that generally provided clarifying guidance where there was the potential for diversity in practice, or to address the cost and complexity of applying Topic 606.

The Bank maintains contracts with customers, primarily other System entities, to provide support services in various areas such as accounting, lending transactions, consulting, insurance, and information technology. The Bank does not generally incur costs to obtain contracts. As most of the contracts are to provide access to expertise or system capacity that the Bank maintains, there are no material incremental costs to fulfill these contracts that should be capitalized.

Transition Information:

- The Bank identified ancillary revenues affected by this Update and adopted the guidance on January 1, 2018.
- The amendments were applied using the modified retrospective approach.
- The Bank elected to only apply the guidance to contracts that were not completed at the date of initial application.
- Subtopics 610-20 on gains and losses from the derecognition of nonfinancial assets, and 340-40 on other assets and deferred costs-contracts with customers were adopted using the same transition options.
- Adoption did not have an impact on the Bank's financial condition or results of operations.

Gains and Losses from Nonfinancial Assets
Any gains or losses on sales of Premises and Equipment and OPO are included as part of Noninterest Income. These gains and losses are recognized, and the nonfinancial asset is derecognized, when the Bank has entered into a valid contract with a noncustomer and transferred control of the asset. If the criteria to

meet the definition of a contract have not been met, the Bank does not derecognize the nonfinancial asset and any consideration received is recognized as a liability. If the criteria for a contract are subsequently met, or if the consideration received is or becomes nonrefundable, a gain or loss may be recognized at that time.

N. **Accounting Standards Updates (ASUs):** In October 2018, the FASB issued ASU 2018-16 Derivatives and Hedging (Topic 815): Inclusion of the Secured Overnight Financing Rate (SOFR) Overnight Index Swap (OIS) Rate as a Benchmark Interest Rate for Hedge Accounting Purposes. The amendments in this Update permit use of the OIS rate based on SOFR as a U.S. benchmark interest rate for hedge accounting purposes under Topic 815 in addition to the UST, the LIBOR swap rate, the OIS rate based on the Fed Funds Effective Rate, and the SIFMA Municipal Swap Rate. For public business entities, the amendments will be effective upon the adoption of Update 2017-12. Refer to ASU 2017-12 below for further information.

In August 2018, the FASB issued ASU 2018-15 Intangibles—Goodwill and Other—Internal-Use Software (Subtopic 350-40): Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract. The amendments align the requirements for capitalizing implementation costs incurred in a hosting arrangement that is a service contract with the requirements for capitalizing implementation costs incurred to develop or obtain internal-use software (and hosting arrangements that include an internal use software license). The accounting for the service element of a hosting arrangement that is a service contract is not affected by the amendments in this Update. The guidance is effective for public business entities for fiscal years beginning after December 15, 2019, and interim periods within those fiscal years. Early adoption is permitted, including adoption in any interim period, for all entities. The amendments should be applied either retrospectively or prospectively to all implementation costs incurred after the date of adoption. The Bank is in the process of evaluating the guidance and what effects it may have on the statements of financial condition and results of operations.

In August 2018, the FASB issued ASU 2018-14 Compensation—Retirement Benefits—Defined Benefit Plans—General (Subtopic 715-20): Disclosure Framework—Changes to the Disclosure Requirements for Defined Benefit Plans. The amendments in this Update remove disclosures that are no longer considered cost beneficial, clarify the specific requirements of certain disclosures, and add new disclosure requirements identified as relevant. Although narrow in scope, the amendments are considered an important part of the FASB's efforts to improve the effectiveness of disclosures in the notes to financial statements by applying concepts in the Concepts Statement, Conceptual Framework for Financial Reporting—Chapter 8: Notes to Financial Statements. The amendments are effective for fiscal years ending after December 15, 2020, for public business entities. Early adoption is permitted for all entities. The Bank is in the process of evaluating the guidance and what effects it may have on the statements of financial condition and results of operations.

In August 2018, the FASB issued ASU 2018-13 Disclosure Framework—Changes to the Disclosure Requirements for Fair Value Measurement. The amendments are part of the FASB's disclosure framework project. The project's objective and primary focus are to improve the effectiveness of disclosures in the notes to financial statements by facilitating clear communication of the information required by GAAP that is most important to users of each entity's financial statements. The amendments remove, modify or add certain disclosures contained in the financial statement footnotes related to fair value. Additionally, the guidance is intended to promote the appropriate exercise of discretion by entities when considering fair value measurement disclosures and to clarify that materiality is an appropriate consideration of entities and their auditors when evaluating disclosure requirements. The amendments are effective for all entities for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2019. Certain amendments should be applied prospectively for only the most recent interim or annual period presented in the initial fiscal year of adoption. All other amendments should be applied retrospectively to all periods presented upon their effective date. Entities may early adopt the provisions in whole upon issuance or may early adopt any removed or modified disclosures upon issuance and delay adoption of the additional disclosures until their effective date. The Bank has adopted the removed disclosures effective with the 2018 Annual Report.

In August 2017, the FASB issued ASU 2017-12 Derivatives and Hedging (Topic 815): Targeted Improvements to Accounting for Hedging Activities. The Update is intended to improve the financial reporting of hedging relationships to better portray the economic results of an entity's risk management activities in its financial statements. In addition to that main objective, the amendments make certain targeted improvements to simplify the application of the hedge accounting guidance in current GAAP. For public business entities, the amendments are effective for fiscal years beginning after December 15, 2018, and interim periods within those fiscal years. The Bank is in the process of evaluating the guidance and what effects it may have on the statements of financial condition and results of operations.

In March 2017, the FASB issued ASU 2017-08 Receivables—Nonrefundable Fees and Other Costs (Subtopic 310-20): Premium Amortization on Purchased Callable Debt Securities. The guidance relates to certain callable debt securities and shortens the amortization period for any premium to the earliest call date. The Update will be effective for interim and annual periods beginning after December 15, 2018 for public business entities. The Bank is in the process of evaluating what effects the guidance may have on the statements of financial condition and results of operations.

In March 2017, the FASB issued ASU 2017-07 Compensation—Retirement Benefits (Topic 715): Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Benefit Cost related to the income statement presentation of the components of net periodic benefit cost for an entity's sponsored defined benefit pension and other postretirement plans. The amendments were effective January 1, 2018 for the Bank. Adoption in 2018 did not have a material effect on the Bank's financial statements, but did require reclassification of certain periodic pension costs to Other Operating Expenses.

In January 2017, the FASB issued ASU 2017-01 Business Combinations (Topic 805): Clarifying the Definition of a Business. The amendments provide a more robust framework to use in determining when a set of assets and activities is a business. They also support more consistency in applying the guidance, reduce the costs of application, and make the definition of a business more operable. The ASU was effective January 1, 2018 for the Bank. The amendments were applied prospectively. Adoption of the guidance in 2018 had no impact on the statements of financial condition and results of operations of the Bank.

In June 2016, the FASB issued ASU 2016-13 Financial Instruments—Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments. This Update, and subsequent clarifying guidance issued, is intended to improve financial reporting by requiring timelier recording of credit losses on financial instruments. It requires an organization to measure all expected credit losses for financial assets held at the reporting date. Financial institutions and other organizations will use forward-looking information to better estimate their credit losses. Additionally, the ASU amends the accounting for credit losses on available-for-sale debt securities and purchased financial assets with credit deterioration. For public companies that are not SEC filers, it will take effect for fiscal years beginning after December 15, 2020, and interim periods within those fiscal years.

Early application will be permitted for all organizations for fiscal years, and interim periods within those fiscal years, beginning after December 15, 2018. The Bank is in the process of evaluating what effects the guidance may have on the statements of financial condition and results of operations.

In February 2016, the FASB issued ASU 2016-02 Leases (Topic 842). This Update, and subsequent clarifying guidance issued, requires organizations that lease assets to recognize on the balance sheet the assets and liabilities for the rights and obligations created by those leases. Leases will be classified as either finance leases or operating leases. This distinction will be relevant for the pattern of expense recognition in the income statement. The amendments will be effective for fiscal years beginning after December 15, 2018, including interim periods within those fiscal years for public business entities. The Bank will implement the guidance in first quarter 2019 using the practical expedients and does not expect a material impact to the financial statements.

In January 2016, the FASB issued ASU 2016-01 Financial Instruments—Overall (Subtopic 825-10): Recognition and Measurement of Financial Assets and Financial Liabilities. The Update, and subsequent clarifying guidance issued, was intended to improve the recognition and measurement of financial instruments. The new guidance makes targeted improvements to existing GAAP.

Transition Information:

- The Bank identified investment securities affected by this Update and adopted the guidance on January 1, 2018.
- The amendments related to equity securities without readily determinable fair values were applied prospectively to equity investments that existed as of the date of adoption.
- Application of the amendments did not require a cumulative effect adjustment.
- Adoption did not have an impact on the Bank's financial condition or results of operations.
- The new standard did result in changes to certain disclosures.

Note 3 — Loans and Allowance for Loan Losses

For a description of the Bank's accounting for loans, including impaired loans, and the allowance for loan losses, see Note 2 subsection B above.

Credit risk arises from the potential inability of an obligor to meet its repayment obligation which exists in outstanding loans. The Bank manages credit risk associated with lending activities through an assessment of the credit risk profile of an individual obligor. The Bank sets its own underwriting standards and lending policies that provide direction to loan officers and are approved by the Board of Directors.

The credit risk management process begins with an analysis of the obligor's credit history, repayment capacity and financial position. Repayment capacity focuses on the obligor's ability to repay the obligation based on cash flows from operations or other sources of income, including non-farm income. Real estate mortgage loans must be secured by first liens on the real estate collateral. As required by FCA regulations, each institution that makes loans on a secured basis must have collateral evaluation policies and procedures.

The credit risk rating process for loans uses a two-dimensional structure, incorporating a 14-point probability of default scale (see further discussion in Note 2 subsection B above) and a separate scale addressing estimated percentage loss in the event of default. The loan rating structure incorporates borrower risk and transaction risk. Borrower risk is the risk of loss driven by factors intrinsic to the borrower. The transaction risk or facility risk is related to the structure of a credit (tenor, terms, and collateral).

The Bank's loan portfolio, which includes purchased interests in loans, has been segmented by the following loan types as defined by the FCA:

- Direct notes and loans to OFIs — revolving lines of credit provided to financing institutions to fund the lending needs of their borrowers.
- Real estate mortgage loans — loans made to full-time or part-time farmers secured by first lien real estate mortgages with maturities from five to thirty years. These loans may be made only in amounts up to 85 percent of the appraised value of the property taken as security or up to 97 percent of the appraised value if guaranteed by a federal, state, or other governmental agency. The actual percentage of loan-to-appraised value when loans are made is generally lower than the statutory required percentage.
- Production and intermediate-term loans — loans to full-time or part-time farmers that are not real estate mortgage loans. These loans fund eligible financing needs including operating inputs (such as labor, feed, fertilizer, and repairs), livestock, living expenses, income taxes, machinery or equipment, farm buildings, and other business-related expenses. Production loans may be made on a secured or unsecured basis and are most often made for a period of time that matches the borrower's normal production and marketing cycle, which is typically one year or less. Intermediate-term loans are made for a specific term, generally greater than one year and less than or equal to ten years.
- Loans to cooperatives — loans for any cooperative purpose other than for communication, power, and water and waste disposal.
- Processing and marketing loans — loans for operations to process or market the products produced by a farmer, rancher, or producer or harvester of aquatic products, or by a cooperative.
- Farm-related business loans — loans to eligible borrowers that furnish certain farm-related business services to farmers or ranchers that are directly related to their agricultural production.
- Rural residential real estate loans — loans made to individuals, who are not farmers, to purchase a single-family dwelling that will be the primary residence in open country, which may include a town or village that has a population of not more than 2,500 persons. In addition, the loan may be to remodel, improve, or repair a rural home, or to refinance existing debt. These loans are generally secured by a first lien on the property.
- Communication loans — loans primarily to finance rural communication providers.
- Power loans — loans primarily to finance electric generation, transmission and distribution systems serving rural areas.
- Water and waste disposal loans — loans primarily to finance water and waste disposal systems serving rural areas.
- International loans — primarily loans or credit enhancements to other banks to support the export of U.S. agricultural commodities or supplies. The federal government guarantees a substantial portion of these loans.
- Lease receivables — the net investment for all finance leases such as direct financing leases, leveraged leases, and sales-type leases.
- Other (including Mission Related) — additional investments in rural America approved by the FCA on a program or a case-by-case basis. Examples of such investments include partnerships with agricultural and rural community lenders, investments in rural economic development and infrastructure, and investments in obligations and mortgage securities that increase the availability of affordable housing in rural America.

A summary of loans outstanding follows:

(dollars in thousands)	December 31, 2018	2017	2016
Direct notes	$ 16,414,045	$ 15,838,709	$ 15,480,715
Real estate mortgage	1,107,077	1,096,159	1,056,241
Production and intermediate-term	1,137,422	1,123,633	1,247,467
Loans to cooperatives	441,510	527,654	480,944
Processing and marketing	977,274	763,024	848,750
Farm-related business	51,393	71,471	68,903
Communication	295,833	226,371	239,580
Power and water/waste disposal	532,649	556,165	543,052
Rural residential real estate	3,104,737	2,956,332	2,754,273
International	71,141	52,637	54,837
Lease receivables	385	6,752	8,054
Loans to OFIs	134,387	131,572	122,573
Other (including Mission Related)	8,028	8,681	9,293
Total loans	$ 24,275,881	$ 23,359,160	$ 22,914,682

A substantial portion of the Bank's loan portfolio consists of notes receivable from District Associations. As described in Note 1, these notes are used by the Associations to fund their loan portfolios, which collateralize the notes. Therefore, the Bank's concentration of credit risk in various agricultural commodities associated with these notes approximates that of the District as a whole. Loan concentrations are considered to exist when there are amounts loaned to a multiple number of borrowers engaged in similar activities, which would cause them to be similarly impacted by economic or other conditions. A substantial portion of the Associations' lending activities is collateralized, and their exposure to credit loss associated with lending activities is reduced accordingly, which further mitigates credit risk to the Bank.

The Bank may purchase or sell participation interests with other parties in order to diversify risk, manage loan volume, and comply with FCA regulations. During 2018, the Bank purchased $547.8 million of residential mortgage loans from various System associations and sold $87.8 million from the portfolio. These amounts are not included in the table below. The following tables present the principal balance of participation loans at periods ended:

	December 31, 2018							
	Within AgFirst District		Within Farm Credit System		Outside Farm Credit System		Total	
(dollars in thousands)	Participations Purchased	Participations Sold	Participations Purchased	Participations Sold	Participations Purchased	Participations Sold	Participations Purchased	Participations Sold
Direct notes	$ –	$ –	$ –	$ 1,044,500	$ –	$ –	$ –	$ 1,044,500
Real estate mortgage	749,214	173,032	422,769	45,352	–	–	1,171,983	218,384
Production and intermediate-term	837,130	269,025	598,501	297,424	270,739	–	1,706,370	566,449
Loans to cooperatives	–	66,879	499,682	–	–	–	499,682	66,879
Processing and marketing	374,181	312,768	350,108	299,783	867,310	–	1,591,599	612,551
Farm-related business	46,458	–	–	–	5,000	–	51,458	–
Communication	–	119,032	415,116	–	–	–	415,116	119,032
Power and water/waste disposal	–	53,082	587,092	–	–	–	587,092	53,082
Rural residential real estate	145	–	–	–	–	–	145	–
International	–	34,127	105,375	–	–	–	105,375	34,127
Lease receivables	–	–	385	–	–	–	385	–
Other (including Mission Related)	8,076	–	–	–	–	–	8,076	–
Total	$ 2,015,204	$ 1,027,945	$ 2,979,028	$ 1,687,059	$ 1,143,049	$ –	$ 6,137,281	$ 2,715,004

	December 31, 2017							
	Within AgFirst District		Within Farm Credit System		Outside Farm Credit System		Total	
(dollars in thousands)	Participations Purchased	Participations Sold	Participations Purchased	Participations Sold	Participations Purchased	Participations Sold	Participations Purchased	Participations Sold
Direct notes	$ –	$ –	$ –	$ 1,015,836	$ –	$ –	$ –	$ 1,015,836
Real estate mortgage	740,241	99,921	354,871	45,621	–	–	1,095,112	145,542
Production and intermediate-term	747,486	323,438	689,174	200,016	222,698	–	1,659,358	523,454
Loans to cooperatives	–	62,825	591,369	–	–	–	591,369	62,825
Processing and marketing	277,271	335,175	302,906	316,193	836,019	–	1,416,196	651,368
Farm-related business	53,036	7,387	–	–	25,970	–	79,006	7,387
Communication	–	132,807	359,838	–	–	–	359,838	132,807
Power and water/waste disposal	–	54,654	594,342	–	18,026	–	612,368	54,654
Rural residential real estate	157	–	–	–	–	–	157	–
International	–	34,127	86,919	–	–	–	86,919	34,127
Lease receivables	6,752	–	–	–	–	–	6,752	–
Other (including Mission Related)	8,819	–	–	–	–	–	8,819	–
Total	$ 1,833,762	$ 1,050,334	$ 2,979,419	$ 1,577,666	$ 1,102,713	$ –	$ 5,915,894	$ 2,628,000

(dollars in thousands)	Within AgFirst District Participations Purchased	Within AgFirst District Participations Sold	Within Farm Credit System Participations Purchased	Within Farm Credit System Participations Sold	Outside Farm Credit System Participations Purchased	Outside Farm Credit System Participations Sold	Total Participations Purchased	Total Participations Sold
	December 31, 2016							
Direct notes	$ –	$ –	$ –	$ 694,390	$ –	$ –	$ –	$ 694,390
Real estate mortgage	804,680	87,488	304,300	78,378	–	–	1,108,980	165,866
Production and intermediate-term	884,503	333,468	754,266	204,963	152,658	–	1,791,427	538,431
Loans to cooperatives	187	77,508	557,079	–	2,000	–	559,266	77,508
Processing and marketing	170,542	319,367	434,227	274,009	844,536	5,100	1,449,305	598,476
Farm-related business	44,597	7,016	–	–	31,500	–	76,097	7,016
Communication	–	120,669	360,990	–	–	–	360,990	120,669
Power and water/waste disposal	–	14,897	553,727	–	5,733	–	559,460	14,897
Rural residential real estate	169	–	–	–	–	–	169	–
International	–	34,127	89,068	–	–	–	89,068	34,127
Lease receivables	8,054	–	–	–	–	–	8,054	–
Other (including Mission Related)	9,436	–	–	–	–	–	9,436	–
Total	$ 1,922,168	$ 994,540	$ 3,053,657	$ 1,251,740	$ 1,036,427	$ 5,100	$ 6,012,252	$ 2,251,380

A significant source of liquidity for the Bank is the repayments of loans. The following table presents the contractual maturity distribution of loans by loan type at the latest period end:

(dollars in thousands)	Due less than 1 year	Due 1 Through 5 years	Due after 5 years	Total
	December 31, 2018			
Direct notes	$ 601,212	$ 2,787,782	$ 13,025,051	$ 16,414,045
Real estate mortgage	12,488	232,385	862,204	1,107,077
Production and intermediate-term	238,780	589,049	309,593	1,137,422
Loans to cooperatives	37,674	279,307	124,529	441,510
Processing and marketing	139,768	523,407	314,099	977,274
Farm-related business	13,479	18,943	18,971	51,393
Communication	–	151,471	144,362	295,833
Power and water/waste disposal	10,924	230,581	291,144	532,649
Rural residential real estate	96,968	12,180	2,995,589	3,104,737
International	34,977	14,187	21,977	71,141
Lease receivables	–	54	331	385
Loans to OFIs	550	127,515	6,322	134,387
Other (including Mission Related)	33	2,320	5,675	8,028
Total loans	$ 1,186,853	$ 4,969,181	$ 18,119,847	$ 24,275,881
Percentage	4.89%	20.47%	74.64%	100.00%

The recorded investment in a receivable is the face amount increased or decreased by applicable accrued interest and unamortized premium, discount, finance charges, or acquisition costs and may also reflect a previous direct writedown of the investment.

The following table shows loans and related accrued interest classified under the FCA Uniform Loan Classification System as a percentage of total loans and related accrued interest receivable by loan type as of December 31:

	2018	2017	2016
Direct notes:			
Acceptable	91.33%	100.00%	100.00%
OAEM	8.67	–	–
Substandard/doubtful/loss	–	–	–
	100.00%	100.00%	100.00%
Real estate mortgage:			
Acceptable	97.34%	97.62%	91.79%
OAEM	2.04	0.28	2.19
Substandard/doubtful/loss	0.62	2.10	6.02
	100.00%	100.00%	100.00%
Production and intermediate-term:			
Acceptable	97.81%	96.17%	93.48%
OAEM	1.61	2.86	5.30
Substandard/doubtful/loss	0.58	0.97	1.22
	100.00%	100.00%	100.00%
Loans to cooperatives:			
Acceptable	98.31%	98.43%	98.02%
OAEM	–	–	1.81
Substandard/doubtful/loss	1.69	1.57	0.17
	100.00%	100.00%	100.00%
Processing and marketing:			
Acceptable	100.00%	100.00%	99.27%
OAEM	–	–	0.73
Substandard/doubtful/loss	–	–	–
	100.00%	100.00%	100.00%
Farm-related business:			
Acceptable	100.00%	86.12%	73.60%
OAEM	–	–	–
Substandard/doubtful/loss	–	13.88	26.40
	100.00%	100.00%	100.00%
Communication:			
Acceptable	96.18%	100.00%	97.16%
OAEM	3.82	–	2.84
Substandard/doubtful/loss	–	–	–
	100.00%	100.00%	100.00%

	2018	2017	2016
Power and water/waste disposal:			
Acceptable	100.00%	100.00%	92.10%
OAEM	–	–	7.90
Substandard/doubtful/loss	–	–	–
	100.00%	100.00%	100.00%
Rural residential real estate:			
Acceptable	99.68%	99.78%	99.88%
OAEM	–	–	–
Substandard/doubtful/loss	0.32	0.22	0.12
	100.00%	100.00%	100.00%
International:			
Acceptable	100.00%	100.00%	100.00%
OAEM	–	–	–
Substandard/doubtful/loss	–	–	–
	100.00%	100.00%	100.00%
Lease receivables:			
Acceptable	100.00%	100.00%	100.00%
OAEM	–	–	–
Substandard/doubtful/loss	–	–	–
	100.00%	100.00%	100.00%
Loans to OFIs:			
Acceptable	100.00%	100.00%	100.00%
OAEM	–	–	–
Substandard/doubtful/loss	–	–	–
	100.00%	100.00%	100.00%
Other (including Mission Related):			
Acceptable	100.00%	100.00%	100.00%
OAEM	–	–	–
Substandard/doubtful/loss	–	–	–
	100.00%	100.00%	100.00%
Total Loans:			
Acceptable	93.80%	99.60%	98.89%
OAEM	6.07	0.15	0.67
Substandard/doubtful/loss	0.13	0.25	0.44
	100.00%	100.00%	100.00%

The following tables provide an aging analysis of the recorded investment in past due loans as of:

	December 31, 2018				
(dollars in thousands)	30 Through 89 Days Past Due	90 Days or More Past Due	Total Past Due	Not Past Due or Less Than 30 Days Past Due	Total Loans
Direct notes	$ –	$ –	$ –	$ 16,459,760	$ 16,459,760
Real estate mortgage	1,419	790	2,209	1,112,905	1,115,114
Production and intermediate-term	3	363	366	1,142,038	1,142,404
Loans to cooperatives	–	–	–	442,294	442,294
Processing and marketing	–	–	–	980,507	980,507
Farm-related business	–	–	–	51,538	51,538
Communication	–	–	–	295,908	295,908
Power and water/waste disposal	–	–	–	534,774	534,774
Rural residential real estate	39,508	7,136	46,644	3,065,415	3,112,059
International	–	–	–	71,650	71,650
Lease receivables	–	–	–	387	387
Loans to OFIs	–	–	–	134,721	134,721
Other (including Mission Related)	–	–	–	8,127	8,127
Total	$ 40,930	$ 8,289	$ 49,219	$ 24,300,024	$ 24,349,243

(dollars in thousands)	December 31, 2017 30 Through 89 Days Past Due	90 Days or More Past Due	Total Past Due	Not Past Due or Less Than 30 Days Past Due	Total Loans
Direct notes	$ –	$ –	$ –	$ 15,877,300	$ 15,877,300
Real estate mortgage	1,701	3,438	5,139	1,097,541	1,102,680
Production and intermediate-term	1,481	714	2,195	1,125,718	1,127,913
Loans to cooperatives	–	–	–	528,662	528,662
Processing and marketing	–	–	–	765,412	765,412
Farm-related business	–	–	–	71,735	71,735
Communication	–	–	–	226,553	226,553
Power and water/waste disposal	–	–	–	558,562	558,562
Rural residential real estate	50,249	4,807	55,056	2,908,490	2,963,546
International	–	–	–	52,815	52,815
Lease receivables	–	–	–	6,766	6,766
Loans to OFIs	–	–	–	131,818	131,818
Other (including Mission Related)	–	–	–	8,785	8,785
Total	$ 53,431	$ 8,959	$ 62,390	$ 23,360,157	$ 23,422,547

(dollars in thousands)	December 31, 2016 30 Through 89 Days Past Due	90 Days or More Past Due	Total Past Due	Not Past Due or Less Than 30 Days Past Due	Total Loans
Direct notes	$ –	$ –	$ –	$ 15,514,031	$ 15,514,031
Real estate mortgage	699	3,787	4,486	1,057,779	1,062,265
Production and intermediate-term	11,266	1,700	12,966	1,238,016	1,250,982
Loans to cooperatives	–	–	–	481,767	481,767
Processing and marketing	–	–	–	850,996	850,996
Farm-related business	–	–	–	69,340	69,340
Communication	–	–	–	239,743	239,743
Power and water/waste disposal	–	–	–	545,489	545,489
Rural residential real estate	41,475	4,201	45,676	2,715,087	2,760,763
International	–	–	–	55,383	55,383
Lease receivables	–	–	–	8,071	8,071
Loans to OFIs	–	–	–	122,772	122,772
Other (including Mission Related)	–	–	–	9,402	9,402
Total	$ 53,440	$ 9,688	$ 63,128	$ 22,907,876	$ 22,971,004

Nonperforming assets (including related accrued interest) and related credit quality statistics are as follows:

(dollars in thousands)	December 31, 2018	2017	2016
Nonaccrual loans:			
Real estate mortgage	$ 1,460	$ 7,761	$ 9,153
Production and intermediate-term	453	2,364	13,135
Loans to cooperatives	7,492	–	–
Rural residential real estate	15,338	11,178	6,690
Total	$ 24,743	$ 21,303	$ 28,978
Accruing restructured loans:			
Real estate mortgage	$ 750	$ 1,042	$ 406
Production and intermediate-term	8,011	8,768	9,445
Rural residential real estate	2,929	1,866	1,558
Other (including Mission Related)	4,092	4,302	4,262
Total	$ 15,782	$ 15,978	$ 15,671
Accruing loans 90 days or more past due:			
Rural residential real estate	$ 145	$ –	$ –
Total	$ 145	$ –	$ –
Total nonperforming loans	$ 40,670	$ 37,281	$ 44,649
Other property owned	2,842	154	3,346
Total nonperforming assets	$ 43,512	$ 37,435	$ 47,995
Nonaccrual loans as a percentage of total loans	0.10%	0.09%	0.13%
Nonperforming assets as a percentage of total loans and other property owned	0.18%	0.16%	0.21%
Nonperforming assets as a percentage of capital	1.96%	1.67%	2.16%

The following table presents information relating to impaired loans (including accrued interest) as defined in Note 2. Impaired loans are loans for which it is probable that all principal and interest will not be collected according to the contractual terms of the loan.

(dollars in thousands)	December 31, 2018	2017	2016
Impaired nonaccrual loans:			
Current as to principal and interest	$ 11,727	$ 6,709	$ 6,113
Past due	13,016	14,594	22,865
Total impaired nonaccrual loans	$ 24,743	$ 21,303	$ 28,978
Impaired accrual loans:			
Restructured	$ 15,782	$ 15,978	$ 15,671
90 days or more past due	145	–	–
Total impaired accrual loans	$ 15,927	$ 15,978	$ 15,671
Total impaired loans	$ 40,670	$ 37,281	$ 44,649
Additional commitments to lend	$ 1,687	$ –	$ –

Additional impaired loan information at period end is summarized as follows:

(dollars in thousands)	December 31, 2018			Year Ended December 31, 2018	
Impaired Loans	**Recorded Investment**	**Unpaid Principal Balance**	**Related Allowance**	**Average Impaired Loans**	**Interest Income Recognized on Impaired Loans**
With a related allowance for credit losses:					
Real estate mortgage	$ –	$ –	$ –	$ 8	$ –
Production and intermediate-term	–	–	–	42	–
Loans to cooperatives	7,492	7,995	3,951	7,684	46
Rural residential real estate	3,923	3,864	718	1,991	–
Other (including Mission Related)	4,092	4,083	135	4,192	259
Total	$ 15,507	$ 15,942	$ 4,804	$ 13,917	$ 305
With no related allowance for credit losses:					
Real estate mortgage	$ 2,210	$ 2,424	$ –	$ 6,259	$ 2,627
Production and intermediate-term	8,464	16,988	–	8,175	781
Loans to cooperatives	–	–	–	–	–
Rural residential real estate	14,489	13,835	–	13,250	677
Other (including Mission Related)	–	–	–	–	–
Total	$ 25,163	$ 33,247	$ –	$ 27,684	$ 4,085
Total:					
Real estate mortgage	$ 2,210	$ 2,424	$ –	$ 6,267	$ 2,627
Production and intermediate-term	8,464	16,988	–	8,217	781
Loans to cooperatives	7,492	7,995	3,951	7,684	46
Rural residential real estate	18,412	17,699	718	15,241	677
Other (including Mission Related)	4,092	4,083	135	4,192	259
Total	$ 40,670	$ 49,189	$ 4,804	$ 41,601	$ 4,390

(dollars in thousands)	December 31, 2017			Year Ended December 31, 2017	
Impaired Loans	**Recorded Investment**	**Unpaid Principal Balance**	**Related Allowance**	**Average Impaired Loans**	**Interest Income Recognized on Impaired Loans**
With a related allowance for credit losses:					
Real estate mortgage	$ 182	$ 182	$ 25	$ 126	$ –
Production and intermediate-term	169	169	33	148	–
Rural residential real estate	2,820	2,820	495	57	–
Other (including Mission Related)	4,302	4,290	153	4,330	267
Total	$ 7,473	$ 7,461	$ 706	$ 4,661	$ 267
With no related allowance for credit losses:					
Real estate mortgage	$ 8,621	$ 12,045	$ –	$ 8,902	$ 297
Production and intermediate-term	10,963	19,358	–	13,236	1,964
Rural residential real estate	10,224	10,057	–	9,454	396
Other (including Mission Related)	–	–	–	–	–
Total	$ 29,808	$ 41,460	$ –	$ 31,592	$ 2,657
Total:					
Real estate mortgage	$ 8,803	$ 12,227	$ 25	$ 9,028	$ 297
Production and intermediate-term	11,132	19,527	33	13,384	1,964
Rural residential real estate	13,044	12,877	495	9,511	396
Other (including Mission Related)	4,302	4,290	153	4,330	267
Total	$ 37,281	$ 48,921	$ 706	$ 36,253	$ 2,924

(dollars in thousands)	December 31, 2016			Year Ended December 31, 2016	
Impaired Loans	**Recorded Investment**	**Unpaid Principal Balance**	**Related Allowance**	**Average Impaired Loans**	**Interest Income Recognized on Impaired Loans**
With a related allowance for credit losses:					
Real estate mortgage	$ 1,069	$ 1,365	$ 97	$ 1,118	$ –
Production and intermediate-term	–	–	–	2,237	–
Rural residential real estate	579	499	71	60	–
Other (including Mission Related)	4,262	4,267	153	4,298	23
Total	$ 5,910	$ 6,131	$ 321	$ 7,713	$ 23
With no related allowance for credit losses:					
Real estate mortgage	$ 8,490	$ 11,703	$ –	$ 13,850	$ 435
Production and intermediate-term	22,580	31,402	–	15,720	2,825
Rural residential real estate	7,669	7,729	–	6,262	262
Other (including Mission Related)	–	–	–	310	245
Total	$ 38,739	$ 50,834	$ –	$ 36,142	$ 3,767
Total:					
Real estate mortgage	$ 9,559	$ 13,068	$ 97	$ 14,968	$ 435
Production and intermediate-term	22,580	31,402	–	17,957	2,825
Rural residential real estate	8,248	8,228	71	6,322	262
Other (including Mission Related)	4,262	4,267	153	4,608	268
Total	$ 44,649	$ 56,965	$ 321	$ 43,855	$ 3,790

Unpaid principal balance represents the contractual principal balance of the loan.

A summary of changes in the allowance for loan losses and period-end recorded investment in loans is as follows:

(dollars in thousands)	**Direct Notes**	**Real Estate Mortgage**	**Production and Intermediate-term**	**Agribusiness***	**Communication**	**Power and Water/Waste Disposal**	**Rural Residential Real Estate**	**International**	**Other****	**Total**
Activity related to the allowance from credit losses:										
Balance at December 31, 2017	$ –	$ 1,635	$ 3,040	$ 3,633	$ 744	$ 1,128	$ 3,908	$ 28	$ 265	$ 14,381
Charge-offs	–	–	(49)	–	–	–	(160)	–	–	(209)
Recoveries	–	–	267	62	–	–	6	–	–	335
Provision for loan losses	–	(117)	(644)	3,264	40	(334)	1,054	106	173	3,542
Balance at December 31, 2018	$ –	$ 1,518	$ 2,614	$ 6,959	$ 784	$ 794	$ 4,808	$ 134	$ 438	$ 18,049
Balance at December 31, 2016	$ –	$ 2,569	$ 3,039	$ 3,287	$ 899	$ 1,997	$ 2,688	$ 58	$ 246	$ 14,783
Charge-offs	–	–	–	–	–	–	(177)	–	–	(177)
Recoveries	–	34	292	–	–	–	–	–	–	326
Provision for loan losses	–	(935)	(324)	346	(155)	(869)	1,397	(30)	19	(551)
Loan type reclassification	–	(33)	33	–	–	–	–	–	–	–
Balance at December 31, 2017	$ –	$ 1,635	$ 3,040	$ 3,633	$ 744	$ 1,128	$ 3,908	$ 28	$ 265	$ 14,381
Balance at December 31, 2015	$ –	$ 3,615	$ 4,779	$ 2,243	$ 777	$ 1,646	$ 1,770	$ 79	$ 204	$ 15,113
Charge-offs	–	(54)	(8)	–	–	–	(117)	–	–	(179)
Recoveries	–	4,511	309	312	–	–	–	–	–	5,132
Provision for loan losses	–	(5,503)	(2,041)	732	122	351	1,035	(21)	42	(5,283)
Balance at December 31, 2016	$ –	$ 2,569	$ 3,039	$ 3,287	$ 899	$ 1,997	$ 2,688	$ 58	$ 246	$ 14,783
Allowance on loans evaluated for impairment:										
Individually	$ –	$ –	$ –	$ 3,951	$ –	$ –	$ 718	$ –	$ 135	$ 4,804
Collectively	–	1,518	2,614	3,008	784	794	4,090	134	303	13,245
Balance at December 31, 2018	$ –	$ 1,518	$ 2,614	$ 6,959	$ 784	$ 794	$ 4,808	$ 134	$ 438	$ 18,049
Individually	$ –	$ 25	$ 33	$ –	$ –	$ –	$ 495	$ –	$ 153	$ 706
Collectively	–	1,610	3,007	3,633	744	1,128	3,413	28	112	13,675
Balance at December 31, 2017	$ –	$ 1,635	$ 3,040	$ 3,633	$ 744	$ 1,128	$ 3,908	$ 28	$ 265	$ 14,381
Individually	$ –	$ 97	$ –	$ –	$ –	$ –	$ 71	$ –	$ 153	$ 321
Collectively	–	2,472	3,039	3,287	899	1,997	2,617	58	93	14,462
Balance at December 31, 2016	$ –	$ 2,569	$ 3,039	$ 3,287	$ 899	$ 1,997	$ 2,688	$ 58	$ 246	$ 14,783
Recorded investment in loans evaluated for impairment:										
Individually	$ 16,459,760	$ 156,824	$ 8,464	$ 7,494	$ –	$ –	$ 1,287,215	$ –	$ 4,092	$ 17,923,849
Collectively	–	958,290	1,133,940	1,466,845	295,908	534,774	1,824,844	71,650	139,143	6,425,394
Ending balance at December 31, 2018	$ 16,459,760	$ 1,115,114	$ 1,142,404	$ 1,474,339	$ 295,908	$ 534,774	$ 3,112,059	$ 71,650	$ 143,235	$ 24,349,243
Individually	$ 15,877,300	$ 149,853	$ 13,102	$ –	$ –	$ –	$ 1,422,934	$ –	$ 4,302	$ 17,467,491
Collectively	–	952,827	1,114,811	1,365,809	226,553	558,562	1,540,612	52,815	143,067	5,955,056
Ending balance at December 31, 2017	$ 15,877,300	$ 1,102,680	$ 1,127,913	$ 1,365,809	$ 226,553	$ 558,562	$ 2,963,546	$ 52,815	$ 147,369	$ 23,422,547
Individually	$ 15,514,031	$ 121,444	$ 22,580	$ 1,788	$ –	$ –	$ 1,664,394	$ –	$ 4,262	$ 17,328,499
Collectively	–	940,821	1,228,402	1,400,315	239,743	545,489	1,096,369	55,383	135,983	5,642,505
Ending balance at December 31, 2016	$ 15,514,031	$ 1,062,265	$ 1,250,982	$ 1,402,103	$ 239,743	$ 545,489	$ 2,760,763	$ 55,383	$ 140,245	$ 22,971,004

**Includes the loan types: Loans to cooperatives, Processing and marketing, and Farm-related business.*
***Includes Loans to OFIs, Lease receivables, and Other loans (including Mission Related).*

To mitigate risk of loan losses, the Bank and Associations may enter into guarantee arrangements with certain government-sponsored enterprises (GSEs), including the Federal Agricultural Mortgage Corporation (Farmer Mac), and state or federal agencies. These guarantees generally remain in place until the loans are paid in full or expire and give the Bank or the Association the right to be reimbursed for losses incurred or to sell designated loans to the guarantor in the event of default (typically four months past due), subject to certain conditions. The guaranteed balance of designated loans under these agreements was $3.042 billion, $3.201 billion, and $3.245 billion at December 31, 2018, 2017, and 2016, respectively. Fees paid for such guarantee commitments totaled $5.0 million, $5.4 million, and $5.9 million for 2018, 2017, and 2016, respectively. These amounts are classified as noninterest expense.

A restructuring of a debt constitutes a troubled debt restructuring (TDR) if the creditor for economic or legal reasons related to the debtor's financial difficulties grants a concession to the debtor that it would not otherwise consider. The following tables present additional information about pre-modification and post-modification outstanding recorded investment and the effects of modifications that occurred during the periods presented. The tables do not include any purchased credit impaired loans.

(dollars in thousands)	Year Ended December 31, 2018				
Outstanding Recorded Investment	**Interest Concessions**	**Principal Concessions**	**Other Concessions**	**Total**	**Charge-offs**
Pre-modification:					
Real estate mortgage	$ 69	$ 5,953	$ –	$ 6,022	
Production and intermediate-term	–	169	–	169	
Loans to cooperatives	–	12,663	–	12,663	
Rural residential real estate	232	1,086	–	1,318	
Other (including Mission Related)	–	34	–	34	
Total	$ 301	$ 19,905	$ –	$ 20,206	
Post-modification:					
Real estate mortgage	$ 69	$ 5,836	$ –	$ 5,905	$ –
Production and intermediate-term	–	95	–	95	(49)
Loans to cooperatives	–	12,593	–	12,593	–
Rural residential real estate	240	1,115	–	1,355	–
Other (including Mission Related)	–	34	–	34	–
Total	$ 309	$ 19,673	$ –	$ 19,982	$ (49)

(dollars in thousands)	Year Ended December 31, 2017				
Outstanding Recorded Investment	**Interest Concessions**	**Principal Concessions**	**Other Concessions**	**Total**	**Charge-offs**
Pre-modification:					
Real estate mortgage	$ 103	$ –	$ –	$ 103	
Rural residential real estate	1,036	132	–	1,168	
Total	$ 1,139	$ 132	$ –	$ 1,271	
Post-modification:					
Real estate mortgage	$ 106	$ –	$ –	$ 106	$ –
Rural residential real estate	1,132	135	–	1,267	–
Total	$ 1,238	$ 135	$ –	$ 1,373	$ –

(dollars in thousands)	Year Ended December 31, 2016				
Outstanding Recorded Investment	**Interest Concessions**	**Principal Concessions**	**Other Concessions**	**Total**	**Charge-offs**
Pre-modification:					
Real estate mortgage	$ –	$ 467	$ –	$ 467	
Rural residential real estate	401	92	–	493	
Total	$ 401	$ 559	$ –	$ 960	
Post-modification:					
Real estate mortgage	$ –	$ 467	$ –	$ 467	$ –
Rural residential real estate	411	96	–	507	–
Total	$ 411	$ 563	$ –	$ 974	$ –

Interest concessions may include interest forgiveness and interest deferment. Principal concessions may include principal forgiveness, principal deferment, and maturity extension. Other concessions may include additional compensation received which might be in the form of cash or other assets.

The following table presents outstanding recorded investment for TDRs that occurred during the previous twelve months and for which there was a subsequent payment default during the period. Payment default is defined as a payment that was thirty days or more past due.

	Year Ended December 31,		
(dollars in thousands)	**2018**	**2017**	**2016**
Defaulted troubled debt restructurings:			
Real estate mortgage	$ 66	$ –	$ –
Rural residential real estate	764	619	209
Total	$ 830	$ 619	$ 209

The following table provides information at each period end on outstanding loans restructured in troubled debt restructurings. These loans are included as impaired loans in the impaired loan table:

	Total TDRs			Nonaccrual TDRs		
	December 31,			December 31,		
(dollars in thousands)	2018	2017	2016	2018	2017	2016
Real estate mortgage	$ 914	$ 7,363	$ 7,693	$ 164	$ 6,321	$ 7,287
Production and intermediate-term	8,601	9,606	10,407	590	838	962
Loans to cooperatives	6,951	–	–	6,951	–	–
Rural residential real estate	4,795	3,757	2,427	1,866	1,891	869
Other (including Mission Related)	4,092	4,302	4,262	–	–	–
Total	$ 25,353	$ 25,028	$ 24,789	$ 9,571	$ 9,050	$ 9,118
Additional commitments to lend	$ 1,687	$ –	$ –			

The following table presents foreclosure information as of period end:

(dollars in thousands)	December 31, 2018
Carrying amount of foreclosed residential real estate properties held as a result of obtaining physical possession	$ 265
Recorded investment of consumer mortgage loans secured by residential real estate for which formal foreclosure proceedings are in process	$ 1,244

Note 4 — Investments

Equity Investments in Other Farm Credit System Institutions
Equity investments in other Farm Credit System institutions are generally nonmarketable investments consisting of stock and participation certificates, allocated surplus, and reciprocal investments in other institutions regulated by the FCA.

Investments in Debt Securities
The Bank's investments in debt securities consist primarily of mortgage-backed securities (MBSs) collateralized by U.S. government or U.S. agency guaranteed residential and commercial mortgages. Also included are asset-backed securities (ABSs) which are issued through the Small Business Administration and are guaranteed by the full faith and credit of the United States government. They are held to maintain a liquidity reserve, manage short-term surplus funds, and manage interest rate risk. These securities meet the applicable FCA regulatory guidelines related to government agency guaranteed investments.

Non-agency ABSs are included in available-for-sale investments. These securities must meet the applicable FCA regulatory guidelines, which require them to be high quality, senior class, and rated in the top category (AAA/Aaa) by Nationally Recognized Statistical Rating Organizations (NRSROs) at the time of purchase. To achieve these ratings, the securities may have a guarantee of timely payment of principal and interest, credit enhancements achieved through over-collateralization or other means, priority of payments for senior classes over junior classes, or bond insurance. All of the non-agency securities owned have one or more credit enhancement features.

The FCA considers a non-agency security ineligible if it falls below the AAA/Aaa credit rating criteria and requires System institutions to provide notification to the FCA when a security becomes ineligible. In August, 2016, the Bank disposed of its non-agency CMO and ABS securities not rated in the top category by at least one of the NRSROs.

Held-to-maturity investments consist of Mission Related Investments, acquired primarily under the Rural Housing Mortgage-Backed Securities (RHMS) and Rural America Bond (RAB) pilot programs. RHMS must be fully guaranteed by a government agency or government sponsored enterprise. RABs are private placement securities, which generally have some form of credit enhancement.

During 2018, the FCA approved the Bank's request to include its held-to-maturity RHMS securities, which totaled approximately $341.4 million at December 31, 2018, in its liquidity portfolio. The Bank then reclassified these securities, all of which had short remaining tenors, to available-for-sale.

In its Conditions of Approval for the program, the FCA considers a RAB ineligible if its investment rating, based on the internal 14-point risk rating scale used to also grade loans, falls below 9. The FCA requires System institutions to provide notification when a security becomes ineligible. At December 31, 2018, the Bank held two RABs totaling $405 thousand whose credit quality had deteriorated beyond the program limits.

Effective December 31, 2014, the FCA ended each pilot program approved after 2004 as part of the Investment in Rural America initiative. Each institution participating in such programs may continue to hold its investment through the maturity dates for the investments, provided the institution continues to meet all approval conditions. The FCA can consider future participation in these programs on a case-by-case basis.

An agreement with a commercial bank requires AgFirst to maintain $50.0 million as a compensating balance. At December 31, 2018, the Bank held $42.2 million in U.S. Treasury securities for that purpose. The remainder of the compensating balance is held in cash in a demand deposit account. These securities are excluded when calculating the amount of eligible liquidity investments.

At December 31, 2017, the Bank also held certain equity investments in Money Market funds. These funds were accounted for as investment securities but were classified as Cash Equivalents in the Balance Sheets and Statements of Cash Flows. There were no investments that met this criteria at December 31, 2018.

Available-for-sale

A summary of the amortized cost and fair value of debt securities held as available-for-sale investments at each period end follows:

	December 31, 2018				
(dollars in thousands)	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value	Yield
U.S. Govt. Treasury Securities	$ 389,948	$ 212	$ (549)	$ 389,611	2.34%
U.S. Govt. Guaranteed	4,518,703	34,712	(53,818)	4,499,597	2.76
U.S. Govt. Agency Guaranteed	2,297,134	11,373	(35,758)	2,272,749	2.74
Non-Agency ABSs	782,839	136	(5,736)	777,239	2.15
Total	$ 7,988,624	$ 46,433	$ (95,861)	$ 7,939,196	2.67%

(dollars in thousands)	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value	Yield
	December 31, 2017				
U.S. Govt. Treasury Securities	$ 490,570	$ 2	$ (475)	$ 490,097	1.31%
U.S. Govt. Guaranteed	4,536,232	35,601	(36,620)	4,535,213	2.06
U.S. Govt. Agency Guaranteed	2,022,077	6,618	(21,852)	2,006,843	1.90
Non-Agency ABSs	634,752	84	(3,384)	631,452	1.60
Total	$ 7,683,631	$ 42,305	$ (62,331)	$ 7,663,605	1.93%

(dollars in thousands)	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value	Yield
	December 31, 2016				
U.S. Govt. Treasury Securities	$ 342,171	$ 12	$ (235)	$ 341,948	0.56%
U.S. Govt. Guaranteed	4,255,293	41,462	(22,469)	4,274,286	1.61
U.S. Govt. Agency Guaranteed	2,265,945	10,763	(26,085)	2,250,623	1.37
Non-Agency ABSs	624,870	163	(1,049)	623,984	1.20
Total	$ 7,488,279	$ 52,400	$ (49,838)	$ 7,490,841	1.46%

Held-to-maturity

A summary of the amortized cost and fair value of debt securities held as held-to-maturity investments at each period end follows:

(dollars in thousands)	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value	Yield
	December 31, 2018				
U.S. Govt. Agency Guaranteed	$ 1,679	$ –	$ (36)	$ 1,643	1.99%
RABs and Other	40,373	2,999	(121)	43,251	6.06
Total	$ 42,052	$ 2,999	$ (157)	$ 44,894	5.89%

(dollars in thousands)	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value	Yield
	December 31, 2017				
U.S. Govt. Agency Guaranteed	$ 401,810	$ 7,438	$ (6,166)	$ 403,082	3.25%
RABs and Other	56,813	3,628	(183)	60,258	6.68
Total	$ 458,623	$ 11,066	$ (6,349)	$ 463,340	3.68%

(dollars in thousands)	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value	Yield
	December 31, 2016				
U.S. Govt. Agency Guaranteed	$ 462,888	$ 10,553	$ (8,505)	$ 464,936	2.98%
RABs and Other	78,466	3,685	(1,161)	80,990	6.00
Total	$ 541,354	$ 14,238	$ (9,666)	$ 545,926	3.41%

Proceeds from sales and realized gains and losses on all sales of investment securities are as follows:

	Year Ended December 31,		
(dollars in thousands)	2018	2017	2016
Proceeds from sales	$ 11,718	$ 77,153	$ 155,342
Realized gains	$ 14	$ 788	$ 23,822
Realized losses	$ (1)	$ (1,046)	$ –

A summary of the contractual maturity, estimated fair value, and amortized cost of investment securities at December 31, 2018, follows:

Available-for-sale

	Due in 1 Year or Less		Due After 1 Year Through 5 Years		Due After 5 Years Through 10 Years		Due After 10 Years		Total	
(dollars in thousands)	Amount	Weighted Average Yield	Amount	Weighted Average Yield	Amount	Weighted Average Yield	Amount	Weighted Average Yield	Amount	Weighted Average Yield
U.S. Govt. Treasury Securities	$ 309,781	2.34 %	$ 79,830	2.34 %	$ –	– %	$ –	– %	$ 389,611	2.34 %
U.S. Govt. Guaranteed	–	–	10,297	3.09	182,935	2.99	4,306,365	2.75	4,499,597	2.76
U.S. Govt. Agency Guaranteed	48,952	2.09	115,557	2.83	218,609	2.69	1,889,631	2.76	2,272,749	2.74
Non-Agency ABSs	–	–	712,695	2.10	64,544	2.66	–	–	777,239	2.15
Total fair value	$ 358,733	2.31 %	$ 918,379	2.23 %	$ 466,088	2.80 %	$ 6,195,996	2.75 %	$ 7,939,196	2.67 %
Total amortized cost	$ 359,219		$ 923,519		$ 467,035		$ 6,238,851		$ 7,988,624	

Held-to-maturity

	Due in 1 Year or Less		Due After 1 Year Through 5 Years		Due After 5 Years Through 10 Years		Due After 10 Years		Total	
(dollars in thousands)	Amount	Weighted Average Yield	Amount	Weighted Average Yield	Amount	Weighted Average Yield	Amount	Weighted Average Yield	Amount	Weighted Average Yield
U.S. Govt. Agency Guaranteed	$ –	– %	$ –	– %	$ –	– %	$ 1,679	1.99 %	$ 1,679	1.99 %
RABs and Other	2,919	7.15	4,012	5.64	11,568	6.12	21,874	5.95	40,373	6.06
Total amortized cost	$ 2,919	7.15 %	$ 4,012	5.64 %	$ 11,568	6.12 %	$ 23,553	5.67 %	$ 42,052	5.89 %
Total fair value	$ 3,007		$ 4,093		$ 12,071		$ 25,723		$ 44,894	

A substantial portion of these investments has contractual maturities in excess of ten years. However, expected maturities for these types of securities will differ from contractual maturities because borrowers may have the right to prepay obligations with or without prepayment penalties.

An investment is considered impaired if its fair value is less than its cost. This also applies to those securities other-than-temporarily impaired for which a credit loss has been recognized but noncredit-related losses continue to remain unrealized. The following tables show the fair value and gross unrealized losses for investments that have been in a continuous unrealized loss position aggregated by investment category at each reporting period. A continuous unrealized loss position for an investment is measured from the date the impairment was first identified.

	December 31, 2018					
	Less Than 12 Months		12 Months Or Greater		Total	
(dollars in thousands)	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses
U.S. Govt. Treasury Securities	$ 198,819	$ (174)	$ 27,062	$ (375)	$ 225,881	$ (549)
U.S. Govt. Guaranteed	550,215	(3,386)	2,092,608	(50,432)	2,642,823	(53,818)
U.S. Govt. Agency Guaranteed	421,629	(2,095)	1,230,414	(33,699)	1,652,043	(35,794)
Non-Agency ABSs	224,573	(295)	454,524	(5,441)	679,097	(5,736)
RABs and Other	171	(52)	2,638	(69)	2,809	(121)
Total	$ 1,395,407	$ (6,002)	$ 3,807,246	$ (90,016)	$ 5,202,653	$ (96,018)

	December 31, 2017					
	Less Than 12 Months		12 Months Or Greater		Total	
(dollars in thousands)	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses
U.S. Govt. Treasury Securities	$ 413,053	$ (182)	$ 27,193	$ (293)	$ 440,246	$ (475)
U.S. Govt. Guaranteed	1,356,044	(14,059)	1,415,892	(22,561)	2,771,936	(36,620)
U.S. Govt. Agency Guaranteed	334,739	(1,454)	1,380,697	(26,564)	1,715,436	(28,018)
Non-Agency ABSs	438,392	(2,569)	162,935	(815)	601,327	(3,384)
RABs and Other	341	–	3,450	(183)	3,791	(183)
Total	$ 2,542,569	$ (18,264)	$ 2,990,167	$ (50,416)	$ 5,532,736	$ (68,680)

	December 31, 2016					
	Less Than 12 Months		12 Months Or Greater		Total	
(dollars in thousands)	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses
U.S. Govt. Treasury Securities	$ 142,097	$ (235)	$ –	$ –	$ 142,097	$ (235)
U.S. Govt. Guaranteed	2,069,868	(18,855)	446,237	(3,614)	2,516,105	(22,469)
U.S. Govt. Agency Guaranteed	1,273,491	(26,423)	694,614	(8,167)	1,968,105	(34,590)
Non-Agency ABSs	374,745	(1,049)	–	–	374,745	(1,049)
RABs and Other	5,851	(210)	7,643	(951)	13,494	(1,161)
Total	$ 3,866,052	$ (46,772)	$ 1,148,494	$ (12,732)	$ 5,014,546	$ (59,504)

The recording of an impairment loss is predicated on: (1) whether or not management intends to sell the security, (2) whether it is more likely than not that management would be required to sell the security before recovering its costs, and (3) whether management expects to recover the security's entire amortized cost basis (even if there is no intention to sell). If the Bank intends to sell the security or it is more likely than not that it would be required to sell the security, the impairment loss recognized equals the full difference between amortized cost and fair value of the security. When the Bank does not intend to sell securities in an unrealized loss position and it is not more likely than not that it would be required to sell the securities, other-than-temporary impairment loss is separated into credit loss and non-credit loss. Credit loss is defined as the shortfall of the present value of the cash flows expected to be collected in relation to the amortized cost basis.

The Bank performs periodic credit reviews, including other-than-temporary impairment (OTTI) analyses, on its investment securities portfolio. Factors considered in determining whether an impairment is other-than-temporary include among others: (1) the length of time and the extent to which the fair value is less than cost, (2) adverse conditions specifically related to the industry, (3) geographic area and the condition of the underlying collateral, (4) payment structure of the security, (5) ratings by rating agencies, (6) the credit worthiness of bond insurers, and (7) volatility of the fair value changes.

The Bank uses the present value of cash flows expected to be collected from each debt security to determine the amount of credit loss. This technique requires assumptions related to the underlying collateral, including default rates, amount and timing of prepayments, and loss severity. Assumptions can vary widely from security to security and are influenced by such factors as loan interest rate, geographical location of the borrower, borrower characteristics, and collateral type.

Significant inputs used to estimate the amount of credit loss include, but are not limited to, performance indicators of the underlying assets in the security (including default rates, delinquency rates, and percentage of nonperforming assets), loan-to-collateral value ratios, third-party guarantees, current levels of subordination, vintage, geographic concentration, and credit ratings. The Bank obtains assumptions for the default rate, prepayment rate, and loss severity rate from an independent third party.

Based on the credit reviews discussed above, none of the securities held in the Bank's portfolio were determined to be other-than-temporarily impaired at December 31, 2018, 2017, or 2016.

When the Bank does not intend to sell other-than-temporarily impaired debt securities and is not more likely than not to be required to sell before recovery, the total OTTI is reflected in the Statements of Income with: (1) a net other-than-temporary impairment amount related to estimated credit loss, and (2) an amount relating to all other factors, recognized as a reclassification to or from OCI.

Because the Bank changed its intention to sell its ineligible available-for-sale securities, $14.9 million of credit-related OTTI was recognized for 2016, and is included in Net Other-than-temporary Impairment Losses in the Statements of Income.

For 2018, net unrealized losses of $29.4 million were recognized in OCI on available-for-sale investments that are not other-than-temporarily impaired.

The following schedule details the activity related to cumulative credit losses on investments recognized in earnings for which a portion of an other-than-temporary impairment was recognized in other comprehensive income:

	For the Year Ended December 31,		
(dollars in thousands)	2018	2017	2016
Amount related to credit loss-beginning balance	$ –	$ –	$ 56,692
Additions for initial credit impairments	–	–	4,665
Additions for subsequent credit impairments	–	–	10,282
Reductions for increases in expected cash flows	–	–	(1,814)
Reductions for securities sold/settled/matured	–	–	(69,825)
Amount related to credit loss-ending balance	$ –	$ –	$ –
Life to date incurred credit losses	–	–	–
Remaining unrealized credit losses	$ –	$ –	$ –

For all other impaired investments, the Bank has not recognized any credit losses as the impairments are deemed temporary and result from non-credit related factors. The Bank has the ability and intent to hold these investments until a recovery of unrealized losses occurs, which may be at maturity, and at this time expects to collect the full principal amount and interest due on these securities. Substantially all of these investments were in U.S. government agency securities and the Bank expects these securities would not be settled at a price less than their amortized cost.

The following table summarizes gains (losses) for the period related to equity securities:

	For the Year Ended December 31,		
(dollars in thousands)	2018	2017	2016
Net gains (losses) on equity securities			
Net gains (losses) recognized	$ 1,662	$ 256	$ –
Less realized net gains (losses)	1,662	167	–
Unrealized gains (losses)	$ –	$ 89	$ –

Note 5 — Real Estate and Other Property

Premises and Equipment

Premises and equipment consisted of the following:

	December 31,		
(dollars in thousands)	2018	2017	2016
Land	$ 12,169	$ 12,169	$ 12,091
Buildings and improvements	43,430	42,804	42,624
Furniture and equipment	50,107	47,088	47,798
Work in progress	207	2,485	1,875
	105,913	104,546	104,388
Less: accumulated depreciation	50,048	45,177	44,342
Total	$ 55,865	$ 59,369	$ 60,046

Other Property Owned

Net losses (gains) from other property owned and held for sale consisted of the following:

	December 31,		
(dollars in thousands)	2018	2017	2016
Losses (gains) on sale, net	$ 39	$ (10)	$ (2,582)
Carrying value adjustments	83	577	399
Operating (income) expense, net	294	(5)	132
Net Total	$ 416	$ 562	$ (2,051)

There were no deferred gains on sales of other property owned at December 31, 2018, 2017 and 2016.

Note 6 — Debt

Bonds and Notes

AgFirst, unlike commercial banks and other depository institutions, obtains funds for its lending operations primarily from the sale of Systemwide Debt Securities issued jointly by the System banks through the Funding Corporation. Certain conditions must be met before AgFirst can participate in the issuance of Systemwide Debt Securities. As one condition of participation, AgFirst is required by the Farm Credit Act and FCA regulations to maintain specified eligible assets, at least equal in value to the total amount of debt obligations outstanding for which it is primarily liable. This requirement does not provide holders of Systemwide Debt Securities with a security interest in any assets of the banks. The System banks and the Funding Corporation have entered into the Third Amended and Restated Market Access Agreement (MAA), which establishes criteria and procedures for the banks to provide certain information and, under certain circumstances, for restricting or prohibiting an individual bank's participation in Systemwide debt issuances, thereby reducing other System banks' exposure to statutory joint and several liabilities. At December 31, 2018, AgFirst was in compliance with the conditions of participation for the issuances of Systemwide Debt Securities.

In accordance with FCA regulations, each issuance of Systemwide Debt Securities ranks equally with other unsecured Systemwide Debt Securities. Systemwide Debt Securities are not issued under an indenture and no trustee is provided with respect to these securities. Systemwide Debt Securities are not subject to acceleration prior to maturity upon the occurrence of any default or similar event.

The following table provides a summary of AgFirst's recorded liability for outstanding Systemwide Debt Securities by maturity. Weighted average interest rates include the effect of any related derivative financial instruments.

	December 31, 2018					
	Bonds		Discount Notes		Total	
Maturities	Amortized Cost	Weighted Average Interest Rate	Amortized Cost	Weighted Average Interest Rate	Amortized Cost	Weighted Average Interest Rate
			(dollars in thousands)			
2019	$ 6,729,405	1.90%	$ 4,574,334	2.41%	$ 11,303,739	2.11%
2020	6,359,623	2.08	–	–	6,359,623	2.08
2021	3,440,190	2.15	–	–	3,440,190	2.15
2022	2,281,959	2.35	–	–	2,281,959	2.35
2023	1,576,605	2.42	–	–	1,576,605	2.42
2024 and after	5,419,585	2.92	–	–	5,419,585	2.92
Total	$ 25,807,367	2.26%	$ 4,574,334	2.41%	$ 30,381,701	2.29%

Discount notes are issued with maturities of one year or less. The weighted average maturity of discount notes at period end was 131 days.

Systemwide debt includes callable bonds consisting of the following as of December 31, 2018:

Amortized Cost	First Call Date	Year of Maturity
(dollars in thousands)		
$ 16,009,149	2019	2019 – 2033
4,989	2022	2027
$ 16,014,138	Total	

Most callable debt may be called on the first call date and any time thereafter.

As described in Note 1, the Insurance Fund is available to ensure the timely payment of principal and interest on Systemwide Debt Securities (Insured Debt) of System banks to the extent net assets are available in the Insurance Fund and not designated for specific use. All other liabilities on the financial statements are uninsured.

Note 7 — Shareholders' Equity

Descriptions of the Bank's capitalization requirements, protection mechanisms, regulatory capitalization requirements and restrictions, and equities are provided below:

A. **Description of Equities:** In accordance with the Farm Credit Act and the Bank's capitalization bylaws, the Bank is authorized to issue and have outstanding Classes B, C, and D Common Stock, Participation Certificates, Preferred Stock, and other classes of equity as may be provided for in the bylaws. All Common Stock and Participation Certificates have a par or face value of five dollars ($5.00) per share.

   The Bank had the following shares of common equities outstanding at December 31, 2018:

		Shares Outstanding *(dollars in thousands)*	
Class	Protected Status	Number	Aggregate Par Value
B Common/Non-OFI	No	1,357,428	$ 6,787
C Common/Voting	No	56,646,483	283,233
D Common/Nonvoting	No	4,655,638	23,278
Participation Certificates/Nonvoting	No	908,353	4,542
Total Capital Stock and Participation Certificates		63,567,902	$ 317,840

B. **Perpetual Preferred Stock:** On June 8, 2007, AgFirst issued $250.0 million of Class B Perpetual Non-Cumulative Fixed-to-Floating Rate Subordinated Preferred Stock, Series 1. Dividends on the stock are non-cumulative and are payable semi-annually in arrears on the 15th day of June and December in each year, commencing December 15, 2007, and ending on June 15, 2012, at an annual rate equal to 6.585 percent of the par value of $1 thousand per share, and will thereafter, commencing September 15, 2012, be payable quarterly in arrears on the 15th day of March, June, September, and December in each year, at an annual rate equal to 3-Month U.S. dollar (USD) LIBOR plus 1.13 percent. In the event dividends are not declared on the Class B, Series 1 Preferred Stock for payment on any dividend payment date, then such dividends shall not accumulate and shall cease to accrue and be payable. The stock may be redeemed on June 15th on any five-year anniversary of its year of issuance at a price of $1 thousand per share plus accrued and unpaid dividends for the then current dividend period to the date of redemption.

   During 2016, the Bank repurchased through privately negotiated transactions, and subsequently cancelled, Class B Perpetual Non-Cumulative Fixed-to-Floating Rate Subordinated Preferred Stock with a par value totaling $65.8 million. The effect of the repurchases on shareholders' equity was to reduce preferred stock outstanding by $65.8 million, and to increase additional paid-in capital by $18.9 million. There were no repurchases of preferred stock during 2018 or 2017. At December 31, 2018, $49.3 million of this issuance remained outstanding.

   Payment of dividends or redemption price on the Preferred Stock may be restricted if the Bank fails to satisfy applicable minimum capital adequacy, surplus, and collateral requirements.

C. **Capital Stock:** District Associations are required to maintain ownership in the Bank in the form of Class B or Class C Common Stock as determined by the Bank. Associations fund stock purchases through direct note advances. At December 31, 2018, 2017, and 2016, the Associations' minimum stock requirement was 1.40 percent of Association Direct Note balances, and a stock equalization computation is made annually. The Bank may require additional capital contributions to maintain its capital levels.

   Additionally, the Bank has issued Class D Common Stock through patronage distributions in connection with participations purchased by the Bank from other System institutions. Class D Common Stock issued in connection with participations has no voting rights. Such Stock may be retired at the discretion of the Board, and if retired, shall be retired at book value not to exceed its par value.

   Class D Common Stock may also be purchased by borrowers eligible to hold it as a condition for obtaining a loan in an amount as may be determined by the Board at its discretion within a range between a minimum of two percent (2.00 percent) of the loan amount or $1 thousand, whichever is less, and a maximum not to exceed ten percent (10.00 percent) of the loan amount. The Bank currently has no such loans outstanding.

D. **Other Equity:** OFIs make cash purchases of participation certificates and are required to capitalize their loans at the same level as the District Associations. See section C above.

E. **Order of Priority Upon Impairment or Liquidation:**

Impairment

Net losses, to the extent they exceed unallocated surplus, shall, except as otherwise provided in the Act, be treated as impairing Stock in the following order:

First, Class B Common Stock, Class C Common Stock, Class D Common Stock, and Participation Certificates, pro rata, in proportion to the number of shares or units of each such class of Stock then issued and outstanding, until such Stock is fully impaired; and

Second, Preferred Stock in proportion to the number of shares of each class and series thereof then issued and outstanding (applied, as among series that rank differently upon liquidation or dissolution of AgFirst, in reverse order of priority first to the most junior ranking series and then successively to each next most junior ranking series) and consistent with the terms of each such class or series until such Stock is fully impaired; and

Third, subject to the Act, as amended, and the regulations thereunder, in such manner as shall be determined by the Board.

Liquidation

In the event of liquidation or dissolution of AgFirst, any assets of AgFirst remaining after payment or retirement of all liabilities shall be distributed in the following order or priority:

First, to the holders of Preferred Stock, in proportion to the number of shares of each class and series thereof then issued and outstanding and consistent with the terms of each such series until an amount equal to the liquidation preference provided for in the terms of such series of Preferred Stock has been distributed to such holders (applied, as among series that rank differently upon liquidation or dissolution of AgFirst, in order of priority first to the most senior ranking series and then successively to each next most senior ranking series); and

Second, to the holders of Class B Common Stock, Class C Common Stock, Class D Common Stock, and Participation Certificates, pro rata, in proportion to the number of shares or units of each such class of Stock then issued and outstanding, until an amount equal to the aggregate par or face value of all such shares or units has been distributed to such holders; and

Third, in accordance with the memorandum of accounting established in the Agreement and Plan of Consolidation between The Farm Credit Bank of Columbia and The Farm Credit Bank of Baltimore, dated as of October 31, 1994; and

Fourth, all remaining assets of AgFirst after such distributions shall be to the extent practicable distributed to all Stockholders and holders of Participation Certificates on a patronage basis.

F. **Regulatory Capitalization Requirements and Restrictions:** An FCA regulation empowers it to direct a transfer of funds or equities by one or more System institutions to another System institution under specified circumstances. The Bank has not been called upon to initiate any transfers and is not aware of any proposed action under this regulation.

Effective January 1, 2017, the regulatory capital requirements for System Banks and associations were modified. The new regulations ensure that the System's capital requirements are comparable to the Basel III framework and the standardized approach that the federal banking regulatory agencies have adopted. New regulations replaced core surplus and total surplus ratios with common equity tier 1 (CET1) capital, tier 1 capital, and total regulatory capital risk-based ratios. The new regulations also include a tier 1 leverage ratio and an unallocated retained earnings (URE) and URE equivalents (UREE) leverage ratio. The permanent capital ratio (PCR) remains in effect.

The ratios are calculated using three-month average daily balances, in accordance with FCA regulations, as follows:

- The CET1 capital ratio is the sum of statutory minimum purchased borrower stock, other required borrower stock held for a minimum of 7 years, allocated equities held for a minimum of 7 years or not subject to revolvement, unallocated retained earnings, paid-in capital, less certain regulatory required deductions including the amount of investments in other System institutions, divided by average risk-adjusted assets.
- The tier 1 capital ratio is CET1 capital plus non-cumulative perpetual preferred stock, divided by average risk-adjusted assets.
- The total regulatory capital ratio is tier 1 capital plus other required borrower stock held for a minimum of 5 years, subordinated debt and limited-life preferred stock greater than 5 years to maturity at issuance subject to certain limitations, allowance for loan losses and reserve for unfunded commitments under certain limitations less certain investments in other System institutions under the corresponding deduction approach, divided by average risk-adjusted assets.
- The PCR is all at-risk borrower stock, any allocated excess stock, unallocated retained earnings, paid-in capital, subordinated debt and preferred stock subject to certain limitations, less certain investments in other System institutions, divided by PCR risk-adjusted assets.
- The tier 1 leverage ratio is tier 1 capital, divided by average assets less regulatory deductions to tier 1 capital.
- The URE and UREE leverage ratio is unallocated retained earnings, paid-in capital, and allocated surplus not subject to revolvement less certain regulatory required deductions including the amount of allocated investments in other System institutions divided by average assets less regulatory deductions to tier 1 capital.

The following sets forth the regulatory capital ratios:

Ratio	Minimum Requirement	Capital Conservation Buffer*	Minimum Requirement with Capital Conservation Buffer	Capital Ratios as of December 31, 2018	2017
Risk-adjusted ratios:					
CET1 Capital	4.50%	2.50%	7.00%	21.20%	21.73%
Tier 1 Capital	6.00%	2.50%	8.50%	21.64%	22.18%
Total Regulatory Capital	8.00%	2.50%	10.50%	21.79%	22.31%
Permanent Capital	7.00%	0.00%	7.00%	21.67%	22.21%
Non-risk-adjusted ratios:					
Tier 1 Leverage	4.00%	1.00%	5.00%	7.53%	7.67%
URE and UREE Leverage	1.50%	0.00%	1.50%	6.58%	6.72%

**Includes fully phased-in capital conservation buffers which will be effective January 1, 2020.*

If the capital ratios fall below the minimum regulatory requirements, including the buffer amounts, capital distributions (equity redemptions, dividends, and patronage) and discretionary senior executive bonuses are restricted or prohibited without prior FCA approval.

G. **Accumulated Other Comprehensive Income:** The following presents activity related to AOCI for the periods presented.

Changes in Accumulated Other Comprehensive Income by Component *(a)*

	For the Year Ended December 31,		
(dollars in thousands)	2018	2017	2016
Investment Securities:			
Balance at beginning of period	$ (20,026)	$ 2,561	$ 64,985
OCI before reclassifications	(29,390)	(22,845)	(53,549)
Amounts reclassified from AOCI	(13)	258	(8,875)
Net current period OCI	(29,403)	(22,587)	(62,424)
Balance at end of period	$ (49,429)	$ (20,026)	$ 2,561
Cash Flow Hedges:			
Balance at beginning of period	$ 18	$ (838)	$ (957)
OCI before reclassifications	19	(115)	34
Amounts reclassified from AOCI	849	971	85
Net current period OCI	868	856	119
Balance at end of period	$ 886	$ 18	$ (838)
Employee Benefit Plans:			
Balance at beginning of period	$ (4,748)	$ (4,076)	$ (4,106)
OCI before reclassifications	1,138	(1,041)	(305)
Amounts reclassified from AOCI	501	369	335
Net current period OCI	1,639	(672)	30
Balance at end of period	$ (3,109)	$ (4,748)	$ (4,076)
Total AOCI:			
Balance at beginning of period	$ (24,756)	$ (2,353)	$ 59,922
OCI before reclassifications	(28,233)	(24,001)	(53,820)
Amounts reclassified from AOCI	1,337	1,598	(8,455)
Net current period OCI	(26,896)	(22,403)	(62,275)
Balance at end of period	$ (51,652)	$ (24,756)	$ (2,353)

Reclassifications Out of Accumulated Other Comprehensive Income *(b)*

(dollars in thousands)	2018	2017	2016	Income Statement Line Item
Investment Securities:				
Sales gains & losses	$ 13	$ (258)	$ 23,822	Gains (losses) on investments, net
Holding gains & losses	–	–	(14,947)	Net other-than-temporary impairment
Net amounts reclassified	13	(258)	8,875	
Cash Flow Hedges:				
Interest income	(868)	(856)	(119)	See Note 14.
Gains (losses) on other transactions	19	(115)	34	See Note 14.
Net amounts reclassified	(849)	(971)	(85)	
Employee Benefit Plans:				
Periodic pension costs	(501)	(369)	(335)	See Note 9.
Net amounts reclassified	(501)	(369)	(335)	
Reclassifications for the period	$ (1,337)	$ (1,598)	$ 8,455	

(a) Amounts in parentheses indicate debits to AOCI.
(b) Amounts in parentheses indicate debits to profit/loss.

Note 8 — Fair Value Measurement

Fair value is defined as the exchange price that would be received for an asset or paid to transfer a liability in an orderly transaction between market participants in the principal or most advantageous market for the asset or liability.

Accounting guidance establishes a hierarchy for disclosure of fair value measurements to maximize the use of observable inputs, that is, inputs that reflect the assumptions market participants would use in pricing an asset or liability based on market data obtained from sources independent of the reporting entity. The hierarchy is based upon the transparency of inputs to the valuation of an asset or liability as of the measurement date. A financial instrument's categorization within the hierarchy tiers is based upon the lowest level of input that is significant to the fair value measurement. See Note 2, *Summary of Significant Accounting Policies*, Section K, *Valuation Methodologies*, for further information.

Estimating the fair value of Equity Investments in Other Farm Credit Institutions is not practicable because the stock is not traded. The net investment is carried at cost.

The classifications within the fair value hierarchy are as follows:

Level 1
Level 1 assets consist of assets held in trust funds related to deferred compensation and supplemental retirement plans. The trust funds include investments in securities that are actively traded and have quoted net asset value prices that are directly observable in the marketplace.

For cash and cash equivalents, the carrying value is primarily utilized as a reasonable estimate of fair value.

Level 2
The fair value of substantially all investment securities is determined from third-party valuation services that estimate current market prices. Inputs and assumptions related to third-party market valuation services are typically observable in the marketplace. Such services incorporate prepayment assumptions and underlying mortgage- or asset-backed collateral information to generate cash flows that are discounted using appropriate benchmark interest rate curves and volatilities. Third-party valuations also incorporate information regarding broker/dealer quotes, available trade information, historical cash flows, credit ratings, and other market information. Such valuations represent an estimated exit price, or price to be received by a seller in active markets to sell the investment securities to a willing participant.

Level 2 assets include investments in U.S. government and agency mortgage-backed securities and U.S. agency debt securities, all of which use unadjusted values from third parties or internal pricing models. The underlying loans for these investment securities are residential mortgages or commercial loans.

Also included are non-agency ABSs, federal funds sold, securities purchased under resale agreements, and other highly-liquid funds, all of which are non-exchange-traded instruments. The market value of these federal funds sold and other instruments is generally their face value, plus accrued interest, as these instruments are highly-liquid, readily convertible to cash, and short-term in nature.

The fair value of derivative financial instruments is the estimated amount to be received to sell a derivative asset or paid to transfer a derivative liability in active markets among willing participants at the reporting date. Estimated fair values are determined through internal valuation models which use an income approach. Interest rate derivative models incorporate benchmark interest rate curves, primarily the LIBOR swap and Overnight Index Swap (OIS) curves, potential volatilities of future interest rate movements, and other inputs which are observable directly or indirectly in the marketplace. The models used for other types of derivatives may take inputs such as market price changes, exchange rates, benchmark interest rates, and other inputs observable directly or indirectly in the marketplace. The Bank compares internally calculated derivative valuations to broker/dealer quotes to substantiate the results.

Collateral liabilities may also be considered Level 2. The majority of derivative contracts are supported by bilateral collateral agreements with counterparties requiring the posting of collateral in the event certain dollar thresholds of credit exposure are reached. Face value approximates the fair value of collateral liabilities.

Level 3

Because no active market exists for the Bank’s loans, fair value is estimated by discounting the expected future cash flows using interest rates at which similar loans would currently be made to borrowers with similar credit risk. For purposes of determining fair value of accruing loans, the portfolio is segregated into pools of loans with homogeneous characteristics based upon repricing and credit risk. Expected future cash flows and interest rates reflecting appropriate credit risk are separately determined for each individual pool.

Fair values of loans in a nonaccrual status are estimated to be the carrying amount of the loan less specific reserves. Certain loans evaluated for impairment under FASB guidance have fair values based upon the underlying collateral, as the loans were collateral-dependent. Specific reserves were established for these loans when the value of the collateral, less estimated cost to sell, was less than the principal balance of the loan. The fair value measurement process uses independent appraisals and other market-based information, but in many cases it also requires significant input based on management's knowledge of and judgment about current market conditions, specific issues relating to the collateral and other matters.

On December 31, 2016, U.S. government and U.S. government agency guaranteed investment securities, with a fair value of $27.6 million, were transferred into Level 3 to reflect a change in valuation technique. The modeling technique previously used to value them was no longer available, the bonds were nearing end of life, and third-party valuation services generally would not provide prices for them. The Bank began employing a valuation technique based on multiple factors including information obtained from broker-dealers using Level 3 inputs.

For other investments, fair value is estimated by discounting expected future cash flows using prevailing rates for similar instruments at the measurement date.

Other property owned is classified as a Level 3 asset. The fair value is generally determined using formal appraisals of each individual property. These assets are held for sale. Costs to sell represent transaction costs and are not included as a component of the fair value of other property owned. Other property owned consists primarily of real and personal property acquired through foreclosure or deed in lieu of foreclosure and is carried as an asset held for sale, which is generally not its highest and best use. These properties are part of the Bank's credit risk mitigation efforts, not its ongoing business. In addition, FCA regulations require that these types of property be disposed of within a reasonable period of time.

Systemwide Debt Securities are not all traded in the secondary market and those that are traded may not have readily available quoted market prices. Therefore, the fair value of the instruments is estimated by calculating the discounted value of the expected future cash flows. The discount rates used are based on the sum of quoted market yields for the Treasury yield curve and an estimated yield-spread relationship between Systemwide Debt Securities and Treasury securities. An appropriate yield-spread is estimated, taking into consideration selling group member (banks and securities dealers) yield indications, observed new GSE debt security pricing, and pricing levels in the related USD interest rate swap market.

The following tables present the changes in Level 3 assets and liabilities measured at fair value on a recurring basis for the periods presented. Except as described above, the Bank had no other transfers of assets or liabilities measured on a recurring basis into or out of Level 1 or Level 2 during the reporting period.

(dollars in thousands)	Mortgage Servicing Rights, Net	Forward Contracts, Net
Balance at December 31, 2017	$ –	$ –
Gains or (losses) included in earnings	–	–
Gains or (losses) included in OCI	–	–
Purchases	–	–
Sales	–	–
Issuances	1,033	1,413
Settlements	–	(1,413)
Transfers in and/or out of Level 3	–	–
Balance at December 31, 2018	$ 1,033	$ –

(dollars in thousands)		U.S. Govt. Guaranteed		U.S. Govt. Agency Guaranteed
Balance at December 31, 2016	$	25,047	$	2,535
Gains/(losses) included in earnings		(437)		(9)
Gains/(losses) included in OCI		598		36
Purchases		–		–
Sales		(23,095)		(1,886)
Settlements		(2,113)		(676)
Transfers in and/or out of Level 3		–		–
Balance at December 31, 2017	$	–	$	–

(dollars in thousands)		U.S. Govt. Guaranteed		U.S. Govt. Agency Guaranteed
Balance at December 31, 2015	$	–	$	–
Gains/(losses) included in earnings		–		–
Gains/(losses) included in OCI		–		–
Purchases		–		–
Sales		–		–
Settlements		–		–
Transfers in and/or out of Level 3		25,047		2,535
Balance at December 31, 2016	$	25,047	$	2,535

Fair values are estimated at each period end date for assets and liabilities measured at fair value on a recurring basis. Other Financial Instruments are not measured at fair value in the statement of financial position, but their fair values are estimated as of each period end date. The following tables summarize the carrying amounts of these assets and liabilities at period end, and their related fair values.

	December 31, 2018				
(dollars in thousands)	Total Carrying Amount	Level 1	Level 2	Level 3	Total Fair Value
Recurring Measurements					
Assets:					
Investments in debt securities available-for-sale:					
U.S. Govt. Treasury securities	$ 389,611	$ –	$ 389,611	$ –	$ 389,611
U.S. Govt. guaranteed	4,499,597	–	4,499,597	–	4,499,597
U.S. Govt. agency guaranteed	2,272,749	–	2,272,749	–	2,272,749
Non-agency ABSs	777,239	–	777,239	–	777,239
Total investments in debt securities available-for-sale	7,939,196	–	7,939,196	–	7,939,196
Federal funds sold, securities purchased under resale agreements, and other	100,000	–	100,000	–	100,000
Interest rate swaps and other derivative instruments	–	–	–	–	–
Money market funds	–	–	–	–	–
Mortgage servicing rights	1,102	–	–	1,102	1,102
Assets held in trust funds	13,834	13,834	–	–	13,834
Recurring Assets	$ 8,054,132	$ 13,834	$ 8,039,196	$ 1,102	$ 8,054,132
Liabilities:					
Interest rate swaps and other derivative instruments	$ –	$ –	$ –	$ –	$ –
Mortgage servicing rights	69	–	–	69	69
Collateral liabilities	–	–	–	–	–
Recurring Liabilities	$ 69	$ –	$ –	$ 69	$ 69
Nonrecurring Measurements					
Assets:					
Impaired loans	$ 10,703	$ –	$ –	$ 10,703	$ 10,703
Other property owned	2,842	–	–	3,555	3,555
Nonrecurring Assets	$ 13,545	$ –	$ –	$ 14,258	$ 14,258
Other Financial Instruments					
Assets:					
Cash	$ 421,485	$ 421,485	$ –	$ –	$ 421,485
Investments in debt securities held to maturity	42,052	–	1,643	43,251	44,894
Loans	24,247,129	–	–	23,931,485	23,931,485
Other Financial Assets	$ 24,710,666	$ 421,485	$ 1,643	$ 23,974,736	$ 24,397,864
Liabilities:					
Systemwide debt securities	$ 30,381,701	$ –	$ –	$ 30,104,941	$ 30,104,941
Other Financial Liabilities	$ 30,381,701	$ –	$ –	$ 30,104,941	$ 30,104,941

(dollars in thousands)	December 31, 2017 Total Carrying Amount	Level 1	Level 2	Level 3	Total Fair Value
Recurring Measurements					
Assets:					
Investments in debt securities available-for-sale:					
U.S. Govt. Treasury securities	$ 490,097	$ –	$ 490,097	$ –	$ 490,097
U.S. Govt. guaranteed	4,535,213	–	4,535,213	–	4,535,213
U.S. Govt. agency guaranteed	2,006,843	–	2,006,843	–	2,006,843
Non-agency ABSs	631,452	–	631,452	–	631,452
Total investments in debt securities available-for-sale	7,663,605	–	7,663,605	–	7,663,605
Federal funds sold, securities purchased under resale agreements, and other	150,000	–	150,000	–	150,000
Interest rate swaps and other derivative instruments	–	–	–	–	–
Money market funds	122,519	122,519	–	–	122,519
Assets held in trust funds	13,086	13,086	–	–	13,086
Recurring Assets	$ 7,949,210	$ 135,605	$ 7,813,605	$ –	$ 7,949,210
Liabilities:					
Interest rate swaps and other derivative instruments	$ –	$ –	$ –	$ –	$ –
Collateral liabilities	–	–	–	–	–
Recurring Liabilities	$ –	$ –	$ –	$ –	$ –
Nonrecurring Measurements					
Assets:					
Impaired loans	$ 6,767	$ –	$ –	$ 6,767	$ 6,767
Other property owned	154	–	–	168	168
Nonrecurring Assets	$ 6,921	$ –	$ –	$ 6,935	$ 6,935
Other Financial Instruments					
Assets:					
Cash	$ 440,768	$ 440,768	$ –	$ –	$ 440,768
Investments in debt securities held to maturity	458,623	–	403,082	60,258	463,340
Loans	23,338,012	–	–	23,201,602	23,201,602
Other Financial Assets	$ 24,237,403	$ 440,768	$ 403,082	$ 23,261,860	$ 24,105,710
Liabilities:					
Systemwide debt securities	$ 29,762,991	$ –	$ –	$ 29,619,713	$ 29,619,713
Other Financial Liabilities	$ 29,762,991	$ –	$ –	$ 29,619,713	$ 29,619,713

(dollars in thousands)	December 31, 2016 Total Carrying Amount	Level 1	Level 2	Level 3	Total Fair Value
Recurring Measurements					
Assets:					
Investments in debt securities available-for-sale:					
U.S. Govt. Treasury securities	$ 341,948	$ –	$ 341,948	$ –	$ 341,948
U.S. Govt. guaranteed	4,274,286	–	4,249,239	25,047	4,274,286
U.S. Govt. agency guaranteed	2,250,623	–	2,248,088	2,535	2,250,623
Non-agency ABSs	623,984	–	623,984	–	623,984
Total investments in debt securities available-for-sale	7,490,841	–	7,463,259	27,582	7,490,841
Federal funds sold, securities purchased under resale agreements, and other	262,624	–	262,624	–	262,624
Interest rate swaps and other derivative instruments	92	–	92	–	92
Assets held in trust funds	10,147	10,147	–	–	10,147
Recurring Assets	$ 7,763,704	$ 10,147	$ 7,725,975	$ 27,582	$ 7,763,704
Liabilities:					
Interest rate swaps and other derivative instruments	$ –	$ –	$ –	$ –	$ –
Collateral liabilities	–	–	–	–	–
Recurring Liabilities	$ –	$ –	$ –	$ –	$ –
Nonrecurring Measurements					
Assets:					
Impaired loans	$ 5,589	$ –	$ –	$ 5,589	$ 5,589
Other property owned	3,346	–	–	3,625	3,625
Nonrecurring Assets	$ 8,935	$ –	$ –	$ 9,214	$ 9,214
Other Financial Instruments					
Assets:					
Cash	$ 549,124	$ 549,124	$ –	$ –	$ 549,124
Investments in debt securities held to maturity	541,354	–	464,936	80,990	545,926
Loans	22,894,310	–	–	22,730,150	22,730,150
Other Financial Assets	$ 23,984,788	$ 549,124	$ 464,936	$ 22,811,140	$ 23,825,200
Liabilities:					
Systemwide debt securities	$ 29,408,483	$ –	$ –	$ 29,285,303	$ 29,285,303
Other Financial Liabilities	$ 29,408,483	$ –	$ –	$ 29,285,303	$ 29,285,303

SENSITIVITY TO CHANGES IN SIGNIFICANT UNOBSERVABLE INPUTS

Discounted cash flow or similar modeling techniques are generally used to determine the recurring fair value measurements for Level 3 assets and liabilities. Use of these techniques requires determination of relevant inputs and assumptions, some of which represent significant unobservable inputs as indicated in the tables that follow. Accordingly, changes in these unobservable inputs may have a significant impact on fair value.

Certain of these unobservable inputs will (in isolation) have a directionally consistent impact on the fair value of the instrument for a given change in that input. Alternatively, the fair value of the instrument may move in an opposite direction for a given change in another input. Where multiple inputs are used within the valuation technique of an asset or liability, a change in one input in a certain direction may be offset by an opposite change in another input having a potentially muted impact to the overall fair value of that particular instrument. Additionally, a change in one unobservable input may result in a change to another unobservable input (that is, changes in certain inputs are interrelated with one another), which may counteract or magnify the fair value impact.

Investments in Debt Securities

The fair values of predominantly all Level 3 investments in debt securities have consistent inputs, valuation techniques and correlation to changes in underlying inputs. The models used to determine fair value for these instruments use certain significant unobservable inputs within a discounted cash flow or market comparable pricing valuation technique. Such inputs generally include discount rate components including risk premiums, prepayment estimates, default estimates and loss severities.

These Level 3 assets would decrease (increase) in value based upon an increase (decrease) in discount rates, defaults, or loss severities. Conversely, the fair value of these assets would generally increase (decrease) in value if the prepayment input were to increase (decrease). Generally, a change in the assumption used for defaults is accompanied by a directionally similar change in the risk premium component of the discount rate (specifically, the portion related to credit risk) and a directionally opposite change in the assumption used for prepayments. Unobservable inputs for loss severities do not normally increase or decrease based on movements in the other significant unobservable inputs for these Level 3 assets.

Derivative Instruments

Level 3 derivative instruments consist of forward contracts that represent a hedge of an unrecognized firm commitment to purchase agency securities at a future date. The value of the forward is the difference between the fair value of the security at inception of the forward and the measurement date. Significant inputs for these valuations would be discount rate and volatility. These Level 3 derivatives would decrease (increase) in value based upon an increase (decrease) in the discount rate.

Generally, for derivative instruments which are subject to changes in the value of the underlying referenced instrument, change in the assumption used for default rate is accompanied by directionally similar change in the risk premium component of the discount rate (specifically, the portion related to credit risk) and a directionally opposite change in the assumption used for prepayment rates.

Unobservable inputs for discount rate and volatility do not increase or decrease based on movements in other significant unobservable inputs for these Level 3 instruments.

Inputs to Valuation Techniques

Management determines the Bank's valuation policies and procedures. Internal valuation processes are calibrated annually by an independent consultant. Fair value measurements are analyzed on a periodic basis. Documentation is obtained for third party information, such as pricing, and periodically evaluated alongside internal information and pricing.

Quoted market prices are generally not available for the instruments presented below. Accordingly, fair values are based on judgments regarding anticipated cash flows, future expected loss experience, current economic conditions, risk characteristics of various financial instruments, and other factors. These estimates involve uncertainties and matters of judgment, and therefore cannot be determined with precision. Changes in assumptions could significantly affect the estimates.

Quantitative Information about Recurring and Nonrecurring Level 3 Fair Value Measurements

(dollars in thousands)	Fair Value	Valuation Technique(s)	Unobservable Input	Range
Impaired loans and other property owned	$ 14,258	Appraisal	Income and expense	*
			Comparable sales	*
			Replacement cost	*
			Comparability adjustments	*
Forward contracts	$ –	Discounted cash flow	Estimated future cash flows	
Mortgage servicing rights, net	$ 1,033	Discounted cash flow	Constant prepayment rate	
			Probability of default	
			Loss severity	
			Fees and costs	

Information about Recurring and Nonrecurring Level 2 Fair Value Measurements

	Valuation Technique(s)	Input
Debt securities available-for-sale	Discounted cash flow	Constant prepayment rate
		Probability of default
		Loss severity
	Quoted prices	Price for similar security
	Vendor priced	**
Federal funds sold, securities purchased under resale agreements and other	Carrying value	Par/principal and appropriate interest yield
Interest rate swaps	Discounted cash flow	Annualized volatility
		Counterparty credit risk
		Own credit risk

Information about Other Financial Instrument Fair Value Measurements

	Valuation Technique(s)	Input
Loans	Discounted cash flow	Prepayment forecasts Probability of default Loss severity
Cash and cash equivalents	Carrying value	Par/principal and appropriate interest yield
Debt securities held-to-maturity	Discounted cash flow	Constant prepayment rate Prepayment rates Probability of default Risk-adjusted spread Loss severity
	Quoted prices	Price for similar security
	Vendor priced	**
Systemwide debt securities	Discounted cash flow	Benchmark yield curve Derived yield spread Own credit risk
Cash collateral	Carrying value	Par/principal and appropriate interest yield

**Ranges for this type of input are not useful because each collateral property is unique.*
***The inputs used to estimate fair value for assets and liabilities that are obtained from third-party vendors are not included in the table as the specific inputs applied are not provided by the vendor.*

Note 9 — Employee Benefit Plans

The Bank participates in three District-sponsored benefit plans. These plans include a multiemployer defined benefit pension plan, the AgFirst Farm Credit Retirement Plan, which is a final average pay plan (FAP Plan). In addition, the Bank participates in a multiemployer defined benefit other postretirement benefits plan (OPEB Plan), the Farm Credit Benefits Alliance Retiree and Disabled Medical and Dental Plan, and a defined contribution 401(k) plan. The risks of participating in these multiemployer plans are different from single-employer plans in the following aspects:

1. Assets contributed to multiemployer plans by one employer may be used to provide benefits to employees of other participating employers.
2. If a participating employer stops contributing to the plan, the unfunded obligations of the plan may be borne by the remaining participating employers.
3. If the Bank chooses to stop participating in some of its multiemployer plans, the Bank may be required to contribute to eliminate the underfunded status of the plan.

The District's multiemployer plans are not subject to ERISA and no Form 5500 is required to be filed. As such, the following information is neither available for nor applicable to the plans:

1. The Employee Identification Number (EIN) and three-digit Pension Plan Number.
2. The most recent Pension Protection Act (PPA) zone status. Among other factors, plans in the red zone are generally less than 65 percent funded, plans in the yellow zone are less than 80 percent funded, and plans in the green zone are at least 80 percent funded.
3. The "FIP/RP Status" indicating whether a financial improvement plan (FIP) or a rehabilitation plan (RP) is either pending or has been implemented.
4. The expiration date(s) of collective-bargaining agreement(s).

The FAP Plan covers employees hired prior to January 1, 2003 and includes other District employees that are not employees of the Bank. It is accounted for as a multiemployer plan. The related net benefit plan obligations are not included in the Bank's Balance Sheets but are included in the Combined Balance Sheets for the AgFirst District. FAP Plan expenses included in employee benefit costs on the Bank's Statements of Income were $5.8 million for 2018, $5.3 million for 2017, and $8.0 million for 2016. At December 31, 2018, 2017, and 2016, the total liability balance for the FAP Plan presented in the District Combined Balance Sheets is $94.5 million, $139.1 million, and $119.0 million, respectively. The FAP Plan is 89.56 percent, 86.41 percent, and 86.96 percent funded to the projected benefit obligation as of December 31, 2018, 2017, and 2016, respectively.

In addition to providing pension benefits, the Bank provides certain medical and dental benefits for eligible retired employees through the OPEB Plan. Substantially all of the Bank employees may become eligible for the benefits if they reach early retirement age while working for the Bank. Early retirement age is defined as a minimum of age 55 and 10 years of service. Employees hired after December 31, 2002, and employees who separate from service between age 50 and age 55, are required to pay the full cost of their retiree health insurance coverage. Employees who retire subsequent to December 1, 2007 are no longer provided retiree life insurance benefits. The OPEB Plan includes other Farm Credit System employees that are not employees of the Bank or District and is accounted for as a multiemployer plan. The related net benefit plan obligations are not included in the Bank's Balance Sheets but are included in the Combined Statement of Condition for the Farm Credit System. The OPEB Plan is unfunded with expenses paid as incurred. Postretirement benefits other than pensions included in employee benefit costs on the Bank's Statements of Income were $988 thousand for 2018, $937 thousand for 2017, and $1.4 million for 2016. At December 31, 2018, the total AgFirst District liability balance for the OPEB Plan presented in the Farm Credit System Combined Statement of Condition is $181.8 million.

During 2017, the method of recording expenses at participating District entities for the FAP and OPEB Plans was modified. Prior to 2017, expense was recorded based on allocations of actuarially-determined costs and any differences between recorded expense and actual contributions were recorded in Other Assets or Other Liabilities on the Balance Sheets. For 2017 and future years, participating entities will record postretirement benefit costs based on the actual contributions to the Plans. This change caused the Bank to modify its accounting estimates recorded in Other Assets and Other Liabilities since the assets and liabilities do not impact future contributions to the Plans. The change in estimate resulted in the reduction of Other Assets by $9.1 million and the reduction of Other Liabilities by $17.2 on the Bank's Balance Sheets, and a total reduction of noninterest expenses on the Bank's Statements of Income of $8.1 million during 2017.

The Bank also participates in the defined contribution Farm Credit Benefits Alliance (FCBA) 401(k) Plan (401(k) Plan), which qualifies as a 401(k) plan as defined by the Internal Revenue Code. For employees hired on or prior to December 31, 2002, the Bank contributes $0.50 for each $1.00 of the employee's first 6.00 percent of contribution (based on total compensation) up to the maximum employer contribution of 3.00 percent of total compensation. For employees hired on or after January 1, 2003, the Bank contributes $1.00 for each $1.00 of the employee's first 6.00 percent of contribution up to the maximum employer contribution of 6.00 percent of total compensation. Employee deferrals are not to exceed the maximum deferral as determined and adjusted by the Internal Revenue Service. The 401(k) Plan costs are expensed as funded. Employer contributions to this plan included in employee benefit costs were $3.0 million, $2.7 million, and $2.5 million for the years ended December 31, 2018, 2017, and 2016, respectively. Beginning in 2015, contributions

include an additional 3.00 percent of eligible compensation for employees hired after December 31, 2002.

In addition to the multiemployer plans above, the Bank sponsors a single employer defined benefit supplemental retirement plan and offers a FCBA supplemental 401(k) plan for certain key employees. These plans are nonqualified; therefore, the associated liabilities are included in the Bank's Balance Sheets in Other Liabilities. The supplemental retirement plan is unfunded and had a projected benefit obligation of $12.5 million and a net under-funded status of $12.5 million at December 31, 2018. Assumptions used to determine the projected benefit obligation as of December 31, 2018 included a discount rate of 4.40 percent and a rate of compensation increase of 5.00 percent. Expenses of these nonqualified plans included in noninterest expenses were $1.4 million, $1.3 million, and $1.2 million for 2018, 2017, and 2016, respectively.

FASB guidance further requires the determination of the fair value of plan assets and recognition of actuarial gains and losses, prior service costs or credits, and transition assets or obligations as a component of AOCI. Under the guidance, these amounts are subsequently recognized as components of net periodic benefit costs over time. For 2018, 2017, and 2016, $1.6 million, $(672) thousand, and $30 thousand, respectively, have been recognized as a net credit, a net debit, and a net credit to AOCI to reflect these elements.

Additional information for the above may be found in the Notes to the Annual Information Statement of the Farm Credit System.

Note 10 — Related Party Transactions

In the ordinary course of business, the Bank enters into loan transactions with related parties, including but not limited to officers and directors, their immediate families and other organizations with which such persons may be affiliated.

As discussed in Note 1, the Bank lends funds to the District Associations primarily to fund their loan portfolios. Further disclosure regarding these related party transactions is found in Notes 3, 7, and 11.

Interest income recognized, net of participations sold, on direct notes receivable from District Associations and OFIs was $503.3 million, $434.1 million and $386.0 million for 2018, 2017, and 2016, respectively.

Note 11 — Commitments and Contingencies

From time to time, legal actions are pending against the Bank in which claims for money damages are asserted. On at least a quarterly basis, the Bank assesses its liabilities and contingencies in connection with outstanding legal proceedings utilizing the latest information available. While the outcome of legal proceedings is inherently uncertain, on the basis of information presently available, management and legal counsel are of the opinion that the ultimate liability, if any, from these actions, would not be material in relation to the financial position of the Bank. Because it is not probable that the Bank will incur a loss or the loss is not estimable, no liability has been recorded for any claims that may be pending.

In the normal course of business, the Bank may participate in credit related financial instruments with off-balance-sheet risk to satisfy the financing needs of its borrowers or the borrowers of the District Associations. These financial instruments may include commitments to extend credit, letters of credit, or various guarantees. The instruments involve, to varying degrees, elements of credit risk in excess of the amount recognized in the financial statements. Commitments to extend credit are agreements to lend to a borrower as long as there is not a violation of any condition established in the contract. Commercial letters of credit are agreements to pay a beneficiary under conditions specified in the letter of credit. Commitments and letters of credit generally have fixed expiration dates or other termination clauses and may require payment of a fee.

Since many of these commitments are expected to expire without being drawn upon, the total commitments do not necessarily represent future cash requirements. However, these financial instruments have off-balance-sheet credit risk because their amounts could be drawn upon at the option of the borrower. The credit risk associated with issuing commitments and letters of credit is substantially the same as that involved in extending loans to borrowers and the same credit policies are applied by management. Upon fully funding a commitment, the credit risk amounts are equal to the contract amounts, assuming that borrowers fail completely to meet their obligations and the loan collateral is of no value. The amount of collateral obtained, if deemed necessary upon extension of credit, is based on management's credit evaluation of the borrower. At December 31, 2018, $4.830 billion of commitments to extend credit were outstanding with a related reserve for unfunded commitments of $36 thousand included in Other Liabilities in the Balance Sheets. No reserve for unfunded commitments is established for commitments related to the Bank's Direct Note portfolio.

The Bank also participates in standby letters of credit to satisfy the financing needs of its borrowers. These letters of credit are irrevocable agreements to guarantee payments of specified financial obligations. At December 31, 2018, standby letters of credit outstanding totaled $56.5 million, with expiration dates ranging from February 2019 to December 2039. The maximum potential amount of future payments the Bank may be required to make under these existing guarantees is $56.5 million.

Under the Farm Credit Act, each System bank is primarily liable for its portion of Systemwide bond and discount note obligations. Additionally, the four banks are jointly and severally liable for the bonds and notes of the other System banks under the terms of the Joint and Several Liability Allocation Agreement. Published in the Federal Register, the agreement prescribes the payment mechanisms to be employed in the event one of the banks is unable to meet its debt obligations.

In the event a bank is unable to timely pay principal or interest on an insured debt obligation for which it is primarily liable, the FCSIC must expend amounts available in the Insurance Fund to ensure the timely payment of principal and interest on the insured debt obligation. The provisions of the Farm Credit Act providing for joint and several liability of the banks on the obligation cannot be invoked until the amounts in the Insurance Fund have been exhausted. At December 31, 2018, the assets of the Insurance Fund totaled $4.954 billion. However, because of other mandatory and discretionary uses of the Insurance Fund, there is no assurance that there will be sufficient funds to pay the principal or interest on the insured debt obligation.

Once the joint and several liability provisions are initiated, the FCA is required to make "calls" to satisfy the liability first on all non-defaulting banks in the proportion that each non-defaulting bank's available collateral (collateral in excess of the aggregate of the banks' collateralized obligations) bears to the aggregate available collateral of all non-defaulting banks. If these calls do not satisfy the liability, then a further call would be made in proportion to each non-defaulting bank's remaining assets. Upon making a call on non-defaulting banks with respect to a Systemwide Debt Security issued on behalf of a defaulting bank, the FCA is required to appoint the FCSIC as the receiver for the defaulting bank. The receiver would be required to expeditiously liquidate the bank.

AgFirst did not anticipate making any payments on behalf of its co-obligors under the Joint and Several Liability Allocation Agreement for any of the periods presented. The total amount outstanding and the carrying amount of the Bank's liability under the agreement are as follows:

	December 31,		
(dollars in billions)	2018	2017	2016
Total System bonds and notes	$ 281.459	$ 265.169	$ 257.782
AgFirst bonds and notes	30.382	29.763	29.408

At December 31, 2018, the Bank also guaranteed certain loans held by District Associations in the amount of $1.1 million with expiration dates ranging from May 2019 to January 2020. The notional amounts of these guarantees represent the maximum amount of exposure the Bank has related to these instruments at period end.

Note 12 — Income Taxes

The Bank is exempt from federal and other income taxes as provided in the Farm Credit Act.

Note 13 — Additional Financial Information

Quarterly Financial Information (Unaudited)

	2018				
(dollars in thousands)	First	Second	Third	Fourth	Total
Net interest income	$ 102,605	$ 100,716	$ 104,742	$ 102,104	$ 410,167
Provision for (reversal of allowance for) loan losses	1,423	(161)	1,544	736	3,542
Noninterest income (expense), net	(22,024)	(27,629)	(28,970)	(22,014)	(100,637)
Net income	$ 79,158	$ 73,248	$ 74,228	$ 79,354	$ 305,988

	2017				
(dollars in thousands)	First	Second	Third	Fourth	Total
Net interest income	$ 110,695	$ 112,173	$ 113,892	$ 110,307	$ 447,067
Provision for (reversal of allowance for) loan losses	609	(84)	(668)	(408)	(551)
Noninterest income (expense), net	(27,161)	(31,275)	(31,097)	(13,336)	(102,869)
Net income	$ 82,925	$ 80,982	$ 83,463	$ 97,379	$ 344,749

	2016				
(dollars in thousands)	First	Second	Third	Fourth	Total
Net interest income	$ 108,643	$ 112,254	$ 119,383	$ 124,724	$ 465,004
Provision for (reversal of allowance for) loan losses	920	1,129	(5,667)	(1,665)	(5,283)
Noninterest income (expense), net	(36,092)	(38,787)	(28,210)	(25,235)	(128,324)
Net income	$ 71,631	$ 72,338	$ 96,840	$ 101,154	$ 341,963

Other Assets and Other Liabilities
A summary of other assets and other liabilities follows:

	December 31,		
(dollars in thousands)	2018	2017	2016
Other assets:			
Derivative assets	$ –	$ –	$ 92
Prepaid retirement expenses	–	–	9,145
Assets held in trust funds	13,834	13,086	10,147
Other	8,703	6,715	5,138
Total	$ 22,537	$ 19,801	$ 24,522
Other liabilities:			
Postretirement benefits liabilities	$ 12,519	$ 13,534	$ 29,612
Payroll liabilities	7,433	6,613	6,465
Bank drafts payable	1,398	10,005	14,612
Other	14,445	13,582	11,933
Total	$ 35,795	$ 43,734	$ 62,622

Offsetting of Financial and Derivative Assets

	December 31,		
(dollars in thousands)	2018	2017	2016
Derivatives	$ –	$ –	$ 92
Reverse repurchase and similar arrangements	100,000	150,000	262,624
Gross Amount of Recognized Assets	100,000	150,000	262,716
Derivatives	–	–	–
Reverse repurchase and similar arrangements	–	–	–
Gross Amounts Offset in the Balance Sheets	–	–	–
Net Amounts of Assets Presented in the Balance Sheets	$ 100,000	$ 150,000	$ 262,716
Financial Instruments	(100,000)	(150,000)	(262,624)
Cash Collateral Received	–	–	–
Gross Amounts Not Offset in the Balance Sheets	(100,000)	(150,000)	(262,624)
Net Amount	$ –	$ –	$ 92

There were no liabilities subject to master netting arrangements or similar agreements during the reporting periods.

A description of the rights of setoff associated with recognized derivative assets and liabilities subject to enforceable master netting arrangements is located in Note 14, *Derivative Financial Instruments and Hedging Activities*.

The reverse repurchase agreements are accounted for as collateralized lending.

Combined Districtwide Financial Statements
The accompanying financial statements exclude financial information of the Bank's affiliated Associations. The Bank and its affiliated Associations are collectively referred to as the AgFirst District. The Bank separately publishes certain unaudited combined financial information of the AgFirst District, including a statement of condition and statement of income, which can be found on the Bank's website at ***www.agfirst.com***. Such information is not incorporated by reference into, and should not be considered a part of, this Annual Report.

Note 14 — Derivative Financial Instruments and Hedging Activities

One of the Bank's goals is to minimize interest rate sensitivity by managing the repricing characteristics of assets and liabilities so that the net interest margin is not adversely affected by movements in interest rates. The Bank maintains an overall interest rate risk management strategy that may incorporate the use of derivative instruments to achieve that goal. The primary derivative type used by the Bank has been interest rate swaps that convert fixed interest rate debt to a lower floating interest rate than was achievable from issuing floating rate debt with identical repricing characteristics. Interest rate swaps may allow the Bank to lower funding costs, diversify sources of funding, or alter interest rate exposures arising from mismatches between assets and liabilities. Under these arrangements, the Bank agrees with other parties to exchange, at specified intervals, payment streams calculated on a specified notional principal amount, with at least one stream based on a specified floating rate index.

The Bank may also purchase interest rate derivatives such as caps, in order to reduce the impact of rising interest rates on its floating-rate debt, and floors, in order to reduce the impact of falling interest rates on its floating-rate assets. In addition, the Bank may also fix a price to be paid in the future which qualifies as a derivative forward contract.

As a result of interest rate fluctuations, interest income and interest expense related to hedged variable-rate assets and liabilities, respectively, will increase or decrease. Another result of interest rate fluctuations is that hedged fixed-rate assets and liabilities will appreciate or depreciate in market value. The effects of any earnings variability or unrealized changes in market value are expected to be substantially offset by the Bank's gains or losses on the derivative instruments that are linked to these hedged assets and liabilities. The Bank considers its strategic use of derivatives to be a prudent method of managing interest rate sensitivity, as it prevents earnings from being exposed to undue risk posed by changes in interest rates.

The primary type of derivative instruments used and the amount of activity for each year ended is summarized in the following table:

	2018		2017		2016	
Notional Amounts *(dollars in millions)*	**Receive-Fixed Swaps**	**Forward Contracts**	**Receive-Fixed Swaps**	**Forward Contracts**	**Receive-Fixed Swaps**	**Forward Contracts**
Balance at beginning of period	$ –	$ –	$ 50	$ 1	$ 150	$ –
Additions	–	122	–	9	–	2
Maturities/amortization	–	(122)	(50)	(10)	(100)	(1)
Terminations	–	–	–	–	–	–
Balance at end of period	$ –	$ –	$ –	$ –	$ 50	$ 1

By using derivative instruments, the Bank exposes itself to credit and market risk. If a counterparty fails to fulfill its performance obligations under a derivative contract, the Bank's credit risk will equal the fair value gain in the derivative. Generally, when the fair value of a derivative contract is positive, this indicates that the counterparty owes the Bank, thus creating a repayment risk for the Bank. When the fair value of the derivative contract is negative, the Bank owes the counterparty and, therefore, assumes no repayment risk.

To minimize the risk of credit losses, the Bank transacts with counterparties that have an investment grade credit rating from a major rating agency and also monitors the credit standing of, and levels of exposure to, individual counterparties. The Bank typically enters into master agreements that contain netting provisions. These provisions allow the Bank to require the net settlement of covered contracts with the same counterparty in the event of default by the counterparty on one or more contracts. A number of swaps are supported by collateral arrangements with counterparties.

Counterparty exposure related to derivatives at:

	December 31,		
(dollars in millions)	**2018**	**2017**	**2016**
Estimated Gross Credit Risk	$–	$–	$0.1
Percent of Notional	–%	–%	0.18%

There was no cash or securities collateral held or posted for the periods presented.

The Bank's derivative activities are monitored by its Asset/Liability Management Committee (ALCO) as part of the Committee's oversight of the Bank's asset/liability and treasury functions. The ALCO is responsible for approving hedging strategies that are developed within parameters established by the Board of Directors through the analysis of data derived from financial simulation models and other internal and industry sources. The resulting hedging strategies are then incorporated into the Bank's overall interest rate risk-management strategies.

Fair Value Hedges
For derivative instruments designated as fair value hedges, the gains or losses on the derivative, as well as the offsetting loss or gain on the hedged item attributable to the hedged risk, are recognized in current earnings. The Bank includes the gain or loss on the hedged items in the same line item (interest expense) as the offsetting loss or gain on the related interest rate swaps. Gains and losses on each derivative representing either hedge ineffectiveness or hedge components excluded from the assessment of effectiveness are recognized in current earnings.

Cash Flow Hedges
From time to time, the Bank may acquire when-issued securities, generally government agency guaranteed bonds. The when-issued transactions are contracts to purchase securities that will not be delivered until 30 or more days in the future. These purchase commitments are considered derivatives (cash flow hedges) in the form of forward contracts. Any difference in market value of the contracted securities, between the purchase and reporting or settlement dates, represent the value of the forward contracts. These amounts are included in OCI, and Other Liabilities or Other Assets as appropriate, as firm commitments in the Bank's Balance Sheets for each period end. At December 31, 2018, 2016, and 2015, the Bank had no commitments to purchase any when-issued bonds.

For derivative instruments that are designated and qualify as a cash flow hedge, such as the Bank's forward contracts, the effective portion of the gain or loss on the derivative is reported as a component of OCI and reclassified into earnings in the same period or periods during which the hedged transaction affects earnings. Gains and losses on the derivative representing either hedge ineffectiveness or hedge components excluded from the assessment of effectiveness are recognized in current earnings.

Derivatives Not Designated as Hedges
The Bank may enter into interest rate lock commitments, which are commitments to originate mortgage loans whereby the interest rate on the loan is determined prior to funding and the customers have locked into that interest rate. The Bank may also manage market risk on interest

rate lock commitments and mortgage loans held for sale with corresponding forward sale commitments. Residential mortgage loans held for sale are recorded at fair value with changes in fair value recorded in Noninterest Income. Changes in mark-to-market from both interest rate lock commitments and corresponding forward sale commitments related to residential mortgage loans are included in Noninterest Income.

Fair Values of Derivative Instruments
There were no derivative assets or liabilities designated as hedging instruments at December 31, 2018 or 2017. The following table represents the fair value of derivatives designated as hedging instruments at December 31, 2016:

(dollars in thousands)	Balance Sheet Classification Assets	12/31/16 Fair Value	Balance Sheet Classification Liabilities	12/31/16 Fair Value
Receive-fixed swaps	Other Assets	$ 92	Other Liabilities	$ –
Forward contracts	Other Assets	–	Other Liabilities	–
Total		$ 92		$ –

The following table sets forth the amount of net gain (loss) on derivatives recognized in earnings and, for cash flow hedges, the amount of net gain (loss) recognized in AOCI for the periods presented. See Note 7, *Shareholders' Equity*.

(dollars in thousands)	Location of Gain or (Loss) Recognized in, or Reclassified from AOCI into, Income	Amount of Gain or (Loss) Recognized in, or Reclassified from AOCI into, Income *			Amount of Gain or (Loss) Recognized in OCI on Derivative (Effective Portion)		
		2018	2017	2016	2018	2017	2016
Cash Flow Hedges:							
Firm Commitments	Interest Income	$ (868)	$ (856)	$ (119)	$ –	$ –	$ –
Forward Contracts	Gains (Losses) on Other Transactions	$ 19	$ (115)	$ 34	$ 19	$ (115)	$ 34

**Represents total gain or loss for fair value hedges and effective portion for cash flow hedges.*

There were no derivative instruments not designated as hedging instruments at December 31, 2018, 2017 or 2016. The following table sets forth the amount of net gain (loss) on derivatives not designated as hedging instruments recognized in earnings. No gain (loss) was recognized in AOCI for these instruments for the periods presented. See Note 7, *Shareholders' Equity*.

(dollars in thousands)	Location of Gain or (Loss) Recognized in Income	Amount of Gain or (Loss) Recognized in Income *		
		2018	2017	2016
Fair Value Derivatives:				
Forward Contracts	Gains (Losses) on Other Transactions	$ 1,628	$ –	$ –

** Represents total gain or loss for fair value hedges and effective portion for cash flow hedges.*

Note 15 — Subsequent Events

The Bank evaluated subsequent events and determined that there were none requiring disclosure through March 13, 2019, which was the date the financial statements were issued.

Glossary of Certain Acronyms

ABO	Accumulated benefit obligation
ABS	Asset backed security
ACA	Agricultural Credit Association
ACB	Agricultural Credit Bank
AFS	Available-for-sale
ALCO	Asset/Liability Management Committee
ALM	Asset and liability management
AOCI	Accumulated Other Comprehensive Income
ARM	Adjustable rate mortgage
ASU	Accounting Standards Update
CEO	Chief Executive Officer
CFPB	Consumer Financial Protection Bureau
CFTC	Commodity Futures Trading Commission
CIPA	Contractual Interbank Performance Agreement
CMO	Collateralized Mortgage Obligation
EIN	Employee Identification Number
FAMC	Federal Agricultural Mortgage Corporation (Farmer Mac)
FASB	Financial Accounting Standards Board
FCA	Farm Credit Administration
FCB	Farm Credit Bank
FCBA	Farm Credit Benefits Alliance
FCSIC	Farm Credit System Insurance Corporation
FHA	Federal Housing Administration
FHLMC	Federal Home Loan Mortgage Corporation (Freddie Mac)
FIP	Financial improvement plan
FLCA	Federal Land Credit Association
FNMA	Federal National Mortgage Association (Fannie Mae)
FSA	Farm Service Agency
GAAP	Generally Accepted Accounting Principles
GCFI	Gross cash farm income
GFA	General Financing Agreement
GNMA	Government National Mortgage Association (Ginnie Mae)
GSE	Government-sponsored enterprise
HTM	Held-to-maturity
IASB	International Accounting Standards Board
IFRS	International Financial Reporting Standards
LIBOR	London Inter-Bank Offered Rate
LLC	Limited liability company
MAA	Market Access Agreement
MBS	Mortgage-backed security
MD&A	Management’s Discussion and Analysis
NII	Net interest income
NRSRO	Nationally Recognized Statistical Rating Organization
OAEM	Other Assets Especially Mentioned
OCI	Other Comprehensive Income
OFI	Other financing institution
OPO	Other property owned
OTTI	Other-than-temporary impairment
PBO	Projected benefit obligation
PCA	Production Credit Association
PFC	Plan Fiduciary Committee
PPA	Pension Protection Act
RAB	Rural America Bond
RBIC	Rural Business Investment Company
RHMS	Rural Housing Mortgage-Backed Securities
RP	Rehabilitation plan
SBA	Small Business Administration
SEC	Securities and Exchange Commission
SIIC	Successor-in-Interest Contract
TDR	Troubled debt restructuring
UBE	Unincorporated business entity
URE	Unallocated retained earnings
UREE	Unallocated retained earnings equivalents
USD	U.S. dollar
USDA	United States Department of Agriculture
YBS	Young, beginning, and small