

# INVESTING — for the — FUTURE

2018 ANNUAL REPORT



FARM CREDIT  
BANK OF TEXAS

# INVESTING *for the* FUTURE

**O**ur mission at Farm Credit Bank of Texas is to support agriculture and rural communities by providing access to the reliable, consistent credit they need to grow and thrive.

We do business the cooperative way. We provide funding and support services that member-owned lending institutions need to serve their local borrowers. We also absorb the cost of investing in tools and technology so our affiliated cooperatives are free to focus on what they do best.

The reward for the bank's hard work is more than just the strong financial results we experienced in 2018. It's the success of this generation and the next in rural America.

**On the cover:**

Four generations of the Rowden family, longtime AgTexas Farm Credit customers from Brownfield, Texas

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## TO OUR STOCKHOLDERS:

Farm Credit Bank of Texas entered 2018 on a strong financial footing, and later emerged from a challenging year with stable earnings and record assets.

To put this in perspective, loans and assets have doubled in the past dozen years of our 101-year history. The growth continued in 2018, even at a time when competition for loans remained high.



Jimmy Dodson

Larry Doyle

The challenge was in generating earnings on those assets in the most difficult interest rate environment in years. To adapt to changing conditions, we were flexible without exposing the bank to risk. We successfully offset much of the compression in spreads by growing our assets and repositioning our debt portfolio to take advantage of the market. In so doing, we kept earnings in line with our projections.

The beneficiaries of our strategy are the rural lending cooperatives that own the bank, as well as their borrower-owners. These are the farmers, ranchers, rural homeowners and agribusinesses in the five-state district we serve. On the following pages, you'll meet some of the people we support with dependable credit and services.

In keeping with our cooperative business model, we provide funding to our affiliated associations at no more than our own cost. The earnings we distributed in the form of patronage in December will enable associations to pass the value on to their borrowers.

In addition, associations receive other products and services at no cost, further enhancing their earnings. In 2018, we raised high-quality, third-party capital by issuing preferred stock, which will support growth for the portfolios that cover the cost of those services well into the future.

We also are investing in market-fresh lending systems for associations and a user-friendly customer portal for their borrowers. These tools will bring the financial industry's newest innovations to rural communities across our territory — home to a vibrant and diverse agriculture industry.

We look forward to our continued partnership with our affiliated cooperatives and the new opportunities to come.

A handwritten signature in black ink, appearing to read 'Jimmy Dodson'.

James F. "Jimmy" Dodson  
Chairman of the Board

A handwritten signature in black ink, appearing to read 'Larry Doyle'.

Larry R. Doyle  
Chief Executive Officer

## KEY ACCOMPLISHMENTS

### BANK ACHIEVES STRONG FINANCIAL RESULTS IN A CHALLENGING ENVIRONMENT.

New strategies for debt management and asset growth compensated for the flattening yield curve and competitive market, which were pressuring the net interest margin. Total assets increased 7.4 percent to \$24.5 billion, keeping earnings in line with projections.

### COOPERATIVE BUSINESS MODEL LOWERS ASSOCIATIONS' COST OF FUNDS.

We shared the bank's earnings with the lending cooperatives that own the bank by distributing \$68 million in patronage on direct note volume. When combined with the benefit of the bank's capital on loan pricing, this payment effectively reduced associations' cost of funds to the bank's own cost.

### PRODUCTS AND SUPPORT SERVICES HELP ASSOCIATIONS SERVE THEIR CUSTOMERS.

Several operational and technology initiatives are enhancing efficiency, risk management, regulatory compliance and customer service. In 2018, we launched an industry-leading consumer loan origination system and absorbed the cost of improving connectivity in associations' rural branch offices.

### PREFERRED STOCK SUPPORTS LONG-TERM GROWTH.

The bank issued \$100 million in non-cumulative, perpetual preferred stock, which was met with very strong demand. This high-quality, low-risk capital will support growth in the bank's portfolios that pays for the technology and other services we provide associations.

### BANK MAINTAINS STRONG CAPITAL AND LIQUIDITY.

Our solid capital position, well-diversified loans and investments, interest rate risk management and debt management provide stability and opportunities for growth. The bank ended the year with 241 days of liquidity coverage, double the regulatory minimum.



# FARM CREDIT BANK

## 2018 TOP FINANCIAL INDICATORS

ASSOCIATION AND OFI DIRECT NOTE GROWTH OF  
**\$239.0**  
 M I L L I O N

OR



**2.1%**

NET INCOME  
**\$190.5**  
 M I L L I O N

PATRONAGE AND PREFERRED STOCK DIVIDENDS  
**\$172.1**  
 M I L L I O N

which represents 90.3% of net income

CREDIT QUALITY  
**99.6%**  
 ACCEPTABLE OR SPECIAL MENTION

ASSET GROWTH  
**7.4%**

### CAPITAL LEVEL

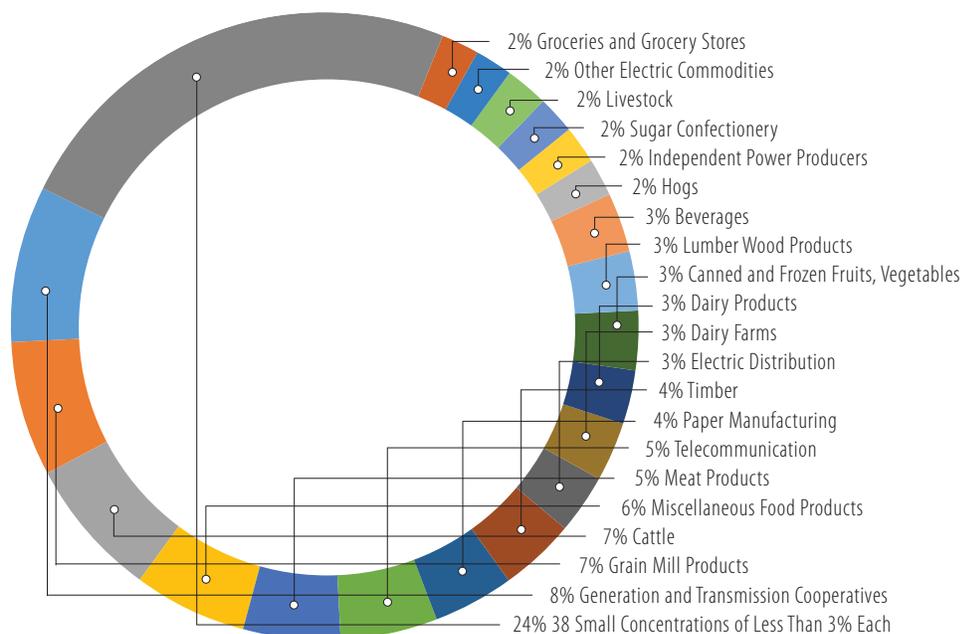
**\$1.8**

B I L L I O N

### Regulatory Capital & Liquidity Measures

	At Dec. 31, 2018	Regulatory Requirement
Common equity tier 1 ratio	9.92%	7.00%
Total capital ratio	16.42%	10.50%
Tier 1 leverage ratio	7.39%	5.00%
Liquidity	241 days	120 days

## DIVERSIFICATION OF CAPITAL MARKETS LOANS BY COMMODITY



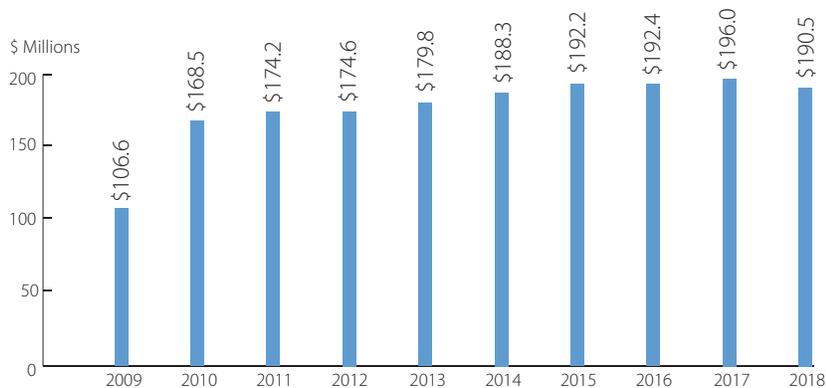
## FINANCIAL HIGHLIGHTS

For the Year (in thousands)	2018	2017	2016
Net interest income	<b>\$256,836</b>	\$ 251,321	\$ 238,321
(Provision) negative provision for credit losses	<b>(4,671)</b>	1,673	(563)
Noninterest expense, net	<b>(61,635)</b>	(57,008)	(45,352)
Net income	<b>\$190,530</b>	\$ 195,986	\$ 192,406
Rate of return on:			
Average assets	<b>0.81%</b>	0.89%	0.92%
Average shareholders' equity	<b>10.85%</b>	11.51%	11.67%
Cash patronage declared	<b>\$110,853</b>	\$ 97,982	\$ 96,449

### At Year End (in millions)

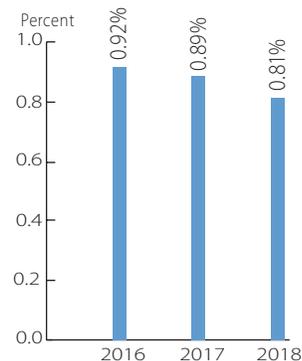
Total loans	<b>\$ 18,057</b>	\$ 17,085	\$ 15,909
Total assets	<b>24,529</b>	22,837	21,222
Total liabilities	<b>22,752</b>	21,169	19,600
Total shareholders' equity	<b>1,777</b>	1,668	1,622

## BANK NET INCOME



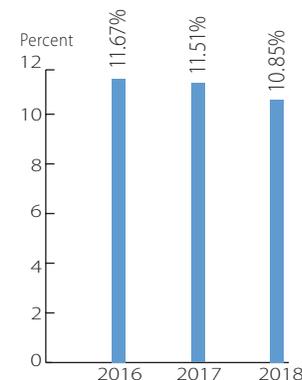
## RETURN ON AVERAGE ASSETS

### FOR THE YEAR



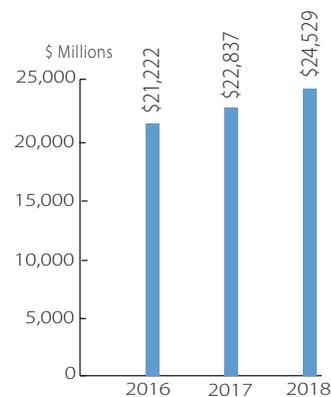
## RETURN ON AVERAGE EQUITY

### FOR THE YEAR



## TOTAL ASSETS OUTSTANDING

### AT YEAR END





# FARM CREDIT BANK OF TEXAS



From left to right are Brad C. Bean; Elizabeth G. "Betty" Flores; James F. "Jimmy" Dodson, chairman; Lester Little, vice chairman; Linda Floerke; M. Philip Guthrie; and Ralph W. "Buddy" Cortese.



From left to right are Stan Ray, chief administrative officer; Amie Pala, chief financial officer; John Sloan, chief credit officer; Larry Doyle, chief executive officer; Nanci Tucker, general counsel; Michael Elliott, chief information officer; and Nisha Rocap, chief audit executive.

## FARM CREDIT BANK OF TEXAS BOARD OF DIRECTORS

The bank provides funding and support services to our affiliated lending cooperatives in a five-state district, helping these local associations be successful so they can help agricultural producers and rural communities succeed.

Its board of directors establishes policies for the bank, provides strategic direction, oversees management and ensures that the bank operates in a safe and sound manner.

The board members have extensive business and leadership experience in a variety of backgrounds. Five of the directors are farmers or ranchers, elected by the local financing cooperatives that own the bank. The two board-appointed directors have backgrounds in banking, finance and business operations.

## JACK DAILEY JOINS BOARD



John L. "Jack" Dailey of Extension, La., was elected by bank stockholders to a three-year term on the board of directors, effective Jan. 1, 2019. He succeeds Brad Bean, whose term expired at the end of 2018.

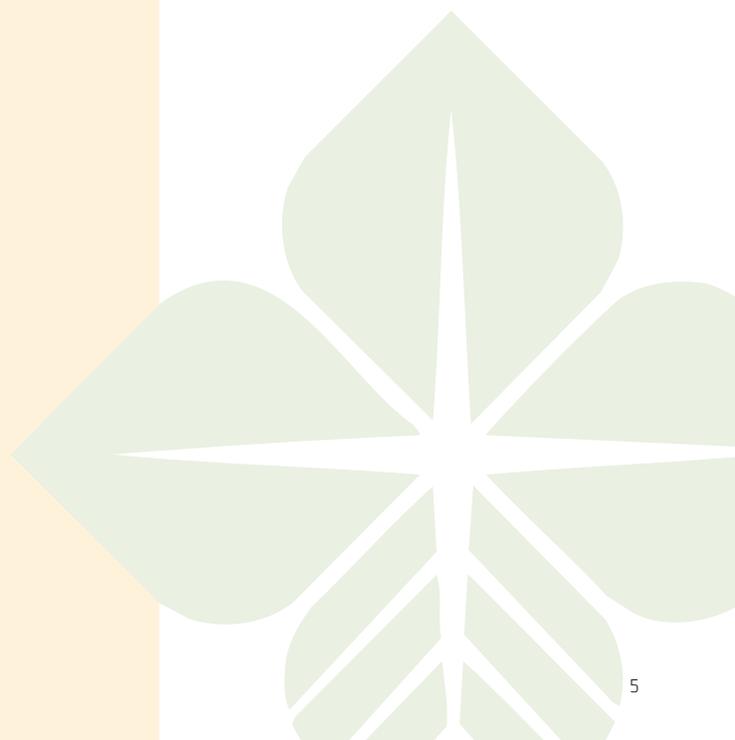
Dailey produces cotton, corn, soybeans and beef cattle and is a manager and serves as treasurer of a farmer-owned agricultural retail store. Prior to his election, he was vice chairman of the Louisiana Land Bank board. He chairs the Louisiana Boll Weevil Eradication Commission and serves on several farm organizations.

## SENIOR MANAGEMENT TEAM

The bank's leaders are guided by the experience they gained during their long tenures in the Farm Credit System and in commercial banking, finance, government, information technology, risk assurance and agriculture.

In addition to overseeing day-to-day operations, the senior management team sets the course for the bank's future success by working with the board of directors to establish business goals and strategies.

Through their vision, combined experience and conservative approach to risk, they ensure that the bank is a stable source of funding and an earnings engine for the district it serves. Their goal is to strengthen our affiliated lenders' ability to provide competitive credit and superior service for the rural marketplace.





# CUSTOMERS — are our — FUTURE

For more than a century, Farm Credit has helped farmers, ranchers, rural homeowners and agribusinesses achieve their goals and dreams.

With each generation, our customers' needs change as agriculture becomes more high-tech and capital-intensive. Whether borrowers are young beginners or seasoned operators, Farm Credit offers the agricultural financing expertise and reliable credit they need to be successful.

We're proud to provide funding and services that lending cooperatives in five states put to work for their local customers, who represent the future of agriculture and rural communities. On the following pages, we introduce some members of the district's co-op family.



## JON HEGEMAN

GREENWAY PLANTS | Anniston, Alabama

A decade ago, Jon Hegeman was a young, beginning farmer with no land and little capital. He now owns Greenway Plants, a thriving greenhouse business near Aniston, Ala., with nearly 30 acres of greenhouses and outdoor growing space. The business contracts with large wholesale greenhouse operations that supply big-box stores with accent plants, hanging plants, ground covers and chrysanthemums.

It took hard work to build such a successful business. It also took the mentoring and financial support of Alabama Farm Credit. The lending cooperative financed Hegeman's third greenhouse operation and his wife's horse farm. It also introduced him to Farm Credit Leasing for major equipment acquisitions.

Even before that, the staff offered him valuable financing tips and helped him write a business plan. Ultimately, it was the co-op's patronage program that won him over.

"I am loyal to the community bank that took the risk to help me get my start, but I still price loans out," Hegeman says. With Farm Credit's patronage, he explains, it is hard for other banks to compete on interest rates.

Jon Hegeman with his wife, Amy, and daughter, Ella

## RYAN JARAMILLO & BRANDON STUART

VALLEY SHREDDING | Las Cruces, New Mexico

Financing from Ag New Mexico has been critical to the success of Valley Shredding, a pecan waste handling business established in 2008 by young entrepreneurs Ryan Jaramillo and Brandon Stuart of Las Cruces, N.M.

“When we started out, we had trouble getting financing from a local bank,” Jaramillo says. “We heard that Ag New Mexico understands agriculture and farm equipment. They welcomed us and took great care of us. They work with our seasonal cash-flow cycle and adjust payment schedules that work for us.”

The pair now owns five pecan shredders, each costing about \$400,000 and financed by Ag New Mexico. The giant machines allow them to handle tree trimmings for pecan growers in three states who have operations ranging from one to 1,000 acres.

“We never would have grown this big without the help of Ag New Mexico,” Stuart says.



Brandon Stuart, left, and Ryan Jaramillo



Fermin and Rosy Cadena with their children, Jackie and Christian

## FERMIN & ROSY CADENA

Gonzales, Texas

When you are new to farming, it can be tough to secure financing. Fortunately for Fermin and Rosy Cadena, a friend referred them to Capital Farm Credit when they decided to purchase a broiler chicken operation in south-central Texas.

In 2016, the lending cooperative partnered with the Farm Service Agency on a guaranteed loan to retrofit the Cadenas’ four existing poultry houses. The project included two new roofs with insulation, two water storage tanks, a generator, computers, fans, cooling cells and brooders.

A longtime broiler service technician with Tyson Foods, Fermin is grateful to his lender for financing the facility upgrades that allow him to run an efficient poultry operation. He also appreciates one of the key benefits of Farm Credit membership.

“I love how Capital Farm Credit pays a patronage check every year,” Fermin says. “I reinvest it back into our loan, which reduces our interest rate.”

## DARRELL & CASSIE SINAGRA

Amite, Louisiana



Cassie and Darrell Sinagra and their daughter, Makenzie

While Darrell and Cassie Sinagra were making plans to construct a new house on their southeastern Louisiana dairy farm a decade ago, their commercial lender “dropped the ball” on their home loan. The couple’s building project proceeded, however, thanks to financing from Louisiana Land Bank, which offers extensive experience in rural home lending.

Pleased with the ease of doing business with the Land Bank, the Sinagras returned to the lending co-op for an equipment loan and a revolving line of credit for their 200-cow dairy operation.

For Darrell, who was not raised on a dairy farm but worked on dairies throughout high school, dairy farming is a passion.

“I always wanted to dairy and farm,” he says. “I love raising cows and growing crops. I feel blessed to just be able to have what we have, but it takes a lot of hard work to keep it this way.”

It also takes the support of a lender that’s committed to agriculture and rural America.

## MARSHALL BARTLETT

HOME PLACE PASTURES | Como, Mississippi



Marshall Bartlett

Five years ago, Marshall Bartlett, then 24, joined his family’s 147-year-old farming operation in the North Mississippi hill country, eager to launch a new business model — producing and selling pasture-raised pork, beef and lamb directly to consumers and restaurants. His Home Place Pastures meats quickly became popular with foodies and chefs from New Orleans to Nashville.

With success came growth opportunities. In 2018, financing from Mississippi Land Bank allowed Bartlett to expand his cattle herd, consolidate existing debt and improve his USDA-inspected on-farm processing facility.

“Working with Mississippi Land Bank was a breath of fresh air,” says Bartlett, who now has 16 full-time employees, more than 600 pigs and a retail outlet. “We needed a bank that would take the time to understand what we are doing. We are not a conventional row crop or cow-calf operation, and our vertically integrated business model was unfamiliar to most lenders. The MLB team came to our farm and allowed us to share our vision with them. They treated us like family and quickly helped dial in our financing needs.”



# The COOPERATIVE ADVANTAGE



## COOPERATING FOR A BETTER FUTURE

For more than a century, Farm Credit has been a loyal partner to the agriculture industry and the people who live and work in rural America. The institutions in this nationwide network are customer-owned cooperatives, the kind of lenders borrowers can count on to have their best interests at heart.

We take this cooperative philosophy a step further. As a funding bank and a federated cooperative — a co-op owned by the lending co-ops we serve — our purpose is to help our affiliated lenders be successful so they can help agricultural producers and rural communities to succeed.

We give our affiliated co-ops — or associations — a competitive edge in the marketplace by:

- Providing funding at or below our own cost
- Centralizing key functions and services at the bank, freeing associations to focus on their local customers
- Maintaining a large and diverse asset base, enabling us to manage risk and generate earnings from sources other than our owners
- Absorbing the cost of our services rather than billing associations

On the following pages, we explain how the benefits of our services, loan pricing and robust patronage flow to our associations and their borrowers.



## COLLABORATION ENHANCES OUR PRODUCTS & SERVICES

We provide services in technology, risk management, credit, compliance, finance, accounting, human resources, training and other areas. This creates greater efficiency and economies of scale than our affiliated associations could achieve on their own without a huge investment.

As agriculture grows more complex and capital-intensive, we are enhancing our services to meet the changing needs of the marketplace. We also are investing in a strong control environment both in the bank and for our associations.

Managing interest rate risk for our associations and absorbing the cost of many business functions contributed greatly to their bottom lines in 2018. They had strong earnings despite a rate environment that squeezed margins for the lending industry overall. Associations also purchased nearly a billion dollars in high-quality, low-risk participation loans from the bank, growing and diversifying their portfolios.

Most significantly, we and our associations are partnering in a major initiative to modernize and streamline their lending systems. The collaboration is resulting in new systems that are user-friendly yet powerful — a tremendous advantage for the lending co-ops and their customers.

Our initiative made great strides in 2018. By fall, associations received more new tools and were getting hands-on practice with upcoming systems, which will work together for a seamless lending experience.

## PATRONAGE & LOAN PRICING SAVE ASSOCIATIONS MONEY

As a Farm Credit System funding bank, we obtain funding through the sale of highly rated Farm Credit notes and bonds to investors.

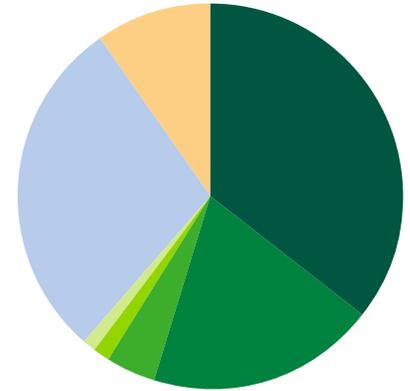
We lend the funds to our associations at our own cost, known as the marginal cost of funds, plus a wholesale spread. We then return the spread to associations two ways: First, we reduce their loan pricing by funding a portion of their direct notes with our own capital, and second, we distribute earnings to them through patronage. In the end, associations pay no more for funding than the bank pays.

To maintain our strong financial profile in a challenging environment for lending institutions, it was necessary to raise our spread on new direct note volume by 23 basis points in 2018 — our first increase in more than 25 years. We also offset the higher spread by distributing more in patronage to associations in December.

Altogether, we are returning approximately 90.3 percent of our 2018 net income — including \$117.4 million through five patronage programs and \$54.7 million in preferred stock dividends — to our affiliated lenders and other stockholders.

The remaining retained capital will lower loan pricing for our associations in the years to come.

What the Bank Did  
With its 2018 Earnings



Paid patronage on:

- associations' direct notes
- participation loans
- associations' stock in the bank
- Capitalized Participation Pool
- Non-Capitalized Participation Pool

.....  
■ Paid dividends on preferred stock

.....  
■ Retained earnings for associations' benefit



# Five-Year Summary of Selected Financial Data

## Farm Credit Bank of Texas

(dollars in thousands)	2018	2017	2016	2015	2014
<b>Balance Sheet Data</b>					
Cash, federal funds sold and overnight investments	\$ 410,609	\$ 303,071	\$ 218,380	\$ 567,503	\$ 450,447
Investment securities	5,714,638	5,144,985	4,831,375	4,445,105	4,086,391
Loans	18,056,686	17,085,177	15,909,403	14,771,006	13,259,837
Less allowance for loan losses	11,974	7,639	7,650	5,833	10,112
<b>Net loans</b>	<b>18,044,712</b>	<b>17,077,538</b>	<b>15,901,753</b>	<b>14,765,173</b>	<b>13,249,725</b>
Other property owned	-	-	-	438	10,310
Other assets	359,191	311,011	270,890	211,356	205,143
<b>Total assets</b>	<b>\$ 24,529,150</b>	<b>\$ 22,836,605</b>	<b>\$ 21,222,398</b>	<b>\$ 19,989,575</b>	<b>\$ 18,002,016</b>
Obligations with maturities of one year or less	\$ 8,721,295	\$ 7,890,433	\$ 9,082,248	\$ 7,995,821	\$ 6,474,695
Obligations with maturities greater than one year	14,030,922	13,278,288	10,517,898	10,440,176	10,048,100
<b>Total liabilities</b>	<b>22,752,217</b>	<b>21,168,721</b>	<b>19,600,146</b>	<b>18,435,997</b>	<b>16,522,795</b>
Preferred stock	700,000	600,000	600,000	600,000	600,000
Capital stock	316,463	301,239	284,038	255,823	233,468
Allocated retained earnings	45,685	39,144	33,171	27,203	22,508
Unallocated retained earnings	796,478	779,403	737,622	697,883	643,067
Accumulated other comprehensive loss	(81,693)	(51,902)	(32,579)	(27,331)	(19,822)
<b>Total shareholders' equity</b>	<b>1,776,933</b>	<b>1,667,884</b>	<b>1,622,252</b>	<b>1,553,578</b>	<b>1,479,221</b>
<b>Total liabilities and shareholders' equity</b>	<b>\$ 24,529,150</b>	<b>\$ 22,836,605</b>	<b>\$ 21,222,398</b>	<b>\$ 19,989,575</b>	<b>\$ 18,002,016</b>
<b>Statement of Income Data</b>					
Net interest income	\$ 256,836	\$ 251,321	\$ 238,321	\$ 232,468	\$ 226,659
(Provision) negative provision for credit losses	(4,671)	1,673	(563)	2,506	5,433
Noninterest expense, net	(61,635)	(57,008)	(45,352)	(42,735)	(43,832)
<b>Net income</b>	<b>\$ 190,530</b>	<b>\$ 195,986</b>	<b>\$ 192,406</b>	<b>\$ 192,239</b>	<b>\$ 188,260</b>
<b>Financial Ratios (unaudited)</b>					
Rate of return on:					
Average assets	0.81%	0.89%	0.92%	1.02%	1.12%
Average shareholders' equity	10.85	11.51	11.67	12.22	12.68
Net interest income to average earning assets	1.10	1.16	1.18	1.27	1.39
Net (recoveries) charge-offs to average loans	-	(0.01)	(0.01)	0.01	0.02
Total shareholders' equity to total assets	7.24	7.30	7.64	7.77	8.21
Debt to shareholders' equity (:1)	12.80	12.69	12.08	11.87	11.18
Allowance for loan losses to total loans	0.07	0.05	0.05	0.04	0.08
Common equity tier 1 ratio	9.92	10.52	n/a	n/a	n/a
Tier 1 capital ratio	16.29	16.59	n/a	n/a	n/a
Total capital ratio	16.42	16.68	n/a	n/a	n/a
Permanent capital ratio	16.31	16.60	17.40	17.74	18.33
Tier 1 leverage ratio	7.39	7.33	n/a	n/a	n/a
UREE leverage ratio	3.08	3.08	n/a	n/a	n/a
Total surplus ratio	n/a	n/a	14.98	15.48	15.86
Core surplus ratio	n/a	n/a	9.97	9.88	10.07
Net collateral ratio	n/a	n/a	107.35	107.70	108.00
<b>Net Income Distributions</b>					
Net income distributions declared and accrued					
Preferred stock cash dividends	\$ 54,727	\$ 50,250	\$ 50,250	\$ 50,250	\$ 50,250
Patronage distributions declared					
Cash	\$ 110,853	\$ 97,982	\$ 96,449	\$ 82,478	\$ 76,414
Allocated retained earnings	6,541	5,973	5,968	4,695	4,032

# Average Balances and Net Interest Earnings

Farm Credit Bank of Texas

(unaudited)  
December 31,

<i>(dollars in thousands)</i>	2018			2017			2016		
	Average Balance	Interest	Average Rate	Average Balance	Interest	Average Rate	Average Balance	Interest	Average Rate
<b>Assets</b>									
Investment securities and federal funds sold	\$ 5,603,001	\$127,070	2.27%	\$ 5,098,250	\$ 84,755	1.66%	\$ 4,782,499	\$ 69,353	1.45%
Loans	17,662,587	563,495	3.19	16,520,111	462,765	2.80	15,488,896	411,159	2.65
<b>Total interest-earning assets</b>	<u>23,265,588</u>	<u>690,565</u>	<b>2.97</b>	<u>21,618,361</u>	<u>547,520</u>	2.53	<u>20,271,395</u>	<u>480,512</u>	2.37
Cash	23,622			131,080			325,672		
Accrued interest receivable	57,340			47,703			42,973		
Allowance for loan losses	(10,973)			(8,112)			(6,922)		
Other noninterest-earning assets	282,889			243,025			198,936		
<b>Total average assets</b>	<u>\$23,618,466</u>			<u>\$22,032,057</u>			<u>\$20,832,054</u>		
<b>Liabilities and Shareholders' Equity</b>									
Bonds, net	\$19,674,296	\$398,257	2.02%	\$17,856,961	\$274,884	1.54%	\$16,321,944	\$228,466	1.40%
Discount notes, net	1,972,411	35,472	1.80	2,289,288	21,315	0.93	2,702,217	13,725	0.51
<b>Total interest-bearing liabilities</b>	<u>21,646,707</u>	<u>433,729</u>	<b>2.00</b>	<u>20,146,249</u>	<u>296,199</u>	1.47	<u>19,024,161</u>	<u>242,191</u>	1.27
Noninterest-bearing liabilities	216,209			183,024			158,764		
<b>Total liabilities</b>	<u>21,862,916</u>			<u>20,329,273</u>			<u>19,182,925</u>		
Shareholders' equity and retained earnings	1,755,550			1,702,784			1,649,129		
<b>Total average liabilities and shareholders' equity</b>	<u>\$23,618,466</u>			<u>\$22,032,057</u>			<u>\$20,832,054</u>		
Net interest rate spread		<u>\$256,836</u>	<b>0.97%</b>		<u>\$251,321</u>	1.06%		<u>\$238,321</u>	1.10%
Net interest margin			<b>1.10%</b>			1.16%			1.18%



# Management's Discussion & Analysis

(DOLLARS IN THOUSANDS, EXCEPT AS OTHERWISE NOTED)

The following commentary is a discussion and analysis of the financial position and the results of operations of the Farm Credit Bank of Texas (the bank or FCBT) for the years ended December 31, 2018, 2017 and 2016. The commentary should be read in conjunction with the accompanying financial statements, notes to the financial statements (notes) and additional sections of this annual report. The accompanying financial statements were prepared under the oversight of the bank's audit committee.

The bank, together with its affiliated associations (the district), are part of the federally chartered Farm Credit System (System). The district serves Texas, Alabama, Mississippi, Louisiana and most of New Mexico. The bank provides funding to the district associations, which, in turn, provide credit to their borrower-shareholders. As of December 31, 2018, the bank served one Federal Land Credit Association (FLCA), 13 Agricultural Credit Associations (ACAs) and certain Other Financing Institutions (OFIs) which are not part of the System. The FLCA and ACAs are collectively referred to as associations. See Note 1, "Organization and Operations," to the accompanying financial statements for an expanded description of the structure and operations of the bank.

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 "Texas District." The bank separately publishes certain unaudited combined financial information of the Texas District, including a condensed statement of condition and statement of income, which can be found on the bank's website at [www.farmcreditbank.com](http://www.farmcreditbank.com). Such information is not incorporated by reference to, and should not be considered part of, this annual report.

## Forward-Looking Information

This annual report contains forward-looking statements. These statements are not guarantees of future performance and involve certain risks, uncertainties and assumptions that are difficult to predict. Words such as "anticipates," "believes," "could," "estimates," "may," "should," "will," or other variations of these terms are intended to identify the forward-looking statements. These statements are based on assumptions and analyses made in light of experience and other historical trends, current conditions and expected future developments. However, actual results and developments may differ materially from our expectations and predictions due to a number of risks and uncertainties, many of which are beyond our control. These risks and uncertainties include, but are not limited to:

- political, legal, regulatory, and economic conditions and developments in the United States and abroad;
- economic fluctuations in the agricultural, rural utility, international and farm-related business sectors;
- weather-related, disease and other adverse climatic or biological conditions that periodically occur that impact agricultural productivity and income;

- changes in United States government support of the agricultural industry and the System as a government-sponsored enterprise, as well as investor and rating agency reactions to events involving the U.S. government and government-sponsored enterprises; and
- actions taken by the Federal Reserve System in implementing monetary policy.

## Critical Accounting Policies

The financial statements are reported in conformity with accounting principles generally accepted in the United States of America. Our significant accounting policies are critical to the understanding of our results of operations and financial position because some accounting policies require us to make complex or subjective judgments and estimates that may affect the value of certain assets or liabilities. We consider these policies critical because management has to make judgments about matters that are inherently uncertain. For a complete discussion of significant accounting policies, see Note 2, "Summary of Significant Accounting Policies," to the accompanying financial statements. The following is a summary of certain critical policies.

- *Reserves for credit losses* — The bank records reserves for credit losses, consisting of an allowance for loan losses, reported as a reduction of loans on the bank's balance sheet, and a reserve for losses on unfunded commitments, including letters of credit and unused loan commitments, which is reported as a liability on the bank's balance sheet. These reserves are management's best estimate of the amount of probable losses existing in and inherent in our loan portfolio. The allowance for loan losses and reserves for credit losses are increased through provisions for credit losses and loan recoveries and are decreased through loan loss reversals and loan charge-offs. The allowance for loan losses is determined based on a periodic evaluation of the loan portfolio, which identifies loans that may be impaired. Each of these individual loans is 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. If the present value of expected future cash flows (or, alternatively, the fair value of the collateral) is less than the recorded investment in the loan (including accrued interest, net deferred loan fees or costs, and unamortized premium or discount), an impairment is recognized by making an addition to the allowance for loan losses with a corresponding charge to the provision for credit losses or by similarly adjusting an existing valuation allowance.
- *Valuation methodologies* — Management applies various valuation methodologies to assets and liabilities that often involve a significant degree of judgment, particularly when liquid markets do not exist for the particular items being valued. Quoted market prices are used when estimating fair values for certain assets for which an observable liquid market exists, such as most investment securities.

Third-party valuation services are utilized by management to obtain fair values for the majority of the bank's investments. Management utilizes significant estimates and assumptions to value items for which an observable liquid market does not exist. Examples of these items include impaired loans, other postretirement benefit obligations, and certain derivative 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 results, which could have material positive or negative effects on the bank's results of operations.

- *Pensions and retirement plans* — The bank and its related associations participate in the district's defined benefit retirement plan (DB plan). The plan is noncontributory, and benefits are based on salary and years of service. In addition, the bank and its related associations also participate in defined contribution retirement savings plans.

The structure of the district's single-employer DB plan is characterized as multiemployer for participating employers' accounting purposes, since neither the assets, liabilities nor cost of any plan is segregated or separately accounted for by participating employers (bank and associations). No portion of any surplus assets is available to any participating employer. Participating employers are jointly and severally liable for the plan obligations. Upon withdrawal or termination of their participation in the plan, a participating employer must pay all associated costs of its withdrawal from the plan, including its unfunded liability (the difference between replacement annuities and the withdrawing employer's share of allocated plan assets). As a result, participating employers of the plan only recognize as cost the required contributions for the period and a liability for any unpaid contributions required for the period of their financial statements. Plan obligations, assets and the components of annual benefit expenses are recorded and reported upon combination only. The bank records current contributions to the DB plan as an expense in the current year.

The liability and expense for other postemployment benefits is determined actuarially based on certain assumptions, including discount rate and mortality assumptions. The discount rate is used to determine the present value of our future benefit obligations. We selected the discount rate by reference to the Aon AA Only Above-Median Yield Curve, actuarial analyses and industry norms. The Aon yield curves are determined based on actual corporate bond yields for bonds rated AA as of the measurement date. The discount rate at December 31, 2018, was 4.75 percent, compared to 4.00 percent at December 31, 2017 and 4.60 percent at December 31, 2016.

## OVERVIEW

### General

The bank's loan portfolio totaled \$18.06 billion at December 31, 2018, a 5.69 percent increase from the prior year. The increase in the bank's loan portfolio was mainly due to an increase in the bank's direct loans to associations and an increase in the bank's capital markets loan portfolio. The bank's net income for 2018 was \$190.5 million, a decrease of \$5.5 million compared to 2017. The decrease

in net income was the result of a \$6.3 million increase in the provision for credit losses and a \$7.0 million increase in non-interest expenses, offset by a \$5.5 million increase in net interest income and a \$2.3 million increase in noninterest income. The increase in net interest income was the result of a \$1.65 billion increase in average earning assets, net of a reduction in the bank's net interest rate spread. The bank's net interest rate spread declined by 9 basis points due to an increase in the cost of debt of 53 basis points, offset by an increase in interest-earning assets of 44 basis points.

While loan growth remains strong, the yield curve and competitive market pricing puts pressure on the net interest margin. The bank's net interest margin was 1.10 percent for 2018, as compared with 1.16 percent for 2017. The net interest margin was negatively impacted by a 9-basis-point decrease in the net interest rate spread to 0.97 percent for 2018, as compared with 1.06 percent for 2017, and was positively impacted by a 3-basis-point increase in income earned on earning assets funded by non-interest bearing sources (principally capital).

### Funding

During 2018, the System continued to have reliable access to the debt capital markets to support its mission of providing credit to farmers, ranchers and other eligible borrowers. Investor demand for Systemwide debt securities has remained favorable across all products. The bank has continued to have reliable access to funding at competitive rates and terms necessary to support our lending and business operations. Future ratings action affecting the U.S. government and related entities (including the System) may affect our borrowing cost and/or limit our access to the debt capital markets, reducing our flexibility to issue debt across the full spectrum of the yield curve.

### Conditions in the Texas District

The district economy performed well during 2018, and employment growth was strong across the five-state territory. According to the U.S. Bureau of Labor Statistics, the Texas economy has added more than 300 thousand jobs year over year as of November 2018, the most of any state in the country. This job growth has been broad, with virtually all segments of the Texas economy reporting gains in employment year over year. The U.S. Energy Information Administration reports that West Texas Intermediate oil prices averaged about \$65 per barrel in 2018 and estimates that they will average about \$54 per barrel in 2019. Lower oil prices could reduce the pace of economic growth in Texas during 2019, but it is still expected to be positive. Positive economic growth is also likely to continue in Alabama, Mississippi, Louisiana and New Mexico. In November 2018, the unemployment rates in the five district states ranged from a low of 3.7 percent to a high of 5.0 percent.

As of the end of 2018, the U.S. remains engaged in a trade conflict with China, the second-largest economy in the world. The outcome of the trade war has implications for several aspects of the U.S. and global economies, including agriculture. U.S. and Chinese officials are seeking to negotiate a resolution of the trade war by the end of the first quarter of 2019. The U.S. Department of Agriculture is using its discretionary authority under the Commodity Credit Corporation Charter Act to provide approximately \$12 billion of

aid to the agricultural sector to compensate for lost revenue due to trade conflicts. Soybean farmers are expected to receive over \$7 billion of this aid, but producers of many other commodities, such as cotton, milk and hogs, will also receive support.

In December, the 2018 Farm Bill, officially known as the Agriculture Improvement Act of 2018, was passed by the U.S. Congress and signed into law. Among other noteworthy provisions related to agriculture, the law reauthorizes federal crop insurance and commodity programs through 2023, expands crop insurance to additional commodities, improves protection for dairy farmers and legalizes industrial hemp production. Importantly, the passage of the 2018 Farm Bill provides some clarity to U.S. farmers as they begin the 2019 production season.

The U.S. Department of Agriculture estimates that federally inspected production of red meat and poultry eclipsed 100 billion pounds in 2018 for the first time in U.S. history. Additional supply has pressured prices for most protein products, but strong domestic consumption and export demand have generally been sufficient to support stable revenues for cattle producers. Efficient producers at all levels of the cattle supply chain, including ranchers, feedlot operators and processors, operated at or above breakeven during 2018. Chicken prices were negatively impacted in the second half of 2018 by several factors, including elevated supplies of competing products and seasonal trends. This led to historically low profitability for many poultry producers; however, based on current market expectations, some improvement should be observed in 2019.

Generally, dairy production has been falling in coastal areas, such as California, and rising in the central U.S., as dairy farmers are seeking access to low-cost feed sources and favorable regulatory environments. The amount of milk produced in the district increased by more than 4 percent in 2018, well above the estimated growth rate of about 1 percent observed nationally. Falling milk prices and relatively high feed and labor costs contributed to a challenging environment for U.S. dairy producers in 2018. The U.S. Department of Agriculture expects milk prices to improve in 2019, but dairy farmers' margins are likely to remain relatively low in the near-term.

Above-average precipitation, coupled with seasonally cooler temperatures, led to a significant reduction in the prevalence of drought across the district during the fourth quarter of 2018. At the end of the year, New Mexico was the only state in the district with sizable land area being impacted by dry conditions. While many areas benefited from precipitation, untimely rains made it difficult for farmers in some regions to harvest their field crops in a timely manner. This led to isolated losses for producers of certain commodities, such as cotton. Nonetheless, with adequate moisture in most areas, farmers in the district are well-positioned for the 2019 production season.

U.S. corn and soybean farmers harvested another bumper crop in 2018. Despite strong production, however, the U.S. Department of Agriculture expects domestic stocks of corn to fall year over year through mid-2019. Meanwhile, soybean prices have been under pressure due to several factors, including the disruption of normal export patterns. The relationship between corn and soybean prices

in early 2019 will impact planting decisions, and, therefore, will be critical to the outlook for both commodities.

Texas's 2018 cotton crop was negatively affected by poor weather conditions early in the growing season and at harvest time. The U.S. Department of Agriculture estimates that Texas cotton farmers only harvested about 60 percent of all acreage planted in the crop statewide; the remainder of the crop was either inaccessible or uneconomical to harvest. Farmers who were able to harvest their cotton generally sold it at prices that were favorable relative to the previous season. Others look to insurance programs to provide financial support and offset losses. Farmers in the district utilize risk management tools, such as federally-sponsored crop insurance programs and forward, futures and options contracts, to mitigate risk and enhance margins.

The impacts of the trade wars, along with the partial U.S. government shutdown in December and January, on the district economy and agricultural producers in the five-state territory are still being evaluated.

The district portfolio continues to be supported by strong credit quality, high levels of capital, low advance rates and diversification.

## RESULTS OF OPERATIONS

### Net Income

The bank's net income of \$190.5 million for the year ended December 31, 2018, reflects a decrease of 2.78 percent over 2017, while 2017 net income of \$196.0 million increased by 1.90 percent from 2016. The return on average assets was 0.81 percent for the year ended December 31, 2018, down from 0.89 percent reported for the year ended December 31, 2017. The return on average assets was 0.92 percent for the year ended December 31, 2016.

Changes in the major components of net income for the referenced periods are outlined in the table below and in the discussion following:

	Year Ended December 31,	
	2018 vs. 2017	2017 vs. 2016
Net income (prior period)	\$ 195,986	\$ 192,406
Increase due to:		
Increase in interest income	143,045	67,008
Increase in interest expense	(137,530)	(54,008)
Increase in net interest income	5,515	13,000
(Increase) decrease in provision for credit losses	(6,344)	2,236
Increase (decrease) in noninterest income	2,346	(5,215)
Increase in noninterest expense	(6,973)	(6,441)
Total change in net income	(5,456)	3,580
Net income	\$ 190,530	\$ 195,986

Discussion of the changes in components of net income is included in the following narrative.

## Interest Income

Total interest income for the year ended December 31, 2018, was \$690.6 million, an increase of \$143.0 million, or 26.13 percent, compared to 2017. Total interest income for the year ended December 31, 2017, was \$547.5 million, an increase of \$67.0 million, or 14.0 percent, compared to 2016.

The increase for 2018 was due primarily to a \$1.65 billion increase in average earning assets and a 44-basis-point increase in the average yield. The increase for 2017 was due primarily to a \$1.35 billion increase in average earning assets and a 16-basis-point increase in the average yield.

The following table illustrates the impact that volume and yield changes had on interest income over these periods:

	Year Ended December 31,	
	2018 vs. 2017 <sup>(1)</sup>	2017 vs. 2016 <sup>(1)</sup>
Increase in average earning assets	\$ 1,647,227	\$ 1,346,966
Average yield (prior year)	2.53%	2.37%
Interest income variance attributed to change in volume	41,718	31,928
Average earning assets (current year)	23,265,588	21,618,361
Increase in average yield	0.44%	0.16%
Interest income variance attributed to change in yield	101,327	35,080
Net change in interest income	\$ 143,045	\$ 67,008

## Interest Expense

Total interest expense for the year ended December 31, 2018, was \$433.7 million, an increase of \$137.5 million, or 46.43 percent, compared to the same period of 2017. Total interest expense for the year ended December 31, 2017, was \$296.2 million, an increase of \$54.0 million, or 22.30 percent, compared to the same period of 2016. The increase in 2018 was due primarily to the effects of a 53-basis-point increase in the average cost of debt and a \$1.50 billion increase in average interest-bearing liabilities. The increase for 2017 was due primarily to the effects of a 20-basis-point increase in the average cost of debt and a \$1.12 billion increase in average interest-bearing liabilities.

During 2018, 2017 and 2016, the bank was able to reduce its interest expense by calling and replacing debt totaling \$268.0 million, \$1.03 billion and \$7.92 billion, respectively.

The following table illustrates the impact that volume and rate changes had on interest expense over these periods:

	Year Ended December 31,	
	2018 vs. 2017 <sup>(1)</sup>	2017 vs. 2016 <sup>(1)</sup>
Increase in average interest-bearing liabilities	\$ 1,500,458	\$ 1,122,088
Average rate (prior year)	1.47%	1.27%
Interest expense variance attributed to change in volume	22,060	14,286
Average interest-bearing liabilities (current year)	21,646,707	20,146,249
Increase in average rate	0.53%	0.20%
Interest expense variance attributed to change in rate	115,470	39,722
Net change in interest expense	\$ 137,530	\$ 54,008

## Net Interest Income

Net interest income, the excess of interest income over interest expense, increased by \$5.5 million from 2017 to 2018, and increased by \$13.0 million from 2016 to 2017. The increase in 2018 was due to the effects of a \$1.65 billion increase in average interest-earning assets, partially offset by a 9-basis-point decrease in the interest rate spread, which is the difference between the average rate received on interest-earning assets and the average rate paid on interest-bearing debt. The bank's increase in average earning assets included growth in direct notes to district associations, the bank's capital markets loan portfolio and the investment portfolio.

Net interest income in 2017 was \$13.0 million greater than 2016.

The increase in 2017 was due to the effects of a \$1.35 billion increase in average interest-earning assets, partially offset by a 4-basis-point decrease in the interest rate spread.

<sup>(1)</sup> The change in interest income or expense not solely due to changes in volume or rate has been allocated in proportion to the absolute dollar amount of the change in volume and rate.

## ANALYSIS OF NET INTEREST INCOME

	2018		2017		2016	
	Average Balance	Interest	Average Balance	Interest	Average Balance	Interest
Loans	\$ 17,662,587	\$ 563,495	\$ 16,520,111	\$ 462,765	\$ 15,488,896	\$ 411,159
Investments	5,603,001	127,070	5,098,250	84,755	4,782,499	69,353
Total earning assets	23,265,588	690,565	21,618,361	547,520	20,271,395	480,512
Interest-bearing liabilities	21,646,707	433,729	20,146,249	296,199	19,024,161	242,191
Impact of capital	\$ 1,618,881		\$ 1,472,112		\$ 1,247,234	
<b>Net Interest Income</b>		<b>\$ 256,836</b>		<b>\$ 251,321</b>		<b>\$ 238,321</b>
		<b>Average Yield</b>		<b>Average Yield</b>		<b>Average Yield</b>
Yield on loans		3.19%		2.80%		2.65%
Yield on investments		2.27%		1.66%		1.45%
Yield on earning assets		2.97%		2.53%		2.37%
Cost of interest-bearing liabilities		2.00%		1.47%		1.27%
Interest rate spread		0.97%		1.06%		1.10%
Impact of capital		0.13%		0.10%		0.08%
Net interest income/average earning assets		1.10%		1.16%		1.18%

### Provision for Credit Losses

The bank's provision for credit losses for 2018 totaled \$4.7 million, an increase of \$6.3 million from the \$1.7 million negative provision recorded for 2017. The provision recognized in 2018 included required allowances related to loans individually evaluated for impairment of \$7.4 million, offset by decreases in general reserves of \$2.6 million.

The bank's negative provision for credit losses for 2017 totaled \$1.7 million, a decrease of \$2.2 million from the \$563 provision recorded for 2016. The negative provision recognized in 2017 included recoveries of \$1.4 million and a decrease in general reserves.

The \$563 provision for credit losses in 2016 included a \$1.8 million increase in the general allowance for loan losses due to downgrades on two energy loans and a \$304 increase in general reserves on unfunded commitments and letters of credit (LOC), offset by recoveries of \$1.6 million.

### Noninterest Income

Noninterest income for the year ended December 31, 2018, was \$47.6 million, an increase of \$2.3 million, or 5.19 percent, compared to 2017. The increase was primarily due to an \$8.4 million increase in the refund from the Farm Credit System Insurance Corporation, and an increase of \$3.6 million in other income related to gains on the extinguishment of debt, offset by a \$1.3 million decrease in prepayment penalty fees, a \$3.7 million decrease in gain on sale of loans, a \$1.3 million decrease in patronage income, and a \$3.0 million decrease in Rural Business Investment Companies (RBICs) income.

Noninterest income for the year ended December 31, 2017, was \$45.2 million, a decrease of \$5.2 million, or 10.30 percent, compared to 2016. The decrease was primarily due to a \$2.7 million decrease in prepayment penalty fees, a \$1.2 million decrease in gain on sale of loans, a \$1.1 million decrease in patronage income, and a \$466 decrease in services billed to associations, offset by a \$544 increase in Rural Business Investment Companies (RBICs) income.

### Noninterest Expenses

Noninterest expenses totaled \$109.2 million for 2018, an increase of \$7.0 million, or 6.82 percent, from 2017. This increase was primarily due to a \$5.3 million increase in professional and contract services, a \$2.8 million increase in salaries and benefits, and a \$2.1 million increase in occupancy and equipment expenses, offset primarily by a \$4.4 million decrease in Farm Credit System Insurance Corporation (FCSIC) premiums.

Professional and contract services increased primarily due to an increase in compliance costs and resources assigned to the bank's technology initiatives. FCSIC premiums decreased due to a rate decrease on outstanding debt from 15 basis points in 2017 to 9 basis points in 2018.

Noninterest expenses totaled \$102.2 million for 2017, an increase of \$6.4 million, or 6.70 percent, from 2016. This increase was primarily due to a \$4.7 million increase in professional and contract services and a \$2.3 million increase in salaries and benefits, offset primarily by a \$947 decrease in Farm Credit System Insurance Corporation (FCSIC) premiums.

Professional and contract services increased primarily due to an increase in consulting and legal fees. The increase in salaries and benefits included a \$2.4 million increase in compensation. FCSIC premiums decreased due to a rate decrease on outstanding debt from 18 basis points in 2016 to 15 basis points in 2017.

Noninterest expenses totaled \$95.8 million for 2016, an increase of \$12.4 million, or 14.90 percent, from 2015. This increase was primarily due to a \$3.7 million increase in Farm Credit System Insurance Corporation (FCSIC) premiums, a \$3.5 million decrease in gains on OPO, a \$1.7 million increase in occupancy and equipment, a \$1.5 million increase in salaries and benefits, and a \$1.5 million increase in professional and contract services.

Operating expense (salaries and employee benefits, occupancy and equipment, FCSIC premiums, and other operating expenses) statistics are set forth below for each of the three years ended December 31:

	2018	2017	2016
Excess of net interest income over operating expense	<b>\$ 147,651</b>	\$ 149,109	\$ 142,989
Operating expense as a percentage of net interest income	<b>42.5%</b>	40.7%	40.0%
Operating expense as a percentage of net interest income and noninterest income	<b>35.9</b>	34.5	33.0
Operating expense as a percentage of average loans	<b>0.62</b>	0.62	0.62
Operating expense as a percentage of average earning assets	<b>0.47</b>	0.47	0.47

## CORPORATE RISK PROFILE

### Overview

The bank is in the business of funding and participating in agricultural and other loans which requires us to take certain risks in exchange for compensation for the risks undertaken. Management of risks inherent in our business is essential for our current and long-term financial performance. Our goal is to mitigate risk, where appropriate, and to properly and effectively identify, measure, price, monitor and report risks in our business activities.

The major types of risk to which we have exposure are:

- structural risk — risk inherent in our business and related to our structure (an interdependent network of 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 our operating results and financial condition;
- liquidity risk — risk of loss arising from the inability to meet obligations when they come due without incurring unacceptable losses;
- operational risk — risk of loss resulting from inadequate or failed internal processes or systems, errors by employees 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 System entities, including the impact of investors' perceptions about agriculture, the reliability of district or System financial information, or the overt actions of any district or System institution; and
- political risk — risk of loss of support for the System and agriculture by the federal and state governments.

### Structural Risk Management

Structural risk results from the fact that the bank, along with its related associations, is part of the Farm Credit System (System), which is composed of banks and associations that are cooperatively owned, directly or indirectly, by their borrowers. While System institutions are financially and operationally interdependent, this structure at times requires action by consensus or contractual agreement. Further, there is structural risk in that only the banks are jointly and severally liable for the payments of Systemwide debt securities.

Although capital at the association level reduces a bank's credit exposure with respect to its direct loans to its affiliated associations, this 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 — 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 (CIPA score) is calculated that measures the financial condition and performance of each district using various ratios that take into account the district's and bank's capital, asset quality, earnings, interest-rate risk and liquidity. The CIPA score is then compared against the agreed-upon standard of financial condition and performance that each district must achieve and maintain. The measurement standard established under the CIPA is intended to provide an early-warning mechanism to assist in monitoring the financial condition of each district. The performance standard under the CIPA is based on the average CIPA score over a four-quarter period.

The MAA is designed to provide for the timely identification and resolution of individual bank financial issues and establishes performance criteria and procedures for the banks that provide operational oversight and control over a bank's access to System funding.

As required by the MAA, the banks and the Funding Corporation undertake a periodic formal review of the MAA to consider whether any amendments are appropriate. In connection with the most recent review, the banks and the Funding Corporation agreed to enter into the Third Amended and Restated MAA, which was effective on January 1, 2017.

Periodically, the CIPA model and the MAA performance criteria are reviewed to take into consideration current performance standards in the financial services industry or regulatory changes. As a result of the changes to regulatory capital ratio requirements that became effective January 1, 2017, the performance criteria set forth in the MAA are as follows:

- the defined CIPA scores,
- the tier 1 leverage ratio of a bank, and
- the total capital ratio of a bank.

The bank's tier 1 leverage ratio is tier 1 capital (primarily unallocated retained earnings, the bank's common stock and preferred stock less certain regulatory required deductions) divided by non-risk adjusted assets. The bank's total capital ratio is the sum of the bank's common equity tier 1 capital, additional tier 1 capital and tier 2 capital elements, minus regulatory deductions and adjustments, divided by risk-adjusted assets.

If a bank fails to meet the above performance criteria, it will be placed into one of three categories. Each category gives the other System banks progressively more control over a bank that has declining financial performance under the MAA performance criteria. A "Category I" bank is subject to additional monitoring and reporting requirements; a "Category II" bank's ability to participate in issuances of Systemwide debt securities may be limited to refinancing maturing debt obligations; and a "Category III" bank may not be

permitted to participate in issuances of Systemwide debt securities. A bank exits these categories by returning to compliance with the agreed-upon performance criteria.

The criteria for the tier 1 leverage ratio and the total capital ratio are:

	<u>Tier 1 Leverage Ratio</u>	<u>Total Capital Ratio</u>
Category I	<5.0%	<10.5%
Category II	<4.0%	<8.0%
Category III	<3.0%	<7.0%

During the year ended December 31, 2018, all banks met the agreed-upon standards for the tier 1 leverage ratio and total capital ratios required by the MAA that became effective January 1, 2017. As of December 31, 2018, all banks met the agreed-upon standard of financial condition and performance required by the CIPA. During the three years ended December 31, 2018, the banks met the defined CIPA score required by the MAA.

## Credit Risk Management

Credit risk arises from the potential inability of an obligor to meet its repayment obligation and exists in our outstanding loans, letters of credit, unfunded loan commitments, investment portfolio and derivative counterparty credit exposures. We manage credit risk associated with our lending activities through an assessment of the credit risk profile of an individual borrower. We set our own underwriting standards and lending policies, approved by the board of directors, that provide direction to loan officers. Underwriting standards include, among other things, an evaluation of:

- character — borrower integrity and credit history;
- capacity — repayment capacity of the borrower based on cash flows from operations or other sources of income;
- collateral — protects the lender in the event of default and represents a potential secondary source of loan repayment;
- capital — ability of the operation to survive unanticipated risks; and
- conditions — requirements that govern intended use of loan funds.

The retail credit risk management process begins with an analysis of the borrower's credit history, repayment capacity and financial position. Repayment capacity focuses on the borrower's ability to repay the loan based on cash flows from operations or other sources of income, including non-farm income. Real estate loans with terms greater than 10 years must be secured by first liens on the real estate (collateral). As required by Farm Credit Administration regulations, each institution that makes loans on a secured basis must have collateral evaluation policies and procedures. Real estate loans with terms greater than 10 years may be made only in amounts up to 85 percent of the original appraised value of the property taken as security or up to 97 percent of the appraised value if guaranteed by a state, federal or other governmental agency. The actual loan to appraised value when loans are made is generally lower than the statutory maximum percentage. Appraisals are required for loans of more than \$250,000. This credit risk-rating process incorporates objective and subjective criteria to identify inherent strengths and weaknesses and risks in a particular relationship.

This credit risk-rating process uses a two-dimensional loan rating structure, incorporating a 14-point risk-rating scale to identify and track the probability of borrower default and a separate 4-point scale addressing loss given default. The 14-point risk-rating scale provides for nine "acceptable" categories, one "other assets especially mentioned" (OAEM) category, two "substandard" categories, one "doubtful" category and one "loss" category. The loss given default scale establishes ranges of anticipated economic loss if the loan defaults. The calculation of economic loss includes principal and interest as well as collections costs, legal fees and staff costs.

By buying and selling loans or interests in loans to or from other institutions within the System or outside the System, we limit our exposure to either a borrower or commodity concentration. This also allows us to manage growth and capital, and to improve geographic diversification.

Portfolio credit risk is also evaluated with the goal of managing the concentration of credit risk. Concentration risk is reviewed and measured by industry, commodity, geography and customer limits.

## Loans

The bank's loan portfolio consists of direct notes receivable from district associations and qualifying other financing institutions (OFIs), the bank's capital markets loan portfolio and other bank-owned loans. See Note 1, "Organization and Operations," Note 2, "Summary of Significant Accounting Policies" and Note 4, "Loans and Reserves for Credit Losses," to the accompanying financial statements for further discussions.

The bank's capital markets loan portfolio predominantly includes participations, syndications and purchased whole loans, along with other financing structures within our lending authorities. The bank also refers to the capital markets portfolio as participations purchased. In addition to purchasing loans from our district associations, which may exceed their hold limits, the bank seeks 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 the bank or subparticipated to the associations or to other System entities.

Gross loan volume of \$18.06 billion at December 31, 2018, reflected an increase of \$971.5 million, or 5.69 percent, from December 31, 2017. The balance of \$17.09 billion at December 31, 2017, reflected an increase of \$1.18 billion, or 7.40 percent, from December 31, 2016. The increase in the loan portfolio from 2017 to 2018 is mainly attributable to a \$716.5 million increase in the bank's capital markets loan portfolio and a \$237.5 million increase in the bank's direct loans to associations and OFIs.

The bank has purchased loan participations and Federal Agricultural Mortgage Corporation (Farmer Mac) guaranteed agricultural mortgage-backed securities (AMBS) from associations in Capitalized Participation Pool (CPP) program transactions. CPP purchases result in pay downs on the associations' direct notes at the time of purchase. During 2018, the bank purchased \$102.8 million in loan participations from associations, which resulted in net stock issuances of \$6.2 million. CPP loans held at December 31, 2018, totaled \$128.4 million and were included in "Loans" on the balance sheets. The balance of the

AMBS CPP was \$35.7 million at December 31, 2018, and is included in "Investment securities" on the balance sheet.

The bank also purchased loans from a district association in Non-Capitalized Participation Pool (NCP) program transactions. NCP purchases result in pay downs on the associations' direct notes at the time of purchase. During 2018, the bank purchased \$198.3 million in loan participations from a district association in NCP transactions which resulted in net stock retirements of \$4.2 million. NCP loans held at December 31, 2018, totaled \$180.0 million, and were included in "Loans" on the balance sheet.

The following table presents each loan category as a percentage of the total loan portfolio:

	December 31,		
	2018	2017	2016
Direct notes receivable from district associations and OFIs	65.5%	67.8%	66.8%
Participations purchased	34.5	32.2	33.2
Other bank-owned loans	-	-	-
Total	100.0%	100.0%	100.0%

The following table discloses the credit quality of the bank's loan portfolio:

	December 31,		
	2018	2017	2016
Acceptable	95.3%	94.2%	99.3%
OAEM (special mention)	4.3	5.5	0.5
Substandard/Doubtful	0.4	0.3	0.2
Total	100.0%	100.0%	100.0%

The increase in acceptable loans credit quality (as a percentage of total loans) as of December 31, 2018, compared to December 31, 2017, is mainly driven by growth in the capital markets loan portfolio, and to a lesser extent, an increase in the direct note volume.

The decrease in acceptable loans credit quality (as a percentage of total loans) as of December 31, 2017, compared to December 31, 2016 is largely due to the downgrade of the direct note to one of our affiliated associations to the special mention credit quality classification during the second quarter of 2017. As of December 31, 2018, the direct note totaled \$750.2 million and remains classified as special mention. The bank's loans to our affiliated associations are collateralized by substantially all of the association assets; the earnings, capital and loan loss reserves of the association provide a buffer against losses in their retail portfolio. While the downgrade reflected control weaknesses at the affiliated association in 2017, the bank has not made any provision for loan loss or recorded any allowance for credit loss related to our direct note to that association because of the collateralization of the direct loan and other mitigating factors.

The bank's capital markets loan portfolio's concentration of credit risk in various commodities is shown in the following table at December 31:

Commodity Group	Percentage of Portfolio		
	2018	2017	2016
Rural electric	19%	22%	24%
Livestock	11	10	10
Grain mill products	7	7	7
Dairy	7	7	6
Miscellaneous food products	5	6	6
Meat products	5	5	5
Telecommunication	4	6	6
Timber	4	4	5
Other	38	33	31
Total	100%	100%	100%

The diversity of states underlying the bank's capital markets loan portfolio is reflected in the following table:

	December 31,		
	2018	2017	2016
Texas	18%	15%	15%
California	6	5	4
Illinois	5	6	7
Georgia	5	6	7
Minnesota	5	4	5
All other states	61	64	62
Total	100%	100%	100%

The balance of the bank's association direct notes sold to another System bank was \$3.85 billion at December 31, 2018, 2017 and 2016, respectively. The bank sold no OFI direct notes to another System bank during 2018 and sold \$1.5 million and \$11.2 million at December 31, 2017 and December 31, 2016.

## Association Direct Notes

As the preceding table illustrates, 65.5 percent of the bank's loan portfolio consisted of direct notes from associations and OFIs at December 31, 2018. Terms of direct notes to associations and OFIs are specified in a separate general financing agreement between each association and OFI and the bank, and all assets of each association secure the direct notes to the bank. Each association is a federally chartered instrumentality of the United States and is regulated by the Farm Credit Administration (FCA). See Note 1, "Organization and Operations," to the accompanying financial statements for further discussion of the Farm Credit System.

The credit exposure of the bank's loans to associations, which are evidenced by direct notes with full recourse, is dependent on the associations' creditworthiness and the ability of their borrowers to repay loans made to them. The credit risk to the bank is mitigated by diversity in the associations' loan portfolios in terms of underlying collateral and income sources, geography and range of individual loan amounts. In addition, the risk-bearing capacities of the associations are assessed quarterly by the bank and are currently deemed adequate to absorb most interest-related shocks. Each association maintains an allowance for loan losses determined by its management and is capitalized to serve its unique market area. Associations are subject to FCA regulations concerning minimum capital, loan underwriting and portfolio management, and are audited annually by independent auditors. In addition, associations are required by the general financing agreement with the bank to provide copies of

their risk-based internal credit review reports and other audit/examination reports. The associations are required to maintain a risk-based internal credit review program including procedures addressing: reviewer qualification and independence, review frequency, accuracy of risk ratings, credit administration, regulatory compliance, scope selection, documentation of audit committee approval of reviewers and audit committee review of the internal control reports. As of December 31, 2018, all associations were in compliance with their general financing agreements with the bank.

Loans held by district associations totaled \$18.58 billion at December 31, 2018, an increase of \$378.4 million, or 2.08 percent, from loan volume at December 31, 2017, due to a strong general economy in the chartered territories of the district associations. In 2017 and 2016, association loan volume increased by \$1.10 billion and \$1.11 billion, respectively.

The combined associations' concentration of credit risk in various agricultural commodities is shown in the following table at December 31:

Commodity Group	Percentage of Portfolio		
	2018	2017	2016
Livestock	39%	40%	40%
Crops	17	17	17
Timber	9	9	9
Cotton	5	5	5
Poultry	5	5	5
Dairy	4	3	3
Rural home	1	1	2
Other	20	20	19
Total	100%	100%	100%

The diversity of states underlying the combined associations' loan portfolio is reflected in the following table:

	December 31,		
	2018	2017	2016
Texas	65%	65%	65%
Alabama	9	9	8
Mississippi	9	8	9
Louisiana	4	4	4
All other states	13	14	14
Total	100%	100%	100%

Direct notes from the associations in Texas represent the majority of the bank's direct notes from all district associations. However, these notes are collateralized by a diverse loan portfolio, both in terms of geography and underlying commodities, which helps to mitigate the concentration risk often associated with one state or locale. Associations in each state have commodity diversification that is being augmented by purchases of loan participations.

The combined associations' loans by size are shown in the following table at December 31:

Size (thousands)	2018
<\$250	20%
\$250-\$500	14
\$500-\$1,000	16
\$1,000-\$5,000	32
\$5,000-\$25,000	16
\$25,000-\$100,000	2
Total	100%

Credit quality at the district's associations remained strong, with loans classified as "acceptable" or "other assets especially mentioned" (special mention) as a percentage of total loans of 99.6, 98.5 and 98.2 percent at December 31, 2018, 2017 and 2016, respectively. Association nonearning assets as a percentage of total loans at December 31, 2018, were 0.73 percent, compared to 0.90 percent and 1.0 percent at December 31, 2017 and 2016, respectively.

From the perspective of the district, which is the bank and its related associations collectively, the loan portfolio consists only of retail loans. The diversity of the commodity types and income sources supporting district loan repayment further mitigates credit risk at the bank.

The following table illustrates the district's loan portfolio by major commodity segments at December 31:

Commodity Group	Percentage of Portfolio		
	2018	2017	2016
Livestock	32%	33%	33%
Crops	14	14	13
Timber	7	8	8
Cotton	4	4	4
Poultry	4	4	4
Dairy	4	4	3
Rural home	1	1	1
Other	34	32	34
Total	100%	100%	100%

The following table reflects the district's geographic distribution, by major states, at December 31:

	Percentage of Portfolio		
	2018	2017	2016
Texas	53%	54%	55%
Alabama	7	7	6
Mississippi	7	7	7
Louisiana	3	4	5
California	2	2	2
All other states	28	26	25
Total	100%	100%	100%

## High-Risk Assets

Nonperforming loan volume is composed of nonaccrual loans, accruing restructured loans and loans 90 days or more past due and still accruing interest, and is referred to as impaired loans. High-risk assets consisted of impaired loans and OPO.

The following table discloses the components of the bank's high-risk assets at December 31:

	2018	2017	2016
Nonaccrual loans	\$ 19,486	\$ 3,393	\$ 2,862
Accruing formally restructured loans	2,531	2,607	6,495
Loans past due 90 days or more and still accruing interest	-	-	-
Total impaired loans	22,017	6,000	9,357
Total high-risk assets	\$ 22,017	\$ 6,000	\$ 9,357

High-risk assets at December 31, 2018 increased by \$16.0 million, or 266.95 percent, from \$6.0 million at December 31, 2017. At December 31, 2018, \$18.3 million, or 93.7 percent, were current as to principal and interest, compared to \$2.9 million, or 100.0 percent, that

were current as to principal and interest at December 31, 2016, respectively. At December 31, 2017, no loans classified as nonaccrual were current as to principal and interest.

The increase in nonaccrual loans at December 31, 2018 was primarily attributable to credit deterioration of two loans in the energy and agribusiness sectors that were classified as nonaccrual during 2018 totaling \$18.3 million, offset by repayments of \$2.7 million. The increase in nonaccrual loans at December 31, 2017, was primarily attributable to transfers to nonaccrual of \$3.8 million and recoveries of \$1.4 million, offset by repayments of \$4.7 million. For the periods presented, the bank held no OPO.

## Allowance and Reserve for Credit Losses

The allowance for loan losses at December 31, 2018, was \$12.0 million, compared to \$7.6 million at December 31, 2017, and \$7.7 million at December 31, 2016. The increase from 2017 to 2018 is mainly due to a \$6.2 million increase in the specific allowance for loan losses, offset by a \$1.8 million decrease in the general allowance for loan losses due to credit deterioration of two loans that moved to nonaccrual and are individually evaluated. The reserve for credit losses on letters of credit (LOC) and unfunded commitments was \$1.9 million, \$1.4 million and \$1.6 million at December 31, 2018, 2017 and 2016, respectively. The allowance and reserve for credit losses in its entirety is related to risks identified in the bank's participation portfolio.

The following table provides an analysis of key statistics related to the allowance and reserve for credit losses at December 31:

	2018	2017	2016
Allowance and reserve for credit losses as a percentage of:			
Average loans	<b>0.07%</b>	0.05%	0.05%
Loans at year end			
Total loans	<b>0.07</b>	0.05	0.05
Participations	<b>0.19</b>	0.14	0.15
Nonaccrual loans	<b>61.45</b>	225.14	267.30
Total high-risk loans	<b>54.39</b>	127.32	81.75
Net (recoveries) charge-offs to average loans	-	(0.01)	(0.01)
Provision (negative provision) expense to average loans	<b>0.03</b>	(0.01)	-

The activity in the reserves for credit losses is discussed further in Note 4, "Loans and Reserves for Credit Losses," to the accompanying financial statements.

## Interest Rate Risk Management

Asset/liability management is the bank's process for directing and controlling the composition, level and flow of funds related to the bank's and district's interest-rate-sensitive assets and liabilities. The bank is able to manage the balance sheet composition by using various debt issuance strategies and hedging transactions to match its asset cash flows. Management's objective is to generate adequate and stable net interest income in a changing interest rate environment.

The bank uses a variety of techniques to manage its financial exposure to changes in market interest rates. These include monitoring the difference in the maturities or repricing cycles of interest-rate-sensitive assets and liabilities; simulating changes in net interest income under various interest rate scenarios; and monitoring the

change in the market value of interest-rate-sensitive assets and liabilities under various interest rate scenarios. The bank measures interest rate risk on a quarterly basis.

The interest rate risk inherent in a district association's loan portfolio is substantially mitigated through its funding relationship with the bank. The bank manages district interest rate risk through its direct loan pricing and funding processes. Under the Farm Credit Act of 1971, as amended, a district association is obligated to borrow only from the bank unless the bank approves borrowing from other funding sources. An association's indebtedness to the bank, under a general financing agreement between the bank and the association, represents demand borrowings by the association to fund the majority of its loan advances to association members and is secured by the total assets of the association.

The bank's net interest income is determined by the difference between income earned on loans and investments and the interest expense paid on funding sources, typically Systemwide bonds and discount notes. The bank's level of net interest income is affected by both changes in market interest rates and timing differences in the maturities or repricing cycles of interest-bearing assets and liabilities. Depending upon the direction and magnitude of changes in market interest rates, the bank's net interest income may be affected either positively or negatively by the mismatch in the maturity or the repricing cycle of interest-rate-sensitive assets and liabilities.

The bank maintains a loan pricing philosophy that loan rates should be based on competitive market rates of interest. The district associations offer a wide variety of products, including LIBOR- and prime-indexed variable-rate loans and loans with fixed-rate terms ranging from under one year to 30 years. The interest rates on these loans are directly related to the bank's cost to issue debt in the capital markets and a credit spread added for borrower risk.

The bank offers an array of loan programs to associations that are designed to meet the needs of the associations' borrowers. These loan programs have varying repayment terms, including fixed and level principal payments, and a choice of payment frequencies, such as monthly, quarterly, semi-annual and annual payments. Additionally, the bank offers a choice of prepayment options to meet customer needs.

As it relates to the transition of the London Inter-Bank Offered Rate (LIBOR), on July 27, 2017, the United Kingdom Financial Conduct Authority announced that it will no longer persuade or compel banks to submit rates for the calculation of the LIBOR rates after 2021. 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. The bank and its affiliated associations are currently evaluating the impacts of a potential phase-out of the LIBOR benchmark interest rate, including the possibility of using SOFR as an alternative to LIBOR. 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. 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 Farm Credit Systemwide debt securities, the bank's borrowings, loans, investments, derivatives, and other bank assets and liabilities that are indexed to LIBOR.

FCBT uses complex modeling tools to manage and measure the risk characteristics of its earning assets and liabilities, including gap and simulation analyses. The following interest rate gap analysis sets forth the bank's interest-earning assets and interest-bearing liabilities outstanding as of December 31, 2018, which are expected to mature or reprice in each of the future time periods shown:

### Interest Rate Gap Analysis

as of December 31, 2018

Interest-Sensitive Period

	One Month or Less	More Than One Through Six Months	More Than Six Through Twelve Months	Total Twelve Months or Less	More Than One Year but Less Than Five Years	More Than Five Years and Non-Rate- Sensitive	Total
<b>Interest-Earning Assets</b>							
Total loans	\$ 3,231,499	\$ 2,194,084	\$ 1,665,016	\$ 7,090,599	\$ 7,310,599	\$ 3,655,488	\$ 18,056,686
Total investments	2,133,331	436,573	463,784	3,033,688	1,674,273	1,287,808	5,995,769
Total interest-earning assets	5,364,830	2,630,657	2,128,800	10,124,287	8,984,872	4,943,296	24,052,455
<b>Interest-Bearing Liabilities</b>							
Total interest-bearing funds	5,247,005	2,316,013	2,079,264	9,642,282	9,238,355	3,616,727	22,497,364
Excess of interest-earning assets over interest-bearing liabilities	-	-	-	-	-	1,555,091	1,555,091
Total interest-bearing liabilities	5,247,005	2,316,013	2,079,264	9,642,282	9,238,355	5,171,818	\$ 24,052,455
Interest rate sensitivity gap	\$ 117,825	\$ 314,644	\$ 49,536	\$ 482,005	\$ (253,483)	\$ (228,522)	
Cumulative interest rate sensitivity gap	\$ 117,825	\$ 432,469	\$ 482,005	\$ 482,005	\$ 228,522		

The amount of assets or liabilities shown in each of the time periods was determined based on the earlier of repricing date, contractual maturity or anticipated loan payments, or projected exercise date on callable debt. To reflect the expected cash flow and repricing characteristics of the bank's balance sheet, an estimate of expected prepayments on loans and mortgage-related investments is used to adjust the maturities of the loans and investments in the earning assets section of the gap analysis. Changes in market interest rates will affect the volume of prepayments on loans. Correspondingly, adjustments have been made to reflect the characteristics of callable debt instruments and the effect derivative financial instruments have on the repricing structure of the bank's balance sheet. The "interest rate sensitivity gap" line reflects the mismatch, or gap, in the maturity or repricing of interest-rate-sensitive assets and liabilities. A gap position can be either positive or negative. A positive gap indicates that a greater volume of assets than liabilities reprices or matures in a given time period, and conversely, a negative gap indicates that a greater volume of liabilities than assets reprices or matures in a given time period. On a 12-month cumulative basis, the bank has a positive gap position, indicating that the bank has an exposure to increasing interest rates. This would occur when interest income on maturing or repricing interest-bearing assets decrease sooner than interest expense on maturing repricing interest-bearing liabilities.

The cumulative gap, which is a static measure, does not take into consideration the changing value of options available to the bank in order to manage this exposure, specifically the ability to exercise or not exercise options on callable debt. These options are considered when projecting the effects of interest rate changes on net interest income and on the market value of equity in the following tables.

Interest rate risk exposure as measured by simulation modeling calculates the bank's expected net interest income and market value of equity based upon projections of interest-rate-sensitive assets, liabilities, derivative financial instruments and interest rate scenarios. The bank monitors its financial exposure to multiple interest rate scenarios. The bank's policy guideline for the maximum negative impact as a result of a 200-basis-point change in interest rates is 16 percent for net interest income and 20 percent for market value of equity. The bank manages its interest rate risk exposure within these guidelines. In the current, relatively low interest rate environment, the downward shock is based on one-half of the three-month Treasury bill rate, which was 120 basis points at December 31, 2018. As of December 31, 2018, projected annual net interest income would increase by 1.25 percent, if interest rates were to increase by 100 basis points, and would increase by 2.11 percent, if interest rates were to increase by 200 basis points. As of December 31, 2018, projected annual net interest income would increase by 0.36 percent, if interest rates were to decrease by 100 basis points, and would increase by 2.00 percent, if interest rates were to decrease by 120 basis points. Market value of equity is projected to decrease by 7.25 percent as a result of a 100-basis-point increase in interest rates, and to decrease by 15.27 percent if interest rates were to increase by 200 basis points as of December 31, 2018. Market value of equity is projected to increase by 6.55 percent, if interest rates were to decline by 100 basis points, and would increase by 8.05 percent if interest rates were to decline by 120 basis points as of December 31, 2018.

The following tables set forth the bank's projected sensitivity to interest rate movements as prescribed by policy as of December 31, 2018, based on the bank's interest-earning assets and interest-bearing liabilities:

	<b>December 31, 2018</b>			
	<b>-120</b>	<b>-100</b>	<b>+100</b>	<b>+200</b>
Change in net interest income	2.00%	0.36%	1.25%	2.11%
Change in market value of equity	8.05	6.55	-7.25	-15.27

The bank may use derivative financial instruments to manage its interest rate risk and liquidity position. Fair value and cash flow interest rate swaps for asset/liability management purposes may be used to change the repricing characteristics of liabilities to match the repricing characteristics of the assets they support. The bank does not hold, and is restricted by policy from holding, derivative financial instruments for trading purposes and is not a party to leveraged derivative transactions.

At December 31, 2018, the bank held interest rate caps with a notional amount of \$195 million and a fair value of \$448, and pay fixed interest rate swap contracts with a notional amount of \$825 million and a net fair value liability of \$5.9 million. See Note 15, "Derivative Instruments and Hedging Activity," to the accompanying financial statements for further discussion. Unrealized losses on interest rate caps, the difference between their amortized cost and fair value, are recorded as a reduction of accumulated other comprehensive income. To the extent that its derivatives have a negative fair value, the bank has a payable on the instrument and the counterparty is exposed to the credit risk of the bank. To the extent that its derivatives have a positive fair value, the bank has a receivable on the instrument and is therefore exposed to credit risk from the counterparty. To manage this credit risk, the bank monitors the credit ratings of its counterparties and has bilateral collateral agreements with counterparties. At December 31, 2018, the bank had credit risk exposure to five counterparties on derivative contracts totaling \$5.4 million.

The bank's activity in derivative financial instruments for 2018 is summarized in the table below:

**Activity in Derivative Financial Instruments  
(Notional Amounts)**

<i>(in millions)</i>	Pay Fixed Swaps	Interest Rate Caps	Total
Balance at January 1, 2018	\$ 250	\$ 195	\$ 445
Additions	575	-	575
Maturities/amortizations	-	-	-
<b>Balance at December 31, 2018</b>	<b>\$ 825</b>	<b>\$ 195</b>	<b>\$ 1,020</b>

## Liquidity Risk Management

The bank's liquidity risk management practices ensure the district's ability to meet its financial obligations. These obligations include the repayment of Systemwide debt securities as they mature, the ability to fund new and existing loan and other funding commitments, and the ability to fund operations in a cost-effective manner. A primary objective of liquidity risk management is to plan for unanticipated changes in the capital markets.

FCSIC insures the timely payment of principal and interest on Systemwide debt securities. FCSIC maintains the Insurance Fund for this purpose and for certain other purposes. In the event a System bank is unable to timely pay principal or interest on any insured debt obligation for which that bank is primarily liable, FCSIC must

expend amounts in the Insurance Fund to the extent available to insure the timely payment of principal and interest on the debt obligation. The provisions of the Farm Credit Act providing for joint and several liability of the System banks on the debt obligation cannot be invoked until the Insurance Fund is exhausted. 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. The insurance provided through use of the Insurance Fund is not an obligation of and is not a guarantee by the U.S. government.

FCSIC has an agreement with the Federal Financing Bank, a federal instrumentality subject to the supervision and direction of the U.S. Treasury, pursuant to which the Federal Financing Bank would advance funds to FCSIC. Under its existing statutory authority, FCSIC may use these funds to provide assistance to the System banks in demanding market circumstances which threaten the banks' ability to pay maturing debt obligations. The agreement provides for advances of up to \$10.00 billion and terminates on September 30, 2019, unless otherwise renewed. The decision whether to seek funds from the Federal Financing Bank is at the discretion of FCSIC, and each funding obligation of the Federal Financing Bank is subject to various terms and conditions and, as a result, there can be no assurance that funding will be available if needed by the System.

The bank's primary source of liquidity is the ability to issue Systemwide debt securities, which are the general unsecured joint and several obligations of the System banks as discussed below. As a secondary source of liquidity, the bank maintains an investment portfolio composed primarily of high-quality liquid securities. The securities provide a stable source of income for the bank, and their high quality ensures the portfolio can quickly be converted to cash should the need arise.

While the bank's primary source of liquidity is the ability to access the capital markets to issue Systemwide debt, the bank also maintains other contingency funding sources including repurchase agreements with several commercial banks, a \$75 million uncommitted Federal Funds line of credit and reciprocal emergency lending agreements with other System entities. These alternative funding sources are subject to various terms and conditions, and as a result, there can be no assurance that funding will be available if needed by the bank. In addition, the Funding Corporation provides contingency financing mechanisms which include emergency and non-emergency purchases of federal funds from counterparties and direct issuance of Systemwide debt securities to institutional investors.

FCA regulations require each bank to maintain a minimum of 90 days of liquidity coverage on a continuous basis, assuming no access to the capital markets. Liquidity coverage is defined as the number of days that maturing Systemwide debt securities could be funded with cash and eligible liquidity investments maintained by the bank. Regulations on liquidity reserve requirement divided the existing eligible liquidity reserve requirement into three levels: Level 1 consists of cash and cash-like instruments and must provide 15 days of coverage; Level 2 consists primarily of government guaranteed securities and must provide 30 days of coverage (combined with Level 1); and Level 3 consists primarily of agency guaranteed securities and must provide a total of 90 days of coverage (combined with Level 1

and Level 2). Additionally, regulations require the bank to maintain a supplemental liquidity reserve above the 90-day minimum to cover cash flow requirements unique to the bank. At December 31, 2018, the bank met all individual level criteria and had a total of 241 days of liquidity coverage, as compared with 227 days at December 31, 2017.

## Funding Sources

The bank continually raises funds to support its mission to provide credit and related services to the rural and agricultural sectors, repay maturing Systemwide debt securities and meet other obligations. As a government-sponsored enterprise, the bank has had access to the nation's and world's capital markets. This access has provided us with a dependable source of competitively priced debt that is critical to support our mission of providing funding to the rural and agricultural sectors. Moody's Investors Service and Standard & Poor's rate the System's long-term debt as Aaa and AA+, respectively. These rating agencies base their ratings on many quantitative and qualitative factors, including the System's government-sponsored enterprise status. Standard and Poor's rating on long-term debt of AA+ is in concert with its sovereign credit rating on the United States of America at AA+. Material changes to the factors considered could result in a different debt rating. However, as a result of the System's financial performance, credit quality and standing in the capital markets, we anticipate continued access to funding necessary to support System needs. The U.S. government does not guarantee, directly or indirectly, Systemwide debt securities.

The types and characteristics of securities are described in Note 8, "Bonds and Notes," to the accompanying financial statements. As a condition of the bank's participation in the issuance of Systemwide debt securities, the bank is required by regulation to maintain specified eligible assets as collateral in an amount equal to or greater than the total amount of bonds and notes outstanding for which the bank is liable. At December 31, 2018, the bank had excess collateral of \$1.65 billion. Management expects the bank to maintain sufficient collateral to permit its continued participation in Systemwide debt issuances in the foreseeable future.

In September 2008, the bank issued \$50.0 million in subordinated debt in a private placement to one investor. The debt was a 10-year instrument with a coupon rate of 8.406 percent. Prior to the bank's issuance of its Class B Series 1 noncumulative subordinated perpetual preferred stock (Class B-1 preferred stock) in August 2010, the subordinated debt received preferential regulatory capital and collateral treatment, being includible in portions of permanent capital and total surplus and being excludable from total liabilities for purposes of net collateral ratio calculation. Regulatory conditions related to the issuance of the Class B-1 preferred stock reduced the benefit of the favorable capital ratio treatment received by subordinated debt, and required that it no longer receive favorable treatment in net collateral calculations.

On March 10, 2016, the FCA approved a final rule to modify the regulatory capital requirements for System banks and associations, effective January 1, 2017. The final rule to modify regulatory capital requirements changed the favorable capital treatment of the subordinated debt, and, therefore, qualified as a regulatory event triggering a right of redemption under the terms of the subordinated debt. On March 30, 2016, the bank's board approved a resolution authorizing the redemption of all outstanding debt at par. The redemption occurred on June 6, 2016.

The bank receives ratings from two rating agencies:

- On April 6, 2018, Fitch Ratings affirmed the bank's long-term and short-term issuer default ratings (IDRs) at "AA-" and "F1+," respectively, with a stable outlook. Fitch also affirmed the bank's noncumulative perpetual preferred stock rating at "BBB" and its support floor at "AA-." Fitch affirmed the Farm Credit System's long-term and short-term IDRs at "AAA" and "F1+," respectively, with a stable outlook, and its support floor at "AAA." As a government-sponsored entity, the System benefits from implicit government support. The ratings and rating outlook are directly linked to the U.S. sovereign rating. The affirmation of the System banks' IDRs reflect their prudent, conservative credit culture, their unique funding advantage and their structural second-loss position on the majority of their loan portfolio.
- On November 20, 2018, Moody's Investors Service affirmed the bank's issuer rating at "Aa3" and its noncumulative preferred stock rating at "Baa1 (hyb)," with a stable outlook. The Aa3 issuer rating reflects the bank's "a1" baseline credit assessment (BCA), very high cooperative support from the other Federal Farm Credit banks and moderate support from the U.S. government, which has an "Aaa" stable outlook. The bank's preferred stock rating incorporated the bank's BCA, very high cooperative support from the other Federal Farm Credit banks and notching reflecting the debt's relative positions in the bank's capital structure. The bank's BCA incorporates its solid capital levels, adequate risk-adjusted profitability and liquidity as well as the benefits associated with its lending to related associations and their strong capital levels. The "a1" BCA is one of Moody's highest assessments of any financial institution, both domestically and globally.

The following table provides a summary of the period-end balances of the debt obligations of the bank:

	December 31,		
	2018	2017	2016
<i>(dollars in thousands)</i>			
Bonds outstanding	\$ 20,992,624	\$ 18,615,696	\$ 16,838,489
Average effective interest rates	2.27%	1.69%	1.34%
Average remaining life (years)	2.6	2.9	2.6
Discount notes outstanding	\$ 1,504,740	\$ 2,335,527	\$ 2,552,173
Average effective interest rates	2.44%	1.27%	0.63%
Average remaining life (days)	143	135	157

During 2018, the bank extinguished approximately \$356 million par value in noncallable, fixed rate bonds, with other System banks assuming the remaining obligations of the extinguished debt. The debt extinguishment resulted in \$3.6 million in gains recognized as non-interest income for the year ended December 31, 2018.

The following table provides a summary of the average balances of the debt obligations of the bank:

	For the years ended December 31,		
	2018	2017	2016
Average interest-bearing liabilities outstanding	\$ 21,646,707	\$ 20,146,249	\$ 19,024,161
Average interest rates on interest-bearing liabilities	2.00%	1.47%	1.27%

## Investments

As permitted under FCA regulations, a bank is authorized to hold eligible investments for the purposes of maintaining a diverse source of liquidity, profitably managing short-term surplus funds and managing interest rate risk. The bank is authorized to hold an amount not to exceed 35.0 percent of loans outstanding. The bank's holdings are within this limit as of December 31, 2018.

FCA regulations also define eligible investments by specifying credit rating criteria, final maturity limit and percentage of investment portfolio limit for each investment type. Generally, the bank's investments must be highly rated by at least one Nationally Recognized Statistical Rating Organization, such as Moody's Investors Service, Standard & Poor's or Fitch Ratings. If an investment no longer meets eligibility criteria, the investment becomes ineligible. On January 1, 2019, the Farm Credit Administration's revised investment regulations became effective and, among other things, removed references to credit ratings and substitutes the eligibility requirements with appropriate standards of creditworthiness.

At December 31, 2018, the bank had no investments which were ineligible for liquidity purposes as a result of credit downgrading.

At December 31, 2018 and December 31, 2017, the bank held no securities that were designated as other-than-temporarily impaired investments (OTTI) and the bank recognized no credit losses related to OTTI securities.

The bank's investments are all considered available for sale, and include a liquidity portfolio and a portfolio of other investments. The liquidity portfolio had a fair value of \$5.68 billion at December 31, 2018, and consisted primarily of federal agency-guaranteed collateralized mortgage-backed securities (MBS), corporate debt, agency-guaranteed debt, U.S. Treasury securities and asset-backed securities (ABS). The majority of the liquidity portfolio's MBS includes Government National Mortgage Association (GNMA), Federal National Mortgage Association (FNMA) and Federal Home Loan Mortgage Corporation (FHLMC) securities.

The bank's liquidity investment portfolio consisted of the following at December 31:

	2018		2017	
	Amortized Cost	Fair Value	Amortized Cost	Fair Value
Agency-guaranteed debt	\$ 170,800	\$ 167,923	\$ 198,246	\$ 195,248
Corporate debt	365,382	363,537	252,482	252,609
Federal agency collateralized mortgage-backed securities:				
GNMA	2,671,043	2,630,995	2,012,484	1,984,662
FNMA and FHLMC	2,157,582	2,130,136	2,395,248	2,372,053
U.S. Treasury securities	298,300	298,083	249,860	249,207
Asset-backed securities	88,292	88,257	47,914	47,889
<b>Total liquidity investments</b>	<b>\$ 5,751,399</b>	<b>\$ 5,678,931</b>	<b>\$ 5,156,234</b>	<b>\$ 5,101,668</b>

The bank's other investments consisted of Federal Agricultural Mortgage Corporation (Farmer Mac) guaranteed agricultural mortgage-backed securities (AMBS), purchased from district associations as part of the bank's CPP. The AMBS are not included in the bank's liquidity portfolio. The Farmer Mac securities are backed by loans originated by the associations and previously held by the associations under the Farmer Mac long-term standby commitments to purchase agreements. As a part of the CPP program, any positive impact to the net income of the bank can be returned as patronage to the association if declared by the bank's board of directors. The declared patronage approximates the net earnings of the respective pool.

Farmer Mac is a government-sponsored enterprise and is examined and regulated by FCA. It provides secondary market arrangements for agricultural and rural home mortgage loans that meet certain underwriting standards. Farmer Mac is authorized to provide loan guarantees or be a direct pooler of agricultural mortgage loans. Farmer Mac is owned by both System and non-System investors and its board of directors has both System and non-System representation. Farmer Mac is not liable for any debt or obligation of any System institution and no System institution other than Farmer Mac is liable for any debt or obligation of Farmer Mac.

The bank's other investment portfolio consisted of Farmer Mac AMBS securities at December 31:

	2018		2017	
	Amortized Cost	Fair Value	Amortized Cost	Fair Value
Agricultural mortgage-backed securities	\$ 37,781	\$ 35,707	\$ 45,564	\$ 43,317

## Capital Adequacy

Total shareholders' equity at December 31, 2018, was \$1.78 billion compared to \$1.67 billion and \$1.62 billion at December 31, 2017 and 2016, respectively. The total shareholders' equity increase of \$109.0 million during 2018 was due primarily to net income of \$190.5 million, and a \$98.7 million and \$15.2 million net issuance of preferred stock and capital stock, respectively, offset by an increase of \$29.8 million in accumulated other comprehensive loss, \$117.4 million in patronage declared, and \$54.7 million in dividends paid on preferred stock. The bank declared patronage of \$117.4 million which included \$67.8 million in direct loan patronage, \$36.8 million in patronage on certain participations, \$7.9 million in patronage

based on the associations' and OFIs' stock investment in the bank, and \$4.9 million in CPP and NCPP patronage. The bank's goal is to provide direct loan patronage at a level that would result in a cost of funds to district associations equal to the bank's marginal cost of funds, which was achieved for the year ended 2018.

Preferred stock totaled \$700.0 million at December 31, 2018, and \$600.0 million at December 31, 2017 and 2016. Class B noncumulative subordinated perpetual preferred stock included \$300.0 million of Class B Series 1, issued in 2010 (Class B-1 preferred stock), \$300.0 million of Class B Series 2 issued in July 2013 (Class B-2 preferred stock), and \$100.0 million of Class B Series 3 issued in June 2018 (Class B-3 preferred stock). The \$100.0 million of Class B-3 preferred stock issued represented one hundred thousand shares at \$1,000 per share par value, with issuance costs of \$1.3 million. Dividends accrued on the Class B-3 preferred stock were \$1.6 million as of December 31, 2018, and were included in "Preferred stock dividends payable" on the balance sheet.

Dividends on the Class B-3 preferred stock, if declared by the board of directors at its sole discretion, are noncumulative and are payable quarterly in arrears on the fifteenth day of March, June, September and December in each year, commencing September 15, 2018, at an annual fixed rate of 6.20 percent of par value of \$1,000 per share up to, but excluding June 15, 2028, from and after which date will be paid at an annual rate of the 3-Month USD LIBOR plus 3.223 percent. The Class B-3 preferred stock is not mandatorily redeemable at any time, but may be redeemed in whole or in part at the option of the bank on any dividend payment date on or after June 15, 2028. The Class B-3 preferred stock ranks pari passu with respect to the existing Class B-1 and Class B-2 preferred stock, and senior to all of the bank's outstanding capital stock. For regulatory purposes, the Class B-3 preferred stock is included in permanent capital, total capital and tier 1 capital within certain limitations.

Dividends on the Class B-1 preferred stock, if declared by the board of directors at its sole discretion, are noncumulative and are payable semi-annually in arrears on the fifteenth day of June and December in each year, commencing December 15, 2010, at an annual fixed rate of 10 percent of par value of \$1,000 per share. Dividends on the Class B-2 preferred stock, if declared by the board of directors at its sole discretion, are noncumulative and are payable quarterly in arrears on the fifteenth day of March, June, September and December in each year, commencing September 15, 2013, at an annual fixed rate of 6.75 percent of par value of \$100 per share, up to, but excluding September 15, 2023, from and after which date will be paid at an annual rate of the 3-Month USD LIBOR plus 4.01 percent.

The Class B preferred stock ranks senior to all of our outstanding common stock. "Dividend/patronage stopper" clauses in the preferred stock offerings require the payment or declaration of current period dividends on the preferred stock issuances before any other patronage can be declared, and were required before payment of the December 31, 2018, bank investment and direct note patronage to associations and OFIs could be paid.

During the third quarter of 2017, the association Class A Common Stockholders approved an amendment to the bank's capitalization bylaws. The amended bylaws became effective September 15, 2017, resulting in updates to certain sections of the bylaws to conform to the

FCA's updated capital adequacy regulations. The amendments did not result in significant changes to the regulatory capital requirements of the bank as of December 31, 2017 or December 31, 2018.

Accumulated other comprehensive loss (AOCL) increased \$29.8 million, or 57.40 percent, to an \$81.7 million loss at December 31, 2018, from a \$51.9 million loss at December 31, 2017, due to an increase of \$17.7 million in unrealized net losses on the bank's investments and an increase of \$13.9 million in unrealized losses on the bank's cash flow hedges, offset by a \$1.8 million decrease related to retirement benefits. The increase in unrealized net losses on investments was primarily attributable to the effects of market interest rate changes on the bank's fixed-rate investments. The \$13.9 million increase of unrealized losses on cash flow hedges is the result of changes in the valuation of interest rate swaps the bank held during 2018. The \$1.8 million decrease in retirement benefits was primarily due to an actuarial gain on postretirement benefit plans. The actuarial gain included the effects of an increase in the discount rate used to determine the present value of our future benefit obligations.

Capital adequacy is evaluated using various ratios for which the FCA has established regulatory minimums. Effective January 1, 2017, the new regulatory capital ratios were implemented by the bank. Regulatory ratios remained well above regulatory minimums, including the conservation and leverage buffers at December 31, 2018. The following table reflects the bank's capital ratios at December 31:

	2018	2017	2016	Total Regulatory Requirement
Permanent capital ratio	<b>16.31%</b>	16.60%	17.40%	7.00%
Common equity tier 1 ratio	<b>9.92</b>	10.52	n/a	7.00
Tier 1 capital ratio	<b>16.29</b>	16.59	n/a	8.50
Total capital ratio	<b>16.42</b>	16.68	n/a	10.50
Tier 1 leverage ratio	<b>7.39</b>	7.33	n/a	5.00
UREE leverage ratio	<b>3.08</b>	3.08	n/a	1.50

	2016	2015	2014	2013	2012	Regulatory Minimum
Total surplus ratio	14.98%	15.48%	15.86%	17.29%	15.92%	7.00%
Core surplus ratio	9.97	9.88	10.07	10.12	9.92	3.50
Net collateral ratio*	107.35	107.70	108.00	108.67	107.94	103.00

\*The bank's minimum net collateral ratio for regulatory purposes while any subordinated debt was outstanding was 104.00. The bank redeemed all of its outstanding subordinated debt in June 2016.

## 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. The board of directors is required, by regulation, to adopt an internal control policy that provides adequate direction to the institution in establishing effective control over and accountability for operations, programs and resources. The policy 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 its 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 general, we address operational risk through the organization's internal governance structure. Exposure to operational risk is typically identified with the assistance of senior management, and internal audit plans are risk-based and are re-evaluated on an annual basis, or more frequently, if necessary. The board of directors is responsible for defining the role of the audit committee in providing oversight and review of the institution's internal controls.

## Reputational Risk Management

Reputational risk is defined as the negative impact resulting from events, real or perceived, that shape the image of the bank, the System or any of its entities. The bank and its affiliated associations could be harmed if its reputation were impacted by negative publicity about the System as a whole, an individual System entity or the agriculture industry in general.

Reputational risk is the direct responsibility of each System entity. For reputational issues that have broader consequences for the System as a whole, System governance will communicate guidance to the System supporting those business practices that are consistent with our mission.

## Political Risk Management

We, as part of the System, are an instrumentality of the federal government and are intended to further governmental policy concerning the extension of credit to or for the benefit of agricultural and rural America. The System and its borrowers may be significantly affected by federal legislation that affects the System directly, such as changes to the Farm Credit Act, or indirectly, such as agricultural appropriations bills. Political risk to the System is the risk of loss of support for the System or agriculture by the U.S. government.

We manage political risk by actively supporting The Farm Credit Council (Council), which is a full-service, federal trade association representing the System before Congress, the executive branch and others. The 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, we take an active role in representing the individual interests of System institutions and their borrowers before Congress. In addition to the Council, each district has its own council, which is a member of the Council. The district councils represent the interests of their members on a local and state level, as well as on a federal level.

## Recent Accounting Pronouncements

In August 2018, the Financial Accounting Standards Board (FASB) issued guidance entitled "Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Cost." The guidance aligns 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 this guidance. This guidance becomes effective for interim and annual periods beginning after December 15, 2019. The guidance also requires an entity (customer) to expense the capitalized implementation costs of a hosting arrangement that is a service contract over the term of the hosting arrangement. It further specifies where to present expense and payments in the financial statements. Early adoption is permitted. The guidance is to be applied on a retrospective or prospective basis to all implementation costs incurred after the date of adoption. The bank is evaluating the impact of adoption on the bank's financial condition and its results of operations.

In August 2018, the FASB issued guidance entitled "Disclosure Framework — Changes to the Disclosure Requirements for Defined Benefit Plans." The guidance modifies the disclosure requirements for employers that sponsor defined benefit pension or other postretirement plans. This guidance becomes effective for fiscal years ending after December 15, 2020. Early adoption is permitted. The guidance is to be applied on a retrospective basis for all periods. The bank is evaluating the impact of adoption on the bank's financial condition and its results of operations.

In August 2018, the FASB issued guidance entitled "Disclosure Framework — Changes to the Disclosure Requirements for Fair Value Measurement." The guidance modifies the requirements on fair value measurements by removing, modifying or adding to the disclosures. This guidance becomes effective for interim and annual periods beginning after December 15, 2019. Early adoption is permitted and an entity is permitted to early adopt any removal or modified disclosures and delay adoption of the additional disclosures until their effective date. The bank is evaluating the impact of adoption on the bank's financial condition and its results of operations.

In February 2018, the Financial Accounting Standards Board (FASB) issued guidance entitled "Income Statement — Reporting Comprehensive Income — Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income." This guidance allows for the reclassification from accumulated other comprehensive income to retained earnings for stranded tax effects resulting from the recently issued tax legislation, Tax Cuts and Jobs Act (TCJA), that lowered the federal corporate tax rate from 35 percent to 21 percent. The amount of the reclassification shall include the effect of the change in the tax rate on gross deferred tax amounts and related valuation allowances at the date of enactment of the TCJA related to items remaining in accumulated other comprehensive income. The guidance becomes effective for financial statements issued for fiscal years beginning after December 15, 2018, and interim periods within those fiscal years. The bank is

exempt from federal and certain other income taxes as provided by the Farm Credit Act of 1971. Thus, the new standard had no impact on the bank's financial results.

In August 2017, the FASB issued guidance entitled "Targeted Improvements to Accounting for Hedging Activities." The guidance better aligns an entity's risk management activities and financial reporting for hedging relationships through changes to both the designation and measurement guidance for qualifying hedging relationships and the presentation of hedge results. The amendments in this guidance require an entity to present the earnings effect of the hedging instrument in the same income statement line item in which the earnings effect of the hedged item is reported. This guidance also addresses the timing of effectiveness testing, qualitative and quantitative effectiveness testing, and components that can be excluded from effectiveness testing. This guidance becomes effective for interim and annual periods beginning after December 15, 2018. The bank does not expect an impact on the bank's balance sheet or income statement as the bank is already reporting in compliance with the guidance.

In March 2017, the FASB issued guidance entitled "Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Cost." The guidance requires that an employer report the service cost component in the same line item or items as other compensation costs arising from services rendered by the pertinent employees during the period. Other components are required to be presented in the income statement separately from the service cost component and outside a subtotal of income from operations, if one is presented. This guidance became effective for interim and annual periods beginning after December 15, 2017. The adoption of this guidance did not impact the bank's financial condition but changed the classification of certain items in the results of operations.

In August 2016, the FASB issued guidance entitled "Classification of Certain Cash Receipts and Cash Payments." The guidance addresses specific cash flow issues with the objective of reducing the diversity in the classification of these cash flows. Included in the cash flow issues are debt repayment or debt extinguishment costs and settlement of zero-coupon debt instruments or other debt instruments with coupon interest rates that are insignificant in relation to the effective interest rate of the borrowing. This guidance became effective for interim and annual periods beginning after December 15, 2017. The adoption of this guidance did not materially impact the bank's financial condition or its results of operations but changed the classification of certain items in the statement of cash flows.

In June 2016, the FASB issued guidance entitled "Measurement of Credit Losses on Financial Instruments." The guidance replaces the current incurred loss impairment methodology with a methodology that reflects expected credit losses and requires consideration of a broader range of reasonable and supportable information to inform credit loss estimates. Credit losses relating to available-for-sale securities would also be recorded through an allowance for credit losses. For public business entities that are not U.S. Securities and Exchange Commission filers, this guidance becomes effective for interim and annual periods beginning after December 15, 2020, with early application permitted. The bank is evaluating

the impact of adoption on the bank's financial condition and its results of operations.

In February 2016, the FASB issued guidance entitled "Leases." This guidance is intended to improve financial reporting about leasing transactions and affects all organizations that lease assets. The guidance will require organizations that lease assets, referred to as lessees, to recognize on the balance sheet the assets and liabilities for the rights and obligations created by those leases. The accounting for organizations that own the assets leased by the lessee, also known as lessor accounting, will remain largely unchanged from current GAAP. In July 2018, the FASB issued additional guidance which allows entities a new and optional transition method. Under this transition method, an entity initially applies the leasing standard at the adoption date and recognizes a cumulative-effect adjustment to opening retained earnings. The leasing standard and this additional guidance become effective for interim and annual periods beginning after December 15, 2018, and early application is permitted. Based on the bank's review and analysis, the new lease accounting guidance will have an insignificant impact on the bank's financial condition and results of operations, and will have no impact on the bank's statement of cash flows.

In January 2016, the FASB issued guidance entitled "Recognition and Measurement of Financial Assets and Liabilities." The guidance affects, among other things, the presentation and disclosure requirements for financial instruments. For public entities, the guidance eliminates the requirement to disclose the methods and significant assumptions used to estimate the fair value of financial instruments carried at amortized cost. This guidance became effective for interim and annual periods beginning after December 15, 2017. The adoption of this guidance did not impact the bank's financial condition or its results of operations.

In May 2014, the FASB issued guidance entitled, "Revenue from Contracts with Customers." The guidance governs revenue recognition from contracts with customers and requires an entity to recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. Financial instruments and other contractual rights within the scope of other guidance issued by the FASB are excluded from the scope of this new revenue recognition guidance. The guidance sets forth the requirement for new and enhanced disclosures. In this regard, a majority of our contracts would be excluded from the scope of this new guidance. The new revenue standard became effective for interim and annual reporting periods beginning after December 15, 2017. The adoption of the guidance did not materially impact the bank's financial condition or results of operations and will not change its current recognition practices.

## Regulatory Matters

At December 31, 2018, there were no district associations under written agreements with the Farm Credit Administration.

On June 12, 2018, the Farm Credit Administration (FCA) published a final rule revising the requirements governing the eligibility of investments for System banks and associations. The stated objectives of the final rule are as follows:

- To strengthen investment practices at Farm Credit banks and associations to enhance their safety and soundness;
- To ensure that System bonds hold sufficient high-quality liquid investments for liquidity purposes;
- To enhance the ability of the System banks to supply credit to agricultural and aquatic producers and their cooperatives in times of financial distress;
- To comply with the requirements of section 939A of the Dodd-Frank Act;
- To modernize the investment eligibility criteria for Farm Credit banks; and
- To revise the investment regulation for System associations to improve their investment management practices so they are more resilient to risk.

The regulation became effective January 1, 2019. On July 3, 2018, a correction to a final rule on investment eligibility was published in the Federal Register.

On June 15, 2018, the FCA published a proposed rule to amend its regulations governing standards of conduct of directors and employees of System institutions and require every System bank and association to have a Standards of Conduct Program based on core principles to put into effect ethical values as part of corporate culture. The stated objectives of the proposed rule are to:

- Establish principles for ethical conduct and recognize each System institution's responsibility for promoting an ethical culture;
- Provide each System institution flexibility to develop specific guidelines on acceptable practices suitable for its business;
- Encourage each System institution to foster core ethical values and conduct as part of its corporate culture;

- Require each System institution to develop strategies and a system of internal controls to promote institution and individual accountability in ethical conduct, including by establishing a Standards of Conduct Program and adopting a Code of Ethics; and
- Remove prescriptive requirements of the regulations that do not promote these objectives.

The deadline for the submission of public comments was September 13, 2018.

On August 24, 2018, the FCA published for public comment a proposed rule that would modify the existing outside director eligibility criteria to accomplish the following objectives:

- Amend the eligibility criteria for outside directors in § 611.220(a);
- Remove the definition of outside director in § 619.9225;
- Strengthen the safety and soundness of System institutions; and
- Incorporate best practices for corporate governance for System institutions.

The proposed regulation would expand the list of persons who would be excluded from nomination for an outside director's seat to ensure the independence of outside directors. The list would include borrowers of the institution, immediate family members of any director, officer, employee, agent, stockholder or borrower of any System institution, and anyone who has a controlling interest in an entity that borrows from any System institution or any affiliated organization of a System institution. The deadline for the submission of public comments was October 23, 2018.

## Other

New U.S. tax laws resulting from legislation commonly known as the Tax Cuts and Jobs Acts of 2017 (TCJA) were enacted in late 2017. Among other things, the TCJA changed the federal corporate tax rate from 35 percent to 21 percent. The bank is exempt from federal and certain other income taxes as provided by the Farm Credit Act. However, the TCJA created a new excise tax on excess tax-exempt organization executive compensation effective for tax years beginning after December 31, 2017. The new excise tax had a minimal impact on the bank's financial results.



## Report of Management

The financial statements of the Farm Credit Bank of Texas (bank) are prepared by management, which is responsible for their integrity and objectivity, including amounts that must necessarily be based on judgments and estimates. The financial statements have been prepared in conformity with generally accepted accounting principles appropriate in the circumstances, except as noted. Other financial information included in this annual report is consistent with that in the financial statements.

To meet its responsibility for reliable financial information, management depends on the bank's accounting and internal control systems, which have been designed to provide reasonable, but not absolute, assurance that assets are safeguarded and transactions are properly authorized and recorded. The systems have been designed to recognize that the cost of controls must be related to the benefits derived. To monitor compliance, the internal audit staff of the Farm Credit Bank of Texas audits the accounting records, reviews accounting systems and internal controls, and recommends improvements as appropriate. The financial statements are audited by PricewaterhouseCoopers LLP (PwC), independent auditors. In addition, our independent auditors have audited our internal accounting controls as of December 31, 2018 to establish a basis for reliance thereon in determining the nature, extent and timing of the audit tests applied in the examination of the financial statements. In addition, the bank is examined by the Farm Credit Administration.

In the opinion of management, the financial statements are true and correct and fairly state the financial position of the Farm Credit Bank of Texas at December 31, 2018, 2017 and 2016. The independent auditors have direct access to the audit committee, which is composed solely of directors who are not officers or employees of the bank.

The FCA has authorized the bank to replace the required footnote inclusion of condensed, unaudited districtwide statements of condition and statements of income with a separate document containing this same districtwide financial information which deviates from the requirements of §620.2(g)(2). Additional information is included in Note 17, "Combined Districtwide Financial Statements."

The undersigned certify that we have reviewed the December 31, 2018, annual report of the Farm Credit Bank of Texas, that the report has been prepared in accordance with all applicable statutory or regulatory requirements, and that the information included herein is true, accurate and complete to the best of our knowledge and belief.

James F. Dodson  
Chairman of the Board

Larry R. Doyle  
Chief Executive Officer

Amie Pala  
Senior Vice President, Chief Financial Officer

March 1, 2019



## Report of Audit Committee

The audit committee (committee) is composed of the entire board of directors of the Farm Credit Bank of Texas (bank). The committee oversees the bank's system of internal controls and the adequacy of management's action with respect to recommendations arising from those internal control activities. The committee's approved responsibilities are described more fully in the Audit Committee Charter, which is available on request or on the bank's website at [www.farmcreditbank.com](http://www.farmcreditbank.com). In 2018, 14 committee meetings were held, with some of these meetings including executive sessions between the committee and PricewaterhouseCoopers LLP (PwC) and the bank's internal auditor. The committee approved the appointment of PwC as independent auditors for 2018.

Management is responsible for the bank's internal controls and for the preparation of the financial statements in accordance with accounting principles generally accepted in the United States of America. PwC is responsible for performing an independent audit of the bank's financial statements in accordance with auditing standards generally accepted in the United States of America in addition to the bank's internal control over financial reporting and to issue a report thereon. The committee's responsibilities include monitoring and overseeing these processes.

In this context, the committee reviewed and discussed the bank's audited financial statements for the year ended December 31, 2018, with management and PwC. The committee also reviewed with PwC the matters required to be discussed by Auditing Standard Section 380 (Communication with Audit Committees).

PwC has provided to the committee the written communications regarding their independence. The committee discussed with appropriate representatives of PwC the firm's independence from the bank. The committee also approved the non-audit services provided by PwC and concluded that these services were not incompatible with maintaining the auditor's independence. Furthermore, throughout 2018 the committee has discussed with management and PwC such other matters and received such assurances from them as the committee deemed appropriate. Both PwC and the bank's internal auditor directly provided reports on significant matters to the committee.

M. Philip Guthrie, Chairman  
Linda C. Floerke, Vice Chairman  
Ralph W. Cortese  
John L. Dailey  
James F. Dodson  
Elizabeth G. Flores  
Lester Little

Audit Committee Members

March 1, 2019



## Report on Internal Control Over Financial Reporting

The Farm Credit Bank of Texas' (bank's) principal executive and principal financial officer are responsible for establishing and maintaining adequate internal control over financial reporting for the bank's financial statements. 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 executive and principal financial officer, or persons performing similar functions, with review by the bank's board of directors, management and other personnel, to provide reasonable assurance regarding the reliability of financial reporting information used in the preparation of the financial statements for external purposes in accordance with generally accepted accounting principles in the United States of America (GAAP). Internal controls over financial reporting include 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 information 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 controls over financial reporting as of December 31, 2018. In making the assessment, management used the updated Internal Control – Integrated Framework promulgated by the Committee of Sponsoring Organizations of the Treadway Commission on May 14, 2013, commonly referred to as the "COSO 2013 Framework."

Based on the assessment performed, the bank 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 determined that there were no material weaknesses in the internal control over financial reporting as of December 31, 2018. A review of the assessment performed was reported to the bank's audit committee.

The effectiveness of the bank's internal control over financial reporting as of December 31, 2018, has been audited by PricewaterhouseCoopers LLP, independent auditors, which expresses an unqualified opinion on the effectiveness of the bank's internal control over financial reporting as of December 31, 2018.



## Evaluation of Disclosure Controls and Procedures

As of December 31, 2018, management of the Farm Credit Bank of Texas (bank) carried out an evaluation with the participation of the bank's management, including the chief executive officer (CEO) and chief financial officer (CFO), of the effectiveness of the design and operation of the their respective disclosure controls and procedures<sup>(1)</sup> with respect to this annual stockholder report. This evaluation is based on testing of the design and effectiveness of key internal controls, certifications and other information furnished by the principal executive officer and principal financial officer of the bank, as well as incremental procedures performed by the bank. Based upon and as of the date of the bank's evaluation, the CEO and the CFO concluded that the disclosure controls and procedures are effective in alerting them on a timely basis of any material information relating to the bank that is required to be disclosed by the bank in the annual and quarterly stockholder reports it files or submits to the Farm Credit Administration. There have been no significant changes in the bank's internal control over financial reporting<sup>(2)</sup> that occurred during the quarter ended December 31, 2018 that have materially affected, or are reasonably likely to materially affect, the bank's internal control over financial reporting.

<sup>(1)</sup> For purposes of this discussion, "disclosure controls and procedures" are defined as controls and procedures of the bank that are designed to ensure that the financial information required to be disclosed by the bank in this annual stockholder report is recorded, processed, summarized and reported, within the time periods specified under the rules and regulations of the Farm Credit Administration.

<sup>(2)</sup> For purposes of this discussion, "internal control over financial reporting" is defined as a process designed by, or under the supervision of, the bank's principal executive officers and principal financial officers, or persons performing similar functions, and effected by the bank's board of directors, management and other personnel, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of the bank's financial statements for external purposes in accordance with generally accepted accounting principles and 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 the bank's financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the bank are being made only in accordance with authorizations of managements 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 the bank's financial statements.

# Certification

I, Larry R. Doyle, certify that:

1. I have reviewed the 2018 Annual Report of the Farm Credit Bank of Texas (bank).
2. Based on my knowledge, this annual stockholder report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this annual stockholder report.
3. Based on my knowledge, the financial statements and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the bank as of, and for, the periods presented in this report.
4. The bank's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures<sup>1</sup> and internal control over financial reporting<sup>2</sup> for the bank and have:
  - (a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the bank is made known to us, particularly during the period in which this annual stockholder report is being prepared;
  - (b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - (c) evaluated the effectiveness of the bank's disclosure controls and procedures and presented in this annual stockholder report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this annual stockholder report based on such evaluation; and
  - (d) disclosed in this annual stockholder report any change in the bank's internal control over financial reporting that occurred during the bank's most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect, the bank's internal control over financial reporting.
5. The bank's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the bank's auditors and the bank's audit committee:
  - (a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the bank's ability to record, process, summarize and report financial information; and
  - (b) any fraud, whether or not material, that involves management or other employees who have a significant role in the bank's internal control over financial reporting.



Larry R. Doyle  
Chief Executive Officer

March 1, 2019

<sup>(1)</sup> See footnote 1 on evaluation of disclosure controls and procedures report

<sup>(2)</sup> See footnote 2 on evaluation of disclosure controls and procedures report

# Certification

I, Amie Pala, certify that:

1. I have reviewed the 2018 Annual Report of the Farm Credit Bank of Texas (bank).
2. Based on my knowledge, this annual stockholder report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this annual stockholder report.
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the bank as of, and for, the periods presented in this report.
4. The bank's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures<sup>1</sup> and internal control over financial reporting<sup>2</sup> for the bank and have:
  - (a) designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under our supervision, to ensure that material information relating to the bank is made known to us, particularly during the period in which this annual stockholder report is being prepared;
  - (b) designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
  - (c) evaluated the effectiveness of the bank's disclosure controls and procedures and presented in this annual stockholder report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this annual stockholder report based on such evaluation; and
  - (d) disclosed in this annual stockholder report any change in the bank's internal control over financial reporting that occurred during the bank's most recent fiscal quarter that has materially affected, or is reasonably likely to materially affect, the bank's internal control over financial reporting.
5. The bank's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the bank's auditors and the bank's audit committee:
  - (a) all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the bank's ability to record, process, summarize and report financial information; and
  - (b) any fraud, whether or not material, that involves management or other employees who have a significant role in the bank's internal control over financial reporting.



Amie Pala

Senior Vice President, Chief Financial Officer

March 1, 2019

<sup>(1)</sup> See footnote 1 on evaluation of disclosure controls and procedures report

<sup>(2)</sup> See footnote 2 on evaluation of disclosure controls and procedures report



## **Report of Independent Registered Public Accounting Firm**

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

### ***Opinions on the Financial Statements and Internal Control over Financial Reporting***

We have audited the accompanying balance sheets of Farm Credit Bank of Texas (the “Company”) as of December 31, 2018, 2017 and 2016, and the related statements of comprehensive income, of changes in shareholders’ equity and of cash flows, for each of the three years in the period ended December 31, 2018, 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 each of the three years in the period ended December 31, 2018 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.

***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 1, 2019

We have served as the Company's auditor since at least 2002. We have not been able to determine the specific year we began serving as auditor of the Company.

# Balance Sheets

Farm Credit Bank of Texas

<i>(dollars in thousands)</i>	December 31,		
	2018	2017	2016
<b>Assets</b>			
Cash	\$ 129,478	\$ 56,183	\$ 195,479
Federal funds sold and overnight investments	281,131	246,888	22,901
Investment securities	5,714,638	5,144,985	4,831,375
Loans (includes \$9,345, \$9,908 and \$16,311 at fair value held under fair value option)	18,056,686	17,085,177	15,909,403
Less allowance for loan losses	11,974	7,639	7,650
Net loans	18,044,712	17,077,538	15,901,753
Accrued interest receivable	76,134	58,330	50,191
Premises and equipment, net	72,746	49,405	37,999
Other assets	210,311	203,276	182,700
<b>Total assets</b>	<b>\$ 24,529,150</b>	<b>\$ 22,836,605</b>	<b>\$ 21,222,398</b>
<b>Liabilities and Shareholders' Equity</b>			
<b>Liabilities</b>			
Bonds and notes, net	\$ 22,497,364	\$ 20,951,223	\$ 19,390,662
Accrued interest payable	86,699	63,809	50,255
Reserve for credit losses	1,900	1,433	1,646
Preferred stock dividends payable	21,613	20,063	20,063
Patronage payable	29,561	31,418	29,398
Other liabilities	115,080	100,775	108,122
<b>Total liabilities</b>	<b>22,752,217</b>	<b>21,168,721</b>	<b>19,600,146</b>
<b>Commitments and Contingencies (Note 12)</b>			
<b>Shareholders' Equity</b>			
Preferred stock	700,000	600,000	600,000
Capital stock	316,463	301,239	284,038
Allocated retained earnings	45,685	39,144	33,171
Unallocated retained earnings	796,478	779,403	737,622
Accumulated other comprehensive loss	(81,693)	(51,902)	(32,579)
<b>Total shareholders' equity</b>	<b>1,776,933</b>	<b>1,667,884</b>	<b>1,622,252</b>
<b>Total liabilities and shareholders' equity</b>	<b>\$ 24,529,150</b>	<b>\$ 22,836,605</b>	<b>\$ 21,222,398</b>

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

# Statements of Comprehensive Income

Farm Credit Bank of Texas

<i>(dollars in thousands)</i>	Year Ended December 31,		
	2018	2017	2016
<b>Interest Income</b>			
Loans	\$ 563,495	\$ 462,765	\$ 411,159
Investment securities	127,070	84,755	69,353
<b>Total interest income</b>	<b>690,565</b>	<b>547,520</b>	<b>480,512</b>
<b>Interest Expense</b>			
Bonds and notes	433,729	296,199	242,191
<b>Net Interest Income</b>	<b>256,836</b>	<b>251,321</b>	<b>238,321</b>
Provision (negative provision) for credit losses	4,671	(1,673)	563
Net interest income after provision (negative provision) for credit losses	<b>252,165</b>	<b>252,994</b>	<b>237,758</b>
<b>Noninterest Income</b>			
Patronage income	25,130	26,414	27,504
Fees for services to associations	3,740	3,889	4,355
Fees for loan-related services	9,599	10,944	13,834
Refunds from Farm Credit System Insurance Corporation	8,397	-	-
Loss on loans held under fair value option	(256)	(300)	(418)
Other income, net	940	4,257	5,144
<b>Total noninterest income</b>	<b>47,550</b>	<b>45,204</b>	<b>50,419</b>
<b>Noninterest Expenses</b>			
Salaries and employee benefits	42,091	39,402	37,132
Occupancy and equipment	19,611	17,470	16,489
FCSIC premiums	7,300	11,724	12,671
Loss on other property owned	-	-	439
Other components of net periodic postretirement benefit cost	446	311	298
Other operating expenses	39,737	33,305	28,742
<b>Total noninterest expenses</b>	<b>109,185</b>	<b>102,212</b>	<b>95,771</b>
<b>Net Income</b>	<b>\$ 190,530</b>	<b>\$ 195,986</b>	<b>\$ 192,406</b>
<b>Other comprehensive loss</b>			
Change in postretirement benefit plans	1,788	(1,344)	(323)
Change in unrealized losses on investments	(17,728)	(18,284)	(13,253)
Change in cash flow derivative instruments	(13,851)	305	8,328
<b>Total other comprehensive loss</b>	<b>(29,791)</b>	<b>(19,323)</b>	<b>(5,248)</b>
<b>Comprehensive Income</b>	<b>\$ 160,739</b>	<b>\$ 176,663</b>	<b>\$ 187,158</b>

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

# Statements of Changes In Shareholders' Equity

## Farm Credit Bank of Texas

<i>(dollars in thousands)</i>	Preferred Stock	Capital Stock	Retained Earnings		Accumulated Other Comprehensive Loss	Total Shareholders' Equity
			Allocated	Unallocated		
Balance at December 31, 2015	\$ 600,000	\$ 255,823	\$ 27,203	\$ 697,883	\$ (27,331)	\$ 1,553,578
Net income	-	-	-	192,406	-	192,406
Other comprehensive loss	-	-	-	-	(5,248)	(5,248)
Capital stock and allocated retained earnings issued	-	29,218	-	-	-	29,218
Capital stock and allocated retained earnings retired	-	(1,003)	-	-	-	(1,003)
Preferred stock dividends	-	-	-	(50,250)	-	(50,250)
Patronage distributions						
Cash	-	-	-	(96,449)	-	(96,449)
Shareholders' equity	-	-	5,968	(5,968)	-	-
Balance at December 31, 2016	600,000	284,038	33,171	737,622	(32,579)	1,622,252
Net income	-	-	-	195,986	-	195,986
Other comprehensive loss	-	-	-	-	(19,323)	(19,323)
Capital stock and allocated retained earnings issued	-	18,312	-	-	-	18,312
Capital stock and allocated retained earnings retired	-	(1,111)	-	-	-	(1,111)
Preferred stock dividends	-	-	-	(50,250)	-	(50,250)
Patronage distributions						
Cash	-	-	-	(97,982)	-	(97,982)
Shareholders' equity	-	-	5,973	(5,973)	-	-
Balance at December 31, 2017	600,000	301,239	39,144	779,403	(51,902)	1,667,884
Net income	-	-	-	190,530	-	190,530
Other comprehensive loss	-	-	-	-	(29,791)	(29,791)
Capital stock and allocated retained earnings issued	-	29,675	-	-	-	29,675
Capital stock and allocated retained earnings retired	-	(14,451)	-	-	-	(14,451)
Preferred stock issued	100,000	-	-	-	-	100,000
Issuance cost on preferred stock	-	-	-	(1,334)	-	(1,334)
Preferred stock dividends	-	-	-	(54,727)	-	(54,727)
Patronage distributions						
Cash	-	-	-	(110,853)	-	(110,853)
Shareholders' equity	-	-	6,541	(6,541)	-	-
<b>Balance at December 31, 2018</b>	<b>\$ 700,000</b>	<b>\$ 316,463</b>	<b>\$ 45,685</b>	<b>\$ 796,478</b>	<b>\$ (81,693)</b>	<b>\$ 1,776,933</b>

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

# Statements of Cash Flows

Farm Credit Bank of Texas

<i>(dollars in thousands)</i>	Year Ended December 31,		
	2018	2017	2016
<b>Cash Flows From Operating Activities</b>			
Net income	\$ 190,530	\$ 195,986	\$ 192,406
Reconciliation of net income to net cash provided by operating activities			
Provision (negative provision) for credit losses	4,671	(1,673)	563
Loss on sales of other property owned	-	-	439
Depreciation and amortization on premises and equipment	8,005	6,930	6,048
Amortization of net premium on loans	109	2,514	4,681
Amortization and accretion on debt instruments	41,975	26,208	14,755
Accretion of net premium on investments	1,722	5,518	3,711
Decrease in fair value of loans held under fair value option	258	300	418
Loss (gain) on sale of loans	106	(3,575)	(4,867)
Allocated equity patronage from System bank	(14,789)	(14,583)	(13,847)
(Gain) loss on other earning assets	2,684	(305)	240
(Gain) loss on sales of premises and equipment	(77)	(60)	(4)
Increase in accrued interest receivable	(17,804)	(8,139)	(2,375)
Decrease (increase) in other assets, net	10,363	(279)	(26,614)
Increase in accrued interest payable	22,890	13,555	5,489
(Decrease) increase in other liabilities, net	(6,518)	(1,027)	27,789
<b>Net cash provided by operating activities</b>	<b>244,125</b>	<b>221,370</b>	<b>208,832</b>
<b>Cash Flows From Investing Activities</b>			
Net increase in federal funds sold	(34,243)	(223,988)	(488)
Investment securities			
Purchases	(1,932,968)	(1,498,827)	(1,565,888)
Proceeds from maturities, calls and prepayments	1,343,864	1,161,416	1,162,654
Increase in loans, net	(1,066,881)	(1,209,906)	(1,306,619)
Proceeds from sale of loans	101,897	28,657	163,839
Proceeds from sale of premises and equipment	183	126	14
Expenditures for premises and equipment	(31,452)	(18,402)	(16,222)
Distributions in excess of cumulative equity earnings	271	224	424
Investment in other earning assets	(3,388)	(4,934)	(3,663)
<b>Net cash used in investing activities</b>	<b>(1,622,717)</b>	<b>(1,765,634)</b>	<b>(1,565,949)</b>
<b>Cash Flows From Financing Activities</b>			
Bonds and notes issued	14,511,288	11,863,920	19,670,304
Bonds and notes retired	(13,007,268)	(10,331,274)	(18,513,323)
Redemption of subordinate debt	-	-	(50,000)
Prepayments on debt extinguishment costs	146	1,708	12,398
Preferred stock issued	100,000	-	-
Issuance costs on preferred stock	(1,334)	-	-
Repayments on capital lease obligation	(281)	(374)	(374)
Capital stock issued	29,675	18,312	29,218
Capital stock retired and allocated retained earnings distributed	(14,451)	(1,111)	(1,003)
Cash dividends on preferred stock	(53,177)	(50,250)	(50,250)
Cash patronage distributions paid	(112,711)	(95,963)	(89,464)
<b>Net cash provided by financing activities</b>	<b>1,451,887</b>	<b>1,404,968</b>	<b>1,007,506</b>
Net increase (decrease) in cash	73,295	(139,296)	(349,611)
Cash at beginning of year	56,183	195,479	545,090
<b>Cash at End of Year</b>	<b>\$ 129,478</b>	<b>\$ 56,183</b>	<b>\$ 195,479</b>
<b>Supplemental Schedule of Noncash Investing and Financing Activities</b>			
Net decrease in unrealized gains on investment securities	(17,729)	(18,284)	(13,253)
Preferred stock dividends payable	21,613	20,063	20,063
Patronage distributions cash payable	29,561	31,418	29,398
Patronage distribution stock	6,541	5,973	5,968
Capital lease obligation	-	281	655
<b>Supplemental Disclosure of Cash Flow Information</b>			
Interest paid	\$ 410,839	\$ 282,645	\$ 236,702

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



# Notes to Financial Statements

## Farm Credit Bank of Texas

(dollars in thousands, except per share amounts and as otherwise noted)

### Note 1 — Organization and Operations

#### A. Organization:

The Farm Credit Bank of Texas (FCBT or bank) is one of the banks of the Farm Credit System (System), a nationwide system of cooperatively owned banks and associations established by acts of Congress. The System is subject to the provisions of the Farm Credit Act of 1971, as amended (Farm Credit Act). The System specializes in providing financing and related services to qualified borrowers for agricultural and rural purposes.

As of December 31, 2018, the nation was served by three Farm Credit Banks (FCBs), each of which has specific lending authority within its chartered territory, and one Agricultural Credit Bank (ACB) — collectively, the “System banks” — which has nationwide lending authority for lending to cooperatives. The ACB also has the lending authorities of an FCB within its chartered territories. The bank is chartered to serve the states of Alabama, Louisiana, Mississippi, New Mexico and Texas.

Each FCB and the ACB serve one or more Federal Land Credit Associations (FLCAs) and/or Agricultural Credit Associations (ACAs). The bank and its related associations collectively are referred to as the Farm Credit Bank of Texas and affiliated associations (district). The district’s one FLCA, 13 ACA parent associations, each containing two wholly-owned subsidiaries (an FLCA and a Production Credit Association [PCA]), certain Other Financing Institutions (OFIs) and preferred stockholders jointly owned the bank at December 31, 2018. The FLCA and ACAs collectively are referred to as associations.

Each FCB and the ACB provides funding for its district associations and is responsible for supervising the activities of the associations within its district. The FCBs and/or associations make loans to or for the benefit of eligible borrower-stockholders for qualified agricultural and rural purposes. District associations borrow the majority of their funds from their related bank. The System banks obtain a substantial majority of funds for their lending operations through the sale of consolidated Systemwide bonds and notes to the public, but also obtain a portion of their funds from internally generated earnings, from the issuance of common and preferred stock.

The Farm Credit Administration (FCA) is delegated authority by Congress to regulate the bank 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.

#### B. Operations:

The Farm Credit Act sets forth the types of authorized lending activities and financial services which can be offered by the bank and defines the eligible borrowers which it may serve.

The bank lends primarily to the district associations in the form of revolving lines of credit (direct notes) to fund the associations’ loan portfolios. These direct notes are collateralized by a pledge of substantially all of each association’s assets. The terms of the revolving direct notes are governed by a general financing agreement between the bank and each association. Each advance is structured so 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, the interest rate risk is effectively transferred to the bank. Advances are also made to fund general operating expenses of the associations. The FLCA borrows money from the bank and, in turn, originates and services long-term real estate and agribusiness loans to their members. ACAs borrow from the bank and in turn originate and service long-term mortgage loans through the FLCA subsidiary and short- and intermediate-term loans through the PCA subsidiary. The OFIs borrow from the bank and in turn originate and service short- and intermediate-term loans to their members. An association’s indebtedness to the bank, under a general financing agreement between the bank and the association, represents demand borrowings by the association to fund the majority, but not all, of its loan advances to association member-borrowers.

In addition to providing loan funds to district associations, the bank also provides banking and support services to them, such as accounting, information systems, human resources and marketing. The fees charged by the bank for these services are included in the bank’s noninterest income.

The bank is also authorized to provide, in participation with other lenders, 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 qualifying financial institutions engaged in lending to eligible borrowers.

The bank, in conjunction with other banks in the System, jointly owns several service organizations which were created to provide a variety of services for the System. The bank has ownership interests in the following service organizations:

- 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.
- Farm Credit System Building Association — leases premises and equipment to the FCA, as required by the Farm Credit Act.
- Farm Credit System Association Captive Insurance Company — as 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.

The Farm Credit Act also established the Farm Credit System Insurance Corporation (FCSIC) to administer the Insurance Fund. The Insurance Fund is required to be used to (1) insure the timely payment of principal and interest on Systemwide debt obligations (insured debt), (2) 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 the discretionary uses, by FCSIC, of providing assistance to certain troubled System institutions and to cover the operating expenses of FCSIC. Each System bank is required to pay premiums, which may be passed on to the associations, into the Insurance Fund based on its annual average adjusted outstanding insured debt until the assets in the Insurance Fund reach the “secure base amount,” which 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 FCSIC in its sole discretion determines to be actuarially sound. When the amount in the Insurance Fund exceeds the secure base amount, FCSIC is required to reduce premiums and may return excess funds above the secure base amount to System institutions.

## 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 notes as applicable.

The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent liabilities at the date of the financial statements. Actual results could differ from those estimates. Material estimates that are particularly susceptible to significant change in the near term relate to the determination of the allowance for loan losses, the determination of fair value of financial instruments and subsequent impairment analysis.

Certain amounts in prior years’ financial statements have been reclassified to conform to the current year’s presentation.

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.

The multiemployer structure of certain retirement and benefit plans of the district results in the recording of these plans only in the combined financial statements of the district.

### A. Cash:

Cash, as included in the financial statements, represents cash on hand and on deposit at banks and the Federal Reserve.

### B. Investment Securities and Federal Funds:

The bank, as permitted under FCA regulations, holds eligible investments for the purposes of maintaining a liquidity reserve, managing short-term surplus funds and managing interest rate risk.

The bank’s investments are to be held for an indefinite time period and, accordingly, have been classified as available for sale at December 31, 2018, 2017 and 2016. These investments are reported at fair value, and unrealized holding gains and losses on investments are netted and reported as a separate component of members’ equity in the balance sheet (accumulated other comprehensive gain [loss]). Changes in the fair value of these investments are reflected as direct charges or credits to other comprehensive income, unless the investment is deemed to be other-than-temporarily impaired. 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. 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 an entity 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 should be recognized currently in earnings in an amount equal to the entire difference between fair value and amortized cost. If a credit loss exists, but an entity 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 should be 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 recognized currently in earnings, with the remainder of the loss amount recognized in other comprehensive income. In subsequent periods, if the present value of cash flows expected to be collected is less than the amortized cost basis, the bank would record an additional other-than-temporarily impaired and adjust the yield of the security prospectively. The amount of total other-than-temporarily impaired for an available-for-sale security that previously was impaired is determined as the difference between its carrying amount prior to the determination of other-than-temporarily impaired and its fair value. Gains and losses on the sales of investments available-for-sale are determined using the specific identification method. Premiums and discounts are amortized or accreted into interest income over the term of the respective issues. The bank does not hold investments for trading purposes.

The bank may also hold additional investments in accordance with mission-related investment programs, approved by the Farm Credit Administration. These programs allow the bank to make investments that further the System’s mission to serve rural America. Mission-related investments are not included in the bank’s liquidity calculations and are not covered by the eligible investment limitations specified by the FCA regulations. Mortgage-backed securities issued by the Federal Agricultural

Mortgage Corporation (Farmer Mac) are considered other investments in the available-for-sale portfolio and are also excluded from the limitation and the bank's liquidity calculations.

The bank is a limited partner in certain Rural Business Investment Companies (RBICs) for various relationship and strategic reasons. These RBICs facilitate equity and debt investments in agriculture-related businesses that create growth and job opportunities in rural America. These investments are accounted for under the equity method as the bank is considered to have significant influence.

The bank's holdings in investment securities are more fully described in Note 3, "Investment Securities."

### C. Loans and Reserves for Credit Losses:

Long-term real estate mortgage loans can have maturities ranging from five to 40 years. Substantially all short-term and intermediate-term loans are made for agricultural production or operating purposes and have maturities of 10 years or less.

Loans are carried at their principal amount outstanding adjusted for charge-offs and any unearned income or unamortized premium or discount. Interest on loans is accrued and credited to interest income based on the daily principal amount outstanding. Funds which are held by the bank on behalf of the borrowers, where legal right of setoff exists and which can be used to reduce outstanding loan balances at the bank's discretion, are netted against loans in the balance sheet.

Loan origination fee income and direct loan origination costs are capitalized and the net fee or cost is amortized over the life of the related loans as an adjustment to yield.

Impaired loans are loans for which it is probable that not all principal and interest will 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, accrual 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 shall remain contractually past due until it is formally restructured or 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 restructured loan constitutes a troubled debt restructuring if for economic or legal reasons related to the debtor's financial difficulties the bank or association grants a concession to the debtor that it would not otherwise consider. A concession is generally granted in order to minimize the bank's economic loss and avoid foreclosure. Concessions vary by program, are borrower-specific and may include interest rate reductions, term extensions, payment deferrals or the acceptance of additional collateral in lieu of payments. In limited circumstances, principal may be forgiven. A loan restructured in a troubled debt restructuring is an impaired loan.

Impaired loans are generally placed in nonaccrual status when principal or interest is delinquent for 90 days (unless adequately secured and in the process of collection) or circumstances indicate that full collection of principal and interest is in doubt. In accordance with FCA regulations, all loans 180 days or more past due are considered nonaccrual. When a loan is placed in nonaccrual status, accrued interest that is considered uncollectible is either reversed (if current year interest) or charged against the allowance for loan losses (if prior year interest). Loans are charged off at the time they are determined to be uncollectible.

Payments received on nonaccrual loans are generally applied to 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, payments are recognized as interest income. Nonaccrual loans may be returned to accrual status when contractual principal and interest are current, the borrower has demonstrated payment performance, there are no unrecovered prior charge-offs and collection of future payments is no longer in doubt. If previously unrecognized interest income exists at the time the loan is transferred to accrual status, cash received at the time of or subsequent to the transfer is first recorded as interest income until such time as the recorded balance equals the contractual indebtedness of the borrower.

The bank and related associations use a two-dimensional loan rating model based on an 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 probability of default 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 more rapidly as a loan moves from a "9" to other assets especially mentioned and grows significantly as a loan moves to a substandard (viable) level. A substandard (nonviable) rating indicates that the probability of default is almost certain.

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 allowance for loan losses is a valuation account used to reasonably estimate loan and lease 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 determination of the allowance for loan losses is based on management's current judgments about the credit quality of its loan portfolio. A specific allowance may be established for impaired loans under authoritative accounting guidance. Impairment of these loans is measured based on the present value of expected future cash flows discounted at the loan's effective interest rate or, as practically expedient, at the loan's observable market price or fair value of the collateral if the loan is collateral-dependent.

The allowance for loan losses encompasses various judgments, evaluations and appraisals with respect to the loans and their underlying security that, by their nature, contain elements of uncertainty and imprecision. Changes in the agricultural economy and their impact on borrower repayment capacity will cause these various judgments, evaluations and appraisals to change over time. The allowance is increased through provisions for loan losses and loan recoveries and is decreased through reversals of provisions for loan losses and loan charge-offs. The level of allowance for loan losses is generally based on recent charge-off experience adjusted for relevant environmental factors. The allowance for loan losses includes components for loans individually evaluated for impairment, loans collectively evaluated for impairment and loans acquired with deteriorated credit quality. Generally, for loans individually evaluated, the allowance for loan losses represents the difference between the recorded investment in the loan and the present value of the cash flows expected to be collected discounted at the loan's effective interest rate, or at the fair value of the collateral, if the loan is collateral-dependent. For those loans collectively evaluated for impairment, the allowance for loan losses is determined using the risk-rating model.

#### D. Other Property Owned:

Other property owned (OPO), consisting of real and personal property acquired through foreclosure or deed in lieu of foreclosure, is recorded at fair value, based on appraisal, less estimated selling costs upon acquisition. 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. On at least an annual basis, revised estimates to the fair value, established by appraisal, 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 and expenses from operations and carrying value adjustments are included in losses (gains) on OPO.

#### E. Premises and Equipment:

Premises and equipment are carried at cost less accumulated depreciation. Depreciation expense is calculated using the straight-line method over the estimated useful lives of three to 10 years for furniture, equipment and certain leasehold improvements, and three years for automobiles. Computer software and hardware are amortized over three to 10 years. Gains and losses on dispositions are reflected in current operations. Maintenance and repairs are charged to operating expense, and improvements

are capitalized and amortized over the remaining useful life of the asset.

#### F. Other Assets and Other Liabilities:

The bank is authorized under the Farm Credit Act to accept "advance conditional payments" (ACPs) from borrowers. To the extent the borrower's access to such ACPs is restricted and the legal right of setoff exists, the ACPs are netted against the borrower's related loan balance. Unrestricted advance conditional payments are included in other liabilities. ACPs are not insured, and interest is generally paid by the bank on such balances. There were no significant balances of ACPs at December 31, 2018, 2017 and 2016.

Derivative financial instruments are included on the balance sheet at fair value, as either other assets or other liabilities.

#### G. Employee Benefit Plans:

Employees of the bank participate in one of two districtwide retirement plans (a defined benefit plan and a defined contribution plan) and are eligible to participate in the 401(k) plan of the district. Within the 401(k) plan, a certain percentage of employee contributions is matched by the bank. The 401(k) plan costs are expensed as incurred. Additionally, certain qualified individuals in the bank may participate in a separate, nonqualified 401(k) plan.

The structure of the district's defined benefit plan (DB plan) is characterized as multiemployer, since neither the assets, liabilities nor cost of the plan is segregated or separately accounted for by participating employers (bank and associations). No portion of any surplus assets is available to any participating employer. Participating employers are jointly and severally liable for the plan obligations. Upon withdrawal or termination of their participation in the plan, a participating employer must pay all associated costs of its withdrawal from the plan, including its unfunded liability (the difference between replacement annuities and the withdrawing employer's share of allocated plan assets). As a result, participating employers of the plan only recognize as cost the required contributions for the period and a liability for any unpaid contributions required for the period of their financial statements. Plan obligations, assets and the components of annual benefit expenses are recorded and reported upon combination at the district level only. The bank records current contributions to the DB plan as an expense in the current year.

In addition to pension benefits, the bank provides certain health-care benefits to qualifying retired employees (other postretirement benefits). These benefits are not characterized as multi-employer and, consequently, the liability for these benefits is included in other liabilities. Bank employees hired after January 1, 2004, will be eligible for retiree medical benefits for themselves and their spouses but will be responsible for 100 percent of the related premiums.

Authoritative accounting guidance requires the accrual of the expected cost of providing postretirement benefits other than pensions (primarily health-care benefits) to an employee and an employee's beneficiaries and covered dependents during the years that the employee renders service necessary to become eligible for these benefits.

## H. Income Taxes:

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

## I. Derivative Instruments and Hedging Activity:

In the normal course of business, the bank may enter into derivative financial instruments, including interest rate swaps and caps, which are principally used to manage interest rate risk on assets, liabilities and anticipated transactions. Derivatives are recorded on the balance sheet as assets and liabilities, measured at fair value.

In accordance with authoritative accounting guidance, for fair-value hedge transactions, which hedge 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. For cash flow hedges, which hedge the exposure to variability in expected future cash flows, changes in the fair value of the derivative will generally be offset by an entry to accumulated other comprehensive income in shareholders' equity. 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 to specific liabilities on the balance sheet. The bank may use interest rate swaps whose critical terms match the corresponding hedged item, thereby qualifying for short-cut treatment under the provisions of authoritative accounting guidance, and are presumed to be highly effective in offsetting changes in the fair value. The bank would discontinue hedge accounting prospectively if it was determined that a hedge has not been or is not expected to be effective as a hedge. In the event that hedge accounting were discontinued and the derivative remained outstanding, the bank would carry the derivative at its fair value on the balance sheet, recognizing changes in fair value in current period earnings. See Note 15, "Derivative Instruments and Hedging Activity," for additional disclosures about derivative instruments.

## J. Fair Value Measurements:

The Financial Accounting Standards Board (FASB) guidance defines fair value, establishes a framework for measuring fair value and expands disclosures about fair value measurements.

It describes three levels of inputs that may be used to measure fair value:

**Level 1** — Quoted prices in active markets for identical assets or liabilities that the reporting entity has the ability to access at the measurement date. Included in Level 1 are assets held in trust funds, which relate to deferred compensation. The trust funds include investments that are actively traded and have quoted net asset values that are observable in the marketplace.

**Level 2** — Observable inputs other than quoted prices included within Level 1 that are observable for the asset or liability either directly or indirectly. Level 2 inputs include the following: (a) quoted prices for similar assets or liabilities in active markets; (b) quoted prices for identical or similar assets or liabilities in markets that are not active so that they are traded less frequently than exchange-traded instruments, the prices are not current or

principal market information is not released publicly; (c) inputs other than quoted prices that are observable such as interest rates and yield curves, prepayment speeds, credit risks and default rates; and (d) inputs derived principally from or corroborated by observable market data by correlation or other means. This category generally includes certain U.S. government and agency mortgage-backed debt securities, corporate debt securities and derivative contracts. The market value of collateral assets and liabilities is their face value, plus accrued interest, as these instruments are cash balances; therefore, fair value approximates face value.

**Level 3** — Unobservable inputs are those that are supported by little or no market activity and that are significant to the determination of the fair value of the assets or liabilities. These unobservable inputs reflect the reporting entity's own assumptions about assumptions that market participants would use in pricing the asset or liability. Level 3 assets and liabilities include financial instruments whose value is determined using pricing models, discounted cash flow methodologies, or similar techniques, as well as instruments for which the determination of fair value requires significant management judgment or estimation. This category generally includes the bank's Federal Agricultural Mortgage Corporation (Farmer Mac) guaranteed agricultural mortgage-backed securities (AMBS), certain loans and OPO.

The fair value disclosures are presented in Note 14, "Fair Value Measurements."

## K. Recently Issued or Adopted Accounting Pronouncements:

In August 2018, the Financial Accounting Standards Board (FASB) issued guidance entitled "Customer's Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Cost." The guidance aligns 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 this guidance. This guidance becomes effective for interim and annual periods beginning after December 15, 2019. The guidance also requires an entity (customer) to expense the capitalized implementation costs of a hosting arrangement that is a service contract over the term of the hosting arrangement. It further specifies where to present expense and payments in the financial statements. Early adoption is permitted. The guidance is to be applied on a retrospective or prospective basis to all implementation costs incurred after the date of adoption. The bank is evaluating the impact of adoption on the bank's financial condition and its results of operations.

In August 2018, the FASB issued guidance entitled "Disclosure Framework — Changes to the Disclosure Requirements for Defined Benefit Plans." The guidance modifies the disclosure requirements for employers that sponsor defined benefit pen-

sion or other postretirement plans. This guidance becomes effective for fiscal years ending after December 15, 2020. Early adoption is permitted. The guidance is to be applied on a retrospective basis for all periods. The bank is evaluating the impact of adoption on the bank's financial condition and its results of operations.

In August 2018, the FASB issued guidance entitled "Disclosure Framework — Changes to the Disclosure Requirements for Fair Value Measurement." The guidance modifies the requirements on fair value measurements by removing, modifying or adding to the disclosures. This guidance becomes effective for interim and annual periods beginning after December 15, 2019. Early adoption is permitted and an entity is permitted to early adopt any removal or modified disclosures and delay adoption of the additional disclosures until their effective date. The bank is evaluating the impact of adoption on the bank's financial condition and its results of operations.

In February 2018, the FASB issued guidance entitled "Income Statement — Reporting Comprehensive Income — Reclassification of Certain Tax Effects from Accumulated Other Comprehensive Income." This guidance allows for the reclassification from accumulated other comprehensive income to retained earnings for stranded tax effects resulting from the recently issued tax legislation, Tax Cuts and Jobs Act (TCJA), that lowered the federal corporate tax rate from 35 percent to 21 percent. The amount of the reclassification shall include the effect of the change in the tax rate on gross deferred tax amounts and related valuation allowances at the date of enactment of the TCJA related to items remaining in accumulated other comprehensive income. The guidance becomes effective for financial statements issued for fiscal years beginning after December 15, 2018, and interim periods within those fiscal years. The bank is exempt from federal and certain other income taxes as provided by the Farm Credit Act of 1971. Thus, the new standard had no impact on the bank's financial results.

In August 2017, the FASB issued guidance entitled "Targeted Improvements to Accounting for Hedging Activities." The guidance better aligns an entity's risk management activities and financial reporting for hedging relationships through changes to both the designation and measurement guidance for qualifying hedging relationships and the presentation of hedge results. The amendments in this guidance require an entity to present the earnings effect of the hedging instrument in the same income statement line item in which the earnings effect of the hedged item is reported. This guidance also addresses the timing of effectiveness testing, qualitative and quantitative effectiveness testing, and components that can be excluded from effectiveness testing. This guidance becomes effective for interim and annual periods beginning after December 15, 2018. The bank does not expect an impact on the bank's balance sheet or income statement as the bank is already reporting in compliance with the guidance.

In March 2017, the FASB issued guidance entitled "Improving the Presentation of Net Periodic Pension Cost and Net Periodic Postretirement Cost." The guidance requires that an

employer report the service cost component in the same line item or items as other compensation costs arising from services rendered by the pertinent employees during the period. Other components are required to be presented in the income statement separately from the service cost component and outside a subtotal of income from operations, if one is presented. This guidance became effective for interim and annual periods beginning after December 15, 2017. The adoption of this guidance did not impact the bank's financial condition but did change the classification of certain items in the results of operations.

In August 2016, the FASB issued guidance entitled "Classification of Certain Cash Receipts and Cash Payments." The guidance addresses specific cash flow issues with the objective of reducing the diversity in the classification of these cash flows. Included in the cash flow issues are debt repayment or debt extinguishment costs and settlement of zero-coupon debt instruments or other debt instruments with coupon interest rates that are insignificant in relation to the effective interest rate of the borrowing. This guidance became effective for interim and annual periods beginning after December 15, 2017. The adoption of this guidance did not materially impact the bank's financial condition or its results of operations but did change the classification of certain items in the statement of cash flows.

In June 2016, the FASB issued guidance entitled "Measurement of Credit Losses on Financial Instruments." The guidance replaces the current incurred loss impairment methodology with a methodology that reflects expected credit losses and requires consideration of a broader range of reasonable and supportable information to inform credit loss estimates. Credit losses relating to available-for-sale securities would also be recorded through an allowance for credit losses. For public business entities that are not U.S. Securities and Exchange Commission filers, this guidance becomes effective for interim and annual periods beginning after December 15, 2020, with early application permitted. The bank is evaluating the impact of adoption on the bank's financial condition and its results of operations.

In February 2016, the FASB issued guidance entitled "Leases." This guidance is intended to improve financial reporting about leasing transactions and affects all organizations that lease assets. The guidance will require organizations that lease assets, referred to as lessees, to recognize on the balance sheet the assets and liabilities for the rights and obligations created by those leases. The accounting for organizations that own the assets leased by the lessee, also known as lessor accounting, will remain largely unchanged from current GAAP. In July 2018, the FASB issued additional guidance which allows entities a new and optional transition method. Under this transition method, an entity initially applies the leasing standard at the adoption date and recognizes a cumulative-effect adjustment to opening retained earnings. The leasing standard and this additional guidance became effective for interim and annual periods beginning after December 15, 2018, and early application is permitted. Based on the bank's review and analysis, the new lease accounting guidance will have an insignificant impact on

the bank's financial condition and results of operations, and will have no impact on the bank's statement of cash flows.

In January 2016, the FASB issued guidance entitled "Recognition and Measurement of Financial Assets and Liabilities." The guidance affects, among other things, the presentation and disclosure requirements for financial instruments. For public entities, the guidance eliminates the requirement to disclose the methods and significant assumptions used to estimate the fair value of financial instruments carried at amortized cost. This guidance became effective for interim and annual periods beginning after December 15, 2017. The adoption of this guidance did not impact the bank's financial condition or its results of operations.

In May 2014, the FASB issued guidance entitled, "Revenue from Contracts with Customers." The guidance governs revenue recognition from contracts with customers and requires an entity to recognize revenue to depict the transfer of promised goods or services to customers in an amount that reflects the consideration to which the entity expects to be entitled in exchange for those goods or services. Financial instruments and other contractual rights within the scope of other guidance issued by the FASB are excluded from the scope of this new revenue recognition guidance. The guidance sets forth the requirement for new and enhanced disclosures. In this regard, a majority of our contracts would be excluded from the scope of this new guidance. The new revenue standard became effective for interim and annual reporting periods beginning after December 15, 2017. The adoption of the guidance did not materially impact the bank's financial condition or results of operations and will not change its current recognition practices.

#### L. Off-Balance-Sheet Credit Exposures:

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. Commercial letters of credit are conditional 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 the third party. The credit risk associated with commitments to extend credit and commercial 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.

#### Note 3 — Investment Securities

The bank's available-for-sale investments include a liquidity portfolio and a portfolio of other investments. The liquidity portfolio consists primarily of agency-guaranteed debt instruments, mortgage-backed investments, U.S. Treasury securities, asset-backed investments and corporate debt. The bank's other investments portfolio consists of Federal Agricultural Mortgage Corporation (Farmer Mac) guaranteed agricultural mortgage-backed securities (AMBS)

purchased from district associations in 2010, 2012 and 2014, as a part of the bank's Capitalized Participation Pool (CPP) program. In accordance with this program, any positive impact to the net income of the bank can be returned as patronage to the association if declared by the bank's board of directors. The declared patronage approximates the net earnings of the respective pool. The Farmer Mac securities are backed by loans originated by the associations and previously held by the associations under the Farmer Mac long-term standby commitments to purchase agreements.

Investments in the available-for-sale liquidity portfolio at December 31:

	2018				
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value	Weighted Average Yield
Agency-guaranteed debt	\$ 170,800	\$ 96	\$ (2,973)	\$ 167,923	2.23%
Corporate debt	365,382	51	(1,896)	363,537	2.84
Federal agency collateralized mortgage-backed securities:					
GNMA	2,671,043	5,172	(45,220)	2,630,995	2.74
FNMA and FHLMC	2,157,582	2,124	(29,570)	2,130,136	2.47
U.S. Treasury securities	298,300	28	(245)	298,083	2.38
Asset-backed securities	88,292	42	(77)	88,257	2.72
<b>Total liquidity investments</b>	<b>\$ 5,751,399</b>	<b>\$ 7,513</b>	<b>\$ (79,981)</b>	<b>\$ 5,678,931</b>	<b>2.61%</b>

	2017				
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value	Weighted Average Yield
Agency-guaranteed debt	\$ 198,246	\$ 30	\$ (3,028)	\$ 195,248	1.94%
Corporate debt	252,482	556	(429)	252,609	1.84
Federal agency collateralized mortgage-backed securities:					
GNMA	2,012,484	706	(28,528)	1,984,662	1.99
FNMA and FHLMC	2,395,248	2,061	(25,256)	2,372,053	1.91
U.S. Treasury securities	249,860	-	(653)	249,207	0.90
Asset-backed securities	47,914	18	(43)	47,889	1.61
<b>Total liquidity investments</b>	<b>\$ 5,156,234</b>	<b>\$ 3,371</b>	<b>\$ (57,937)</b>	<b>\$ 5,101,668</b>	<b>1.88%</b>

	2016				
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value	Weighted Average Yield
Agency-guaranteed debt	\$ 225,457	\$ 160	\$ (3,243)	\$ 222,374	1.80%
Corporate debt	202,365	461	(423)	202,403	1.41
Federal agency collateralized mortgage-backed securities:					
GNMA	1,697,627	1,452	(16,080)	1,682,999	1.61
FNMA and FHLMC	2,308,775	2,026	(20,222)	2,290,579	1.47
U.S. Treasury securities	249,502	-	(496)	249,006	0.90
Asset-backed securities	130,703	19	(43)	130,679	1.10
<b>Total liquidity investments</b>	<b>\$ 4,814,429</b>	<b>\$ 4,118</b>	<b>\$ (40,507)</b>	<b>\$ 4,778,040</b>	<b>1.49%</b>

Investments in the available-for-sale other investments portfolio at December 31:

	2018				
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value	Weighted Average Yield
Agricultural mortgage-backed securities	\$ 37,781	\$ -	\$ (2,074)	\$ 35,707	4.90%
	2017				
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value	Weighted Average Yield
Agricultural mortgage-backed securities	\$ 45,564	\$ -	\$ (2,247)	\$ 43,317	4.46%
	2016				
	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value	Weighted Average Yield
Agricultural mortgage-backed securities	\$ 55,475	\$ -	\$ (2,140)	\$ 53,335	4.23%

There were no investments in the held-to-maturity portfolio at December 31, 2018, December 31, 2017 or December 31, 2016.

A summary of contractual maturity, amortized cost, estimated fair value and weighted average yield of the available-for-sale liquidity portfolio at December 31, 2018:

	Due in One Year Or Less	Due After One Year Through Five Years	Due After Five Years Through 10 Years	Due After 10 Years	Total
Agency-guaranteed debt	\$ -	\$ 14,724	\$ 153,199	\$ -	\$ 167,923
Corporate debt	60,227	303,310	-	-	363,537
Federal agency collateralized mortgage-backed securities					
GNMA	-	-	77,269	2,553,726	2,630,995
FNMA and FHLMC	2	87,087	410,038	1,633,009	2,130,136
U.S. Treasury securities	298,083	-	-	-	298,083
Asset-backed securities	7,750	78,851	1,656	-	88,257
Total fair value	\$ 366,062	\$ 483,972	\$ 642,162	\$ 4,186,735	\$ 5,678,931
Total amortized cost	\$ 366,336	\$ 487,244	\$ 654,032	\$ 4,243,787	\$ 5,751,399
Weighted average yield	2.47%	2.63%	2.27%	2.67%	2.61%

Collateralized mortgage obligations (CMOs) have stated contractual maturities in excess of 15 years. However, the security structure of the CMOs is designed to produce a relatively short-term life. At December 31, 2018, the CMO portfolio had a weighted average remaining life of 3.4 years.

Investments in the available-for-sale other investments portfolio at December 31, 2018:

	Due After One Year Through Five Years	Due After Five Years Through 10 Years	Total
	Fair value of agricultural mortgage-backed securities	\$ 14,328	\$ 21,379
Total amortized cost	\$ 15,103	\$ 22,678	\$ 37,781
Weighted average yield	4.71%	5.03%	4.90%

The ratings of the eligible investments held for maintaining a liquidity reserve, managing short-term surplus funds and managing interest rate risk must meet the applicable regulatory guidelines, which require these securities to be high-quality and senior class at the time of purchase.

To achieve the ratings, these securities have a guarantee of timely payment of principal and interest or credit enhancement achieved through overcollateralization and the priority of payments of senior classes over junior classes. The bank performs analysis based on expected behavior of the loans, whereby these loan performance scenarios are applied against each security's credit-support structure to monitor credit-enhancement sufficiency to protect the investment. The model output includes projected cash flows, including any shortfalls in the capacity of the underlying collateral to fully return the original investment, plus accrued interest.

If an investment no longer meets the credit rating criteria, the investment becomes ineligible. At December 31, 2018, the bank held no investments that were ineligible for liquidity purposes by FCA standards.

The following table shows the fair value and gross unrealized losses for investments in a loss position aggregated by investment category, and the length of time the securities have been in a continuous unrealized loss position. The continuous loss position is based on the date the impairment occurred.

	December 31, 2018					
	Less Than 12 Months		Greater Than 12 Months		Total	
	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses
Agency-guaranteed debt	\$ 12,571	\$ (76)	\$ 121,927	\$ (2,898)	\$ 134,498	\$ (2,974)
Corporate debt	274,317	(1,082)	39,219	(813)	313,536	(1,895)
Federal agency collateralized mortgage-backed securities						
GNMA	312,108	(2,000)	1,407,873	(43,220)	1,719,981	(45,220)
FNMA and FHLMC	239,890	(687)	1,332,521	(28,883)	1,572,411	(29,570)
U.S. Treasury securities	248,732	(245)	-	-	248,732	(245)
Asset-backed securities	51,411	(74)	3,027	(3)	54,438	(77)
<b>Total</b>	<b>\$ 1,139,029</b>	<b>\$ (4,164)</b>	<b>\$ 2,904,567</b>	<b>\$ (75,817)</b>	<b>\$ 4,043,596</b>	<b>\$ (79,981)</b>

	December 31, 2017					
	Less Than 12 Months		Greater Than 12 Months		Total	
	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses
Agency-guaranteed debt	\$ 68,088	\$ (460)	\$ 112,869	\$ (2,568)	\$ 180,957	\$ (3,028)
Corporate debt	64,635	(427)	14,998	(2)	79,633	(429)
Federal agency collateralized mortgage-backed securities						
GNMA	848,826	(9,518)	880,604	(19,010)	1,729,430	(28,528)
FNMA and FHLMC	692,020	(5,917)	1,045,992	(19,339)	1,738,012	(25,256)
U.S. Treasury securities	-	-	249,207	(653)	249,207	(653)
Asset-backed securities	28,999	(42)	2,072	(1)	31,071	(43)
<b>Total</b>	<b>\$ 1,702,568</b>	<b>\$ (16,364)</b>	<b>\$ 2,305,742</b>	<b>\$ (41,573)</b>	<b>\$ 4,008,310</b>	<b>\$ (57,937)</b>

	December 31, 2016					
	Less Than 12 Months		Greater Than 12 Months		Total	
	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses
Agency-guaranteed debt	\$ 97,764	\$ (1,380)	\$ 89,055	\$ (1,863)	\$ 186,819	\$ (3,243)
Corporate debt	14,993	(3)	27,098	(420)	42,091	(423)
Federal agency collateralized mortgage-backed securities						
GNMA	1,019,022	(8,613)	399,310	(7,467)	1,418,332	(16,080)
FNMA and FHLMC	1,343,532	(14,666)	511,743	(5,556)	1,855,275	(20,222)
U.S. Treasury securities	249,006	(496)	-	-	249,006	(496)
Asset-backed securities	47,705	(39)	8,649	(4)	56,354	(43)
<b>Total</b>	<b>\$ 2,772,022</b>	<b>\$ (25,197)</b>	<b>\$ 1,035,855</b>	<b>\$ (15,310)</b>	<b>\$ 3,807,877</b>	<b>\$ (40,507)</b>

As more fully discussed in Note 2, "Summary of Significant Accounting Policies," the guidance for other-than-temporarily impaired contemplates numerous factors in determining whether an impairment is other-than-temporary, including: (i) whether or not an entity intends to sell the security, (ii) whether it is more likely

than not that an entity would be required to sell the security before recovering its costs or (iii) whether or not an entity expects to recover the security's entire amortized cost basis (even if it does not intend to sell).

The bank performs a quarterly evaluation on a security-by-security basis considering all available information. 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 would equal the entire difference between amortized cost and fair value of the security. When the bank does not intend to sell securities in an unrealized loss position, other-than-temporarily impaired is considered using various factors, including the length of time and the extent to which the fair value is less than cost; adverse conditions specifically related to the industry, geographic area and the condition of the underlying collateral; payment structure of the security; ratings by rating agencies; the creditworthiness of bond insurers; and volatility of the fair value changes. The bank uses estimated cash flows over the remaining lives of the underlying collateral to assess whether credit losses exist. In estimating cash flows, the bank considers factors such as expectations of relevant market and economic data, including underlying loan level data for mortgage-backed and asset-backed securities and credit enhancements.

There were no other-than-temporarily impaired (OTTI) securities at December 31, 2018, 2017 or 2016.

#### Note 4 — Loans and Reserves for Credit Losses

Loans comprised the following categories at December 31:

	2018	2017	2016
Direct notes receivable from district associations and OFIs	\$11,823,267	\$11,584,236	\$10,625,132
Participations purchased	6,233,167	5,500,659	5,283,917
Other bank-owned loans	252	282	354
<b>Total loans</b>	<b>\$18,056,686</b>	<b>\$17,085,177</b>	<b>\$15,909,403</b>

A summary of the bank's loan types at December 31 follows:

	2018	2017	2016
Direct notes receivable from district associations	\$ 11,786,926	\$ 11,544,129	\$ 10,583,054
Real estate mortgage	709,274	445,116	463,955
Production and intermediate term	731,302	631,148	525,931
Agribusiness			
Loans to cooperatives	321,233	332,664	296,486
Processing and marketing	2,658,208	2,361,426	2,134,186
Farm-related business	49,278	79,879	132,813
Communications	408,135	326,297	335,171
Energy (rural utilities)	1,199,509	1,188,465	1,248,297
Water and waste disposal	126,785	104,920	129,116
Mission-related	16,275	16,351	18,316
Lease receivables	13,420	14,675	-
Loans to other financing institutions	36,341	40,107	42,078
<b>Total</b>	<b>\$ 18,056,686</b>	<b>\$ 17,085,177</b>	<b>\$ 15,909,403</b>

The bank's capital markets loan portfolio predominantly includes participations, syndications and purchased whole loans, along with other financing structures within our lending authorities. The bank also refers to the capital markets portfolio as participations purchased. In addition to purchasing loans from our district associations, which may exceed their hold limits, the bank seeks 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 the bank or subparticipated to the associations or to other System entities.

The bank purchases or sells participation interests with other parties in order to diversify risk, manage loan volume and comply with Farm Credit Administration regulations.

The following table presents information on loan participations, excluding syndications, at December 31, 2018:

	Other Farm Credit Institutions		Non-Farm Credit Institutions		Total	
	Participations Purchased	Participations Sold	Participations Purchased	Participations Sold	Participations Purchased	Participations Sold
Real estate mortgage	\$ 1,033,721	\$ 344,753	\$ -	\$ 2,430	\$ 1,033,721	\$ 347,183
Production and intermediate term	1,605,107	916,050	27,935	14,849	1,633,042	930,899
Agribusiness	1,974,846	853,328	-	-	1,974,846	853,328
Communications	513,866	105,365	-	-	513,866	105,365
Energy (rural utilities)	1,355,543	155,863	-	-	1,355,543	155,863
Water and waste disposal	142,311	15,324	-	-	142,311	15,324
Lease receivables	15,246	1,841	-	-	15,246	1,841
Direct note receivable from district associations	-	3,850,000	-	-	-	3,850,000
Mission-related	2,485	-	-	-	2,485	-
<b>Total</b>	<b>\$ 6,643,125</b>	<b>\$ 6,242,524</b>	<b>\$ 27,935</b>	<b>\$ 17,279</b>	<b>\$ 6,671,060</b>	<b>\$ 6,259,803</b>

A substantial portion of the bank's loan portfolio consists of direct notes receivable from district associations. As described in Note 1, "Organization and Operations," these notes are used by the associations to fund their loan portfolios, and therefore the bank's implicit concentration of credit risk in various agricultural commodities approximates that of the district as a whole. Loan concentrations are considered to exist when there are amounts loaned to borrowers engaged in similar activities, which could cause them to be similarly impacted by economic or other conditions. A substantial portion of the associations' lending activities is collateralized and the associations' exposure to credit loss associated with lending activities is reduced accordingly. An estimate of the bank's credit risk exposure is considered in the bank's allowance for loan losses.

At December 31, 2018, the bank had a total of \$3.85 billion of district association direct notes sold to another System bank. The sales included participations of 11 direct notes receivable from district associations. These sales provide diversification benefits between Farm Credit entities.

The bank has elected the fair value option for certain callable loans purchased on the secondary market at a significant premium. The fair value option provides an irrevocable option to elect fair value as an alternative measurement for selected financial assets. The fair value of loans held under the fair value option totaled \$9,345 at December 31, 2018. Fair value is used for both the initial and subsequent measurement of the designated instrument, with the changes in fair value recognized in net income. On these instruments, the related contractual interest income and premium amortization are recorded as interest income in the Statements of Comprehensive Income. The remaining changes in fair value on these instruments are recorded as net gains (losses) in noninterest income on the Statements of Comprehensive Income. The fair value of these instruments is included in Level 2 in the fair value hierarchy for assets recorded at fair value on a recurring basis.

The following is a summary of the transactions on loans for which the fair value option has been elected for the twelve months ended December 31, 2018:

Balance at January 1, 2018	\$ 9,908
Maturities, repayments and calls by issuers	-
Net losses on financial instruments under fair value option	(256)
Premium amortization	(307)
Balance at December 31, 2018	<u>\$ 9,345</u>

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 loans. Interest income recognized and cash payments received on nonaccrual impaired loans are applied in a similar manner as for nonaccrual loans, as described in Note 2, "Summary of Significant Accounting Policies."

The bank has purchased loan participations and Federal Agricultural Mortgage Corporation (Farmer Mac) guaranteed agricultural mortgage-backed securities (AMBS) from associations in CPP transactions. As a condition of the transactions, the bank redeemed stock in the amount of 2.0 percent of the par value of the loans purchased, and the associations bought bank stock equal to 8.0 percent of the purchased loans' par value and 1.6 percent of the AMBS' par value. During 2018, the bank purchased \$102.8 million in loan participations from associations, which resulted in net stock issuances of \$6.2 million. CPP loans held at December 31, 2018, totaled \$128.4 million and were included in "Loans" on the balance sheets. The balance of the AMBS CPP was \$35.7 million at December 31, 2018, and is included in "Investment securities" on the balance sheet.

The bank also purchased loans from district associations in Non-Capitalized Participation Pool (NCP) transactions. The loans purchased in these transactions represent up to 90.0 percent of the outstanding balances, all of which had credit quality ratings of 8 or better (acceptable classification) and are included in the capital markets' portfolio. As a condition of these transactions, the bank redeems common stock in the amount of 2.0 percent of the par value of the loans purchased. NCP purchases result in pay downs on the associations' direct notes at the time of purchase. During 2018, the bank purchased \$198.3 million in loan participations from district associations in NCP transactions which resulted in net stock retirements of \$4.2 million. NCP loans held at December 31, 2018, totaled \$180.0 million, and were included in "Loans" on the balance sheet.

The following table presents information concerning nonaccrual loans, accruing restructured loans and accruing loans 90 days or more past due, collectively referred to as "impaired loans." Restructured loans are loans whose terms have been modified and on which concessions have been granted because of borrower financial difficulties. The bank's impaired loans consisted of participations purchased; no direct notes to district associations were impaired at December 31, 2018, 2017 and 2016.

	December 31,		
	2018	2017	2016
Nonaccrual loans			
Current as to			
principal and interest	\$ 18,250	\$ -	\$ 2,862
Past due	1,236	3,393	-
Total nonaccrual loans	<u>19,486</u>	<u>3,393</u>	<u>2,862</u>
Impaired accrual loans			
Restructured accrual loans	2,531	2,607	6,495
Total impaired accrual loans	<u>2,531</u>	<u>2,607</u>	<u>6,495</u>
Total impaired loans	<u>\$ 22,017</u>	<u>\$ 6,000</u>	<u>\$ 9,357</u>

The increase in nonaccrual loans is attributable to loan transfers from accrual status during 2018 offset by repayments. The bank had no accruing loans 90 days or more past due at December 31, 2018, 2017 and 2016.

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

	December 31,		
	2018	2017	2016
<b>Nonaccrual loans:</b>			
Real estate mortgage	\$ 953	\$ 3,393	\$ 967
Agribusiness	8,257		
Energy & water/waste disposal	10,276	-	-
Mission-related	-	-	1,895
Total nonaccrual loans	<u>19,486</u>	<u>3,393</u>	<u>2,862</u>
<b>Accruing restructured loans:</b>			
Real estate mortgage	-	-	3,818
Mission-related	2,531	2,607	2,677
Total accruing restructured loans	<u>2,531</u>	<u>2,607</u>	<u>6,495</u>
Total nonperforming loans	<u>22,017</u>	<u>6,000</u>	<u>9,357</u>
Total nonperforming assets	<u>\$ 22,017</u>	<u>\$ 6,000</u>	<u>\$ 9,357</u>

One credit quality indicator utilized by the bank is the Farm Credit Administration Uniform Loan Classification System that categorizes loans into five categories. The categories are defined as follows:

- Acceptable – assets expected to be fully collectible and represent the highest quality
- Other assets especially mentioned (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 factors, conditions and values that make collection in full highly questionable, and
- Loss – assets are considered uncollectible.

The following table presents loans and related accrued interest classified under the 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
<b>Real estate mortgage:</b>			
Acceptable	96.5%	94.2%	99.0%
OAEM	1.1	3.0	-
Substandard/Doubtful	2.4	2.8	1.0
	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>
<b>Production and intermediate term:</b>			
Acceptable	95.2%	93.4%	98.8%
OAEM	-	5.7	0.4
Substandard/Doubtful	4.8	0.9	0.8
	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>
<b>Agribusiness:</b>			
Acceptable	99.5%	99.5%	99.3%
OAEM	0.2	-	0.4
Substandard/Doubtful	0.3	0.5	0.3
	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>
<b>Energy &amp; water/waste disposal:</b>			
Acceptable	98.8%	98.6%	94.9%
OAEM	0.4	0.5	5.1
Substandard/Doubtful	0.8	0.9	-
	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>
<b>Communications:</b>			
Acceptable	96.4%	100.0%	98.6%
OAEM	3.6	-	-
Substandard/Doubtful	-	-	1.4
	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>
<b>Direct notes to associations:</b>			
Acceptable	93.7%	92.3%	100.0%
OAEM	6.3	7.7	-
Substandard/Doubtful	-	-	-
	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>
<b>Loans to other financing institutions:</b>			
Acceptable	100.0%	100.0%	100.0%
OAEM	-	-	-
Substandard/Doubtful	-	-	-
	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>
<b>Mission-related:</b>			
Acceptable	100.0%	100.0%	89.8%
OAEM	-	-	-
Substandard/Doubtful	-	-	10.2
	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>
<b>Lease receivables:</b>			
Acceptable	100.0%	100.0%	-
OAEM	-	-	-
Substandard/Doubtful	-	-	-
	<u>100.0%</u>	<u>100.0%</u>	<u>-</u>
<b>Total Loans:</b>			
Acceptable	95.3%	94.2%	99.3%
OAEM	4.3	5.5	0.5
Substandard/Doubtful	0.4	0.3	0.2
	<u>100.0%</u>	<u>100.0%</u>	<u>100.0%</u>

The following table provides an age analysis of past due loans (including accrued interest) as of December 31, 2018:

	30-89 Days Past Due	90 Days or More Past Due	Total Past Due	Not Past Due or Less Than 30 Days Past Due	Total Loans	Recorded Investment Greater Than 90 Days Past Due and Accruing
Real estate mortgage	\$ -	\$ 1,236	\$ 1,236	\$ 713,882	\$ 715,118	\$ -
Production and intermediate term	-	-	-	734,377	734,377	-
Agribusiness	-	-	-	3,046,354	3,046,354	-
Energy & water/waste disposal	-	-	-	1,333,469	1,333,469	-
Lease receivables	-	-	-	13,463	13,463	-
Communications	-	-	-	408,266	408,266	-
Direct notes to associations	-	-	-	11,816,423	11,816,423	-
Loans to OFIs	-	-	-	36,435	36,435	-
Mission-related	-	-	-	16,520	16,520	-
<b>Total</b>	<b>\$ -</b>	<b>\$ 1,236</b>	<b>\$ 1,236</b>	<b>\$ 18,119,189</b>	<b>\$ 18,120,425</b>	<b>\$ -</b>

The following table provides an age analysis of past due loans (including accrued interest) as of December 31, 2017:

	30-89 Days Past Due	90 Days or More Past Due	Total Past Due	Not Past Due or Less Than 30 Days Past Due	Total Loans	Recorded Investment Greater Than 90 Days Past Due and Accruing
Real estate mortgage	\$ -	\$ 3,393	\$ 3,393	\$ 445,621	\$ 449,014	\$ -
Production and intermediate term	-	-	-	633,330	633,330	-
Agribusiness	-	-	-	2,785,593	2,785,593	-
Energy & water/waste disposal	-	-	-	1,300,418	1,300,418	-
Lease receivables	-	-	-	14,717	14,717	-
Communications	-	-	-	326,705	326,705	-
Direct notes to associations	-	-	-	11,568,693	11,568,693	-
Loans to OFIs	-	-	-	40,187	40,187	-
Mission-related	-	-	-	16,596	16,596	-
<b>Total</b>	<b>\$ -</b>	<b>\$ 3,393</b>	<b>\$ 3,393</b>	<b>\$ 17,131,860</b>	<b>\$ 17,135,253</b>	<b>\$ -</b>

The following table provides an age analysis of past due loans (including accrued interest) as of December 31, 2016:

	30-89 Days Past Due	90 Days or More Past Due	Total Past Due	Not Past Due or Less Than 30 Days Past Due	Total Loans	Recorded Investment Greater Than 90 Days Past Due and Accruing
Real estate mortgage	\$ -	\$ -	\$ -	\$ 467,157	\$ 467,157	\$ -
Production and intermediate term	-	-	-	527,619	527,619	-
Agribusiness	-	-	-	2,573,463	2,573,463	-
Energy & water/waste disposal	14,590	-	14,590	1,370,017	1,384,607	-
Communications	-	-	-	335,359	335,359	-
Direct notes to associations	-	-	-	10,603,982	10,603,982	-
Loans to OFIs	-	-	-	42,143	42,143	-
Mission-related	-	-	-	18,562	18,562	-
<b>Total</b>	<b>\$ 14,590</b>	<b>\$ -</b>	<b>\$ 14,590</b>	<b>\$ 15,938,302</b>	<b>\$ 15,952,892</b>	<b>\$ -</b>

Note: The recorded investment in the 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 write-down of the investment.

A restructuring of a debt constitutes a troubled debt restructuring 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. Troubled debt restructurings are undertaken in order to improve the likelihood of recovery on the loan and may include, but are not limited to, forgiveness of principal or interest, interest rate reductions that are lower than the current market rate for new debt with similar risk, or significant term or payment extensions.

As of December 31, 2018, the total recorded investment of troubled debt restructured loans was \$11,451, with \$2,531 classified as accrual and \$8,920 classified as nonaccrual, with specific allowance for loan losses of \$3,577.

There were no payment defaults on troubled debt restructurings that occurred within the previous 12 months. A payment default is defined as a payment that is 30 days past due after the date the loan was restructured.

At December 31, 2018, there were additional commitments of \$1,921 to lend to borrowers whose loans have been modified in TDRs. There were no additional commitments to lend to borrowers whose loans have been modified in TDRs at December 31, 2017.

The following table presents additional information regarding troubled debt restructurings, which includes both accrual and nonaccrual loans with troubled debt restructuring designation, that occurred during the years ended December 31, 2018 and December

31, 2016. There were no new troubled debt restructurings identified during 2017. The premodification outstanding recorded investment represents the recorded investment of the loans as of the quarter end prior to the restructuring. The postmodification outstanding recorded investment represents the recorded investment of the loans as of the quarter end the restructuring occurred.

For the year ended December 31, 2018:

	Premodification Outstanding Recorded Investment*	Postmodification Outstanding Recorded Investment*
<b>Troubled debt restructurings:</b>		
Agribusiness	\$ 7,739	\$ 8,588
Total	<u>\$ 7,739</u>	<u>\$ 8,588</u>

For the year ended December 31, 2016:

	Premodification Outstanding Recorded Investment*	Postmodification Outstanding Recorded Investment*
<b>Troubled debt restructurings:</b>		
Mission-related	\$ 2,066	\$ 1,947
Total	<u>\$ 2,066</u>	<u>\$ 1,947</u>

\*Premodification represents the recorded investment prior to restructuring, and postmodification represents the recorded investment following the restructuring. The recorded investment is the face amount of the receivable increased or decreased by applicable accrued interest and unamortized premium, discount, finance charges or acquisition costs and may also reflect a previous direct write-down of the investment.

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

	Total Loans Modified as TDRs			TDRs in Nonaccrual Status		
	December 31,			December 31,		
	2018	2017	2016	2018	2017	2016
Real estate mortgage	\$ 1,236	\$ 3,393	\$ 3,818	\$ 1,236	\$ 3,393	\$ -
Agribusiness	7,684	-	-	7,684	-	-
Mission-related	2,531	2,607	4,572	-	-	1,895
Total	<u>\$ 11,451</u>	<u>\$ 6,000</u>	<u>\$ 8,390</u>	<u>\$ 8,920</u>	<u>\$ 3,393</u>	<u>\$ 1,895</u>

Additional impaired loan information at December 31, 2018, is as follows:

	Recorded Investment	Unpaid Principal Balance*	Related Allowance	Average Impaired Loans	Interest Income Recognized
<b>Impaired loans with a related allowance for credit losses:</b>					
Agribusiness	\$ 7,684	\$ 7,684	\$ 3,527	\$ 5,896	\$ -
Energy & water/waste disposal	10,277	10,277	2,679	8,177	-
Mission-related	172	172	50	178	14
<b>Total</b>	<b>\$ 18,133</b>	<b>\$ 18,133</b>	<b>\$ 6,256</b>	<b>\$ 14,251</b>	<b>\$ 14</b>
<b>Impaired loans with no related allowance for credit losses:</b>					
Real estate mortgage	\$ 953	\$ 1,236	\$ -	\$ 1,832	\$ -
Agribusiness	572	572	-	-	-
Processing and marketing	-	1,192	-	-	-
Energy & water/waste disposal	-	7,623	-	11	-
Mission-related	2,359	2,359	-	2,355	143
<b>Total</b>	<b>\$ 3,884</b>	<b>\$ 12,982</b>	<b>\$ -</b>	<b>\$ 4,198</b>	<b>\$ 143</b>
<b>Total impaired loans:</b>					
Real estate mortgage	\$ 953	\$ 1,236	\$ -	\$ 1,832	\$ -
Agribusiness	8,256	8,256	3,527	5,896	-
Processing and marketing	-	1,192	-	-	-
Energy & water/waste disposal	10,277	17,900	2,679	8,188	-
Mission-related	2,531	2,531	50	2,533	157
<b>Total</b>	<b>\$ 22,017</b>	<b>\$ 31,115</b>	<b>\$ 6,256</b>	<b>\$ 18,449</b>	<b>\$ 157</b>

\*Unpaid principal balance represents the contractual obligations of the loans.

Additional impaired loan information at December 31, 2017, is as follows:

	Recorded Investment	Unpaid Principal Balance*	Related Allowance	Average Impaired Loans	Interest Income Recognized
<b>Impaired loans with a related allowance for credit losses:</b>					
Mission-related	\$ 200	\$ 200	\$ 82	\$ 205	\$ 15
<b>Total</b>	<b>\$ 200</b>	<b>\$ 200</b>	<b>\$ 82</b>	<b>\$ 205</b>	<b>\$ 15</b>
<b>Impaired loans with no related allowance for credit losses:</b>					
Real estate mortgage	\$ 3,393	\$ 3,393	\$ -	\$ 4,007	\$ 632
Production and intermediate term	-	3,035	-	-	-
Processing and marketing	-	1,192	-	-	-
Energy & water/waste disposal	-	7,623	-	-	-
Mission-related	2,407	2,407	-	4,034	146
<b>Total</b>	<b>\$ 5,800</b>	<b>\$ 17,650</b>	<b>\$ -</b>	<b>\$ 8,041</b>	<b>\$ 778</b>
<b>Total impaired loans:</b>					
Real estate mortgage	\$ 3,393	\$ 3,393	\$ -	\$ 4,007	\$ 632
Production and intermediate term	-	3,035	-	-	-
Processing and marketing	-	1,192	-	-	-
Energy & water/waste disposal	-	7,623	-	-	-
Mission-related	2,607	2,607	82	4,239	161
<b>Total</b>	<b>\$ 6,000</b>	<b>\$ 17,850</b>	<b>\$ 82</b>	<b>\$ 8,246</b>	<b>\$ 793</b>

\*Unpaid principal balance represents the contractual obligations of the loans.

Additional impaired loan information at December 31, 2016, is as follows:

	Recorded Investment	Unpaid Principal Balance*	Related Allowance	Average Impaired Loans	Interest Income Recognized
<b>Impaired loans with a related allowance for credit losses:</b>					
Mission-related	\$ 210	\$ 210	\$ 78	\$ 214	\$ 14
Total	\$ 210	\$ 210	\$ 78	\$ 214	\$ 14
<b>Impaired loans with no related allowance for credit losses:</b>					
Real estate mortgage	\$ 4,785	\$ 4,789	\$ -	\$ 6,687	\$ 153
Production and intermediate term	-	3,035	-	6,836	375
Processing and marketing	-	1,192	-	-	-
Energy & water/waste disposal	-	9,043	-	-	-
Mission-related	4,362	4,362	-	4,430	138
Total	\$ 9,147	\$ 22,421	\$ -	\$ 17,953	\$ 666
<b>Total impaired loans:</b>					
Real estate mortgage	\$ 4,785	\$ 4,789	\$ -	\$ 6,687	\$ 153
Production and intermediate term	-	3,035	-	6,836	375
Processing and marketing	-	1,192	-	-	-
Energy & water/waste disposal	-	9,043	-	-	-
Mission-related	4,572	4,572	\$ 78	4,644	152
Total	\$ 9,357	\$ 22,631	\$ 78	\$ 18,167	\$ 680

\*Unpaid principal balance represents the contractual obligations of the loans.

Interest income on nonaccrual and accruing restructured loans that would have been recognized under the original terms of the loans were as follows at December 31:

	2018	2017	2016
Interest income which would have been recognized under the original loan terms	\$ 2,476	\$ 1,732	\$ 1,965
Less: interest income recognized	157	793	680
Foregone interest income	\$ 2,319	\$ 939	\$ 1,285

A summary of changes in the allowance and reserves for credit losses and period end recorded investment (including accrued interest) in loans follows:

	Production and		Agribusiness	Communications	Energy and		Lease	Direct Notes	Loans	Mission-	Total
	Real Estate Mortgage	Intermediate Term			Water/Waste Disposal	Receivables					
<b>Allowance for Credit Losses:</b>											
Balance at											
December 31, 2017	\$ 117	\$ 954	\$ 2,679	\$ 364	\$ 3,439	\$ -	\$ -	\$ -	\$ 86	\$ 7,639	
Charge-offs	-	-	-	-	-	-	-	-	-	-	
Recoveries	11	-	-	120	-	-	-	-	-	131	
Provision for credit losses (loan loss reversal)	(10)	(138)	3,846	(126)	1,132	29	-	-	(62)	4,671	
Other*	2	(17)	(550)	6	64	-	-	-	28	(467)	
Balance at											
December 31, 2018	\$ 120	\$ 799	\$ 5,975	\$ 364	\$ 4,635	\$ 29	\$ -	\$ -	\$ 52	\$ 11,974	
Individually evaluated for impairment	\$ -	\$ -	\$ 3,527	\$ -	\$ 2,680	\$ -	\$ -	\$ -	\$ 50	\$ 6,257	
Collectively evaluated for impairment	120	799	2,448	364	1,955	29	-	-	2	5,717	
Loans acquired with deteriorated credit quality	-	-	-	-	-	-	-	-	-	-	
Balance at											
December 31, 2018	\$ 120	\$ 799	\$ 5,975	\$ 364	\$ 4,635	\$ 29	\$ -	\$ -	\$ 52	\$ 11,974	
<b>Recorded Investments in loans outstanding:</b>											
Balance at											
December 31, 2018	\$ 715,118	\$ 734,377	\$ 3,046,354	\$ 408,266	\$ 1,333,469	\$ 13,463	\$ 11,816,423	\$ 36,435	\$ 16,520	\$ 18,120,425	
Ending Balance for loans individually evaluated for impairment	\$ 953	\$ -	\$ 8,257	\$ -	\$ 10,277	\$ -	\$ 11,816,423	\$ -	\$ 2,531	\$ 11,838,441	
Ending Balance for loans collectively evaluated for impairment	\$ 714,165	\$ 734,377	\$ 3,038,097	\$ 408,266	\$ 1,323,192	\$ 13,463	\$ -	\$ 36,435	\$ 13,989	\$ 6,281,984	
Ending Balance for loans acquired with deteriorated credit quality	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	

\*Reserve for losses on letters of credit and unfunded commitments recorded in other liabilities

	Production and		Agribusiness	Communications	Energy and		Lease	Direct Notes	Loans	Mission-	Total
	Real Estate Mortgage	Intermediate Term			Water/Waste Disposal	Receivables					
<b>Allowance for Credit Losses:</b>											
Balance at											
December 31, 2016	\$ 74	\$ 712	\$ 2,259	\$ 526	\$ 3,997	\$ -	\$ -	\$ -	\$ 82	\$ 7,650	
Charge-offs	-	-	-	-	-	-	-	-	-	-	
Recoveries	24	-	5	-	1,420	-	-	-	-	1,449	
Provision for credit losses (loan loss reversal)	25	229	270	(185)	(2,016)	-	-	-	4	(1,673)	
Other*	(6)	13	145	23	38	-	-	-	-	213	
Balance at											
December 31, 2017	\$ 117	\$ 954	\$ 2,679	\$ 364	\$ 3,439	\$ -	\$ -	\$ -	\$ 86	\$ 7,639	
Individually evaluated for impairment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 82	\$ 82	
Collectively evaluated for impairment	117	954	2,679	364	3,439	-	-	-	4	7,557	
Loans acquired with deteriorated credit quality	-	-	-	-	-	-	-	-	-	-	
Balance at											
December 31, 2017	\$ 117	\$ 954	\$ 2,679	\$ 364	\$ 3,439	\$ -	\$ -	\$ -	\$ 86	\$ 7,639	
<b>Recorded Investments in loans outstanding:</b>											
Balance at											
December 31, 2017	\$ 449,014	\$ 633,330	\$ 2,785,593	\$ 326,705	\$ 1,300,418	\$ 14,717	\$ 11,568,693	\$ 40,187	\$ 16,596	\$ 17,135,253	
Ending Balance for loans individually evaluated for impairment	\$ 3,393	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 11,568,693	\$ -	\$ 2,607	\$ 11,574,693	
Ending Balance for loans collectively evaluated for impairment	\$ 445,621	\$ 633,330	\$ 2,785,593	\$ 326,705	\$ 1,300,418	\$ 14,717	\$ -	\$ 40,187	\$ 13,989	\$ 5,560,560	
Ending Balance for loans acquired with deteriorated credit quality	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	

	Production and		Agricultural	Energy and	Direct Notes	Loans	Mission-	Total
	Real Estate	Intermediate						
	Mortgage	Term	Agribusiness	Disposal	Finance			
<b>Allowance for Credit Losses:</b>								
Balance at								
December 31, 2015	\$ 789	\$ 428	\$ 1,586	\$ 343	\$ 2,575	\$ 3	\$ -	\$ 5,833
Charge-offs	-	-	-	-	-	-	-	-
Recoveries	12	-	179	1,367	-	-	-	1,558
Provision for credit losses	(728)	354	524	(1,183)	1,626	(3)	-	563
Other*	1	(70)	(30)	(1)	(204)	-	-	(304)
Balance at								
December 31, 2016	\$ 74	\$ 712	\$ 2,259	\$ 526	\$ 3,997	\$ -	\$ -	\$ 7,650
Individually evaluated for impairment	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 78
Collectively evaluated for impairment	74	712	2,259	526	3,997	-	-	7,572
Loans acquired with deteriorated credit quality	-	-	-	-	-	-	-	-
Balance at								
December 31, 2016	\$ 74	\$ 712	\$ 2,259	\$ 526	\$ 3,997	\$ -	\$ -	\$ 7,650
<b>Recorded Investments in loans outstanding:</b>								
Balance at								
December 31, 2016	\$ 467,157	\$ 527,619	\$ 2,573,463	\$ 335,359	\$ 1,384,607	\$ -	\$ 10,603,982	\$ 15,952,892
Ending Balance for loans individually evaluated for impairment	\$ 4,785	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 10,603,982	\$ 4,573
Ending Balance for loans collectively evaluated for impairment	\$ 462,372	\$ 527,619	\$ 2,573,463	\$ 335,359	\$ 1,384,607	\$ -	\$ -	\$ 5,339,552
Ending Balance for loans acquired with deteriorated credit quality	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

The bank's reserves for credit losses include the allowance for loan losses and a reserve for losses on unfunded commitments. The reserve for losses on unfunded commitments includes letters of credit and unused loan commitments, and is recorded in "Other liabilities" in the Balance Sheets. At December 31, 2018, 2017 and 2016, the reserve totaled \$1,900, \$1,433 and \$1,646, respectively, representing management's estimate of probable credit losses related to letters of credit and unfunded commitments.

## Note 5 — Premises and Equipment

Premises and equipment comprised the following at:

	December 31,		
	2018	2017	2016
Leasehold improvements	\$ 2,643	\$ 2,519	\$ 2,468
Computer equipment & software	108,883	78,498	62,915
Furniture and equipment	3,835	3,364	3,310
	115,361	84,381	68,693
Accumulated depreciation	(42,615)	(34,976)	(30,694)
Total	\$ 72,746	\$ 49,405	\$ 37,999

The increase in computer equipment and software is due to the bank's technology initiatives.

On September 30, 2003, the bank entered into a lease for approximately 102,500 square feet of office space to house its headquarters facility. The lease was effective September 30, 2003, and its term was from September 1, 2003, to August 31, 2013. On November 16, 2010, the bank entered into a lease amendment which extended the term of the lease to August 31, 2024. In addition, the lease amendment included expansion of the leased space to approximately 111,500 square feet of office space. Under the terms of the lease amendment, the bank will pay annual base rental ranging from \$18 per square foot in the first year to \$26 per square foot in the last year. Annual lease expenses for the facility, including certain operating expenses passed through from the landlord, were \$4,095, \$3,931 and \$3,844 for 2018, 2017 and 2016, respectively.

On July 31, 2015, the bank entered into a lease of computer network storage equipment, the terms of which provide for payments of \$32 per month for 36 months. In that the present value of the minimum lease payments is greater than 90 percent of the fair value of the asset at the inception of the lease, the lease has been capitalized. At December 31, 2018, the capitalized lease had no book value remaining. Interest on the capital lease obligation totaled \$5 during 2018. The lease expired during 2018.

Following is a schedule of the minimum lease payments remaining on building and other equipment leases:

	<b>Minimum Lease Payments</b>
2019	<b>\$ 3,160</b>
2020	<b>2,618</b>
2021	<b>2,633</b>
2022	<b>2,712</b>
2023	<b>2,793</b>
Thereafter	<b>1,899</b>
Total minimum lease payments	<b>\$ 15,815</b>

## Note 6 — Other Property Owned

OPO, consisting of real and personal property acquired through foreclosure or deed in lieu of foreclosure, is recorded at fair value, based on appraisal, less estimated selling costs upon acquisition. There was no OPO at December 31, 2018, December 31, 2017 and December 31, 2016, respectively.

Net (loss) gain on OPO consists of the following for the years ended:

	December 31:		
	2018	2017	2016
(Loss) gain on sale, net	\$ -	\$ -	\$ (439)
Net (loss) gain on other property owned	\$ -	\$ -	\$ (439)

## Note 7 — Other Assets and Other Liabilities

Other assets comprised the following at December 31:

	2018	2017	2016
Investment in other			
System bank	<b>\$ 142,086</b>	\$ 127,297	\$ 112,713
Other accounts receivable	<b>37,193</b>	48,762	48,627
RBIC investments	<b>12,222</b>	11,789	6,775
Fair value of derivatives	<b>10,700</b>	8,932	8,074
Other	<b>8,110</b>	6,496	6,511
Total	<b>\$ 210,311</b>	\$ 203,276	\$ 182,700

Other liabilities comprised the following at December 31:

	2018	2017	2016
Payable to associations for cash management services	<b>\$ 33,654</b>	\$ 27,795	\$ 35,420
Accounts payable – participations	<b>969</b>	-	275
Accounts payable – other	<b>33,136</b>	35,617	36,812
Fair value of derivatives	<b>16,143</b>	248	-
Obligation for nonpension postretirement benefits	<b>11,085</b>	12,521	10,967
Mortgage life additional reserve	<b>4,107</b>	4,068	3,850
FCSIC premium payable	<b>7,300</b>	11,724	12,671
Accrued building lease payable	<b>2,885</b>	3,154	3,363
Other	<b>5,801</b>	5,648	4,764
Total	<b>\$ 115,080</b>	\$ 100,775	\$ 108,122

## Note 8 — Bonds and Notes

### Systemwide Debt Securities:

The System, unlike commercial banks and other depository institutions, obtains funds for its lending operations primarily from the sale of Systemwide debt securities issued by the banks through the Funding Corporation. Systemwide bonds and discount notes (Systemwide debt securities) are the joint and several liability of the System banks. Certain conditions must be met before the bank can participate in the issuance of Systemwide debt securities. The bank 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 as a condition for participation in the issuance of Systemwide debt. This requirement does not provide holders of Systemwide debt securities, or bank and other bonds, with a security interest in any assets of the banks. In general, each bank determines its participation in each issue of Systemwide debt securities based on its funding and operating requirements, subject to the availability of eligible assets as described above and subject to Funding Corporation determinations and FCA approval. At December 31, 2018, the bank had such specified eligible assets totaling \$24.23 billion and obligations and accrued interest payable totaling \$22.58 billion, resulting in excess eligible assets of \$1.65 billion.

The System banks and the Funding Corporation have entered into the third amended and restated Market Access Agreement (MAA), which established criteria and procedures for the banks to provide certain information to the Funding Corporation 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 liability. At December 31, 2018, the bank was, and currently remains, in compliance with the conditions and requirements of the System banks' and the Funding Corporation's MAA.

Each issuance of Systemwide debt securities ranks equally, in accordance with the FCA regulations, 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 bank's participation in Systemwide debt securities at December 31, 2018, follows (*dollars in thousands*):

Year of Maturity	Systemwide					
	Bonds		Discount Notes		Total	
	Amount	Weighted Average Interest Rate	Amount	Weighted Average Interest Rate	Amount	Weighted Average Interest Rate
2019	\$ 6,961,702	2.03%	\$ 1,504,740	2.44%	\$ 8,466,442	2.11%
2020	4,957,361	2.09	-	-	4,957,361	2.09
2021	2,410,808	2.18	-	-	2,410,808	2.18
2022	1,943,695	2.16	-	-	1,943,695	2.16
2023	1,261,078	2.56	-	-	1,261,078	2.56
Subsequent years	3,457,980	3.02	-	-	3,457,980	3.02
<b>Total</b>	<b>\$ 20,992,624</b>	<b>2.27%</b>	<b>\$ 1,504,740</b>	<b>2.44%</b>	<b>\$ 22,497,364</b>	<b>2.28%</b>

In the preceding table, the weighted average interest rate reflects the effects of interest rate caps and interest rate swaps used to manage the interest rate risk on the bonds and notes issued by the bank. The bank's interest rate swap strategy is discussed more fully in Note 2, "Summary of Significant Accounting Policies," and Note 15, "Derivative Instruments and Hedging Activity."

Discount notes are issued with maturities ranging from one to 365 days. The average maturity of discount notes at December 31, 2018, was 143 days.

The bank's Systemwide debt includes callable debt, consisting of the following at December 31, 2018 (*dollars in thousands*):

Year of Maturity	Amount	Range of First Call
2019	\$ 1,740,000	1/2/2019-1/29/2019
2020	2,055,000	1/1/2019-1/30/2019
2021	1,595,000	1/1/2019-1/28/2019
2022	1,458,000	1/1/2019-6/13/2019
2023	785,000	1/1/2019-6/27/2019
Subsequent years	2,955,000	1/1/2019-7/2/2019
<b>Total</b>	<b>\$ 10,588,000</b>	<b>1/1/2019-7/2/2019</b>

Callable debt may be called on the first call date and, generally, every day thereafter with seven days' notice. Expenses associated with the exercise of call options on debt issuances are included in interest expense.

As described in Note 1, "Organization and Operations," the Insurance Fund is available to ensure the timely payment of principal and interest on bank bonds and Systemwide debt securities (insured debt) of insured System banks to the extent net assets are available in the Insurance Fund. All other liabilities in the financial statements are uninsured. At December 31, 2018, the assets of the Insurance Fund aggregated \$4.95 billion; however, due to the other authorized uses of the Insurance Fund, there is no assurance that the amounts in the Insurance Fund will be sufficient to fund the timely payment of principal and interest on an insured debt obligation in the event of a default by any System bank having primary liability thereon.

FCSIC has an agreement with the Federal Financing Bank, a federal instrumentality subject to the supervision and direction of the U.S. Treasury, pursuant to which the Federal Financing Bank would advance funds to FCSIC. Under its existing statutory authority, FCSIC may use these funds to provide assistance to the System banks in demanding market circumstances which threaten the banks' ability to pay maturing debt obligations. The agreement provides for advances

of up to \$10.00 billion and terminates on September 30, 2019, unless otherwise renewed. The decision whether to seek funds from the Federal Financing Bank is in the discretion of FCSIC, and each funding obligation of the Federal Financing Bank is subject to various terms and conditions and, as a result, there can be no assurance that funding will be available if needed by the System.

## Note 9 — Shareholders' Equity

During the third quarter of 2017, the association Class A Common Stockholders approved an amendment to the bank's capitalization bylaws. The amended bylaws became effective September 15, 2017, resulting in updates to certain sections of the bylaws to conform to the FCA's updated capital adequacy regulations. The amendments did not result in significant changes to the regulatory capital requirements of the bank as of December 31, 2018 or 2017.

Descriptions of the bank's equities, capitalization requirements, and regulatory capitalization requirements and restrictions are provided below.

### A. Description of Bank Equities:

Class B Series 1 Noncumulative Subordinated Perpetual Preferred Stock (Class B-1 preferred stock) – On August 26, 2010, the bank issued \$300.0 million of Class B noncumulative subordinated perpetual preferred stock, representing 300,000 shares at \$1,000 per share par value for net proceeds of \$296.6 million. Dividends on the preferred stock, if declared by the board of directors at its sole discretion, are noncumulative and are payable semi-annually in arrears on the fifteenth day of June and December in each year, commencing December 15, 2010, at an annual fixed rate of 10 percent of par value of \$1,000 per share. The Class B-1 preferred stock is not mandatorily redeemable at any time, but may be redeemed in whole or in part at the option of the bank after the dividend payment date in June 2020. The Class B-1 preferred stock ranks, both as to dividends and upon liquidation, senior to all outstanding capital stock. Class B-1 preferred stock dividends are required by "dividend/patronage stopper" clauses to be declared and accrued before payment of bank investment and direct note patronage to associations and OFIs can be paid. In 2018, 2017 and 2016, Class B-1 preferred stock dividends totaling \$30.0 million were declared and paid. At December 31, 2018, dividends payable on Class B-1 preferred stock totaled \$15.0 million.

**Class B Series 2 Noncumulative Subordinated Perpetual Preferred Stock (Class B-2 preferred stock)** – On July 23, 2013, the bank issued \$300.0 million of Class B noncumulative subordinated perpetual preferred stock, Series 2, representing three million shares at \$100 per share par value, for net proceeds of \$296.0 million. Dividends on the Class B-2 preferred stock, if declared by the board of directors at its sole discretion, are noncumulative and are payable quarterly in arrears on the fifteenth day of March, June, September and December in each year, commencing September 15, 2013, at an annual fixed rate of 6.75 percent of par value of \$100 per share up to, but excluding September 15, 2023, from and after which date will be paid at an annual rate of the 3-Month USD LIBOR plus 4.01 percent. The Class B-2 preferred stock is not mandatorily redeemable at any time, but may be redeemed in whole or in part at the option of the bank on any dividend payment date on or after September 15, 2023. The Class B-2 preferred stock ranks, both as to dividends and upon liquidation, *pari passu* with respect to the existing Class B-1 preferred stock, and senior to all other classes of the bank's outstanding capital stock. Class B-2 preferred stock dividends are required by "dividend/patronage stopper" clauses to be declared and accrued before payment of bank investment and direct note patronage to associations and OFIs can be paid. In 2018, 2017 and 2016, Class B-2 preferred stock dividends totaling \$20.2 million were declared and paid. At December 31, 2018, dividends payable on Class B-2 preferred stock totaled \$5.0 million.

**Class B Series 3 Noncumulative Subordinated Perpetual Preferred Stock (Class B-3 preferred stock)** – On June 25, 2018, the bank issued \$100.0 million of Class B noncumulative subordinated perpetual preferred stock, Series 3 (Class B-3 preferred stock), representing one hundred thousand shares at \$1,000 per share par value, for net proceeds of \$98.7 million. Dividends on the Class B-3 preferred stock, if declared by the board of directors at its sole discretion, are noncumulative and are payable quarterly in arrears on the fifteenth day of March, June, September and December in each year, commencing September 15, 2018, at an annual fixed rate of 6.20 percent of par value of \$1,000 per share up to, but excluding June 15, 2028, from and after which date will be paid at an annual rate of the 3-Month USD LIBOR plus 3.223 percent. The Class B-3 preferred stock is not mandatorily redeemable at any time, but may be redeemed in whole or in part at the option of the bank on any dividend payment date on or after June 15, 2028. The Class B-3 preferred stock ranks *pari passu* with respect to the existing Class B-1 and Class B-2 preferred stock, and senior to all of the bank's outstanding capital stock. In 2018, Class B-3 preferred stock dividends totaling \$2.9 million were declared and paid. At December 31, 2018, dividends payable on Class B-3 preferred stock totaled \$1.6 million.

**Class A Voting Common Stock** – According to the bank's by-laws, the minimum and maximum stock investments that the bank may require of the ACAs and FLCA are 2 percent (or one thousand dollars, whichever is greater) and 5 percent. The investments in the bank are required to be in the form of Class A voting common stock (with a par value of \$5 per share) and allocated retained earnings. The current investment required of the associations is 2 percent of their average borrowings from the bank. Under the CPP program, the stock investment that the bank requires is 1.6 percent of each AMBS pool and 8 percent of each loan pool. Under the NCPP program, the bank redeems stock in the amount of 2.0 percent of the par value of the loans purchased. No Class A voting common stock may be retired except at the sole discretion of the bank's board of directors, and provided that after such retirement, the bank shall meet minimum capital adequacy standards as may from time to time be promulgated by the FCA or such higher level as the board may from time to time establish in the bank's Capital Plan. There were 63.1 million shares, 60.1 million shares and 56.6 million shares of Class A voting common stock issued and outstanding at December 31, 2018, 2017 and 2016, respectively.

**Class A Nonvoting Common Stock** – The bank requires OFIs to make cash purchases of Class A nonvoting common stock (with a par value of \$5 per share) in the bank based on a minimum stock investment of 2 percent (or one thousand dollars, whichever is greater) and on a maximum of 5 percent. The current investment required of the OFIs is 2 percent of their average borrowings from the bank. No Class A nonvoting common stock may be retired except at the sole discretion of the bank's board of directors, and provided that after such retirement, the bank shall meet minimum capital adequacy standards as may from time to time be promulgated by the FCA or such higher level as the board may from time to time establish in the bank's Capital Plan. The bank has a first lien on these equities for the repayment of any indebtedness to the bank. There were 163 thousand shares, 196 thousand shares and 232 thousand shares of Class A nonvoting common stock issued and outstanding at December 31, 2018, 2017 and 2016, respectively.

Allocated retained earnings of \$45,685, \$39,144 and \$33,171 at December 31, 2018, 2017 and 2016, respectively, consisted of allocated equity for the payment of patronage on loans participated with another System bank.

At December 31, the bank's equities included the following:

	2018	2017	2016
Class A voting common stock – associations	\$ 315,646	\$ 300,261	\$ 282,880
Class A nonvoting common stock – Other Financing Institutions	817	978	1,158
Total common stock	<u>316,463</u>	<u>301,239</u>	<u>284,038</u>
Preferred stock	<u>700,000</u>	<u>600,000</u>	<u>600,000</u>
Allocated retained earnings			
Associations	-	-	-
Other entities	<u>45,685</u>	<u>39,144</u>	<u>33,171</u>
Total allocated retained earnings	<u>45,685</u>	<u>39,144</u>	<u>33,171</u>
Total capital stock and allocated retained earnings	<u>\$ 1,062,148</u>	<u>\$ 940,383</u>	<u>\$ 917,209</u>

Patronage may be paid to the holders of Class A voting common stock, Class A nonvoting stock and allocated retained earnings of the bank, as the board of directors may determine by resolution, subject to the capitalization requirements defined by the FCA. During 2018, \$110,853 in cash patronage was declared to district associations, OFIs and other entities, compared to \$97,982 in 2017 and \$96,449 in 2016. Cash patronage in 2018 consisted of direct loan patronage of \$67,797, patronage on certain participations of \$30,229, patronage on association and OFI investment in the bank of \$7,891, and capitalized and noncapitalized participation pool patronage of \$4,936.

## B. Regulatory Capitalization Requirements and Restrictions:

The Farm Credit Administration (FCA) sets minimum regulatory capital requirements for banks and associations. Effective January 1, 2017, new regulatory capital requirements for banks and associations were adopted. These new requirements replaced the core surplus and total surplus requirements with common equity tier 1, tier 1 capital and total capital risk-based capital ratio requirements. The new requirements also replaced the existing net collateral ratio for System Banks with a tier 1 leverage ratio and an unallocated retained earnings (URE) and URE equivalents (UREE) leverage ratio that are applicable to both the banks and associations. The permanent capital ratio continues to remain in effect; however, the risk-adjusted assets are calculated differently than in the past.

The Farm Credit Act has defined permanent capital to include all capital except stock and other equities that may be retired upon the repayment of the holder's loan or otherwise at the option of the holder, or is otherwise not at risk. Risk-adjusted assets have been defined by regulations as the balance sheet assets and off-balance-sheet commitments adjusted by various percentages ranging from 0 to 1,250 percent, depending on the level of risk inherent in the various types of assets. The primary changes which generally have the impact of increasing risk-adjusted assets (decreasing risk-based regulatory capital ratios) were as follows:

- Inclusion of off-balance-sheet commitments less than 14 months

- Increased risk-weighting of most loans 90 days past due or in nonaccrual status
- Inclusion of unfunded commitments for direct notes receivable from district associations

The ratios are based on a three-month average daily balance in accordance with FCA regulations and are calculated as follows:

- Common equity tier 1 ratio is 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 revolvment, unallocated retained earnings, paid-in capital, less certain regulatory required deductions including the amount of allocated investments in other System institutions, and the amount of purchased investments in other System institutions under the corresponding deduction approach, divided by average risk-adjusted assets.
- Tier 1 capital ratio is common equity tier 1 plus noncumulative perpetual preferred stock, divided by average risk-adjusted assets.
- Total capital is tier 1 capital plus other required borrower stock held for a minimum of 5 years, allocated equities 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 and reserve for credit losses under certain limitations less certain investments in other System institutions under the corresponding deduction approach, divided by average risk-adjusted assets.
- Permanent capital ratio (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 allocated and purchased investments in other System institutions, divided by PCR risk-adjusted assets.
- Tier 1 leverage ratio is tier 1 capital, including regulatory deductions, divided by average assets less regulatory deductions subject to tier 1 capital.
- UREE leverage ratio is unallocated retained earnings, paid-in capital, allocated surplus not subject to revolvment less certain regulatory required deductions including the amount of allocated investments in other System institutions divided by average assets less regulatory deductions subject to tier 1 capital.

If the capital ratios fall below the total requirements, including the buffer amounts, capital distributions and discretionary executive bonuses are restricted or prohibited without prior FCA approval.

The following table reflects the bank's capital ratios at December 31:

	2018*	2017*	2016	Regulatory Minimums	Conservation Buffers	Total Regulatory Minimums
Permanent capital ratio	<b>16.31%</b>	16.60%	17.40%	7.00%	0.0%	7.00%
Common equity tier 1 ratio	<b>9.92</b>	10.52	n/a	4.50	2.5**	7.00
Tier 1 capital ratio	<b>16.29</b>	16.59	n/a	6.00	2.5**	8.50
Total capital ratio	<b>16.42</b>	16.68	n/a	8.00	2.5**	10.50
Tier 1 leverage ratio	<b>7.39</b>	7.33	n/a	4.00	1.0	5.00
UREE leverage ratio	<b>3.08</b>	3.08	n/a	1.50	0.0	1.50

\*Effective January 1, 2017 the new regulatory capital ratios were implemented by the bank. Regulatory ratios remained well above regulatory minimums, including the conservation and leverage buffers at December 31, 2017. The full amount of the bank's Class B preferred stock is included in the permanent capital, tier 1 capital, and tier 1 capital.

\*\*The 2.5% capital conservation buffer for the risk-adjusted ratios will be phased in over a three-year period ending December 31, 2019.

The components of the bank's risk-adjusted capital, based on 90-day average balances, were as follows at December 31, 2018:

<i>(dollars in thousands)</i>	Common Equity Tier 1 Ratio	Tier 1 Capital Ratio	Total Capital Ratio	Permanent Capital Ratio
Numerator:				
Unallocated retained earnings	\$ 889,359	\$ 889,359	\$ 889,359	\$ 889,359
Common Cooperative Equities:				
Purchased other required stock $\geq$ 7 years	267,785	267,785	267,785	267,785
Allocated stock $\geq$ 7 years	36,042	36,042	36,042	36,042
Allocated equities:				
Allocated equities held $\geq$ 7 years	39,429	39,429	39,429	39,429
Noncumulative perpetual preferred stock	-	700,000	700,000	700,000
Allowance for loan losses and reserve for credit losses subject to certain limitations	-	-	14,155	-
Regulatory Adjustments and Deductions:				
Amount of allocated investments in other System institutions	(142,322)	(142,322)	(142,322)	(142,322)
Other regulatory required deductions	(256)	(256)	(256)	(256)
Total	\$ 1,090,037	\$ 1,790,037	\$ 1,804,192	\$ 1,790,037
Denominator:				
Risk-adjusted assets excluding allowance	\$ 10,988,322	\$ 10,988,322	\$ 10,988,322	\$ 10,988,322
Regulatory Adjustments and Deductions:				
Allowance for loan losses	-	-	-	(12,317)
Total	\$ 10,988,322	\$ 10,988,322	\$ 10,988,322	\$ 10,976,005

The components of the bank's non-risk-adjusted capital, based on 90-day average balances, were as follows at December 31, 2018:

<i>(dollars in thousands)</i>	Tier 1 Leverage Ratio	UREE Leverage Ratio
Numerator:		
Unallocated retained earnings	\$ 889,359	\$ 889,359
Common Cooperative Equities:		
Purchased other required stock $\geq$ 7 years	267,785	-
Allocated stock $\geq$ 7 years	36,042	-
Allocated equities:		
Allocated equities held $\geq$ 7 years	39,429	-
Noncumulative perpetual preferred stock	700,000	-
Regulatory Adjustments and Deductions:		
Amount of allocated investments in other System institutions	(142,322)	(142,322)
Other regulatory required deductions	(256)	-
Total	\$ 1,790,037	\$ 747,037
Denominator:		
Total Assets	\$ 24,382,460	\$ 24,382,460
Regulatory Adjustments and Deductions:		
Regulatory deductions included in tier 1 capital	(154,254)	(154,254)
Total	\$ 24,228,206	\$ 24,228,206

The components of the bank's risk-adjusted capital, based on 90-day average balances, were as follows at December 31, 2017:

<i>(dollars in thousands)</i>	Common Equity Tier 1 Ratio	Tier 1 Capital Ratio	Total Capital Ratio	Permanent Capital Ratio
<b>Numerator:</b>				
Unallocated retained earnings	\$ 851,333	\$ 851,333	\$ 851,333	\$ 851,333
Common Cooperative Equities:				
Purchased other required stock $\geq$ 7 years	248,931	248,931	248,931	248,931
Allocated stock $\geq$ 7 years	36,042	36,042	36,042	36,042
Allocated equities:				
Allocated equities held $\geq$ 7 years	33,365	33,365	33,365	33,365
Noncumulative perpetual preferred stock	-	600,000	600,000	600,000
Allowance for loan losses and reserve for credit losses subject to certain limitations	-	-	9,638	-
<b>Regulatory Adjustments and Deductions:</b>				
Amount of allocated investments in other System institutions	(127,533)	(127,533)	(127,533)	(127,533)
Other regulatory required deductions	(265)	(265)	(265)	(265)
Total	<u>\$ 1,041,873</u>	<u>\$ 1,641,873</u>	<u>\$ 1,651,511</u>	<u>\$ 1,641,873</u>
<b>Denominator:</b>				
Risk-adjusted assets excluding allowance	\$ 9,899,452	\$ 9,899,452	\$ 9,899,452	\$ 9,899,452
<b>Regulatory Adjustments and Deductions:</b>				
Allowance for loan losses	-	-	-	(8,085)
Total	<u>\$ 9,899,452</u>	<u>\$ 9,899,452</u>	<u>\$ 9,899,452</u>	<u>\$ 9,891,367</u>

The components of the bank's non-risk-adjusted capital, based on 90-day average balances, were as follows at December 31, 2017:

<i>(dollars in thousands)</i>	Tier 1 Leverage Ratio	UREE Leverage Ratio
<b>Numerator:</b>		
Unallocated retained earnings	\$ 851,333	\$ 851,333
Common Cooperative Equities:		
Purchased other required stock $\geq$ 7 years	248,931	-
Allocated stock $\geq$ 7 years	36,042	-
Allocated equities:		
Allocated equities held $\geq$ 7 years	33,365	-
Noncumulative perpetual preferred stock	600,000	-
<b>Regulatory Adjustments and Deductions:</b>		
Amount of allocated investments in other System institutions	(127,533)	(127,533)
Amount of allocated equities in other System institutions	-	(33,365)
Other regulatory required deductions	(265)	-
Total	<u>\$ 1,641,873</u>	<u>\$ 690,435</u>
<b>Denominator:</b>		
Total Assets	\$ 22,554,092	\$ 22,554,092
<b>Regulatory Adjustments and Deductions:</b>		
Regulatory deductions included in tier 1 capital	(142,802)	(142,802)
Total	<u>\$ 22,411,290</u>	<u>\$ 22,411,290</u>

### C. Accumulated Other Comprehensive (Loss) Income:

Following is a summary of the components of accumulated other comprehensive (loss) income (AOCI) and the changes occurring during the year ended December 31, 2018:

	Total	Unrealized Loss on Investments	Postretirement Benefit Plans	Cash Flow Derivative Instruments
<b>Balance, January 1, 2018</b>	\$ (51,902)	\$ (56,813)	\$ (1,815)	\$ 6,726
<b>Change in unrealized losses on available-for-sale securities</b>				
Net change in unrealized losses on investment securities	(17,728)	(17,728)		
Net change in unrealized losses on securities	(17,728)	(17,728)		
<b>Change in postretirement benefit plans</b>				
Actuarial gains and plan amendments	1,835		1,835	
Amounts amortized into net periodic expense:				
Amortization of prior service credits	(47)		(47)	
Net change in postretirement benefit plans	1,788		1,788	
<b>Change in cash flow derivative instruments</b>				
Unrealized loss on cash flow derivative instruments	(13,814)			(13,814)
Reclassification of loss recognized in interest expense	(37)			(37)
Net change in cash flow derivative instruments	(13,851)			(13,851)
<b>Total other comprehensive (loss) income</b>	(29,791)	(17,728)	1,788	(13,851)
<b>Balance, December 31, 2018</b>	\$ (81,693)	\$ (74,541)	\$ (27)	\$ (7,125)

Following is a summary of the components of accumulated other comprehensive income (loss) (AOCI) and the changes occurring during the year ended December 31, 2017:

	Total	Unrealized Loss on Investments	Postretirement Benefit Plans	Cash Flow Derivative Instruments
<b>Balance, January 1, 2017</b>	\$ (32,579)	\$ (38,529)	\$ (471)	\$ 6,421
<b>Change in unrealized losses on available-for-sale securities</b>				
Net change in unrealized losses on investment securities	(18,284)	(18,284)		
Net change in unrealized losses on securities	(18,284)	(18,284)		
<b>Change in postretirement benefit plans</b>				
Actuarial losses	(1,158)		(1,158)	
Amounts amortized into net periodic expense:				
Amortization of prior service credits	(186)		(186)	
Net change in postretirement benefit plans	(1,344)		(1,344)	
<b>Change in cash flow derivative instruments</b>				
Unrealized loss on cash flow derivative instruments	(666)			(666)
Reclassification of loss recognized in interest expense	971			971
Net change in cash flow derivative instruments	305			305
<b>Total other comprehensive (loss) income</b>	(19,323)	(18,284)	(1,344)	305
<b>Balance, December 31, 2017</b>	\$ (51,902)	\$ (56,813)	\$ (1,815)	\$ 6,726

Following is a summary of the components of accumulated other comprehensive income (loss) (AOCI) and the changes occurring during the year ended December 31, 2016:

	Total	Unrealized Loss on Investments	Postretirement Benefit Plans	Cash Flow Derivative Instruments
Balance, January 1, 2016	\$ (27,331)	\$ (25,276)	\$ (148)	\$ (1,907)
Change in unrealized losses on available-for-sale securities				
Net change in unrealized losses on investment securities	(13,253)	(13,253)		
Net change in unrealized losses on securities	(13,253)	(13,253)		
Change in postretirement benefit plans				
Actuarial losses	(137)		(137)	
Amounts amortized into net periodic expense:				
Amortization of prior service credits	(186)		(186)	
Net change in postretirement benefit plans	(323)		(323)	
Change in cash flow derivative instruments				
Unrealized losses on interest rate caps	6,507			6,507
Reclassification of loss recognized in interest expense	1,821			1,821
Net change in cash flow derivative instruments	8,328			8,328
Total other comprehensive (loss) income	(5,248)	(13,253)	(323)	8,328
Balance, December 31, 2016	\$ (32,579)	\$ (38,529)	\$ (471)	\$ 6,421

The following table summarizes amounts reclassified out of accumulated other comprehensive loss to current earnings:

Description	Amount Reclassified From Accumulated Other Comprehensive Loss			Location of Gain (Loss) Recognized in Statement of Comprehensive Income
	2018	2017	2016	
Postretirement Benefit Plans				
Amortization of prior service credits	\$ 47	\$ 186	\$ 186	Salaries and employee benefits
Cash Flow Derivative Instruments				
Losses on cash flow derivatives	37	(971)	(1,821)	Interest expense
	\$ 84	\$ (785)	\$ (1,635)	

## Note 10 — Employee Benefit Plans

Employees of the bank participate in either the district's defined benefit retirement plan (DB plan) or in a nonelective defined contribution feature (DC plan) within the Farm Credit Benefits Alliance 401(k) plan. In addition, all benefits-eligible employees are eligible to participate in the Farm Credit Benefits Alliance 401(k) plan.

The structure of the district's DB plan is characterized as multi-employer, since neither the assets, liabilities nor cost of any plan is segregated or separately accounted for by participating employers (bank and associations). No portion of any surplus assets is available to any participating employer. As a result, participating employers of the plan only recognize as cost the required contributions for the period and a liability for any unpaid contributions required for the period of their financial statements. Plan obligations, assets and the components of annual benefit expenses are recorded and reported upon district combination only. The bank records current contributions to the DB plan as an expense in the current year.

The DB plan is noncontributory, and benefits are based on salary and years of service. The legal name of the plan is Farm Credit Bank of Texas Pension Plan; its employer identification number is 74-1110170. The DB plan is not subject to any contractual expiration dates. The DB plan's funding policy is to fund current year benefits expected to be earned by covered employees. The plan sponsor is the board of directors of the bank. The "projected unit credit" actu-

arial method is used for both financial reporting and funding purposes. District employers have the option of providing enhanced retirement benefits, under certain conditions, within the DB plan, to facilitate reorganization and/or restructuring. Actuarial information regarding the DB pension plan accumulated benefit obligation and plan asset is calculated for the district as a whole and is presented in the district's unaudited 2018 Annual Report. The actuarial present value of vested and nonvested accumulated benefit obligation exceeded the net assets of the DB plan as of December 31, 2018.

The risks of participating in this multiemployer plan are different from single-employer plans in the following aspects:

- Assets contributed to the multiemployer plan by one employer may be used to provide benefits to employees of other participating employers.
- If a participating employer stops contributing to the plan, the unfunded obligations of the plan may be borne by the remaining participating employers.
- If the participating employer chooses to stop participating in the multiemployer plan, it may be required to pay the plan an amount based on the underfunded status of the plan, referred to as a withdrawal liability.

The following table includes additional information regarding the funded status of the plan, the bank's contributions and the percentage of bank contribution to total plan contributions for the years ended December 31, 2018, 2017 and 2016:

	2018	2017	2016
Funded status of plan	<b>68.0%</b>	69.7%	66.4%
Bank's contribution	<b>\$ 706</b>	\$ 610	\$ 691
Percentage of bank's contribution to total contributions	<b>7.2%</b>	5.3%	5.9%

The funded status presented above is based on the percentage of plan assets to projected benefit obligations. DB plan funding is based on the percentage of plan assets to the accumulated benefit obligation, which was 70.1 percent, 73.4 percent and 70.6 percent at December 31, 2018, 2017 and 2016, respectively.

Actuarial information regarding the DB pension plan accumulated benefit obligation and plan assets is calculated for the district as a whole and is presented in the district's unaudited 2018 Annual Report.

Participants in the DC plan generally include employees who elected to transfer from the DB plan prior to January 1, 1996, and all employees hired on or after January 1, 1996. Participants in the non-elective pension feature of the DC plan direct the placement of their employers' contributions (5 percent of eligible compensation during 2018) made on their behalf into various investment alternatives.

The district also participates in the Farm Credit Benefits Alliance 401(k) plan, which offers a pre-tax and after-tax Roth compensation deferral feature. Employers match 100 percent of employee contributions for the first 3 percent of eligible compensation and then match 50 percent of employee contributions on the next 2 percent of eligible compensation, for a maximum employer contribution of 4 percent of eligible compensation.

Certain executive or highly compensated employees in the bank are eligible to participate in a separate nonqualified supplemental 401(k) plan, named the Farm Credit Benefits Alliance Nonqualified Supplemental 401(k) Plan (Supplemental 401(k) Plan). This plan allows district employers to elect to participate in any or all of the following benefits:

- Restored Employer Contributions – to allow “make-up” contributions for eligible employees whose benefits to the qualified 401(k) plan were limited by the Internal Revenue Code during the year
- Elective Deferrals – to allow eligible employees to make pre-tax deferrals of compensation above and beyond any deferrals into the qualified 401(k) plan
- Discretionary Contributions – to allow participating employers to make a discretionary contribution to an eligible employee's account in the plan, and to designate a vesting schedule

Contributions of \$159, \$104 and \$56 were made to this plan for the years ended December 31, 2018, 2017 and 2016. There were no distributions from the plan in 2018, 2017 and 2016. The fair value of accumulated benefits and funded balance in the plan totaled \$682 at December 31, 2018.

The following table presents the bank's retirement benefit expenses for the years ended:

	2018	2017	2016
District DB plan	<b>\$ 706</b>	\$ 610	\$ 691
DC plan	<b>1,522</b>	1,395	1,311
401(k) plan	<b>1,159</b>	1,088	989
Supplemental 401(k) plan	<b>159</b>	104	56
Total	<b>\$ 3,546</b>	\$ 3,197	\$ 3,047

The bank provides certain health-care benefits to qualifying retired employees (other postretirement benefits). These benefits are not characterized as multiemployer and, consequently, the liability for these benefits is included in other liabilities. Bank employees hired on or after January 1, 2004, may be eligible for retiree medical benefits for themselves and their spouses at their expense and will be responsible for 100 percent of the related premiums.

The following tables reflect the benefit obligation, cost, funded status and actuarial assumptions for the bank's other postretirement benefits:

	Other Postretirement Benefits		
	2018	2017	2016
<b>Change in projected benefit obligation</b>			
Projected benefit obligation,			
beginning of year	\$ 12,521	\$ 10,967	\$ 10,455
Service cost	274	242	236
Interest cost	493	496	485
Plan participants' contributions	65	69	72
Plan amendments	(466)	-	-
Actuarial (gain) loss	(1,370)	1,158	137
Benefits paid	(432)	(411)	(418)
Projected benefit obligation,			
end of year	\$ 11,085	\$ 12,521	\$ 10,967
<b>Change in plan assets</b>			
Plan assets at fair value,			
beginning of year	-	-	-
Actual return on plan assets	-	-	-
Company contributions	367	342	346
Plan participants' contributions	65	69	72
Benefits paid	(432)	(411)	(418)
Plan assets at fair value, end of year	-	-	-
<b>Unfunded status at end of year</b>	<b>\$ (11,085)</b>	<b>\$ (12,521)</b>	<b>\$ (10,967)</b>
<b>Amounts recognized in the balance sheets consist of:</b>			
Other postretirement liabilities	\$ (11,085)	\$ (12,521)	\$ (10,967)
Accumulated other			
comprehensive loss	27	1,815	472
<b>Amounts recognized in</b>			
<b>accumulated other</b>			
<b>comprehensive income</b>			
Net actuarial loss	\$ 493	\$ 1,954	\$ 797
Prior service credit	(466)	(139)	(325)
Total	\$ 27	\$ 1,815	\$ 472
<b>Net periodic benefit cost</b>			
Service cost	\$ 274	\$ 242	\$ 236
Interest cost	493	496	484
Expected return on plan assets	-	-	-
Amortization of:			
Prior service cost credit	(139)	(186)	(186)
Net actuarial loss	92	-	-
Total periodic benefit cost	\$ 720	\$ 552	\$ 534
<b>Other changes to plan assets</b>			
<b>and projected benefit obligations</b>			
<b>recognized in other</b>			
<b>comprehensive income</b>			
Net actuarial (gain) loss	\$ (1,370)	\$ 1,158	\$ 137
Amortization of net actuarial gain	(92)	-	-
Prior service costs	(466)	-	-
Amortization of prior service costs	140	186	186
Net change	\$ (1,788)	\$ 1,344	\$ 323
<b>AOCI amounts expected to be amortized in 2019</b>			
Prior service (credit) cost	\$ (77)		
Net actuarial loss (gain)	-		
Net amount recognized	\$ (77)		

	Other Postretirement Benefits		
	2018	2017	2016
<b>Weighted-average assumptions used to determine benefit obligation at year end</b>			
Measurement date	12/31/2018	12/31/2017	12/31/2016
Discount rate	4.75%	4.00%	4.60%
Health-care cost trend rate assumed for next year (pre/post-65)	7.30%/6.90%	7.70%/6.90%	6.75%/6.50%
Ultimate health-care cost trend rate	4.50%	4.50%	4.50%
Year that the rate reaches the ultimate trend rate	2027	2026	2024
<b>Weighted-average assumptions used to determine net periodic cost for the year</b>			
Measurement date	12/31/2017	12/31/2016	12/31/2015
Discount rate	4.00%	4.60%	4.70%
Expected return on plan assets	N/A	N/A	N/A
Health-care cost trend rate assumed for next year (pre/post-65)	7.70%/6.90%	6.75%/6.50%	7.00%/6.50%
Ultimate health-care cost trend rate	4.50%	4.50%	4.50%
Year that the rate reaches the ultimate trend rate	2026	2024	2023

### Expected Future Cash Flow Information

#### Expected Benefit Payments

Fiscal 2019	\$	415
Fiscal 2020		459
Fiscal 2021		496
Fiscal 2022		524
Fiscal 2023		527
Fiscal 2024 - 2028		3,121

#### Expected Contributions

Fiscal 2019	\$	415
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The bank's plan for other postretirement benefits does not have plan assets.

## Note 11 — Related Party Transactions

As discussed in Note 1, “Organization and Operations,” the bank lends funds to the district associations to fund their loan portfolios. Interest income recognized on direct notes receivable from district associations was \$319,224, \$269,064 and \$240,132 for 2018, 2017 and 2016, respectively. Further disclosure regarding these related party transactions is found in Note 4, “Loans and Reserves for Credit Losses,” and Note 9, “Shareholders’ Equity.”

In addition to providing loan funds to district associations, the bank also provides banking and support services to them, such as accounting, information systems, marketing and other services. Income derived by the bank from these activities was \$3,740, \$3,889 and \$4,355 for 2018, 2017 and 2016, respectively, and was included in the bank’s noninterest income.

The bank had no transactions with nor loans to directors or senior officers, their immediate family members, or any organizations with which such senior officers or directors are affiliated, during 2018, 2017 and 2016.

## Note 12 — Commitments and Contingencies

The district has various outstanding commitments and contingent liabilities as discussed elsewhere in these notes.

The bank is primarily liable for its portion of Systemwide debt obligations. Additionally, the bank is jointly and severally liable for the consolidated Systemwide bonds and notes of other System banks. The total bank and consolidated Systemwide debt obligations of the System at December 31, 2018, were approximately \$281.46 billion.

In the normal course of business, the bank incurs a certain amount of claims, litigation, and other legal and administrative proceedings, all of which are considered incidental to the normal conduct of business. The bank believes it has meritorious defenses to the claims currently asserted against it, and, with respect to such legal proceedings, intends to defend itself vigorously, litigating or settling cases according to management’s judgment as to what is in the best interest of the bank and its shareholders.

On at least a quarterly basis, the bank assesses its liabilities and contingencies in connection with outstanding legal proceedings utilizing the latest information available. For those matters where it is probable that the bank would incur a loss and the amount of the loss could be reasonably estimated, the bank would record a liability in its financial statements. These liabilities would be increased or decreased to reflect any relevant developments on a quarterly basis. For other matters, where a loss is not probable or the amount of the loss is not estimable, the bank does not record a liability.

Currently, other actions are pending against the bank in which claims for monetary damages are asserted. Upon the basis of current information, management and legal counsel are of the opinion that any resulting losses are not probable, and that the ultimate liability,

if any, resulting from a lawsuit and other pending actions will not be material in relation to the financial position, results of operations or cash flows of the bank.

## Note 13 — Financial Instruments With Off-Balance-Sheet Risk

The bank may participate in financial instruments with off-balance-sheet risk to satisfy the financing needs of its borrowers and to manage its exposure to interest-rate risk. These financial instruments include commitments to extend credit and commercial letters of credit. 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. At December 31, 2018, the bank had \$2.67 billion of commitments to extend credit and \$85.2 million of letters of credit were outstanding.

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 credit-related financial instruments have off-balance-sheet credit risk because their amounts are not reflected on the balance sheet until funded or drawn upon.

The bank also participates in letters of credit to satisfy the financing needs of their borrowers. These letters of credit are irrevocable agreements to guarantee payments of specified financial obligations. Letters of credit are recorded, at fair value, on the balance sheet by the bank. At December 31, 2018, \$85.2 million of letters of credit with a fair value of \$676 was included in other liabilities. Outstanding letters of credit generally have expiration dates ranging from 2019 to 2023.

The credit risk involved in issuing commitments and letters of credit is essentially the same as that involved in extending loans to customers, and the same credit policies are applied by management. In the event of funding, the credit risk amounts are equal to the contract amounts, assuming that counterparties fail completely to meet their obligations and the collateral or other security 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 counterparty. At December 31, 2018, 2017 and 2016, the bank had a reserve for losses on letters of credit and unfunded commitments of \$1,900, \$1,433 and \$1,646, respectively, representing management’s estimate of probable credit losses related to letters of credit and unfunded commitments.

## Note 14 — Fair Value Measurements

Authoritative accounting 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. See Note 2, “Summary of Significant Accounting Policies,” for additional information and “Valuation Techniques” at the end of this note.

Assets and liabilities measured at fair value on a recurring basis at December 31, 2018, for each of the fair value hierarchy values are summarized below:

	Fair Value Measurement			
	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
<b>Assets:</b>				
Federal funds	\$ 281,131	\$ -	\$ 281,131	\$ -
Investments available-for-sale				
Corporate debt	363,537	-	363,537	-
U.S. Treasury securities	298,083	-	298,083	-
Agency-guaranteed debt	167,923	-	167,923	-
Mortgage-backed securities	4,761,131	-	4,761,131	-
Asset-backed securities	88,257	-	88,257	-
Mission-related investments	35,708	-	-	35,708
Loans valued under the fair value option	9,345	-	9,345	-
Derivative assets	10,700	-	10,700	-
Assets held in nonqualified benefit trusts	682	682	-	-
<b>Total assets</b>	<b>\$ 6,016,497</b>	<b>\$ 682</b>	<b>\$ 5,980,107</b>	<b>\$ 35,708</b>
<b>Liabilities:</b>				
Letters of credit	\$ 676	\$ -	\$ -	\$ 676
Derivative liabilities	16,143	-	16,143	-
<b>Total liabilities</b>	<b>\$ 16,819</b>	<b>\$ -</b>	<b>\$ 16,143</b>	<b>\$ 676</b>

The table below represents a reconciliation of all Level 3 assets and liabilities measured at fair value on a recurring basis for the year ended December 31, 2018:

	Assets	Liabilities	
	Agricultural Mortgage-Backed Securities	Letters of Credit	Total
Balance at January 1, 2018	\$ 43,317	\$ 846	\$ 42,471
Net losses included in other comprehensive loss	173	-	173
Purchases, issuances and settlements	(7,782)	(170)	(7,612)
<b>Balance at December 31, 2018</b>	<b>\$ 35,708</b>	<b>\$ 676</b>	<b>\$ 35,032</b>

There were no transfers of assets or liabilities into or out of Level 1 from other levels during the year ended December 31, 2018. Agricultural mortgage-backed securities are included in Level 3 due to limited activity or less transparency around inputs to their valuation. The liability for letters of credit is included in Level 3 because their valuation, based on fees currently charged for similar agreements, may not closely correlate to a fair value for instruments that are not regularly traded in the secondary market.

Assets and liabilities measured at fair value on a nonrecurring basis at December 31, 2018 for each of the fair value hierarchy values are summarized below:

	Fair Value Measurement			
	Total	Quoted Price in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
<b>Assets:</b>				
Loans	\$ 11,875	\$ -	\$ -	\$ 11,875
<b>Total assets</b>	<b>\$ 11,875</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 11,875</b>

Assets and liabilities measured at fair value on a recurring basis at December 31, 2017, for each of the fair value hierarchy values are summarized below:

	Fair Value Measurement			
	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
<b>Assets:</b>				
Federal funds	\$ 246,888	\$ -	\$ 246,888	\$ -
Investments available-for-sale				
Corporate debt	252,609	-	252,609	-
U.S. Treasury securities	249,207	-	249,207	-
Agency-guaranteed debt	195,248	-	195,248	-
Mortgage-backed securities	4,356,715	-	4,356,715	-
Asset-backed securities	47,889	-	47,889	-
Mission-related investments	43,317	-	-	43,317
Loans valued under the fair value option	9,908	-	9,908	-
Derivative assets	8,932	-	8,932	-
Assets held in nonqualified benefit trusts	551	551	-	-
<b>Total assets</b>	<b>\$ 5,411,264</b>	<b>\$ 551</b>	<b>\$ 5,367,396</b>	<b>\$ 43,317</b>
<b>Liabilities:</b>				
Letters of credit	\$ 846	\$ -	\$ -	\$ 846
Derivative liabilities	248	-	248	-
<b>Total liabilities</b>	<b>\$ 1,094</b>	<b>\$ -</b>	<b>\$ 248</b>	<b>\$ 846</b>

The table below represents a reconciliation of all Level 3 assets and liabilities measured at fair value on a recurring basis for the year ended December 31, 2017:

	Assets	Liabilities	
	Agricultural Mortgage-Backed Securities	Letters of Credit	Total
Balance at January 1, 2017	\$ 53,335	\$ 594	\$ 52,741
Net losses included in other comprehensive loss	(106)	-	(106)
Purchases, issuances and settlements	(9,912)	252	(10,164)
Balance at December 31, 2017	\$ 43,317	\$ 846	\$ 42,471

There were no transfers of assets or liabilities into or out of Level 1 from other levels during the year ended December 31, 2017. Agricultural mortgage-backed securities are included in Level 3 due to limited activity or less transparency around inputs to their valuation. The liability for letters of credit is included in Level 3 because their valuation, based on fees currently charged for similar agreements, may not closely correlate to a fair value for instruments that are not regularly traded in the secondary market.

Assets and liabilities measured at fair value on a nonrecurring basis at December 31, 2017, for each of the fair value hierarchy values are summarized below:

	Fair Value Measurement			
	Total	Quoted Price in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
<b>Assets:</b>				
Loans	\$ 119	\$ -	\$ -	\$ 119
<b>Total assets</b>	<b>\$ 119</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 119</b>

Assets and liabilities measured at fair value on a recurring basis at December 31, 2016, for each of the fair value hierarchy values are summarized below:

	Fair Value Measurement			
	Total	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
<b>Assets:</b>				
Federal funds	\$ 22,901	\$ -	\$ 22,901	\$ -
Investments available-for-sale				
Corporate debt	202,403	-	202,403	-
U.S. Treasury securities	249,006	-	249,006	-
Agency-guaranteed debt	222,374	-	222,374	-
Mortgage-backed securities	3,973,578	-	3,973,578	-
Asset-backed securities	130,679	-	130,679	-
Mission-related and other available-for-sale investments	53,335	-	-	53,335
Loans valued under the fair value option	16,311	-	16,311	-
Derivative assets	8,074	-	8,074	-
Assets held in nonqualified benefit trusts	405	405	-	-
<b>Total assets</b>	<b>\$ 4,879,066</b>	<b>\$ 405</b>	<b>\$ 4,825,326</b>	<b>\$ 53,335</b>
<b>Liabilities:</b>				
Letters of credit	\$ 594	\$ -	\$ -	\$ 594
<b>Total liabilities</b>	<b>\$ 594</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 594</b>

The table below represents a reconciliation of all Level 3 assets and liabilities measured at fair value on a recurring basis for the year ended December 31, 2016:

	Assets			Liabilities	
	Mortgage-Backed Securities	Agricultural Mortgage-Backed Securities	Loan Held for Sale	Letters of Credit	Total
Balance at January 1, 2016	\$ 50,250	\$ 65,650	\$ 4,850	\$ 807	\$ 119,943
Net losses included in other comprehensive loss	-	(522)	-	-	(522)
Purchases, issuances and settlements	-	(11,793)	(4,850)	(213)	(16,430)
Transfers into Level 3	(50,250)	-	-	-	(50,250)
Balance at December 31, 2016	\$ -	\$ 53,335	\$ -	\$ 594	\$ 52,741

There were no transfers of assets or liabilities into or out of Level 1 from other levels during the year ended December 31, 2016. Agricultural mortgage-backed securities are included in Level 3 due to limited activity or less transparency around inputs to their valuation. At December 31, 2016, there were no agency MBS investments in Level 1. The liability for letters of credit is included in Level 3 because their valuation, based on fees currently charged for similar agreements, may not closely correlate to a fair value for instruments that are not regularly traded in the secondary market.

Assets and liabilities measured at fair value on a nonrecurring basis at December 31, 2016, for each of the fair value hierarchy values are summarized below:

	Fair Value Measurement			
	Total	Quoted Price in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
<b>Assets:</b>				
Loans	\$ 132	\$ -	\$ -	\$ 132
<b>Total assets</b>	<b>\$ 132</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 132</b>

The bank revised fair value measurements for the reporting of certain loans measured at fair value on a nonrecurring basis using Level 3 at December 31, 2016. The disclosure was revised to report impaired loans with specific reserves only. The Level 3 fair value was disclosed at \$2.8 million in the 2016 Annual Report, for the December 31, 2016 disclosures, and has been revised to \$132.

Management has evaluated the impact of these errors and concluded that the amounts are immaterial to previously issued financial statements; however, it has elected to revise the reporting of certain loans

measured at fair value on a nonrecurring basis in order to correctly present such amounts. The correction had no effect on the balance sheet, the statement of comprehensive income, earnings or the financial ratios.

Financial assets and financial liabilities measured at carrying amounts and not measured at fair value on the Balance Sheet for each of the fair value hierarchy values are summarized as follows:

December 31, 2018					
Fair Value Measurements Using					
	Total Carrying Amount	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total Fair Value
<b>Assets:</b>					
Cash	\$ 129,478	\$ 129,478	\$ -	\$ -	\$ 129,478
Net loans	18,044,712	-	-	17,860,769	17,860,769
<b>Total assets</b>	<b>\$ 18,174,190</b>	<b>\$ 129,478</b>	<b>\$ -</b>	<b>\$ 17,860,769</b>	<b>\$ 17,990,247</b>
<b>Liabilities:</b>					
Systemwide debt securities	\$ 22,497,364	-	-	\$ 22,367,133	\$ 22,367,133
<b>Total liabilities</b>	<b>\$ 22,497,364</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 22,367,133</b>	<b>\$ 22,367,133</b>

December 31, 2017					
Fair Value Measurements Using					
	Total Carrying Amount	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total Fair Value
<b>Assets:</b>					
Cash	\$ 56,183	\$ 56,183	\$ -	\$ -	\$ 56,183
Net loans	17,077,538	-	-	16,994,401	16,994,401
<b>Total assets</b>	<b>\$ 17,133,721</b>	<b>\$ 56,183</b>	<b>\$ -</b>	<b>\$ 16,994,401</b>	<b>\$ 17,050,584</b>
<b>Liabilities:</b>					
Systemwide debt securities	\$ 20,951,223	-	-	\$ 20,902,279	\$ 20,902,279
<b>Total liabilities</b>	<b>\$ 20,951,223</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 20,902,279</b>	<b>\$ 20,902,279</b>

December 31, 2016					
Fair Value Measurements Using					
	Total Carrying Amount	Quoted Prices in Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)	Total Fair Value
<b>Assets:</b>					
Cash	\$ 195,479	\$ 195,479	\$ -	\$ -	\$ 195,479
Net loans	15,882,657	-	-	15,796,675	15,796,675
<b>Total assets</b>	<b>\$ 16,078,136</b>	<b>\$ 195,479</b>	<b>\$ -</b>	<b>\$ 15,796,675</b>	<b>\$ 15,992,154</b>
<b>Liabilities:</b>					
Systemwide debt securities	\$ 19,390,662	-	-	\$ 19,384,908	\$ 19,384,908
<b>Total liabilities</b>	<b>\$ 19,390,662</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ 19,384,908</b>	<b>\$ 19,384,908</b>

## VALUATION TECHNIQUES

As more fully discussed in Note 2, "Summary of Significant Accounting Policies," authoritative accounting guidance 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. Fair values of financial instruments represent the estimated amount to be received to sell an asset or paid to transfer or extinguish a liability in active markets among willing participants at the reporting date. Due to the uncertainty of expected cash flows resulting from financial instruments, the use of different assumptions and valuation methodologies could significantly affect the estimated fair value amounts. Accordingly, certain of the estimated fair values may not be indicative of the amounts for which the financial instruments could be exchanged in a current or future market transaction. The following represent a brief summary of the valuation techniques used by the bank for assets and liabilities:

### *Cash*

For cash, the carrying amount is a reasonable estimate of fair value.

### *Investment Securities*

Where quoted prices are available in an active market, available-for-sale securities would be classified as Level 1. If quoted prices are not available in an active market, the fair value of securities is estimated using quoted prices for similar securities received from pricing services or discounted cash flows. Generally, these securities would be classified as Level 2. Among other securities, this would include certain mortgage-backed securities. Where there is limited activity or less transparency around inputs to the valuation, the securities are classified as Level 3. Level 3 assets at December 31, 2018, included the bank's AMBS portfolio, which is valued by the bank using a model that incorporates underlying rates and current yield curves.

As permitted under Farm Credit Administration regulations, the banks are authorized to hold eligible investments. The regulations define eligible investments by specifying credit rating criteria, final maturity limit and percentage of portfolio limit for each investment type. At the time of purchase, mortgage-backed and asset-backed securities must be triple-A rated by at least one Nationally Recognized Statistical Rating Organization. The triple-A rating requirement puts the banks in a position to hold the senior tranches of securitizations. The underlying loans for mortgage-backed securities are residential mortgages, while the underlying loans for asset-backed securities are home equity lines of credit, small business loans, equipment loans, auto loans or student loans.

To estimate the fair value of the majority of the investments held, including certain non-agency securities, the bank obtains prices from third-party pricing services.

### *Assets Held in Nonqualified Benefits Trusts*

Assets held in trust funds related to deferred compensation and supplemental retirement plans are classified within Level 1. The trust funds include investments that are actively traded and have quoted net asset values that are observable in the marketplace.

### *Derivatives*

Derivative positions are valued using internally developed models that use as their basis quoted prices would be classified within Level

1 of the valuation hierarchy. However, few classes of derivative contracts are listed on an exchange; thus, the majority of the derivative positions are valued using internally developed models that use as their basis readily observable market parameters and are classified within Level 2 of the valuation hierarchy. Such derivatives include interest rate caps and interest rate swaps.

The models used to determine the fair value of derivative assets and liabilities use an income approach based on observable market inputs, including the LIBOR and Overnight Index Swap curves and volatility assumptions about future interest rate movements.

### *Letters of Credit*

The fair value of letters of credit approximates the fees currently charged for similar agreements or the estimated cost to terminate or otherwise settle similar obligations.

### *Loans*

Fair value is estimated by discounting the expected future cash flows using the banks' and/or the associations' current interest rates at which similar loans would be made to borrowers with similar credit risk. The discount rates are based on the banks' and/or the associations' current loan origination rates as well as management's estimates of credit risk. Management has no basis to determine whether the fair values presented would be indicative of the value negotiated in an actual sale and could be less.

For purposes of estimating fair value of accruing loans, the loan portfolio is segregated into pools of loans with homogeneous characteristics. Expected future cash flows, primarily based on contractual terms, and interest rates reflecting appropriate credit risk are separately determined for each individual pool.

The fair value of loans in nonaccrual status that are current as to principal and interest is estimated as described above, with appropriately higher interest rates which reflect the uncertainty of continued cash flows. For collateral-dependent impaired loans, it is assumed that collection will result only from the disposition of the underlying collateral.

### *Loans Evaluated for Impairment*

For certain loans individually evaluated for impairment under accounting impairment guidance, the fair value is based upon the underlying collateral since the loans are collateral-dependent loans for which real estate is the collateral. 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. As a result, these fair value measurements fall within Level 3 of the hierarchy. When the value of the real estate, less estimated costs to sell, is less than the principal balance of the loan, a specific reserve is established. The fair value of these loans would fall under Level 2 of the hierarchy if the process uses independent appraisals and other market-based information.

The bank has elected the fair value option for certain callable loans purchased on the secondary market at a significant premium. The fair value option provides an irrevocable option to elect fair value as an alternative measurement for selected financial assets. Fair value

is used for both the initial and subsequent measurement of the designated instrument, with the changes in fair value recognized in net income. The fair value of securities is estimated using pricing models that utilize observable inputs, quoted prices for similar securities received from pricing services or discounted cash flows. Accordingly, these assets are classified within Level 2.

### *Bonds and Notes*

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 System debt instruments and Treasury securities. We estimate an appropriate yield-spread taking into consideration selling group member (banks and securities dealers) yield indications, observed new government-sponsored enterprise debt security pricing and pricing levels in the related U.S. dollar interest rate swap market.

### *Other Property Owned*

OPO is generally classified as Level 3 of the fair value hierarchy. The process for measuring the fair value of OPO involves the use of independent appraisals or other market-based information. Costs to sell represent transaction costs and are not included as a component of the asset's fair value.

### *Uncertainty of Fair Value Measurements*

For recurring fair value measurements categorized within Level 3 of the fair value hierarchy, the significant unobservable inputs used in the fair value measurement of the mortgage-backed securities are prepayment rates, probability of default and loss severity in the event of default. Significant increases (decreases) in any of those inputs in isolation would have resulted in a significantly lower (higher) fair value measurement.

Generally, a change in the assumption used for the probability of default would have been accompanied by a directionally similar change in the assumption used for the loss severity and a directionally opposite change in the assumption used for prepayment rates.

Quoted market prices may not be available for the instruments presented below. Accordingly, fair values are based on internal models that consider 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.

### *Information About Recurring and Nonrecurring Level 3 Fair Value Measurements*

	<b>Valuation Technique(s)</b>	<b>Unobservable Input</b>	<b>Range of Inputs</b>
Mission-related investments	Discounted cash flow	Prepayment rates	2.3%-38.0%

With regard to impaired loans and OPO, it is not practicable to provide specific information on inputs as each collateral property is unique. System institutions utilize appraisals to value these loans and OPO and take into account unobservable inputs such as income and expense, comparable sales, replacement cost and comparability adjustments.

### *Information About Recurring and Nonrecurring Level 2 Fair Value Measurements*

	<b>Valuation Technique(s)</b>	<b>Input</b>
Federal funds sold	Carrying value	Par/principal
Investment securities available for sale	Quoted prices Discounted cash flow	Price for similar security Constant prepayment rate Appropriate interest rate yield curve
Loans held under the fair value option	Quoted prices Discounted cash flow	Price for similar security Constant prepayment rate Appropriate interest rate yield curve
Interest rate caps	Discounted cash flow	Appropriate interest rate yield curve Annualized volatility
Interest rate swaps	Discounted cash flow	Benchmark yield curve Counterparty credit risk Volatility

### *Information About Other Financial Instrument Fair Value Measurements*

	<b>Valuation Technique(s)</b>	<b>Input</b>
Cash	Carrying value	Actual balance
Loans	Discounted cash flow	Prepayment forecasts Appropriate interest rate yield curve Probability of default Loss severity
Systemwide debt securities	Discounted cash flow	Benchmark yield curve Derived yield spread Own credit risk

## **Note 15 — Derivative Instruments and Hedging Activity**

The bank maintains an overall interest rate risk-management strategy that incorporates the use of derivative instruments to minimize significant unplanned fluctuations in earnings that are caused by interest rate volatility. The bank's goal is to manage interest rate sensitivity by modifying the repricing or maturity characteristics of certain balance sheet liabilities so that the net interest margin is not adversely affected by movements in interest rates. 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 bank may enter into derivative transactions to lower funding costs, diversify sources of funding, alter interest rate exposures arising from mismatches between assets and liabilities, or better

manage liquidity. Interest rate swaps allow the bank to raise borrowings in the government-sponsored entities market and modify the repricing characteristics of that debt to better match those of the earning assets. Under interest rate swap 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 purchase interest rate options, such as caps, in order to reduce the impact of rising interest rates on its floating-rate debt.

At December 31, 2018, the bank held interest rate caps with a notional amount of \$195.0 million and a fair value of \$448, and pay fixed interest rate swaps with a notional amount of \$825.0 million and a net fair value liability of \$5.9 million. The primary types of derivative instruments used and the amount of activity (notional amount of derivatives) during the year ended December 31, 2018, is summarized in the following table:

	Pay Fixed Swaps	Interest Rate Caps	Total
Balance at			
January 1, 2018	\$ 250,000	\$ 195,000	\$ 445,000
Additions	575,000	-	575,000
Maturities/Amortizations	-	-	-
<b>Balance at</b>			
<b>December 31, 2018</b>	<b>\$ 825,000</b>	<b>\$ 195,000</b>	<b>\$ 1,020,000</b>

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 of 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 maintains collateral agreements to limit exposure to agreed-upon thresholds; deals with counterparties that have an investment grade or better 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. At December 31, 2018, the bank had credit exposure to counterparties totaling \$5.4 million, as compared with \$8.7 million at December 31, 2017 and \$8.1 million at December 31, 2016.

The credit exposure represents the exposure to credit loss on derivative instruments, which is estimated by calculating the cost, on a present value basis, to replace all outstanding derivative contracts in a gain position.

The table below presents the credit ratings of counterparties to whom the bank has credit exposure at December 31, 2018:

	Remaining Years to Maturity			Maturity Distribution Netting	Exposure	Collateral Held	Exposure Net of Collateral
	Less Than One to Five Years	More Than Five Years	Total				
Moody's Credit Rating							
A1	\$ -	\$ 31	\$ 31	\$ -	\$ 31	\$ -	\$ 31
Aa2	6,053	(10,765)	(4,712)	-	(4,712)	-	(4,712)
Aa3	3,258	(4,019)	(761)	-	(761)	-	(761)

The bank's derivative activities are monitored by its Asset-Liability Management Committee (ALCO) as part of the ALCO's bank asset/liability and treasury functions. The ALCO is responsible for approving hedging strategies that are developed through its 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 Values of Derivative Instruments:

The following table represents the fair value of derivative instruments as of December 31, 2018, 2017 and 2016:

	Balance Sheet Location	Fair Value 2018	Fair Value 2017	Fair Value 2016	Balance Sheet Location	Fair Value 2018	Fair Value 2017	Fair Value 2016
Interest rate caps	Other assets	\$ 448	\$ 396	\$ 414	Other liabilities	\$ -	\$ -	\$ -
Pay fixed swaps	Other assets	10,253	8,536	7,660	Other liabilities	(16,143)	(248)	-

The following table sets forth the amount of gain (loss) recognized in Other Comprehensive Income (OCI) for the years ended December 31, 2018, 2017 and 2016:

	Gain (Loss) Recognized in OCI on Derivatives (Effective Portion) at December 31,			Amount of Gain Reclassified From AOCI Into Income (Effective Portion) at December 31,			
	2018	2017	2016	2018	2017	2016	
Interest rate caps	\$ (52)	\$ (553)	\$ (89)	Interest expense	\$ (167)	\$ 192	\$ 1,089
Pay fixed swaps	13,866	(113)	6,596	Interest income	204	779	732

The table below provides information about derivative financial instruments and other financial instruments that are sensitive to changes in interest rates, including debt obligations and interest rate swaps. The debt information below presents the principal cash flows and related weighted average interest rates by expected maturity dates. The derivative information below represents the notional amounts and weighted average interest rates by expected maturity dates.

December 31, 2018 (dollars in thousands)	Maturities of 2018 Derivative Products and Other Financial Instruments						Subsequent Years	Total	Fair Value
	2019	2020	2021	2022	2023				
Total Systemwide debt obligations:									
Fixed rate	\$ 4,386,543	\$ 2,957,564	\$ 2,410,808	\$ 1,943,695	\$ 1,261,078	\$ 3,457,980	\$ 16,417,668	\$ 16,283,429	
Weighted average interest rate	1.85%	1.83%	2.18%	2.16%	2.56%	3.02%	2.23%		
Variable rate	\$ 4,079,899	\$ 1,999,797	\$ -	\$ -	\$ -	\$ -	\$ 6,079,696	\$ 6,083,704	
Weighted average interest rate	2.38%	2.47%	-	-	-	-	2.41%		
Total Systemwide debt obligations:	\$ 8,466,442	\$ 4,957,361	\$ 2,410,808	\$ 1,943,695	\$ 1,261,078	\$ 3,457,980	\$ 22,497,364	\$ 22,367,133	
Weighted average interest rate	2.11%	2.09%	2.18%	2.16%	2.56%	3.02%	2.28%		
Derivative instruments:									
Interest rate caps									
Notional value	\$ -	\$ 50,000	\$ -	\$ 30,000	\$ -	\$ 115,000	\$ 195,000	\$ 448	
Weighted average receive rate	-	-	-	-	-	-	-	-	
Weighted average pay rate	-	-	-	-	-	-	-	-	
Pay fixed swaps									
Notional value	\$ -	\$ -	\$ -	\$ -	\$ 200,000	\$ 625,000	\$ 825,000	\$ (5,890)	
Weighted average receive rate	-	-	-	-	2.48%	2.65%	2.61%		
Weighted average pay rate	-	-	-	-	1.33%	2.97%	2.57%		

## Note 16 — Selected Quarterly Financial Information (Unaudited)

Quarterly results of operations are shown below for the years ended December 31:

	2018				
	First	Second	Third	Fourth	Total
Net interest income	\$ 61,214	\$ 61,889	\$ 65,213	\$ 68,520	\$ 256,836
Provision for credit losses	4,857	(11)	108	(283)	4,671
Noninterest expense (income), net	11,745	23,023	12,368	14,499	61,635
Net income	\$ 44,612	\$ 38,877	\$ 52,737	\$ 54,304	\$ 190,530
	2017				
	First	Second	Third	Fourth	Total
Net interest income	\$ 61,737	\$ 62,673	\$ 63,527	\$ 63,384	\$ 251,321
Negative provision for credit losses	(944)	(114)	(29)	(586)	(1,673)
Noninterest expense (income), net	15,909	17,227	10,696	13,176	57,008
Net income	\$ 46,772	\$ 45,560	\$ 52,860	\$ 50,794	\$ 195,986
	2016				
	First	Second	Third	Fourth	Total
Net interest income	\$ 56,933	\$ 58,184	\$ 59,538	\$ 63,666	\$ 238,321
Provision for credit losses	693	799	(1,104)	175	563
Noninterest expense (income), net	14,130	11,293	16,449	3,480	45,352
Net income	\$ 42,110	\$ 46,092	\$ 44,193	\$ 60,011	\$ 192,406

## Note 17 — 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 "Texas District." The bank separately publishes certain unaudited combined financial information of the Texas District, including a condensed statement of condition and statement of income, which can be found on the bank's website at [www.farmcreditbank.com](http://www.farmcreditbank.com). Such information is not incorporated by reference to, and should not be considered part of, this annual report.

## Note 18 — Subsequent Events

The bank has evaluated subsequent events through March 1, 2019, which is the date the financial statements were issued. There are no other significant subsequent events requiring disclosure as of March 1, 2019.



# Disclosure Information and Index

DISCLOSURES REQUIRED BY FARM CREDIT ADMINISTRATION REGULATIONS

## DESCRIPTION OF BUSINESS

The Farm Credit Bank of Texas (FCBT or bank), Agricultural Credit Associations (ACAs) and a Federal Land Credit Association (FLCA), collectively referred to as the district, are member-owned cooperatives which provide credit and credit-related services to or for the benefit of eligible borrower-shareholders for qualified agricultural purposes in the states of Alabama, Louisiana, Mississippi, New Mexico and Texas. The district's ACA parent associations, which each contain wholly-owned FLCA and Production Credit Association (PCA) subsidiaries, and the FLCA are collectively referred to as associations. A further description of territory served, persons eligible to borrow, types of lending activities engaged in, financial services offered and related Farm Credit organizations required to be disclosed in this section are incorporated herein by reference to Note 1, "Organization and Operations," to the accompanying financial statements.

The description of significant developments that had or could have a material impact on results of operations or interest rates to borrowers, acquisitions or dispositions of material assets, material changes in the manner of conducting business, seasonal characteristics and concentrations of assets, if any, required to be disclosed in this section are incorporated herein by reference to "Management's Discussion and Analysis" of the bank included in this annual report to shareholders.

### *Board of Directors and Bank Senior Officers*

FCBT is governed by a seven-member board of directors. Five directors are farmers or ranchers, who are elected by the customers of the 14 associations that own the bank. Two directors, who are not stockholders of any of the associations, are appointed by the elected board members. The board of directors is responsible for directing the operations of the bank. The bank's senior officers, through the bank's chief executive officer, are accountable to the board of directors and work with the board of directors to set the bank's direction, goals and strategies.

The following represents certain information regarding the board of directors and senior officers of the bank as of December 31, 2018, including business experience during the past five years:

## DIRECTORS

James F. "Jimmy" Dodson, 65, chairman of the board of directors, is from Robstown, Texas. He grows cotton, corn, wheat and milo on four family farm operations and owns a seed sales business. Mr. Dodson serves on the bank's audit and compensation committees and was chairman of the Tenth District Farm Credit Council for 2016. In January 2017, he was elected vice chairman of the Tenth District Farm Credit Council. He is one of the board's designated financial experts on the board audit committee for the bank. In January 2019, he was elected chairman of the national Farm Credit Council Board of Directors, where he previously served as vice chairman. Mr. Dodson joined the board of directors of FCC Ser-

vices, an integrated services firm, in January 2017. He is also president of Dodson Farms, Inc. and Dodson Ag, Inc., and is a partner in Legacy Farms and 3-D Farms. He is manager of Weber Station LLC, which is the managing partner of Weber Greene, Ltd., both of which are family farm real estate management firms. Mr. Dodson is a founding member of Cotton Leads, a responsible cotton production initiative of U.S. and Australian Cotton Producer organizations. He also serves on the boards of Gulf Coast Cooperative, an agricultural retail cooperative, and the Texas Agricultural Cooperative Council, an industry trade association. He is past chairman of the National Cotton Council of America, the American Cotton Producers and the Cotton Foundation, and formerly served as a director of Cotton Incorporated. He is past chairman of the Texas AgFinance, FCS board of directors and a former member of the Texas District's Stockholders Advisory Committee. Mr. Dodson became a director of the bank in 2003 and his term expires at the end of 2020.

Lester Little, 68, vice chairman of the board of directors, is from Hallettsville, Texas. He owns and operates a farm and offers custom-farming services, primarily reclaiming farms and handling land preparation. His principal crops are corn, milo, hay and wheat. Mr. Little is a member of the bank's audit and compensation committees. In January 2019, he was appointed vice chairman of the bank's compensation committee. He is also a member of the Tenth District Farm Credit Council. In addition, he is a member of the Farm Bureau, an agricultural trade organization, and served on the Lavaca Regional Water Planning Group, a regional water planning authority in Texas, during 2016. He previously was a board member of the Lavaca Central Appraisal District, a county organization in Texas that hires the chief appraiser for the county for purposes of assigning real estate values for tax assessments, and was board chairman of the Hallettsville Independent School District Board of Trustees. He is former chairman of the Capital Farm Credit board of directors and previously served as vice chairman of the Texas District's Stockholders Advisory Committee. Mr. Little became a director in 2009 and his term expires at the end of 2020.

Brad C. Bean, 58, is from Gillsburg, Mississippi. He is a dairy farmer with other farming interests, including corn, sorghum and timber. Mr. Bean was chairman of the bank's audit committee and was also a member of the bank's compensation committee. In January 2017, he was elected chairman of the Tenth District Farm Credit Council and was also elected to the national Farm Credit Council Board of Directors as a district representative. Mr. Bean serves on the boards of the Amite County Farm Bureau and the Amite County Cooperative, both of which are trade organizations. Mr. Bean is a former chairman of the Southern AgCredit, ACA board of directors and a former vice chairman of the Texas District's Stockholders Advisory Committee. Mr. Bean became a director in 2013 and his term expired at the end of 2018.

Ralph W. "Buddy" Cortese, 72, is from Fort Sumner, New Mexico. He is president of Cortese Farm and Ranch, Inc., a farming and ranching operation. He is chairman of the bank's compensation

committee and is a member of the bank's audit committee. Mr. Cortese also is a member of the Tenth District Farm Credit Council board. He currently serves on the board of the Federal Farm Credit Banks Funding Corporation. Mr. Cortese served as chairman of the board of directors of the bank from 2000 through 2011. He is a member of the Texas Agricultural Cooperative Council board of directors, an industry trade association. From 2003 to 2008, he served on the board of Federal Agricultural Mortgage Corporation (Farmer Mac), a government agency chartered to create a secondary market for agricultural loans; and is a former board member of the American Land Foundation, a property rights organization. Prior to joining the bank board, he was chairman of the PCA of Eastern New Mexico board of directors. Mr. Cortese became a director in 1995 and his term expires at the end of 2019.

Linda C. Floerke, 57, is from near Lampasas, Texas. She is a member of the bank's audit committee and is also a member of the Tenth District Farm Credit Council. During 2018, she was vice chairman of the bank's compensation committee. In January 2019, Ms. Floerke was appointed vice chairman of the bank's audit committee. She and her husband, Benton, raise cattle, whitetail deer and hay as Buena Vista Ranch, FLP. They are also co-owners of Agro-Tech Services Inc., an agricultural consultation business, where she is secretary/treasurer. They also own and manage rental property in Uvalde, Real and Williamson counties. She is a co-owner of Casa Floerke LLC, a rental property business, and is the secretary/treasurer and co-owner of Jarrell Farm Supply, Inc. Ms. Floerke serves on the Lampasas First United Methodist Church Finance Committee and serves on the Texas A&M AgriLife Extension Leadership Advisory Board, which provides oversight of agricultural extension services. She is a member of the Texas Agricultural Cooperative Council board of directors, an industry trade association. She previously served as a trustee of the Lampasas Independent School District. Ms. Floerke was a director of Lone Star Ag Credit, formerly Texas Land Bank, from 2012 through the end of 2016. She became a director in 2017 and her term expires at the end of 2019.

Elizabeth G. "Betty" Flores, 74, is from Laredo, Texas, where she served as city mayor from 1998 to 2006. Ms. Flores is one of two appointed members on the board and serves on the bank's audit and compensation committees. She is also a member of the Tenth District Farm Credit Council. Previously, she was senior vice president of the Laredo National Bank. Ms. Flores serves on the boards of the Texas Agricultural Cooperative Council, an industry trade association, and Laredo Main Street, a nonprofit organization whose goal is to enhance the vibrant, multicultural community of Laredo's historic downtown and to diversify the economics base of the central business district within the framework of historic preservation, and which hosts El Centro de Laredo Farmers Market, a true certified farmers' market. In 2016, she was appointed by the Texas A&M University Chancellor, John Sharp, to serve on the selection committee to identify a new president for Texas A&M International University. Ms. Flores is a graduate of Leadership Texas 1995, a leadership program for women professional and community leaders for the state of Texas, and Leadership America 2008, a national leadership program for women professional and community leaders. In 2010, she was appointed to serve as a member of the Farm Credit System Diversity Workgroup. Ms. Flores is a partner in a

ranching and real estate partnership, E.G. Ranch, Ltd. She is a former member of the Federal Reserve Board Consumer Advisory Council. Ms. Flores became a director in 2006 and her term expired at the end of 2018.

M. Philip Guthrie, 73, is one of two appointed members on the board. He was vice chairman of the bank's audit committee and also serves on the bank's compensation committee. In January 2019, Mr. Guthrie was appointed chairman of the bank's audit committee. He is also a member of the Tenth District Farm Credit Council. He is one of the board's designated financial experts on the board audit committee for the bank. Mr. Guthrie is the chief executive officer of Denham Partners LLC, a Dallas-based private investment firm, and the chief executive officer of Neuro Holdings International LLC, which is a medical devices firm. He also has served as a director for Neuro Resources Group, a medical devices firm. Early in his career, he was chief financial officer of Southwest Airlines, and later served as chief financial officer of Braniff International during that airline's reorganization. Mr. Guthrie also was the managing director of Mason Best Co., a Dallas-based investment firm that managed operations in over \$2 billion in equity investments in a broad spectrum of industries, for 10 years, and has served as chairman, director or chief executive officer of numerous private and public financial service companies, both in banking and insurance. He is also currently an advisor to several large private equity firms, focusing on the financial services industry worldwide. A Certified Public Accountant and a Chartered Global Management Accountant, Mr. Guthrie is audit committee-qualified under the guidelines of the Securities and Exchange Commission, the New York Stock Exchange and Nasdaq. He is a stockholder of his family-managed 125-year-old livestock and crop operation in northern Louisiana. Mr. Guthrie became a director in 2015 and his term expires at the end of 2020.

## Committees

The board of directors has established an audit committee and a compensation committee. All members of the board serve on both the audit committee and the compensation committee. As the need arises, a member of the board of directors will also participate in the functions of the bank's credit review committee. The responsibilities of each board committee are set forth in its respective approved charter.

The disclosure of director and senior officer information included in this disclosure information and index was reviewed by the compensation committee prior to the annual report's issuance (including the disclosure information and index).

## Compensation of Directors

Directors of the bank are compensated in cash for service on the bank's board. An annual compensation amount is considered as a retainer for all services performed by the director in an official capacity during the year except for extraordinary services for which additional compensation may be paid. The annual retainer fee is to be paid in equal monthly installments. Compensation for 2018 was paid at the rate of \$59,353 per year, payable at \$4,946 per month. In addition to days served at board meetings, directors may serve additional days on other official assignments and under exceptional circumstances where extraordinary time and effort are involved, the board may approve additional compensation, not to exceed 30 percent of the annual maximum allowable by FCA regulations. In this

regard, effective July 1, 2017, additional compensation was paid for leadership positions on the board on an annual basis, including the chairman in the amount of \$12,000 and vice chairman in the amount of \$5,000; chairman and vice chairman of each board standing committees; and to members of each board standing committee. The additional compensation was as follows: audit committee chairman \$10,000, audit committee vice chairman \$5,000, compensation

committee chairman \$10,000, compensation vice chairman \$5,000, audit committee membership of \$2,500 and compensation committee membership of \$2,500. No director received non-cash compensation exceeding \$5,000 in 2018. Total cash compensation paid to all directors as a group during 2018 was \$497,471.

Information for each director for the year ended December 31, 2018, is provided below:

<b>Board Member</b>	<b>Days Served at Board Meetings*</b>	<b>Days Served on Other Official Assignments**</b>	<b>Total Compensation Paid***</b>
James F. Dodson	31.40	31.10	\$ 76,353
Lester Little	31.40	30.10	69,353
Brad C. Bean	29.40	29.60	74,353
Ralph W. Cortese	30.90	20.10	74,353
Linda C. Floerke	31.40	26.10	69,353
Elizabeth G. Flores	30.40	26.10	64,353
M. Philip Guthrie	31.40	30.10	69,353
			\$ 497,471

\*Includes travel time, but does not include time required to prepare for board meetings. Also includes attendance via teleconference.

\*\*Includes audit committee meetings, compensation committee meetings, credit review committee meetings, special assignments, training and travel time.

\*\*\*Reflects regular compensation and additional compensation for year presented.

Directors are reimbursed for reasonable travel, subsistence and other related expenses while conducting bank business. The aggregate amount of expenses reimbursed to directors in 2018, 2017 and 2016 totaled \$148,603, \$177,377 and \$122,538, respectively. A copy of the bank's travel policy is available to shareholders upon request.

## BANK SENIOR OFFICERS

<b>Name and Title</b>	<b>Time in Position</b>	<b>Experience – Past Five Years</b>	<b>Other Business Interests – Past Five Years</b>
Larry R. Doyle, <i>Chief Executive Officer</i>	15.5 years		During 2018, he was a member of the board of directors for Federal Farm Credit Banks Funding Corporation and served on the National Council of Farmer Cooperatives Executive Council. He currently serves on the Farm Credit System Presidents Planning Committee (PPC), business practices committee. He is the managing member of the following organizations: Lone Star Plantation LLC, a family-owned farming and land ownership operation, K&R Farm LLC, a family-owned farming operation and K&R Land Holdings, a family-owned land ownership operation.
John Sloan, <i>Senior Vice President, Chief Credit Officer</i>	1 year	Vice President and Unit Manager, 2014-2017; Vice President and Relationship Manager, prior to 2014, Association Direct Lending Group, FCBT	

<b>Name and Title</b>	<b>Time in Position</b>	<b>Experience – Past Five Years</b>	<b>Other Business Interests – Past Five Years</b>
Carolyn Owen*, <i>Senior Vice President, Corporate Affairs, General Counsel and Corporate Secretary</i>	5.8 years	Vice President, Corporate Affairs, Deputy General Counsel, FCBT	She served as a member of the Farm Credit System Capital Workgroup.
Nanci Tucker, <i>Senior Vice President, General Counsel and Corporate Secretary</i>	1 year	Chief Legal, Compliance and Chief Ethics Officer, Texas Guaranteed Student Loan Corporation; General Counsel, U.S. Financial Services Division, EZCORP, Inc.	
Amie Pala, <i>Senior Vice President, Chief Financial Officer</i>	8.4 years		She serves as a member of the Farm Credit System Capital Workgroup and of the Farm Credit System Disclosure Committee. She also serves as a member of the board of governors for the Farm Credit System Captive Insurance Corporation.
Michael Elliott, <i>Chief Information Officer</i>	5 years	Vice President of Information Technology, FCBT 2011-2013	
Stan Ray, <i>Chief Administrative Officer</i>	8.4 years		He serves on the AgFirst/FCBT Plan Sponsor Committee, the Texas District Benefits Administration Committee and the Farm Credit System's Reputation Risk Analysis and Planning Workgroup. He is president of the Tenth District Farm Credit Council, a trade organization. He is a member of the board of directors for the following organizations: Texas FFA Foundation, a nonprofit organization promoting youth in agriculture; Texas Agricultural Cooperative Council, an industry association; and Rodeo Austin, a nonprofit organization promoting youth education and Western heritage.
Nisha Rocap, <i>Chief Audit Executive</i>	1 year	Risk Assurance Director, PricewaterhouseCoopers	

\*Carolyn Owen served as Senior Vice President, Corporate Affairs, General Counsel and Corporate Secretary until her retirement effective December 31, 2018.

## Compensation Discussion and Analysis – Senior Officers

### Overview

The board of directors of the Farm Credit Bank of Texas, through its compensation committee, has pursued a compensation philosophy for the bank that promotes leadership in the adoption and administration of a comprehensive compensation program.

A description of the bank's compensation plans is as follows.

### *Base Pay*

Market-based salaries along with the other incentive and benefits described below are critical to attracting and retaining needed talent in a highly competitive job market and at a time of high retirement risks.

### *Defined Benefit Pension Plan*

The Defined Benefit Pension Plan (Pension Plan) is a final average pay plan which was closed to new participants in 1996, and later fully closed to all participants, including rehires who had formerly participated in the plan. The Pension Plan benefits are based on the average monthly eligible compensation over the 60 consecutive months that produce the highest average after 1996 (FAC60). The Pension Plan's benefit formula for a Normal Retirement Pension is the sum of (a) 1.65 percent of FAC60 times "Years of Benefit Service" and (b) 0.50 percent of (i) FAC60 in excess of Social Security covered compensation times (ii) "Years of Benefit Service" (not to exceed 35).

The Pension Plan's benefit formula for the Normal Retirement Pension assumes that the employee's retirement age is 65, that the employee is married on the date the annuity begins, that the spouse is exactly two years younger than the employee and that the benefit is payable in the form of a 50 percent joint and survivor annuity. If any of those assumptions are incorrect, the benefit is recalculated to be the actuarial equivalent benefit. The Pension Plan benefit is offset by the pension benefits any employee may have from another Farm Credit System institution.

The Pension Plan was amended in 2013 to allow those retiring after September 1, 2013, to elect a lump-sum distribution option. The plan was also amended to allow participating employers to exclude from pension compensation new long-term incentive plans which began after January 1, 2014.

In 2014 the plan was amended to allow terminated employees with a vested benefit to also elect a lump-sum distribution beginning January 1, 2015.

### *401(k) Plan – Elective*

Farm Credit Benefits Alliance (FCBA) 401(k) Plan is open to all bank employees and includes up to a 4 percent employer match on employee deferrals up to Internal Revenue Service (IRS) directed limits. Employees become fully vested in the plan upon participation. The plan allows for self-directed investment choices by participants.

### *401(k) Plan – Non-Elective Defined Contribution Plan*

FCBA 401(k) Plan's Defined Contribution component is open to employees not participating in the Defined Benefit Pension Plan. Employees become fully vested in the plan upon participation and receive a 5 percent employer contribution each pay period up to IRS-directed limits to the participant's account which is invested in the self-directed investment choices available.

### *Nonqualified Supplemental 401(k) Plan*

With the exception of the CEO, this plan is open to all employees who meet the minimum salary requirements set by the IRS. It has three features: elective deferral of employee compensation; discretionary employer contributions; and restored employer contributions that make an employee "whole" when 401(k) IRS limitations are met. Deferred money is invested with similar investment fund choices as the qualified 401(k) Plan at the participant's direction.

### *Success Sharing Plan*

The purpose of the Farm Credit Bank of Texas Success Sharing Plan (SSP) is to advance the mission of the bank by recognizing employees with variable pay through a discretionary bonus. The SSP (also categorized as a bonus or profit-sharing plan), rewards employees as the overall organization experiences success and performs within the realities of the current market environment and in accordance with business planning goals and objectives. Additionally, it is expected to help to attract, motivate and retain bank staff.

The SSP provides an annual award that is paid after the bank's operational results and strategic objectives are reported and assessed by the compensation committee of the board. The compensation committee has the final authority to determine if a success sharing award is to be paid and what percentage of the award target will be funded. The CEO does not participate in this plan; otherwise, all employees are eligible to participate in the SSP for that year. This program applies the concept of differential factors for all eligible bank participants, and is tiered into five groups according to employee job grades and their accountability level inside the entire organization. Each employee group has its own Success Sharing Award Factor for this plan. This factor is multiplied by the employee's December 31st annualized base compensation to arrive at the Success Sharing Plan award target for the year.

When a promotion or salary adjustment occurs during the year that elevates an employee's job grade into a higher employee group in the plan, the plan's award calculation will be prorated and paid at the separate employee group percentages for the periods the employee was in each of the employee groups. Additionally, when a salary adjustment occurs, the plan's award calculation will be prorated and paid at the separate employee salaries for the periods the employee was at each salary.

### *FCBT Retention Plan*

This is a nonqualified plan for bank employees that provides dollar incentives to remain employed for specific time periods to accomplish important bank initiatives or to aid in leadership succession. It is paid according to the agreement arranged for each participant. The CEO approves and recommends participants to the compensation committee, which approves plan provisions and participant agreements. Several employees were offered and accepted three-year retention plans in 2015. These employees have expertise with current software and systems from which the bank is transitioning to new software/system solutions. In order to retain these employees with critical knowledge, the bank offered retention plans that were accepted by the employees. The three-year retention plans are back loaded. The employees will receive 15 percent payout at the end of the first and second year if employed on December 31 each year. At the end of the third and final year, the employees will receive the last payment of 70 percent of the agreed-upon amount.

### *Spot Awards Program*

This bank program allows for discretionary awards to be paid to employees throughout the year in recognition of outstanding performance events or service provided to the bank's customers. Senior officers do not participate in this program.

### *Bank-Owned Vehicle Program*

Use of bank-owned vehicles is provided to three groups within the bank: the executive group, which is comprised of voting members of the bank's executive committee; the senior management group, which includes members defined by the CEO exclusive of the voting members of the executive committee; and the other group consisting of employees who have been identified by executive committee members as requiring a vehicle for job performance. Any current employee who was in possession of a bank-provided vehicle when vehicle eligibility guidelines were set was grandfathered for their remaining uninterrupted employment term at the bank. Employees assigned use of a bank-owned vehicle are required to maintain written records of their business and personal use. This data is used to annually impute to the employee's taxable wages the personal use value of the vehicle following the IRS lease value rule.

### *Educational and Training Program*

This program was established in recognition that ongoing enrichment of employees' skills, knowledge and expertise is essential not only for the success of the bank and the retention of key employees, but for the realization of employees' personal growth and achievement.

This program is directed to employees at all levels and includes formal orientation of new hires, a continuing education and degree program, and a licensing and certification program. The degree program reimbursement is open to full-time employees who have been with the bank at least six months. This program covers tuition, lab fees, books and registration fees if the employee receives a grade of C or better in undergraduate courses and B or better in graduate-level courses and expenses are in excess of those reimbursable by a scholarship or other sources.

Tuition reimbursement will not normally exceed the cost per semester hour charged at state-supported universities. Expenses incurred above the state-supported university baseline are the responsibility of

the employee. Certain positions in the bank must be staffed by employees who hold professional licenses and/or certifications. In these instances, the membership and license fees, training and educational expenses for obtaining and maintaining professional status, licenses and certifications are reimbursable.

### *Compensation, Risk and Performance*

One of the critical strategic goals of the bank is to provide market-driven financial products and support services to add value to our association customers. The bank succeeds at this through robust customer communications and relationships to stay aware of their business needs. Our staff provides technical, credit, operational and marketing support, and offers leadership in talent acquisition, retention and development. Our ability to succeed in these areas is dependent upon having a knowledgeable and experienced customer-service-focused workforce that is responsive but also proactive in meeting our district's business challenges and recognizing and taking advantage of opportunities, including promoting the bank's mission as a government-sponsored enterprise.

Market and higher compensation programs are required to keep Farm Credit competitive in the talent war currently being waged in Austin, Texas. The bank is located in one of the nation's top economic markets. It has become known as the "Silicon Hills" for the large number of technology firms located here that pay top salaries to information technology professionals as well as many other employee classifications. The unemployment rate has for years been lower than the national average (currently less than 3 percent compared to about 4 percent nationally), which makes attracting talent a struggle with not only the aggressive tech sector, but also with competition from major medical, real estate and government employers. Austin is one of the country's fastest growing regions bringing new talent into the market, but also attracts new employers seeking those same resources. All these factors exert an upward pressure on all aspects of the employee value proposition and stress in acquiring and retaining the skilled workforce needed to achieve the bank's goals.

While external factors impact compensation programs, internal measures are in place to make certain there is alignment with the bank's performance. Market-driven base salaries are combined with a bonus program that is at risk each year. The compensation committee of the district board annually determines the structure and the award for the Success Sharing Plan, a short-term bonus plan. This gives them the agility to modify or discontinue the plan in response to changing circumstances. The bank is not locked into an incentive program for any extended period of time.

The SSP in regard to the total compensation mix is not overly significant or significantly larger than the market practice. Multiple performance measures are considered, which include financial and operational metrics. Although awards are based on a single year's performance, because the bank's customers are its cooperative associations, performance in the time period measured is less uncertain than in businesses with larger and lesser known customer bases. The board and compensation committee review the bank's financial and operational performance at each meeting, so SSP decisions are reviewed by the same centralized group who hear those reports all year. Additionally, the compensation committee has external resources to support its oversight and uses that independent compensation consultant to review SSP awards with its annual executive compensation update.

In making its decision on the SSP award at year end, the compensation committee analyzes the bank's performance against the business plan for the year. The business plan is approved by the full composition of the board at the beginning of the year and is monitored all year as the CEO and senior team members deliver management and other reporting on bank performance and respond to director questions. Financial metrics include net income, the associations' direct note volume, allowance for loan losses, nonaccrual loans, capital market and investment income, total asset growth, credit quality, permanent capital ratio, and at year end, the association patronage. Operational accomplishments considered vary but typically include staff outreach to associations, participation and leadership in System workgroups and initiatives, debt issuances, credit and technology products and services delivered, marketing support, talent acquisition and talent management support, and continued progress in diversity and inclusion efforts.

### *Chief Executive Officer (CEO) Compensation Table and Policy for Bank*

In December 2016, a memorandum of understanding between the bank and the CEO was executed with an effective date of January 1, 2017, which supersedes the previous memorandum of understanding effective January 2, 2014. The memorandum of understanding is

effective for a term of three years, until December 31, 2019. The base salary for each year of the three-year term for the CEO will be \$1,375,000. Bonus payments, if any, are at the sole discretion of the compensation committee. The employment relationship between the bank and CEO remains at-will, meaning the bank may terminate the CEO's employment at any time, and the CEO may choose to leave at any time.

As previously mentioned, the CEO bonus is discretionary and subject to the approval of the bank's compensation committee. The compensation committee reviews the same bank financial performance and operational metrics that the committee evaluates for purposes of the SSP. Additionally, for both the CEO and senior officer group, the compensation committee has annual peer market data it reviews with its third-party consultant before making CEO base and bonus pay decisions. The compensation committee also reviews seven dimensions of CEO performance and has discussions about goals set for the current year and successes in meeting those goals. The seven dimensions of CEO performance are: strategy and vision; leadership; innovation/technology; operating metrics; risk management; people management; and external relationships.

The following table summarizes the compensation paid to the CEO of the bank during 2018, 2017 and 2016.

**Summary Compensation Table for the Bank's CEO**

Name of Chief Executive Officer	Year	Annual					Total
		Salary (a)	Bonus (b)	Change in Pension Value (c)	Deferred/Perquisites (d)	Other (e)	
Larry R. Doyle	2018	\$ 1,375,053	\$ 1,500,000	\$ (75,943)	\$ 16,666	\$ -	\$ 2,815,776
Larry R. Doyle	2017	1,375,053	1,500,000	181,118	16,932	-	3,073,103
Larry R. Doyle	2016	1,250,048	1,375,000	102,812	960	-	2,728,820

(a) Gross salary for year presented.

(b) Bonus compensation is presented in the year earned, and bonuses are paid within the first 30 days of the subsequent calendar year. For 2018 and 2017, bonus compensation was paid in January of the following year based on the performance of the bank during the previous year. For 2016, bonus compensation was paid in January 2017 of \$1,375,000 based on the performance of the bank during 2016.

(c) For 2018, 2017 and 2016, disclosure of the change in pension value represents the change in the actuarial present value of the accumulated benefit under the defined benefit pension plan, the Farm Credit Bank of Texas Pension Plan, from the pension measurement date used for financial statement reporting purposes with respect to the audited financial statements for the prior completed fiscal year to the pension measurement date used for financial statement reporting purposes with respect to the audited financial statements for the covered fiscal year. For 2018, the negative (or decrease) change in pension value is due to the increase in discount rate as compared to the prior year. For 2017 and 2016, the change in pension value is primarily associated with a decline in the discount rate as compared to the prior years.

(d) Deferred/Perquisites for 2018 and 2017 includes contributions to a 401(k) plan and premiums paid for life insurance. For 2016, the amount includes premiums paid for life insurance.

(e) No values to disclose.

## Compensation of Senior Officers for Bank

The following table summarizes the compensation paid to the aggregate number of senior officers, plus one highly compensated individual that is not a senior officer of the bank, during 2017 and 2016. Amounts reflected in the table are presented in the year the compensation is earned.

**Summary Compensation Table for Other Officers**

Aggregate Number in Group (excludes CEO)	Year	Annual					Total
		Salary (a)	Bonus (b)	Change in Pension Value (c)	Deferred/Perquisites (d)	Other (e)	
7 Officers	2018	\$ 2,045,745	\$ 1,022,873	\$ -	\$ 294,269	\$ 775	\$ 3,363,662
9 Officers	2017	2,195,979	1,034,423	583,589	274,901	51,658	4,140,550
8 Officers	2016	2,043,668	975,921	1,276,074	270,692	-	4,566,355

(a) Gross salary for year presented.

(b) Bonuses paid within the first 30 days of the subsequent calendar year.

(c) For 2017 and 2016, disclosure of the change in pension value represents the change in the actuarial present value of the accumulated benefit under the defined benefit pension plan, the Farm Credit Bank of Texas Pension Plan, from the pension measurement date used for financial statement reporting purposes with respect to the audited financial statements for the prior completed fiscal year to the pension measurement date used for financial statement reporting purposes with respect to the audited financial statements for the covered fiscal year. The significant increase in the change in pension value for 2016 is due to an officer attaining the required years of service and age to receive the maximum benefit allowed under the plan.

(d) Deferred/Perquisites include contributions to 401(k) and defined contribution plans, supplemental 401(k) discretionary contributions, automobile benefits and premiums paid for life insurance.

(e) For 2018, Other includes physical fitness compensation and service awards. For 2017, Other includes physical fitness compensation, service and retirement rewards, and an annual leave payment to a senior officer who retired at December 31, 2017. For 2016, there were no values to disclose.

For 2018, the aggregate number of officers includes one senior officer who retired from the bank effective December 31, 2018.

Disclosure of the compensation paid during 2018 to any senior officer or officer included in the table is available and will be disclosed to shareholders of the bank upon written request.

Neither the CEO nor any other senior officer received non-cash compensation exceeding \$5,000 in 2018.

Senior officers, including the CEO, are reimbursed for reasonable travel, subsistence and other related expenses while conducting bank business. A copy of the bank's travel policy is available to shareholders upon request.

## Pension Benefits Table for the CEO for Bank

The following table presents the total annual benefit provided from the defined benefit pension plan applicable to the CEO for the year ended December 31, 2018. There were no other senior officers eligible for the defined benefit pension plan.

Name	Plan Name	Number of Years Credited Service	Present Value of Accumulated Benefit	Payments During 2018
Larry R. Doyle	Farm Credit Bank of Texas Pension Plan	45.257	\$ 1,848,341	\$ -

## Description of Property

On September 30, 2003, the bank entered into a lease for approximately 102,500 square feet of office space to house its headquarters facility located at 4801 Plaza on the Lake Drive, Austin, Texas. The lease was effective September 30, 2003, and its term was from September 1, 2003, to August 31, 2013. On November 16, 2010, the bank entered into a lease amendment which extended the term of the lease to August 31, 2024. In addition, the lease amendment included expansion of the leased space to approximately 111,500 square feet of office space and an “early out” option to terminate the lease in 2020.

## Legal Proceedings

There were no matters that came to the attention of the board of directors or management regarding the involvement of current directors or senior officers in specified legal proceedings which are required to be disclosed.

## Description of Capital Structure

The bank is authorized to issue and retire certain classes of capital stock and retained earnings in the management of its capital structure. Details of the capital structure is described in Note 9, “Shareholders’ Equity,” to the accompanying financial statements.

## Description of Liabilities

The bank’s debt outstanding is described in Note 8, “Bonds and Notes,” to the accompanying financial statements. The bank’s contingent liabilities are described in Note 12, “Commitments and Contingencies,” to the accompanying financial statements. See also Note 10, “Employee Benefit Plans,” with regard to obligations related to employee retirement plans.

## Selected Financial Data

The selected financial data for the five years ended December 31, 2018, required to be disclosed, is incorporated herein by reference to the “Five-Year Summary of Selected Financial Data” included in this annual report to stockholders.

## Management’s Discussion and Analysis of Financial Condition and Results of Operations

“Management’s Discussion and Analysis,” which precedes the financial statements in this annual report, is incorporated herein by reference.

## Transactions With Senior Officers and Directors

The policies on loans to and transactions with the bank’s officers and directors, required to be disclosed in this section, are incorporated herein by reference to Note 11, “Related Party Transactions,” to the accompanying financial statements.

## Related Party Transactions

As discussed in Note 1, “Organization and Operations,” the bank lends funds to the district associations to fund their loan portfolios. Interest income recognized on direct notes receivable from district associations was \$320.4 million, \$269.1 million and \$240.1 million for 2018, 2017 and 2016, respectively. Further disclosure regarding these related party transactions is found in Note 4, “Loans and Reserves for Credit Losses,” and Note 9, “Shareholders’ Equity.”

In addition to providing loan funds to district associations, the bank also provides banking and support services to them, such as accounting, information systems, marketing and other services. Income derived by the bank from these activities was \$3.7 million, \$3.9 million and \$4.4 million for 2018, 2017 and 2016, respectively, and was included in the bank’s noninterest income.

The bank had no transactions with nor loans to directors or senior officers, their immediate family members, or any organizations with which such senior officers or directors are affiliated, during 2018, 2017 and 2016.

## Relationship With Public Accountants

There were no changes in independent qualified public accountants since the prior annual report to shareholders, and there were no material disagreements with our independent qualified public accountants on any matter of accounting principles or financial statement disclosure during the period.

Fees for professional services paid by the bank during 2018 to PricewaterhouseCoopers LLP, the bank’s independent qualified public accountants, were as follows.

- Audit services of \$979 related to the integrated audit for the bank and annual audit of the financial statements for the district for 2017 of \$287, additional controls assessment and auditing procedures for district associations of \$675, and \$17 related to out-of-pocket expenses for 2017 and 2016. Engagement letter for audit services for 2018 for the integrated audit for the bank reflect an estimated fee of \$772, plus reasonable out-of-pocket expenses.
- Audit-related services of \$342 of which \$246 was related to procedures completed for the bank’s SOC 2 (Service Organization Control 2) assessment, specifically directed at evaluating the suitability of design and operating effectiveness of controls related to credit delivery, accounting, processing and related application hosting system. The remaining fee of \$96 was related to procedures performed on the preferred stock issuance.
- Non-audit services of \$2 associated with accounting research and disclosure tools.
- FCBT is exempt from federal and certain other income taxes as provided in the Farm Credit Act. No tax services were provided by PricewaterhouseCoopers LLP to the bank.

Fees paid for the audit of the Farm Credit Benefits Alliance (FCBA) 401(k) plan for 2017 as engaged by the AgFirst/FCBT Plan Fiduciary Committee totaled \$16 and represented the bank’s proportionate share of fees paid.

With the exception of the audit of the FCBA 401(k) plan, the non-audit services for the bank listed above required pre-approval of the bank's audit committee, which was obtained.

Information regarding the fees for services rendered by the qualified public accountants for the district associations is disclosed in the individual associations' annual reports.

## Relationships With Unincorporated Business Entities (UBEs)

The bank has a relationship with FCBT BioStar B LLC, which is a limited liability company organized for the purpose of acquiring and managing unusual or complex collateral associated with loans.

The bank and a district association are among the forming limited partners for a \$154.5 million Rural Business Investment Company (RBIC), Advantage Capital Agribusiness Partners, LP (ACAP), established on October 3, 2014. Additionally, the bank is among the forming limited partners for a \$31.3 million RBIC, Innova Ag Innovation Fund IV, LP (Innova), established on December 12, 2016. The RBICs will facilitate private equity investments in agriculture-related businesses that will create growth and job opportunities in rural America. Each limited partner has a commitment to contribute up to \$20.0 million and \$5.0 million to ACAP and Innova, respectively, over a 10-year period and, as of December 31, 2018, FCBT has invested \$15.3 million in both RBICs, included in "Other assets" on the Balance Sheets. FCBT entered into a RBIC third investment on November 14, 2018. The bank committed to invest \$5.0 million alongside Farm Credit System partners in the new Midwest Growth Partners II Fund. The RBIC fund will focus on late and growth stage investments. The fund had no activity through year-end 2018.

Information regarding UBEs for district associations is disclosed in the individual association annual reports.

## Financial Statements

The financial statements, together with the report thereon of PricewaterhouseCoopers LLP dated March 1, 2019, and the report of management in this annual report to shareholders, are incorporated herein by reference.

The Farm Credit Bank of Texas' and its affiliated associations' (district) annual and quarterly reports are available free of charge, upon request. These reports can be obtained by writing to Farm Credit Bank of Texas, Department of Corporate Communications, P.O. Box 202590, Austin, Texas 78720 or by calling (512) 483-9260. Copies of the bank's quarterly and annual stockholder reports can be requested by sending an e-mail to [fcbb@farmcreditbank.com](mailto:fcbb@farmcreditbank.com). The bank's quarterly report is available approximately 40 days after the end of each fiscal quarter. The bank's annual report will be posted on the bank's website ([www.farmcreditbank.com](http://www.farmcreditbank.com)) within 75 calendar days of the end of the bank's fiscal year. This posting coincides with an electronic version of the report being provided to its regulator, the Farm Credit Administration. Within 90 calendar days of the end of the bank's fiscal year, a copy of the bank's annual report will be provided to its stockholders.

## Borrower Information Regulations

Farm Credit Administration (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.

## Credit and Services to Young, Beginning and Small Farmers and Ranchers, and Producers or Harvesters of Aquatic Products (YBS)

In line with its mission, the district has policies and programs for making credit available to young, beginning and small farmers and ranchers.

The definitions for YBS, as prescribed by FCA regulations, are provided below.

*Young Farmer or Rancher* – 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 or Rancher* – A farmer, rancher or producer or harvester of aquatic products who had 10 years or less of experience at farming, ranching or producing or harvesting aquatic products as of the date the loan was originally made.

*Small Farmer or Rancher* – A farmer, rancher or producer or harvester of aquatic products who normally generated less than \$250,000 in annual gross sales of agricultural or aquatic products at the date the loan was originally made.

For the purposes of YBS, the term "loan" means an extension of, or a commitment to extend, credit authorized under the Farm Credit Act, whether it results from direct negotiations between a lender and a borrower or is purchased from, or discounted for, another lender, including participation interests. A farmer/rancher may be included in multiple categories as they are included in each category in which the definition is met.

The bank and associations' efforts to respond to the credit and related needs of YBS borrowers are evidenced by the following table:

	At December 31, 2018	
	Number of Loans	Volume
<i>(dollars in thousands)</i>		
Total loans and commitments	78,746	\$ 29,733,536
Loans and commitments to young farmers and ranchers	14,532	\$ 2,612,104
Percent of loans and commitments to young farmers and ranchers	18.45%	8.79%
Loans and commitments to beginning farmers and ranchers	41,689	\$ 9,352,776
Percent of loans and commitments to beginning farmers and ranchers	52.94%	31.46%

The following table summarizes information regarding new loans to young and beginning farmers and ranchers:

	For the year ended December 31, 2018	
	Number of Loans	Volume
<i>(dollars in thousands)</i>		
Total loans and commitments	17,370	\$ 11,342,349
Loans and commitments to young farmers and ranchers	2,951	\$ 862,668
Percent of loans and commitments to young farmers and ranchers	16.99%	7.61%
New loans and commitments to beginning farmers and ranchers	7,608	\$ 2,672,097
Percent of loans and commitments to beginning farmers and ranchers	43.80%	23.56%

The following table summarizes information regarding loans to small farmers and ranchers:

	At December 31, 2018				
	Loan Size				
	\$50 Thousand or Less	\$50 to \$100 Thousand	\$100 to \$250 Thousand	More Than \$250 Thousand	Total
<i>(dollars in thousands)</i>					
Total number of loans and commitments	13,120	16,811	25,344	23,471	78,746
Number of loans and commitments to small farmers and ranchers	10,019	13,658	20,160	13,550	57,387
Percent of loans and commitments to small farmers and ranchers	76.36%	81.24%	79.55%	57.73%	72.88%
Total loans and commitments volume	\$ 608,120	\$ 948,548	\$ 3,256,561	\$ 24,920,307	\$ 29,733,536
Total loans and commitments to small farmers and ranchers volume	\$ 217,132	\$ 734,689	\$ 2,518,163	\$ 7,381,200	\$ 10,851,184
Percent of loans and commitments volume to small farmers and ranchers	35.71%	77.45%	77.33%	29.62%	36.49%

The following table summarizes information regarding new loans made to small farmers and ranchers:

	At December 31, 2018				
	Loan Size				
	\$50 Thousand or Less	\$50 to \$100 Thousand	\$100 to \$250 Thousand	More Than \$250 Thousand	Total
<i>(dollars in thousands)</i>					
Total new number of loans and commitments	3,416	2,924	4,501	6,529	17,370
Number of new loans and commitments to small farmers and ranchers	2,561	2,240	3,250	2,692	10,743
Percent of new loans and commitments to small farmers and ranchers	74.97%	76.61%	72.21%	41.23%	61.85%
Total new loans and commitments volume	\$ 95,460	\$ 222,931	\$ 756,119	\$ 10,267,839	\$ 11,342,349
Total new loans and commitments to small farmers and ranchers volume	\$ 75,256	\$ 171,247	\$ 538,235	\$ 2,059,512	\$ 2,844,250
Percent of loans and commitments volume to small farmers and ranchers	78.84%	76.82%	71.18%	20.06%	25.08%



## Additional Regulatory Information – Farm Credit Bank of Texas (unaudited)

### Overview

As described in “Structural Risk Management” beginning on page 19 of this annual report, the Farm Credit Administration (FCA) adopted final rules relating to capital requirements for the Farm Credit System (System) in 2016, which became effective January 1, 2017. These include public disclosure requirements set forth in Title 12 of the Code of Federal Regulations parts 628.61 through 628.63.

### Disclosure Map

The following table summarizes the annual disclosure requirements and indicates where each matter is disclosed in this annual report.

Disclosure Requirement	Description	2018 Annual Report Reference
Scope of Application	Corporate entity and structure Restrictions on transfers of funds or capital	Page 14, Pages 92 to 93 Page 93
Capital Structure	Terms and conditions of capital instruments Regulatory capital components	Note 9 – Pages 63 to 69; Pages 93 to 94 Pages 66, 94
Capital Adequacy	Capital adequacy assessment Risk-weighted assets Regulatory capital ratios	Pages 27 to 28, Page 95 Page 95 Page 12, 28; Note 9 – Page 66
Capital Buffers	Quantitative disclosures	Page 95
Credit Risk	Credit risk management and policies Summary of exposures Geographic distribution Industry distribution Contractual maturity Impaired loans and allowance for credit losses	Page 20, Pages 96 to 97 Page 98 Page 98 Page 98 Page 98 Note 4 – Pages 53 to 61, Pages 96 to 97
Counterparty Credit Risk-Related Exposures	General description Counterparty exposures	Page 20, Pages 98 to 99 Note 13 – Page 72; Note 15 – Page 78 to 80
Credit Risk Mitigation	General description Exposures with reduced capital requirements	Pages 97 to 99 Page 99
Securitization	General description Securitization exposures	Note 3 – Pages 50 to 53, Page 99 Note 3 – Pages 50 to 53, Note 14 – Pages 73 to 78, Page 100
Equities	General description	Page 100
Interest Rate Risk for Non-Trading Activities	General description Interest rate sensitivity	Pages 23 to 25, Page 100 Page 25

The following disclosures contain regulatory disclosures as required under Farm Credit Administration Regulation (FCA) 628.63 for risk-adjusted ratios: common equity tier 1, tier 1 capital and total capital. Refer to Note 9 of the accompanying Financial Statements for information regarding the statutorily required permanent capital ratio. As required, these disclosures are made available for at least three years and can be accessed at Farm Credit Bank of Texas’ website at [www.farmcreditbank.com](http://www.farmcreditbank.com).

### Scope of Application

The Farm Credit Bank of Texas (FCBT or bank) is one of the banks of the Farm Credit System (System), a nationwide system of cooperatively owned banks and associations established by acts of Congress. The System is subject to the provisions of the Farm Credit Act of 1971, as amended (Farm Credit Act). 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 bank and its related associations collectively are referred to as the Farm Credit Bank of Texas and affiliated associations (district). The district’s one FLCA (Federal Land Credit Association), 13 ACA (Agricultural Credit Associations) parent associations, each containing two wholly-owned subsidiaries (an FLCA and a Production Credit Association [PCA]), certain Other Financing Institutions (OFIs) and preferred stockholders jointly owned the bank at December 31, 2018. The FLCA and ACAs collectively are referred to as associations. The bank is the primary funding source for the district associations. FCBT has no subsidiaries; therefore, the financial statements are only those of the bank and are not consolidated with any other entity. In conjunction with other System entities, the bank jointly owns certain service organizations: the Federal Farm Credit Banks Funding Corporation (Funding Corporation), the Farm Credit System Building Association (FCSBA), and the Farm Credit System Association Captive Insurance Company. 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 who issued the equities may count the amount as capital. The bank's unincorporated business entities (UBEs), including its investment in the Rural Business Investment Companies (RBICs), and its investment in the Farm Credit System Association Captive Insurance Company are included in risk-weighted assets and are not deducted from any capital component in accordance with FCA regulations. The bank has no consolidated subsidiaries: 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 that is below the minimum total capital requirement.

## Capital Structure

The par value of the bank's common stock is \$5 and the par value of the Class B Series 1, 2 and 3 Noncumulative Perpetual Preferred Stock is \$1,000, \$100 and \$1,000 per share, respectively. The minimum initial borrower investment is equal to the greater of one thousand dollars or 2 percent of the association's and OFIs' average borrowing from the bank. Our bylaws permit the bank's board of directors to set the required level of association and OFI investment in the bank within a range of 2 to 5 percent of the average association and OFI borrowings. In 2018, the required investment level was 2 percent. There are no capital sharing agreements between the bank and its affiliated associations.

## Description of Bank Equities

Descriptions of the bank's equities, capitalization requirements and restrictions are provided as follows:

**Class B Series 1 Noncumulative Subordinated Perpetual Preferred Stock (Class B-1 preferred stock)** – On August 26, 2010, the bank issued \$300 million of Class B noncumulative subordinated perpetual preferred stock, representing 300,000 shares at \$1,000 per share par value for net proceeds of \$296.6 million. Dividends on the preferred stock, if declared by the board of directors at its sole discretion, are noncumulative and are payable semi-annually in arrears on the fifteenth day of June and December in each year, commencing December 15, 2010, at an annual fixed rate of 10 percent of par value of \$1,000 per share. The Class B-1 preferred stock is not mandatorily redeemable at any time, but may be redeemed in whole or in part at the option of the bank after the dividend payment date in June 2020. The Class B-1 preferred stock ranks, both as to dividends and upon liquidation, senior to all outstanding capital stock. Class B-1 preferred stock dividends are required by “dividend/patronage stopper” clauses to be declared and accrued before payment of bank investment and direct note patronage to associations and OFIs can be paid.

**Class B Series 2 Noncumulative Subordinated Perpetual Preferred Stock (Class B-2 preferred stock)** – On July 23, 2013, the bank issued \$300 million of Class B noncumulative subordinated perpetual preferred stock, Series 2, representing three million shares at \$100 per share par value, for net proceeds of \$296.0 million. Dividends on the Class B-2 preferred stock, if declared by the board of directors at its sole discretion, are noncumulative and are payable

quarterly in arrears on the fifteenth day of March, June, September and December in each year, commencing September 15, 2013, at an annual fixed rate of 6.75 percent of par value of \$100 per share up to, but excluding September 15, 2023, from and after which date will be paid at an annual rate of the 3-Month USD LIBOR plus 4.01 percent. The Class B-2 preferred stock is not mandatorily redeemable at any time, but may be redeemed in whole or in part at the option of the bank on any dividend payment date on or after September 15, 2023. The Class B-2 preferred stock ranks, both as to dividends and upon liquidation, *pari passu* with respect to the existing Class B-1 preferred stock, and senior to all other classes of the bank's outstanding capital stock. Class B-2 preferred stock dividends are required by “dividend/patronage stopper” clauses to be declared and accrued before payment of bank investment and direct note patronage to associations and OFIs can be paid.

**Class B Series 3 Noncumulative Subordinated Perpetual Preferred Stock (Class B-3 preferred stock)** – On June 25, 2018, the bank issued \$100.0 million of Class B noncumulative subordinated perpetual preferred stock, Series 3, representing one hundred thousand shares at \$1,000 per share par value, with issuance costs on preferred stock of \$1.3 million for net proceeds of \$98.7 million. Dividends on the Class B-3 preferred stock, if declared by the board of directors at its sole discretion, are noncumulative and are payable quarterly in arrears on the fifteenth day of March, June, September and December in each year, commencing September 15, 2018, at an annual fixed rate of 6.20 percent of par value of \$1,000 per share up to, but excluding June 15, 2028, from and after which date will be paid at an annual rate of the 3-Month USD LIBOR plus 3.223 percent. The Class B-3 preferred stock is not mandatorily redeemable at any time, but may be redeemed in whole or in part at the option of the bank on any dividend payment date on or after June 15, 2028. The Class B-3 preferred stock ranks *pari passu* with respect to the existing Class B-1 and Class B-2 preferred stock, and senior to all of the bank's outstanding capital stock. Class B-3 preferred stock dividends are required by “dividend/patronage stopper” clauses to be declared and accrued before payment of bank investment and direct note patronage to associations and OFIs can be paid.

**Class A Voting Common Stock** – According to the bank's bylaws, the minimum and maximum stock investments that the bank may require of the ACAs and FLCA are 2 percent (or one thousand dollars, whichever is greater) and 5 percent. The investments in the bank are required to be in the form of Class A voting common stock (with a par value of \$5 per share) and allocated retained earnings. The current investment required of the associations is 2 percent of their average borrowings from the bank. Under the Capitalized Participation Pool (CPP) program, the stock investment that the bank requires is 1.6 percent of each AMBS pool and 8 percent of each loan pool. Under the Capitalized and Non-Capitalized Participation Pool (NCP) program, the bank redeems stock in the amount of 2.0 percent of the par value of the loans purchased. No Class A voting common stock may be retired except at the sole discretion of the bank's board of directors, and provided that after such retirement, the bank shall meet minimum capital adequacy standards as may

from time to time be promulgated by the FCA or such higher level as the board may from time to time establish in the bank's Capital Plan. There were 63.1 million shares, 60.1 million shares and 56.6 million shares of Class A voting common stock issued and outstanding at December 31, 2018, 2017 and 2016, respectively.

**Class A Nonvoting Common Stock** – The bank requires OFIs to make cash purchases of Class A nonvoting common stock (with a par value of \$5 per share) in the bank based on a minimum stock investment of 2 percent (or one thousand dollars, whichever is greater) and on a maximum of 5 percent. The current investment required of the OFIs is 2 percent of their average borrowings from the bank. No Class A nonvoting common stock may be retired ex-

cept at the sole discretion of the bank's board of directors, and provided that after such retirement, the bank shall meet minimum capital adequacy standards as may from time to time be promulgated by the FCA or such higher level as the board may from time to time establish in the bank's Capital Plan. The bank has a first lien on these equities for the repayment of any indebtedness to the bank. There were 163 thousand shares, 196 thousand shares and 232 thousand shares of Class A nonvoting common stock issued and outstanding at December 31, 2018, 2017 and 2016, respectively.

Allocated retained earnings of \$45,685, \$39,144 and \$33,171 at December 31, 2018, 2017 and 2016, respectively, consisted of allocated equity for the payment of patronage on loans participated with another System bank.

The following table provides a summary of the bank's capital structure at December 31, 2018:

<i>(dollars in thousands)</i>	<b>Three-Month Average Daily Balance</b>	
<b>Common equity tier 1 capital (CET1)</b>		
Common cooperative equities:		
Purchased other required stock $\geq 7$ years	\$	267,785
Allocated stock $\geq 7$ years		36,042
Other required member purchased stock		-
Allocated equities:		
Qualified allocated equities subject to retirement		39,429
Nonqualified allocated equities subject to retirement		-
Nonqualified allocated equities not subject to retirement		-
Unallocated retained earnings		889,359
Paid-in capital		-
Regulatory adjustments and deductions made to CET1		(142,578)
<b>Total CET1</b>	<b>\$</b>	<b>1,090,037</b>
<b>Additional tier 1 capital (AT1)</b>		
Non-cumulative perpetual preferred stock	\$	700,000
Regulatory adjustments and deductions made to AT1 capital		-
<b>Total AT1 capital</b>		<b>700,000</b>
<b>Total tier 1 capital</b>	<b>\$</b>	<b>1,790,037</b>
<b>Tier 2 capital</b>		
Common cooperative equities not included in CET1	\$	-
Tier 2 capital elements (allowance for loan losses)		14,155
Regulatory adjustments and deductions made to Tier 2 capital		-
<b>Total tier 2 capital (T2)</b>		<b>14,155</b>
<b>Total capital</b>	<b>\$</b>	<b>1,804,192</b>
<b>Reconciliation to statement of condition:</b>		
Total capital	\$	1,724,424
Additions:		
Accumulated other comprehensive income		(81,693)
Regulatory adjustments and deductions		169,689
Subtractions:		
Tier 2 allowance and reserve		(13,874)
Regulatory deductions		(21,613)
<b>Total shareholders' equity*</b>	<b>\$</b>	<b>1,776,933</b>

\*The amount of total capital presented in the Regulatory Capital Components table above is the three-month average daily balance used in calculating capital ratios, as required by FCA regulations, whereas this amount is the amount outstanding as of December 31, 2018.

## 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. As part of our business planning process, we perform 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 our mission. Results of these stress tests are reviewed with the board of directors and the FCA. The bank regularly

assesses the adequacy of our capital to support current and future activities. This assessment includes maintaining a formal capital plan that addresses our capital targets in relation to our risks and establishes the required investment levels. The plan assesses the capital level and composition necessary to support financial viability and growth. The plan considers factors such as credit risk and allowance levels, quality and quantity of earnings, sufficiency of liquid funds, operational risk, interest rate risk and growth in determining optimal capital levels. The bank periodically reviews and modifies these targets to reflect current business and economic conditions. Our capital plan is updated at least annually and is subject to change at the discretion of the bank's board of directors.

### Risk-Weighted Assets at December 31, 2018:

<i>(dollars in thousands)</i>	Three-Month Average Daily Balance
<b>On-Balance Sheet Assets:</b>	
Exposures to sovereign entities	\$ -
Exposures to supranational entities and Multilateral Development Banks	-
Exposures to government-sponsored entities (direct notes to associations)	2,369,175
Exposures to depository institutions, foreign banks and credit unions	2,287
Exposures to public sector entities	-
Corporate exposures, including borrower loans and exposures to other financing institu-	6,011,109
Residential mortgage exposures	-
Past due and nonaccrual exposures	27,154
Securitization exposures	116,469
Exposures to other assets	949,046
<b>Total Risk-Weighted Assets, On-Balance Sheet</b>	<b>9,475,240</b>
<b>Off-Balance Sheet:</b>	
Letters of Credit	77,502
Commitments	1,427,951
Over-the-Counter Derivatives	4,967
Unsettled transactions	-
Cleared transactions	-
All other off-balance sheet exposures	2,662
<b>Total Risk-Weighted Assets, Off-Balance Sheet</b>	<b>1,513,082</b>
<b>Total Risk-Weighted Assets Before Adjustments</b>	<b>10,988,322</b>
Additions:	
Intra-System Equity Investments	142,578
Deductions:	
Regulatory Capital Deductions	(142,578)
<b>Total Standardized Risk-Weighted Assets</b>	<b>\$ 10,988,322</b>

## Capital Conservation and Leverage Buffers

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 capital conservation buffer is the lowest of the calculated buffer listed in the table below at 5.42 percent. The bank's leverage buffer of 3.39 percent is equal to the tier 1 leverage ratio minus the minimum tier 1 leverage ratio re-

quirement. Because the bank's conservation and leverage buffers exceed the minimum buffer requirements of 2.5 percent and 1 percent, respectively, the bank currently has no limitations on its distributions and discretionary bonus payments. The aggregate amount of eligible retained income was \$32,406 as of December 31, 2018. Capital conservation and leverage buffers are set forth for the year ended December 31, 2018 as follows:

	Regulatory Minimums	Required Buffer	Ratios as of December 31,	Calculated Buffer
Common equity tier 1 capital ratio*	4.5%	2.5%	9.92%	5.42%
Tier 1 capital ratio*	6.0%	2.5%	16.29%	10.29%
Total capital ratio*	8.0%	2.5%	16.42%	8.42%
Capital conservation buffer				5.42%
Tier 1 leverage ratio	4.0%	1.0%	7.39%	3.39%
Leverage buffer				3.39%

\*The capital conservation buffer over risk-adjusted ratio minimums will be phased in over 3 years under the FCA revised capital requirement, up to 2.5% beginning in 2020.

## Credit Risk

System entities have specific lending authorities within their chartered territories. The bank is chartered to serve its associations in Texas, Alabama, Mississippi, Louisiana and most of New Mexico. Our chartered territory is referred to as the district. FCBT serves its chartered territory by lending to the district's Federal Land Credit Association (FLCA) and Agricultural Credit Associations (ACAs). 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) as is further discussed in the section "Allowance for Loan Losses and Reserve for Unfunded Commitments." Allowance needs by geographic region are only considered in circumstances that may not otherwise be reflected in the PD and LGD, such as flooding or drought. There was no allowance attributed to a geographic area as of December 31, 2018.

### Impaired Loans

Impaired loans are loans for which it is probable that not all principal and interest will 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, accrual 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 shall remain contractually past due until it is formally restructured or 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 restructured loan constitutes a troubled debt restructuring 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. A concession is generally granted in order to minimize the bank's economic loss and avoid foreclosure. Concessions vary by program, are borrower-specific and may include interest rate reductions, term extensions, payment deferrals or the acceptance of additional collateral in lieu of payments. In limited circumstances, principal may be forgiven. A loan restructured in a troubled debt restructuring is an impaired loan.

Impaired loans are generally placed in nonaccrual status when principal or interest is delinquent for 90 days (unless adequately secured and in the process of collection) or circumstances indicate that full collection of principal and interest is in doubt. In accordance with FCA regulations, all loans 180 days or more past due are considered nonaccrual. When a loan is placed in nonaccrual status, accrued interest that is considered uncollectible is either reversed (if current year interest) or charged against the allowance for loan losses (if prior year interest). Loans are charged off at the time they are determined to be uncollectible.

Payments received on nonaccrual loans are generally applied to 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, payments are recognized as interest income. Nonaccrual loans may be returned to accrual status when contractual principal and interest are current, the borrower has demonstrated payment performance, there are no unrecovered prior charge-offs and collection of future payments is no longer in doubt. If previously unrecognized interest income exists at the time the loan is transferred to accrual status, cash received at the time of or subsequent to the transfer is first recorded as interest income until such time as the recorded balance equals the contractual indebtedness of the borrower.

### Allowance for Loan Losses and Reserve for Unfunded Commitments

The bank uses a two-dimensional loan rating model based on an 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 probability of default 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 more rapidly as a loan moves from a "9" to other assets especially mentioned and grows significantly as a loan moves to a substandard (viable) level. A substandard (nonviable) rating indicates that the probability of default is almost certain.

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 allowance for loan losses is a valuation account used to reasonably estimate loan and lease 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 determination of the allowance for loan losses is based on management's current judgments about the credit quality of its loan portfolio. A specific allowance may be established for impaired loans under authoritative accounting guidance. Impairment of these loans is measured based on the present value of expected future cash flows discounted at the loan's effective interest rate or, as practically expedient, at the loan's observable market price or fair value of the collateral if the loan is collateral-dependent.

The allowance for loan losses encompasses various judgments, evaluations and appraisals with respect to the loans and their underlying security that, by their nature, contain elements of uncertainty and imprecision. Changes in the agricultural economy and their impact on borrower repayment capacity will cause these various judgments, evaluations and appraisals to change over time. Accordingly, actual circumstances could vary significantly from the institutions' expectations and predictions of those circumstances. The allowance is increased through provisions for loan losses and loan recoveries and is decreased through reversals of provisions for loan losses and loan charge-offs. The level of allowance for loan losses is generally based on recent charge-off experience adjusted for relevant environmental factors. The allowance for loan losses includes components for loans individually evaluated for impairment, loans collectively evaluated for impairment and loans acquired with deteriorated credit quality. Generally, for loans individually evaluated, the allowance for loan losses represents the difference between the recorded investment in the loan and the present value of the cash flows expected to be collected discounted at the loan's effective interest rate, or at the fair value of the collateral, if the loan is collateral-dependent. For those loans collectively evaluated for impairment, the allowance for loan losses is determined using the risk-rating model.

The bank's reserves for credit losses include the allowance for loan losses and a reserve for losses on unfunded commitments. The reserve for losses on unfunded commitments includes letters of credit and unused loan commitments, and is recorded in "Other liabilities" in the Balance Sheet.

## Credit Risk Management

### Credit Risk Mitigation Related to Loans

Credit risk arises from the potential inability of an obligor to meet its repayment obligation and exists in our outstanding loans, letters of credit, unfunded loan commitments, investment portfolio and derivative counterparty credit exposures. The bank manages credit risk associated with our lending activities through an assessment of the credit risk profile of an individual borrower. The bank sets its own underwriting standards and lending policies, approved by the board of directors that provide direction to loan officers. Underwriting standards include, among other things, an evaluation of:

- character — borrower integrity and credit history;
- capacity — repayment capacity of the borrower based on cash flows from operations or other sources of income;
- collateral — protects the lender in the event of default and represents a potential secondary source of loan repayment;

- capital — ability of the operation to survive unanticipated risks; and
- conditions — requirements that govern intended use of loan funds.

The retail credit risk management process begins with an analysis of the borrower's credit history, repayment capacity and financial position. Repayment capacity focuses on the borrower's ability to repay the loan based on cash flows from operations or other sources of income, including non-farm income. Real estate loans with terms greater than 10 years must be secured by first liens on the real estate (collateral). As required by Farm Credit Administration regulations, each institution that makes loans on a secured basis must have collateral evaluation policies and procedures. Real estate loans with terms greater than 10 years may be made only in amounts up to 85 percent of the original appraised value of the property taken as security or up to 97 percent of the appraised value if guaranteed by a state, federal or other governmental agency. The actual loan to appraised value when loans are made is generally lower than the statutory maximum percentage. Appraisals are required for loans of more than \$250,000. This credit risk-rating process incorporates objective and subjective criteria to identify inherent strengths and weaknesses and risks in a particular relationship.

This credit risk-rating process uses a two-dimensional loan rating structure, incorporating a 14-point risk-rating scale to identify and track the probability of borrower default and a separate 4-point scale addressing loss given default. The 14-point risk-rating scale provides for nine "acceptable" categories, one "other assets especially mentioned" category, two "substandard" categories, one "doubtful" category and one "loss" category. The loss given default scale establishes ranges of anticipated economic loss if the loan defaults. The calculation of economic loss includes principal and interest as well as collections costs, legal fees and staff costs.

By buying and selling loans or interests in loans to or from other institutions within the System or outside the System, we limit our exposure to either a borrower or commodity concentration. This also allows us to manage growth and capital, and to improve geographic diversification. Portfolio credit risk is also evaluated with the goal of managing the concentration of credit risk. Concentration risk is reviewed and measured by industry, commodity, geography and customer limits.

Refer to the Risk-Weighted Asset table on page 95 for the bank's total and average loans, investment securities, off-balance sheet commitments and over-the-counter (OTC) derivatives. The following table illustrates the bank's total exposure (including commitments) by loan type as of December 31, 2018.

	Total Exposure
Direct notes receivable from district associations	\$ 16,366,402
Real estate mortgage	762,039
Production and intermediate term Agribusiness	1,122,142
Loans to cooperatives	720,855
Processing and marketing	3,685,053
Farm-related business	135,911
Communications	443,570
Energy (rural utilities)	1,900,168
Water and waste disposal	170,281
Rural home	-
Agricultural export finance	-
Mission-related	16,308
Leases	13,505
Loans to other financing institutions	76,000
<b>Total</b>	<b>\$ 25,412,234</b>

The following table provides an overview of the remaining contractual maturity of the bank's credit risk portfolio categorized by exposure at December 31, 2018:

<i>(dollars in thousands)</i>	Due in one year or less	Due after one year through five years	Due after five years	Total
Loans	\$ 16,388,468	\$ 1,112,613	\$ 555,605	\$ 18,056,686
Off-balance sheet commitments:				
Financial letters of credit	62,771	12,246	-	75,017
Performance letters of credit	6,992	234	-	7,226
Commercial letters of credit	2,906	4	-	2,910
Unfunded commitments	5,072,496	2,107,806	90,093	7,270,395
Investments	366,062	483,972	4,828,897	5,678,931
Derivatives (notional)	-	280,000	740,000	1,020,000
<b>Total</b>	<b>\$ 21,899,695</b>	<b>\$ 3,996,875</b>	<b>\$ 6,214,595</b>	<b>\$ 32,111,165</b>

The following table illustrates the bank's total exposure (including commitments) by geographic distribution as of December 31, 2018.

State	Percentage
Texas	55%
Mississippi	6
Alabama	6
Louisiana	4
California	2
All other states	27
	<u>100%</u>

Refer to Note 4 of the accompanying financial statements for amounts of impaired loans with or with no related allowance, loans in nonaccrual status and greater than 90 days past due, loans past due greater than 90 days and still accruing, the allowance at the end of each reporting period, charge-offs during the period, and changes in components of our allowance for credit losses.

## Counterparty Credit Risk and Credit Risk Mitigation

### Credit Risk Mitigation Related to Derivatives

By using derivative instruments, the bank exposes itself to credit and market risk. The bank's derivative activities are monitored by its Asset-Liability Management Committee (ALCO) as part of the ALCO's bank asset/liability and treasury functions. The ALCO is responsible for approving hedging strategies that are developed

through its 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.

If a counterparty fails to fulfill its performance obligations under a derivative contract, the bank's credit risk will equal the fair value gain of 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 maintains collateral agreements to limit exposure to agreed-upon thresholds. The bank deals with counterparties that have an investment grade or better credit rating from a major rating agency, and also monitors the credit standing of, and levels of exposure to, individual counterparties. When certain thresholds are met, the bank's over-the-counter derivative contracts require the bank or its counterparties to post cash or securities as collateral when the fair values of the derivatives change based on changes in interest rates. 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. The amount of collateral the bank

would have to provide if the bank's own creditworthiness deteriorated would be dependent upon the terms of the contract with the counterparty, including agreed-upon thresholds to limit exposure, and changes in interest rates. Refer to Note 15 of the accompanying financial statements for details on the notional, fair value, collateral held and credit ratings of the bank's derivative contracts. The bank did not hold any purchased credit derivatives for its own credit portfolio as of December 31, 2018.

The table below shows derivatives by underlying exposure type, segregated between interest rate caps and pay fixed swaps, both of which are traded in over-the-counter markets as of December 31, 2018.

	<b>Notional Amount</b>	<b>Gross Positive Fair Value</b>
Interest rate caps	\$ 195,000	\$ 448
Pay fixed swaps	825,000	10,252
<b>Total Derivatives</b>	<b>\$ 1,020,000</b>	<b>\$ 10,700</b>

### Credit Risk Mitigation Related to Investments

Credit risk in our investment portfolio is largely mitigated by investing primarily in securities issued or guaranteed by the U.S. government or one of its agencies. At December 31, 2018, 54.19 percent of our \$5.71 billion investment portfolio consisted of securities that carry a full faith and credit guarantee of the U.S. government. Such securities include mortgage-backed securities issued by the Government National Mortgage Association (Ginnie Mae), Export-Import Bank of the United States and U.S. Treasury. The bank's investment portfolio consisted of 37.90 percent of securities issued by government agencies that carry the implicit backing of the U.S. government, including MBS issued by the Federal National Mortgage Association (Fannie Mae), the Federal Home Loan Mortgage Corporation (Freddie Mac) and Farmer Mac. Another 7.91 percent of our investment portfolio is made up of asset-backed investments and corporate debt which primarily represents the credit risk in the bank's investment portfolio.

Credit risk in our 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 us.

For each separately disclosed credit risk portfolio, see the following table for the total exposure that is covered by guarantees/credit derivatives, and the risk-weighted asset amount associated with that

exposure. The bank did not hold eligible financial collateral for its loan, investment and derivative portfolios at December 31, 2018.

*(dollars in thousands)*

Government Guaranteed Asset Type	90-Day Average	Risk Weighting	Risk-Weighted Amount
Investments	\$ 3,104,882	0%	\$ -
Loans	2,349	0%	-
<b>Total</b>	<b>\$ 3,107,231</b>		<b>\$ -</b>

### 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 does not currently hold any credit-related re-securitization investments.

The bank currently only participates in credit-related securitizations as investors through the purchase of highly rated asset-backed securities (ABS) as included in its investment portfolio. The bank also holds securitization exposures through the purchase of U.S. government and agency guaranteed securities. The bank has not transferred any exposures that it has originated or purchased from a third party in connection with a securitization of assets as of December 31, 2018, nor does it have any outstanding exposures that it intends to be securitized as of December 31, 2018. The bank did not recognize any gain or loss on securitized assets for the twelve months ended December 31, 2018. As of December 31, 2018, the bank did not retain any credit-related re-securitization exposures.

We are subject to liquidity risk with respect to our purchased securitization exposures. In volatile market conditions, it could be difficult to sell such investments, if the need arises, and the discounts from face value could likely be significant. In addition, because of the inherent uncertainty of determining the fair value of such investments that do not have a readily available market value during volatile market conditions, the fair value of our investments may differ significantly from the values that would have been used had a ready market existed for the investments. The bank monitors its purchased ABS holdings on an ongoing basis, reviewing monthly credit performance metrics against outstanding credit enhancements, monitoring issuer and servicer performance, and tracking relevant ABS market conditions and credit spreads.

Below is an overview of our purchased securitization exposures held as of December 31, 2018, by exposure type and categorized by risk weighting band and risk-based capital approach. Refer to Note 3 of the accompanying Financial Statements:

Description of Securitization	Risk-Based Capital Approach	Exposure Amount (dollars in thousands)	Risk Weighted
Agency MBS:			
GNMA	Standardized Risk Weight	\$2,671,043	0%
FNMA and FHLMC	Standardized Risk Weight	2,157,582	20%
Asset-backed securities	Gross-up	32,829	20%-100%
Asset-backed securities	Gross-up	10,011	101%-125%
Asset-backed securities	Gross-up	17,522	126%-150%
Asset-backed securities	Gross-up	28,027	151%-175%
Total Asset-backed securities	Gross-up	88,389	126%

## Equities

The bank is a limited partner in certain Rural Business Investment Companies (RBICs) for various relationship and strategic reasons. These RBICs facilitate equity and debt investments in agriculture-related businesses that create growth and job opportunities in rural

America. There have been no sales or liquidations of these investments during the period. These investments are accounted for under the equity method as the bank is considered to have significant influence. These investments are not publicly traded and the book value reflects fair value. The bank had no unrealized gains or losses not recognized either on the balance sheet or through earnings.

(dollars in thousands)	Disclosed in Other Assets	Life-to-Date Gains (Losses) Recognized in Retained Earnings*
RBICs	\$12,222	\$(3,060)

\*Retained earnings is included in common equity tier 1 and total capital ratios.

## Interest Rate Risk

Asset/liability management is the bank's process for directing and controlling the composition, level and flow of funds related to the bank's and district's interest-rate-sensitive assets and liabilities. The bank is able to manage the balance sheet composition by using various debt issuance strategies and hedging transactions to match its asset cash flows. Management's objective is to generate adequate and stable net interest income in a changing interest rate environment.

The bank uses a variety of techniques to manage its financial exposure to changes in market interest rates. These include monitoring the difference in the maturities or repricing cycles of interest-rate-sensitive assets and liabilities; simulating changes in net interest income under various interest rate scenarios; and monitoring the change in the market value of interest-rate-sensitive assets and liabilities under various interest rate scenarios. The bank measures interest rate risk on a quarterly basis.

The interest rate risk inherent in a district association's loan portfolio is substantially mitigated through its funding relationship with the bank. The bank manages district interest rate risk through its direct loan pricing and funding processes. Under the Farm Credit Act of 1971, as amended, a district association is obligated to borrow only from the bank unless the bank approves borrowing from other funding sources. An association's indebtedness to the bank, under a general financing agreement between the bank and the association, represents demand borrowings by the association to fund the majority of its loan advances to association members and is secured by the total assets of the association.

The bank's net interest income is determined by the difference between income earned on loans and investments and the interest expense paid

on funding sources, typically Systemwide bonds and discount notes. The bank's level of net interest income is affected by both changes in market interest rates and timing differences in the maturities or repricing cycles of interest-rate-sensitive assets and liabilities.

Depending upon the direction and magnitude of changes in market interest rates, the bank's net interest income may be affected either positively or negatively by the mismatch in the maturity or the repricing cycle of interest-rate-sensitive assets and liabilities.

The bank maintains a loan pricing philosophy that loan rates should be based on competitive market rates of interest. The district associations offer a wide variety of products, including LIBOR- and prime-indexed variable-rate loans and loans with fixed-rate terms ranging from under one year to 30 years. The interest rates on these loans are directly related to the bank's cost to issue debt in the capital markets and a credit spread added for borrower risk.

The bank offers an array of loan programs to associations that are designed to meet the needs of the associations' borrowers. These loan programs have varying repayment terms, including fixed and level principal payments, and a choice of payment frequencies, such as monthly, quarterly, semi-annual and annual payments. Additionally, the bank offers a choice of prepayment options to meet customer needs.

Refer to the net interest income and market value of equity table in the Management's Discussion and Analysis on page 25, which sets forth the bank's projected sensitivity to interest rate movements as prescribed by policy as of December 31, 2018, based on the bank's interest-earning assets and interest-bearing liabilities at December 31, 2018.

**OUR MISSION** is to enhance  
the quality of life in rural  
communities by using cooperative  
principles to provide competitive  
credit and superior service to  
our member-owners.



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