2017
ANNUAL
REPORT

# INVESTING IN RURAL AMERICA

CoBANK

# FINANCIAL HIGHLIGHTS

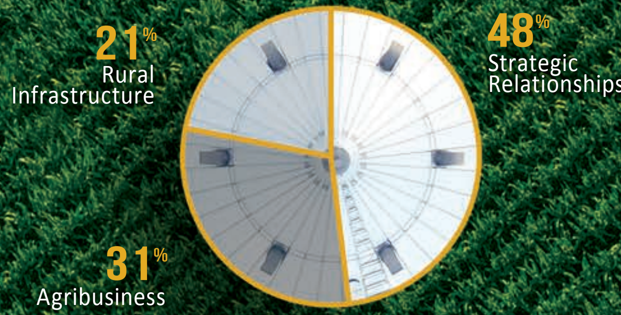
| FOR THE YEAR ($ in millions) | 2017 | 2016 | 2015 |
|---|---|---|---|
| Net Interest Income | $ 1,393 | $ 1,362 | $ 1,273 |
| Provision for Loan Losses | 42 | 63 | 10 |
| Net Income | 1,125 | 946 | 937 |
| Patronage Distributions | 610 | 588 | 514 |

| AT YEAR-END ($ in millions) | 2017 | 2016 | 2015 |
|---|---|---|---|
| Agribusiness | $ 30,304 | $ 28,660 | $ 26,131 |
| Strategic Relationships | 47,948 | 45,994 | 43,358 |
| Rural Infrastructure | 21,014 | 20,604 | 19,552 |
| **Total Loans** | **$ 99,266** | $ 95,258 | $ 89,041 |
| Allowance for Credit Losses | $ 671 | $ 662 | $ 602 |
| Total Assets | 129,211 | 126,131 | 117,471 |
| Total Shareholders' Equity | 9,060 | 8,574 | 7,810 |

| FINANCIAL RATIOS | 2017 | 2016 | 2015 |
|---|---|---|---|
| Return on Average Common Equity | 14.20 % | 12.40 % | 13.57 % |
| Return on Average Assets | 0.89 | 0.78 | 0.86 |
| Return on Active Patron Investment | 20.70 | 21.32 | 19.76 |
| Net Interest Margin | 1.12 | 1.14 | 1.20 |
| Total Capital Ratio* | 15.24 | N/A | N/A |
| Permanent Capital Ratio | 14.29 | 15.47 | 14.95 |

*Effective January 1, 2017, CoBank implemented new regulatory capital requirements, as required by the Farm Credit Administration. Therefore, this ratio is not applicble for periods ending prior to this date.

# KEY METRICS

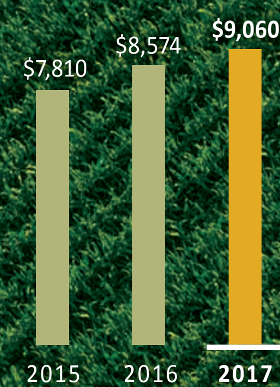



TOTAL LOANS
$99.3 BILLION
at 12/31/17


TOTAL ASSETS
(in billions)


NET INCOME
(in millions)


PATRONAGE DISTRIBUTIONS
(in millions)




TOTAL SHAREHOLDERS' EQUITY
(in millions)

AS AN INTEGRAL MEMBER OF THE FARM CREDIT SYSTEM, OUR MISSION IS TO SERVE AS A DEPENDABLE PROVIDER OF CREDIT AND OTHER VALUE-ADDED FINANCIAL SERVICES TO AGRICULTURE AND RURAL INFRASTRUCTURE BUSINESSES FOR THE BENEFIT OF RURAL AMERICA.

# TABLE OF CONTENTS



**THOMAS HALVERSON**
President &
Chief Executive Officer

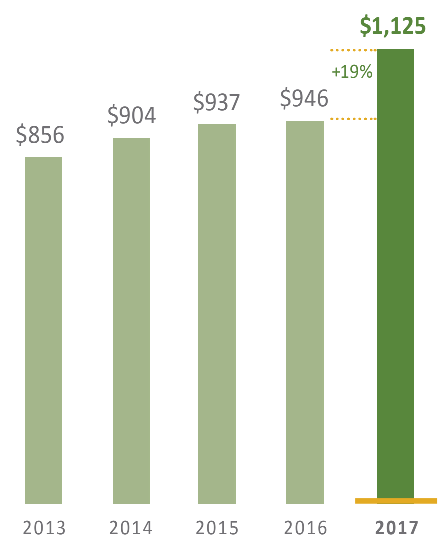
**KEVIN RIEL**
Chairman

# TO OUR CUSTOMERS & OTHER STAKEHOLDERS

"COBANK RECORDED ROBUST RESULTS IN 2017 WHILE REMAINING TRUE TO THE COOPERATIVE MODEL AND OUR MISSION OF SERVICE TO RURAL AMERICA."

It is with pride and gratitude that we report on CoBank's year-end business and financial performance to our customer-owners and other stakeholders. Despite ongoing challenges in financial services as well as in many of the rural industries we serve, CoBank recorded robust results in 2017 while remaining true to the cooperative model and our mission of service to rural America. We ended the year in a position of genuine strength in the marketplace—with outstanding customer relationships, deeply committed employees, and a highly aligned board of directors and executive team focused on CoBank's long-term ability to serve as a dependable financial partner for our customers.

As strong as CoBank's organic business results were in 2017, they were unexpectedly buttressed by the passage of federal tax reform legislation late in the year. As further detailed below, the new tax law generated approximately $142 million in additional net income for CoBank, which helped drive a 19 percent increase in earnings year-over-year. The law also permanently lowered the federal corporate tax rate from 35 percent to 21 percent. Since CoBank pays taxes on income generated by lending to cooperatives and other direct borrowers, we expect our customer-owners to see a material financial benefit from the legislation going forward. Determining how this windfall should be applied within our business on behalf of our customers and other stakeholders will be a major focus for our board in 2018.




**COBANK NET INCOME**
(dollars in millions)

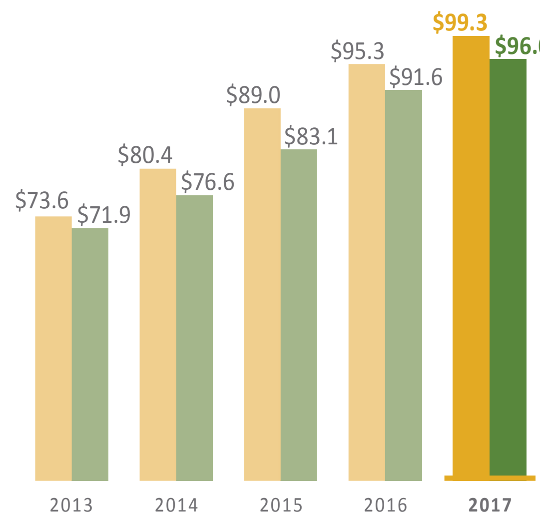
Since CoBank is a customer-owned financial institution, our board is committed to transparent communication with our borrowers and to ensuring their solid grasp of our performance and marketplace trends that are expected to impact us going forward. To that end, this letter includes a thorough discussion of our financial performance as well as industry dynamics and policy issues we are focused on as we execute our business strategy. Much more detailed information is contained in the Management's Discussion & Analysis section beginning on page 33 and in the accompanying footnotes to our financial statements. We hope the entire annual report is useful to you and that it provides you with a comprehensive understanding of the opportunities and challenges we face while managing CoBank on your behalf.

## 2017 FINANCIAL RESULTS

CoBank's average loan and lease volume increased approximately 5 percent in 2017, to $96.0 billion. That growth reflected higher levels of borrowing by customers in all three of our operating segments—Agribusiness, Rural Infrastructure and Strategic Relationships.

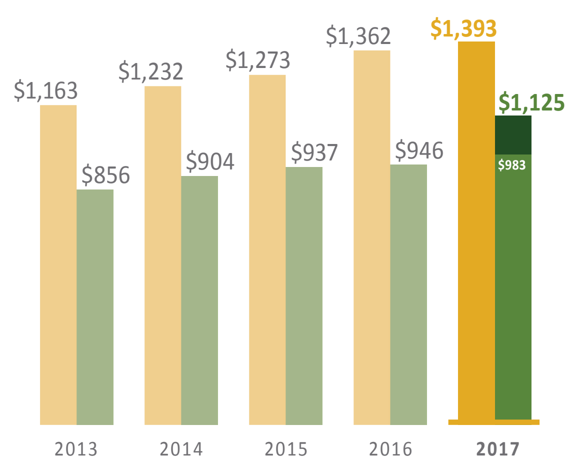
Loan volume growth at CoBank is determined by a variety of factors, some of which are exogenous and outside of our control. For instance, the movement of agricultural commodity prices can have a direct impact on demand for seasonal financing from farmer-owned cooperatives, particularly in the U.S. grain complex. Commodity prices also affect farm income and how much credit farmers around the country need to sustain their operations, which in turn impacts wholesale borrowing by CoBank's affiliated Farm Credit associations. Infrastructure lending is influenced by everything from government regulation to technology change. Over the long term, however, what most determines loan volume at CoBank are our relationships and reputation in the marketplace. Across the board, our customers are looking for a lender that understands their needs and that will serve them reliably and with excellence, in good times and bad. The fact that our portfolio has increased by an average of 6.4 percent annually over the past five years is highly encouraging in that regard—particularly in light of relatively slow growth in the U.S. economy as a whole.

CoBank's net interest income (NII) increased by 2 percent in 2017, to $1.393 billion, primarily as a result of higher average loan volume. NII is the difference in interest we earn on loans to customers and other interest-bearing assets and the interest we pay on the Farm Credit System debt issued to fund those assets. Given the nature of our business as a balance-sheet lender, NII is the single most important component of earnings for CoBank. While NII has continued to grow steadily in recent years, it has done so more slowly than loan volume in part due to downward pressure on margins, an industry-wide phenomenon that is discussed in detail below. Another factor




### COBANK LOAN VOLUME
(dollars in billions)

Period End | Average




### NII AND NET INCOME
(dollars in millions)

Net Interest Income | Net Income | Portion of 2017 net income attributable to tax reform

contributing to slower NII growth has been the declining level of accretion income tied to CoBank's 2012 merger with U.S. AgBank.

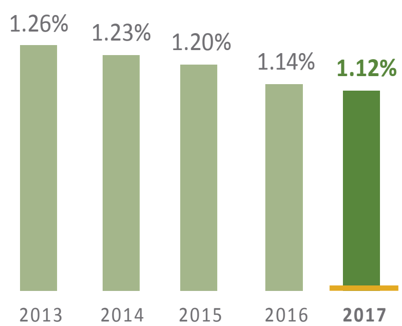
Net income for CoBank rose 19 percent to $1.125 billion in 2017, reflecting higher net interest income as well as the benefit of federal tax reform legislation. Excluding the impact of the new tax law, net income rose 4 percent, to $983 million.

The passage of tax reform in late December 2017 took many observers by surprise, and it has required banks and many other businesses to adjust their 2017 financial results and modify their longer-term business plans. For CoBank, a key impact in 2017 was the effect that the tax legislation had on our Farm Credit Leasing business and its billions of dollars in depreciable assets. We were required to remeasure the deferred tax liabilities recorded against those assets at the new lower corporate tax rate, which when netted with other deferred tax adjustments resulted in a significant one-time tax benefit of $142 million for CoBank. This dynamic with our leasing business differentiates CoBank from many commercial banks, who have reported large charges in the fourth quarter of 2017 due to the impact of the tax legislation on their allowances for credit losses. We also recorded a charge tied to our allowance, but it was more than offset by the leasing business benefit.

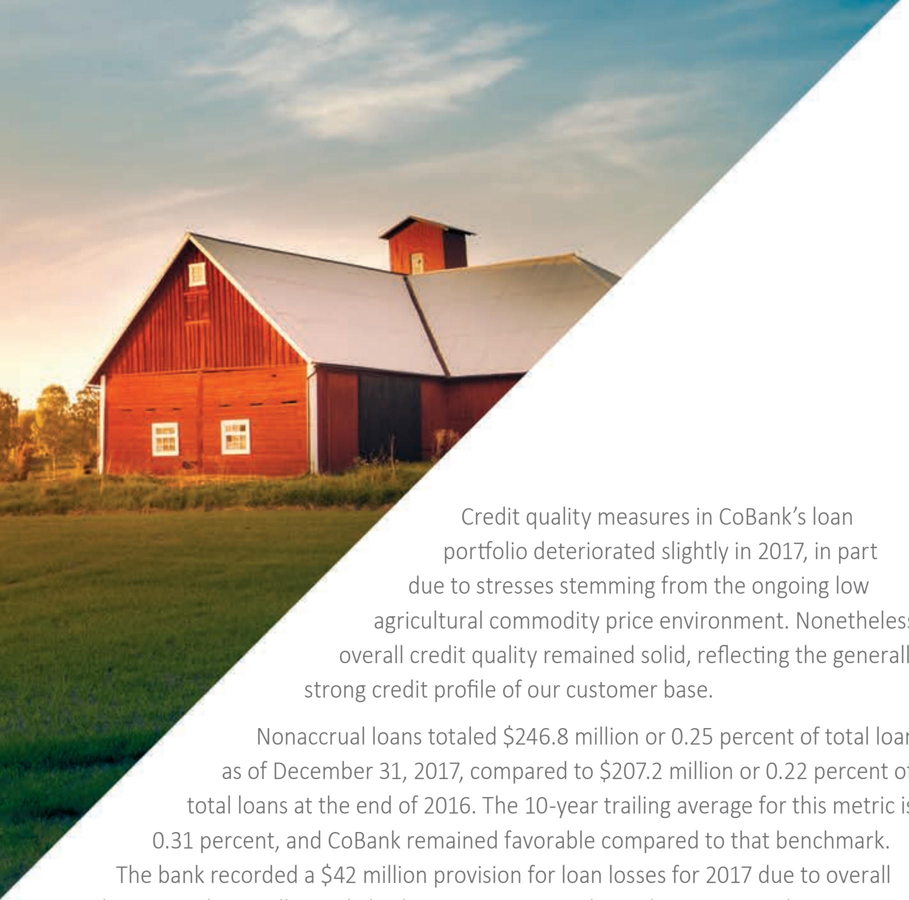
More important than the one-time boost to CoBank's 2017 financials will be the long-term benefit of the lower corporate tax rate in future years. Given the current size and makeup of our business, we expect the reduced rate to lower our effective tax rate by roughly one-third. As a customer-owned cooperative, it will be important that we make sure the incremental value created by the lower effective tax rate predominantly benefits our customer-owners and other key stakeholders. Our board and executive team will be considering this matter carefully in 2018 to determine the most appropriate course of action for our shareholders and business.

Net interest margin, an important measure of profitability for banks, was 1.12 percent in 2017, compared with 1.14 percent in 2016 and 1.26 percent five years ago. Margins in the financial services industry have compressed in recent years due to a combination of marketplace challenges, including intense competition and continuing low interest rates, and CoBank has not been immune from these trends.

It remains unclear whether we will see margin compression arrest in our business in 2018. The U.S. Federal Reserve is expected to continue along its path of gradual rate increases, and rising rates generally boost profitability for banks by expanding their margins. However, our margins are more directly impacted by medium-term rates, which are set by market forces rather than the Fed, as well as the shape of the U.S. Treasury yield curve. In addition, we expect downward pressure on credit spreads to continue due to ongoing competition from banks and other lenders for the business of our customers. While we hope that margin pressures ease in 2018, there is no guarantee that will occur. We will continue to manage our assets and liabilities to position the bank optimally for the current and anticipated interest rate and spread environment.

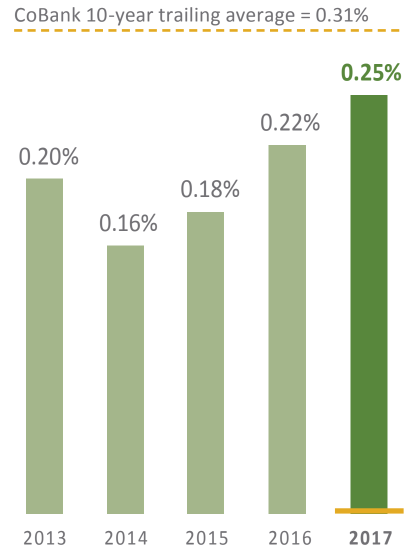



**NET INTEREST MARGIN**
(percent)



Credit quality measures in CoBank's loan portfolio deteriorated slightly in 2017, in part due to stresses stemming from the ongoing low agricultural commodity price environment. Nonetheless, overall credit quality remained solid, reflecting the generally strong credit profile of our customer base.

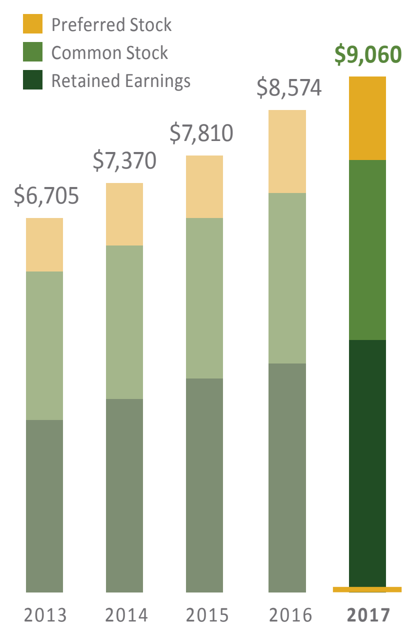
Nonaccrual loans totaled $246.8 million or 0.25 percent of total loans as of December 31, 2017, compared to $207.2 million or 0.22 percent of total loans at the end of 2016. The 10-year trailing average for this metric is 0.31 percent, and CoBank remained favorable compared to that benchmark. The bank recorded a $42 million provision for loan losses for 2017 due to overall loan growth as well as a slight deterioration in credit quality in our Agribusiness operating segment, compared to a $63 million provision in 2016. CoBank's allowance for credit losses, which protects the bank's capital base against losses embedded in our loan portfolio, totaled $670.8 million at year-end or 1.33 percent of nonguaranteed loans when loans to Farm Credit associations are excluded.




## NON-ACCRUAL LOANS/TOTAL LOANS
(percent)

## SHAREHOLDERS' EQUITY
(dollars in millions)

| | 2013 | 2014 | 2015 | 2016 | 2017 |
|---|---|---|---|---|---|
| Preferred Stock | $ 962 | $ 1,125 | $ 1,125 | $ 1,500 | $ 1,500 |
| Common Stock | 2,677 | 2,769 | 2,900 | 3,072 | 3,240 |
| Retained Earnings | 3,104 | 3,482 | 3,845 | 4,121 | 4,552 |
| Other Comprehensive Loss | $ (38) | $ (6) | $ (60) | $ (119) | $ (232) |
| **Total Shareholders' Equity** | **$ 6,705** | **$ 7,370** | **$ 7,810** | **$ 8,574** | **$ 9,060** |




CoBank's capital and liquidity levels remain well in excess of regulatory minimums. As of December 31, 2017, shareholders' equity was $9.1 billion, and the bank's total capital ratio was 15.24 percent, compared with the 8.0 percent minimum (10.5 percent inclusive of the fully phased-in capital conservation buffer) established by the Farm Credit Administration (FCA), the bank's independent regulator. At year-end, the bank held approximately $29.2 billion in cash and investments. The bank had 176 days of liquidity at the end of 2017, which exceeded the FCA minimum.

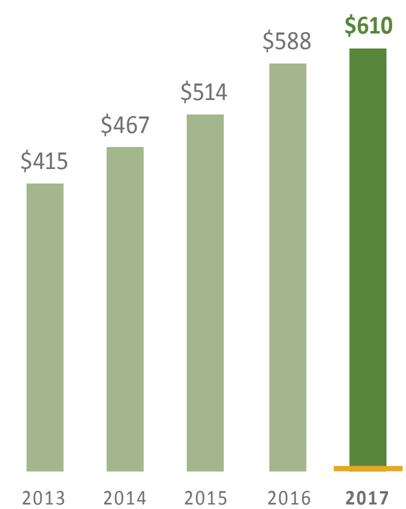
Overall, we are pleased with the bank's financial performance in 2017. Financial strength and stability are critical to our ability to serve and deliver value to customers and fulfill our mission in rural America. We hope our customers and other stakeholders continue to have confidence in our financial stewardship given the strong results delivered on their behalf last year.

## PATRONAGE

CoBank's patronage payouts for 2017 will total a record $610 million—well over half of the bank's earnings for the year. Patronage is a key part of the value proposition we provide our customers. Over the past five years alone, CoBank has distributed almost $2.6 billion in patronage to customers across rural America, highlighting once again the enduring power of the cooperative model.

### PATRONAGE
(dollars in millions)

| | 2013 | 2014 | 2015 | 2016 | 2017 |
|---|---|---|---|---|---|
| Common Stock | $ 77 | $ 89 | $ 98 | $ 114 | $ 118 |
| Cash | $ 338 | $ 378 | $ 416 | $ 474 | $ 492 |
| **Total Patronage** | **$ 415** | **$ 467** | **$ 514** | **$ 588** | **$ 610** |




In August 2017, CoBank announced changes to its capital plans and patronage programs for eligible customer-owners. The changes, which are scheduled to take effect in 2018 for patronage distributed in 2019, include the creation of a separate capital plan for rural electric and water customers, as well as reductions in patronage levels for all eligible borrowers.

As we said at the time of the announcement, we believe this is a prudent step given overall profitability trends in the banking industry that have also impacted CoBank in recent years. The combination of margin compression, extremely low interest rates, and increased regulatory costs have reduced the rate at which we retain earnings and therefore our ability to capitalize future growth. In addition, low and declining spreads in the rural utilities sector, particularly for rural electric and water loans, have led to profitability and equitability issues in those businesses. Having an additional patronage pool will allow us to more equitably align patronage payouts to the underlying economics of our various portfolios.

For cooperatives and other eligible direct borrowers as well as for loans purchased from other Farm Credit institutions, the new target patronage levels take effect in the

2018 calendar year and will be reflected in patronage distributions made in March 2019. Meanwhile, affiliated associations and non-affiliated Farm Credit and other financing institutions will transition to their new targeted patronage levels over a multi-year period ending in 2020. As always, any patronage distributions are subject to approval by CoBank's board of directors.

## PATRONAGE PROGRAM CHANGES

| Customer or Loan Type | Equity Requirement [1] | Target Patronage level - former plan [2] | Target Patronage level - new plan [2] | Cash/Equity Split - former plan [3] | Cash/Equity Split - new plan [3] |
|---|---|---|---|---|---|
| Agribusiness, communications and project finance | 8% | 100 bps | 95 bps | 75% / 25% | 75% / 25% |
| Rural electric and water | 8% | 100 bps | 80 bps | 75% / 25% | 60% / 40% |
| Loans purchased from other Farm Credit institutions | 8% | 100 bps | 95 bps | 75% / 25% | 75% / 25% |
| Farm Credit affiliates | 4% | 45 bps | 36 bps | 100% / 0% | 100% / 0% |
| Non-affiliated Farm Credit and other financing institutions | 4% | 45 bps | 26 bps | 20% / 80% | 20% / 80% |

[1] Cooperatives and other eligible direct borrowers fulfill their equity requirement over time through the equity portion of their annual patronage distributions, as do loans purchased from other Farm Credit institutions, and non-affiliated Farm Credit and other financing institutions. Affiliated Farm Credit associations capitalize their wholesale loans from the bank in full on an annual basis.
[2] Target patronage is defined as the number of basis points (bps) of current-year average loan volume for eligible borrowers.
[3] Once borrowers reach their target equity requirement, they effectively receive 100 percent of their patronage distribution in cash.

The above notwithstanding, it's also true that the new tax reform legislation has unexpectedly mitigated some of the issues we were trying to address with the announced modifications to our patronage programs. Specifically, bank-wide earnings retention (the primary source of capital that supports future growth) will improve as a result of a lower federal tax liability going forward. In 2018, our board and executive team will carefully evaluate our capital plans and patronage programs in light of the new law to determine whether further adjustments are warranted.

## GOVERNANCE & BOARD LEADERSHIP

2017 marked the second year of a four-year, shareholder-approved board restructuring process at CoBank. The size of our board expanded dramatically after our merger with U.S. AgBank in 2012, and we are now gradually downsizing the board to return the number of elected seats closer to historical norms. CoBank currently has 21 elected board members from six voting regions around the country. In addition, we have an additional appointed director and two outside, independent directors with no customer or Farm Credit System affiliation. By 2020, the number of elected board seats will be reduced to 14, making the size of the board more manageable while still allowing for appropriate geographic and industry representation. We are very pleased with the strength of our board and with the quality and dedication of the directors who govern the bank on our customers' behalf.

Another significant development in 2017 was that longtime chairman Everett Dobrinski stepped down as planned after 10 years of outstanding service in that role. A grain farmer from Makoti, North Dakota, Everett has been a tireless supporter of CoBank and the Farm Credit System as well as a passionate advocate for cooperatives and rural America. Everett's tenure as chairman of CoBank encompassed a number of major developments and accomplishments in CoBank's history, including:

- Growth of almost 150 percent in total assets, from $52 billion in January 2008 to almost $129 billion in December 2017;
- Cumulative patronage distributions of more than $4.2 billion to eligible borrowers across rural America;
- CoBank's merger with U.S. AgBank in 2012, which significantly increased the scale of the bank, enhanced the diversification of our loan portfolio and greatly expanded our commercial relationships within the Farm Credit System;
- A steady track record of business and financial success as well as mission fulfillment during a tumultuous period for the U.S. economy, rural America and the financial services industry.

Everett remains on the board through the expiration of his current term in December 2019. Succeeding him as chairman in 2018 is Kevin Riel, a hops farmer from Washington state and former chairman of Northwest Farm Credit Services, one of CoBank's affiliated Farm Credit associations. Longtime members Jon Marthedal and Kevin Still will serve as vice chairs. We are deeply grateful to all of our board members for their service to the bank and the strong ethic of stewardship they bring to the governance of this organization.


EVERETT DOBRINSKI
Chairman of the CoBank Board of Directors
2008 - 2017

## THE OPERATING ENVIRONMENT & THE COBANK FRANCHISE

In the Forward Looking Statements section on page 71 of this report is a long list of the "risks and uncertainties" that we face in our business and that, collectively, help to define the external operating environment for the CoBank franchise. It is a sobering compilation of challenges encompassing everything from global macroeconomic forces and government policy to commodity cycles and cybersecurity threats. One of the most important obligations of our board and executive team is to understand these issues and to position CoBank to thrive despite developments in any of these areas.

Among these many challenges, several stand out at the current time as especially worthy of focus and attention:

- **The risk of an economic recession in the U.S.** The American economy has been growing continuously (albeit slowly) since mid-2009, and the current expansion is one of the longest on record since the end of World War II. At some point, the recovery will inevitably come to an end and we will face another recession. How will a downturn impact rural America and demand for credit in the industries served by CoBank, as well as the competition we face from other lenders in the financial services industry?
- **The long-term fiscal trajectory of the United States.** The overall level of public debt in the United States, measured as a percentage of GDP, is now higher than at any other time since the aftermath of World War II and is projected to continue climbing steadily over the next 10 years. Additionally, a substantial portion of our ongoing deficits are being incurred to finance consumption rather than investment in productivity-enhancing infrastructure and technology. At what point will the fiscal trajectory of the U.S. government begin to materially impact the borrowing costs of the U.S. Treasury, to which the borrowing costs of CoBank and the rest of the Farm Credit System are closely linked?
- **Structural change in the Farm Credit System.** Since the 2008-2009 financial crisis, the member-owned Farm Credit System has performed exceptionally well in comparison to the commercial and community banking industries, serving as a key source of financial support for U.S. agriculture and other rural industries. At the same time, the FCS has experienced many of the same challenges facing its commercial competitors, including intense competition, increased regulatory costs and persistent pressure to consolidate. How will the Farm Credit System

evolve to ensure it is optimally configured to serve customers and fulfill its vital mission going forward?

- **Technology disruption in banking.** The financial services industry is experiencing a breathtaking acceleration of technological change that is fundamentally altering how credit, insurance, payments and other financial products are delivered all over the world. The lexicon of financial services now includes words like “blockchain,” “crowdfunding,” “cryptocurrency” and “FinTech”—terms that didn’t even exist a generation ago. Large commercial institutions are literally spending billions of dollars each year on technology investments in order to keep pace. How can CoBank and other Farm Credit entities ensure they are making the right investments in technology to remain competitive and continue serving their customers with outstanding products that are better, faster and cheaper?
- **The continuing urban-rural divide.** America’s rural communities continue to struggle with a wide array of unique challenges, from higher unemployment and population decline to lower levels of access to health care, broadband and investment capital. And yet a healthy rural economy is essential to the nation as a whole, since rural America is the source of virtually all the food we eat as well as a growing share of our energy as well. How can CoBank and its partners in the Farm Credit System help to ensure that rural communities remain vibrant in the future?

We believe that the single best way to prepare CoBank for these and other challenges is through continued growth; continued investment in our people, technology and systems; and continued enhancement of our financial strength and flexibility for the long term. We remain committed to serving our customers, and to the mission of CoBank and the Farm Credit System in rural America. And despite the challenges outlined above, we are enormously optimistic about the future given the inherent strength of our business model and the essential role our customers play in rural communities throughout the country.

As always, we remain grateful for the enormous trust our customers place in CoBank as their financial partner. We thank you for your ongoing support and look forward to reporting back to you on our future progress.

Kevin Riel

KEVIN RIEL
Chairman

Tom Halverson

THOMAS HALVERSON
President &
Chief Executive Officer

2018

# BOARD OF DIRECTORS

1 **KEVIN G. RIEL**
CHAIRMAN
**Occupation:** Farming
**Hometown:** Yakima, Washington

2 **JON E. MARTHEDAL**
1ST VICE CHAIR
**Occupation:** Farming
**Hometown:** Fresno, California

3 **KEVIN A. STILL**
2ND VICE CHAIR
**Occupation:** Agribusiness cooperative management
**Hometown:** Danville, Indiana

4 **ROBERT M. BEHR**
**Occupation:** Agribusiness cooperative management
**Hometown:** Lakeland, Florida

5 **MICHAEL S. BROWN**
**Occupation:** Retired, commercial banking
**Hometown:** San Diego, California

6 **RUSSELL G. BROWN**
**Occupation:** Banking, electric cooperative director
**Hometown:** Warsaw, Virginia

7 **M. DAN CHILDS**
**Occupation:** Farming and livestock
**Hometown:** Mannsville, Oklahoma

8 **EVERETT M. DOBRINSKI**
**Occupation:** Farming
**Hometown:** Makoti, North Dakota

9 **WILLIAM M. FARROW III**
**Occupation:** Retired, banking
**Hometown:** Evanston, Illinois

10 **BENJAMIN J. FREUND**
**Occupation:** Farming
**Hometown:** East Canaan, Connecticut

11 **ANDREW J. GILBERT**
**Occupation:** Farming
**Hometown:** Potsdam, New York

12 **DANIEL T. KELLEY**
**Occupation:** Farming
**Hometown:** Normal, Illinois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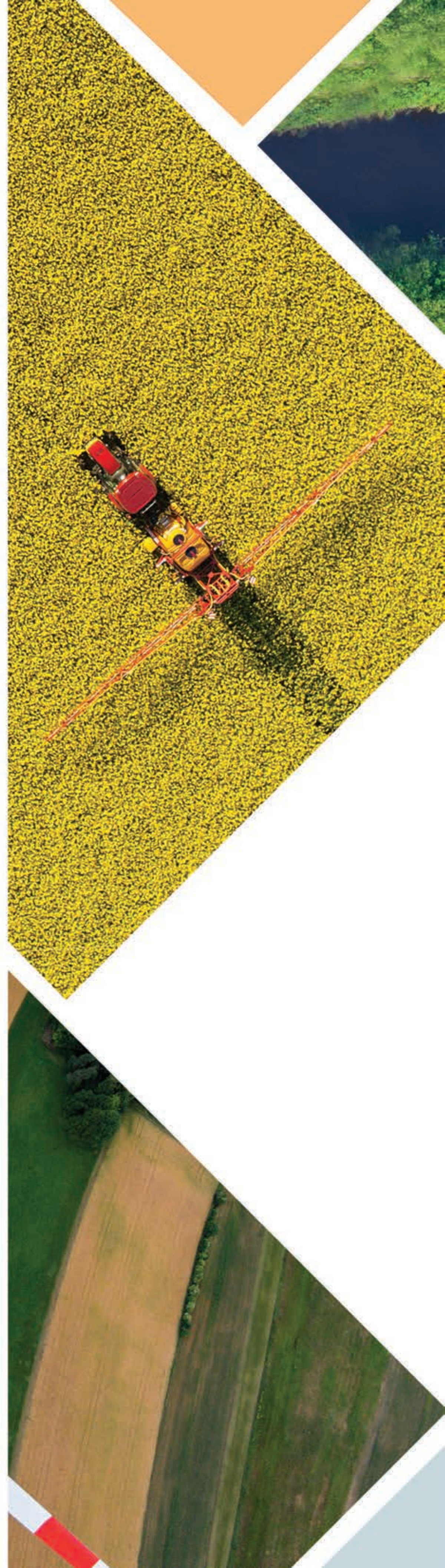

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"OUR BOARD IS FULLY COMMITTED TO COBANK'S LONG-TERM MISSION OF SERVICE TO RURAL AMERICA."

— Kevin Riel,
Chairman

**13 DAVID J. KRAGNES**
**Occupation:** Farming
**Hometown:** Felton, Minnesota

**14 JAMES R. MAGNUSON**
**Occupation:** Retired, agribusiness cooperative management
**Hometown:** Holmen, Wisconsin

**15 CATHERINE MOYER**
**Occupation:** Rural communications management
**Hometown:** Ulysses, Kansas

**16 ALARIK MYRIN**
**Occupation:** Farming and ranching
**Hometown:** Altamont, Utah

**17 RONALD J. RAHJES**
**Occupation:** Farming
**Hometown:** Kensington, Kansas

**18 DAVID L. REINDERS**
**Occupation:** Retired, agribusiness cooperative management
**Hometown:** Mallard, Iowa

**19 CLINT E. ROUSH**
**Occupation:** Farming and livestock
**Hometown:** Arapaho, Oklahoma

**20 KAREN L. SCHOTT**
**Occupation:** Farming
**Hometown:** Broadview, Montana

**21 RICHARD W. SITMAN**
**Occupation:** Electric cooperative director
**Hometown:** Kentwood, Louisiana

**22 EDGAR A. TERRY**
**Occupation:** Farming
**Hometown:** Ventura, California

**23 SCOTT H. WHITTINGTON**
**Occupation:** Electric cooperative management
**Hometown:** Burlington, Kansas

**24 BRANDON J. WITTMAN**
**Occupation:** Electric cooperative management
**Hometown:** Billings, Montana

# AGRIBUSINESS
## PORTFOLIO


**CoBank's Agribusiness** operating segment includes lending to regional and corporate agribusiness customers, export finance customers and leasing customers. It serves cooperatives and other customers involved in a wide variety of industries, including grain handling and marketing, farm supply, food processing, dairy, livestock, fruits, nuts, vegetables, cotton, biofuels and forest products.

**31%**
OF PORTFOLIO

**Agribusiness**

| FOR THE YEAR<br>*($ in millions)* | 2017 | 2016 | 2015 |
|---|---|---|---|
| Period-end Loans | $ 30,304 | $ 28,660 | $ 26,131 |
| Average Loans | 29,241 | 27,563 | 24,872 |
| Net Income | 630* | 403 | 449 |

* 2017 net income included the benefit of $198 million resulting from the enactment of federal tax legislation in late 2017.

**$30.3 BILLION**
Loan Volume at Year-End

# RURAL INFRASTRUCTURE
## PORTFOLIO


**CoBank's Rural Infrastructure** operating segment includes lending to rural infrastructure borrowers across the United States. It serves rural utilities and other customers across a wide variety of industries, including electric generation, transmission and distribution cooperatives; water and wastewater companies; broadband, wireline, cable and wireless communications service providers; and rural health care and other community facilities.

**21%**
OF PORTFOLIO

**Rural Infrastructure**

| FOR THE YEAR *($ in millions)* | 2017 | 2016 | 2015 |
|---|---|---|---|
| Period-end Loans | $ 21,014 | $ 20,604 | $ 19,552 |
| Average Loans | 20,732 | 20,092 | 17,770 |
| Net Income | 241* | 308 | 255 |

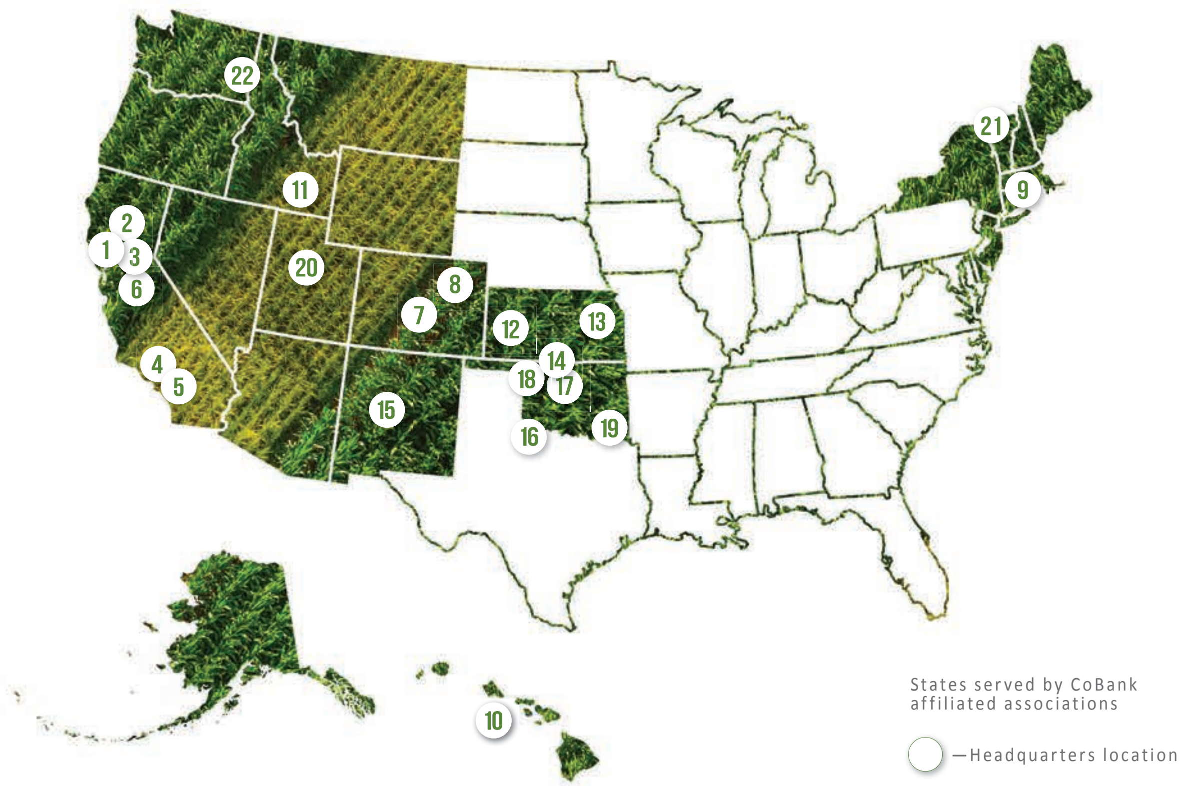
* 2017 net income included $56 million of expense resulting from the enactment of federal tax legislation in late 2017.

**$21.0 BILLION**

Loan Volume at Year-End

# STRATEGIC RELATIONSHIPS

## AFFILIATED FARM CREDIT ASSOCIATIONS




### CALIFORNIA

1 American AgCredit
*SANTA ROSA*

2 FCS of Colusa-Glenn
*COLUSA*

3 Farm Credit West
*ROCKLIN*

4 Fresno Madera Farm Credit
*FRESNO*

5 Golden State Farm Credit
*KINGSBURG*

6 Yosemite Farm Credit
*TURLOCK*

### COLORADO

7 FC of Southern Colorado
*COLORADO SPRINGS*

8 Premier Farm Credit
*STERLING*

### CONNECTICUT

9 Farm Credit East
*ENFIELD*

### HAWAII

10 FCS of Hawaii
*AIEA*

### IDAHO

11 Idaho AgCredit
*BLACKFOOT*

### KANSAS

12 FC of Western Kansas
*COLBY*

13 Frontier Farm Credit
*MANHATTAN*

14 High Plains Farm Credit
*LARNED*

### NEW MEXICO

15 FC of New Mexico
*ALBUQUERQUE*

### OKLAHOMA

16 AgPreference
*ALTUS*

17 Farm Credit of Enid
*ENID*

18 FC of Western Oklahoma
*WOODWARD*

19 Oklahoma AgCredit
*BROKEN ARROW*

### UTAH

20 Western AgCredit
*SOUTH JORDAN*

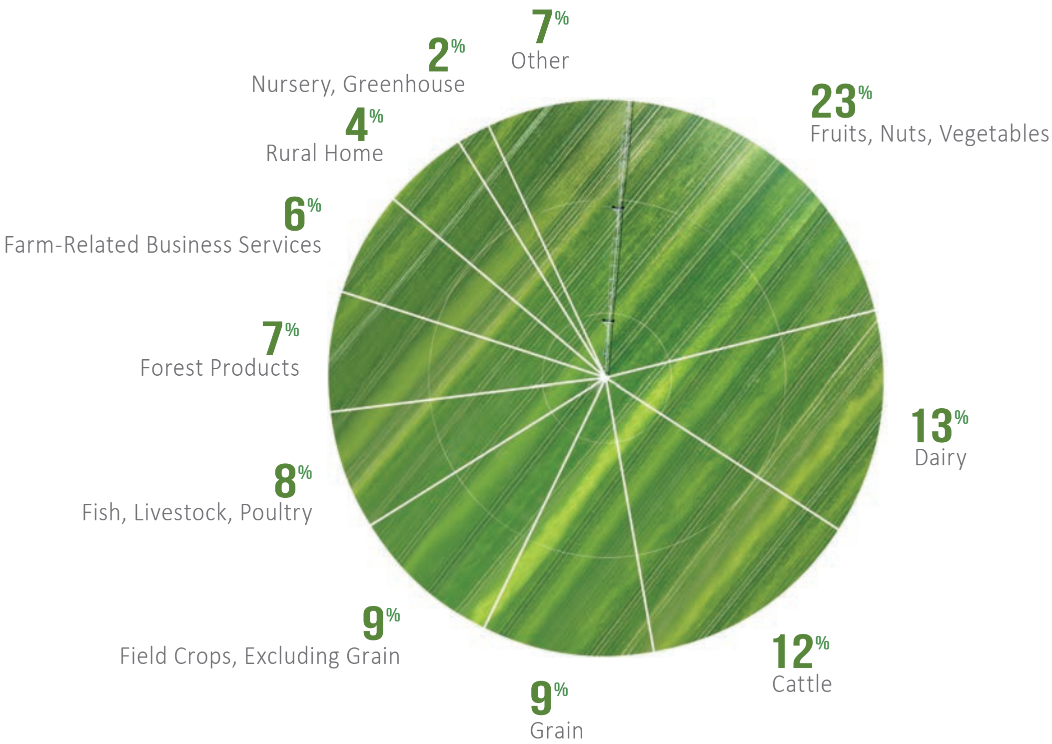
### VERMONT

21 Yankee Farm Credit
*WILLISTON*

### WASHINGTON

22 Northwest FCS
*SPOKANE*

# STRATEGIC RELATIONSHIPS
## PORTFOLIO




In addition to providing loans to cooperatives and other customers in all 50 states, CoBank serves as a funding bank for 22 affiliated Farm Credit associations across the country. Those associations provide loans and financial services to more than 70,000 farmers, ranchers and other rural borrowers in 23 states. They serve a diverse array of industries, from fruits, nuts and vegetables to grains and other row crops to dairy, beef, poultry and forest products.

CoBank provides these association customers with wholesale financing as well as other value-added products and services. In turn, the associations provide the bank with added lending capacity by serving as participation partners on large credit transactions. At the same time, CoBank derives additional value from our association partners by being able to purchase participations in their loans.

CoBank also serves as a partner of choice for a number of nonaffiliated Farm Credit System associations throughout the country for leasing, cash management and other non-credit services.

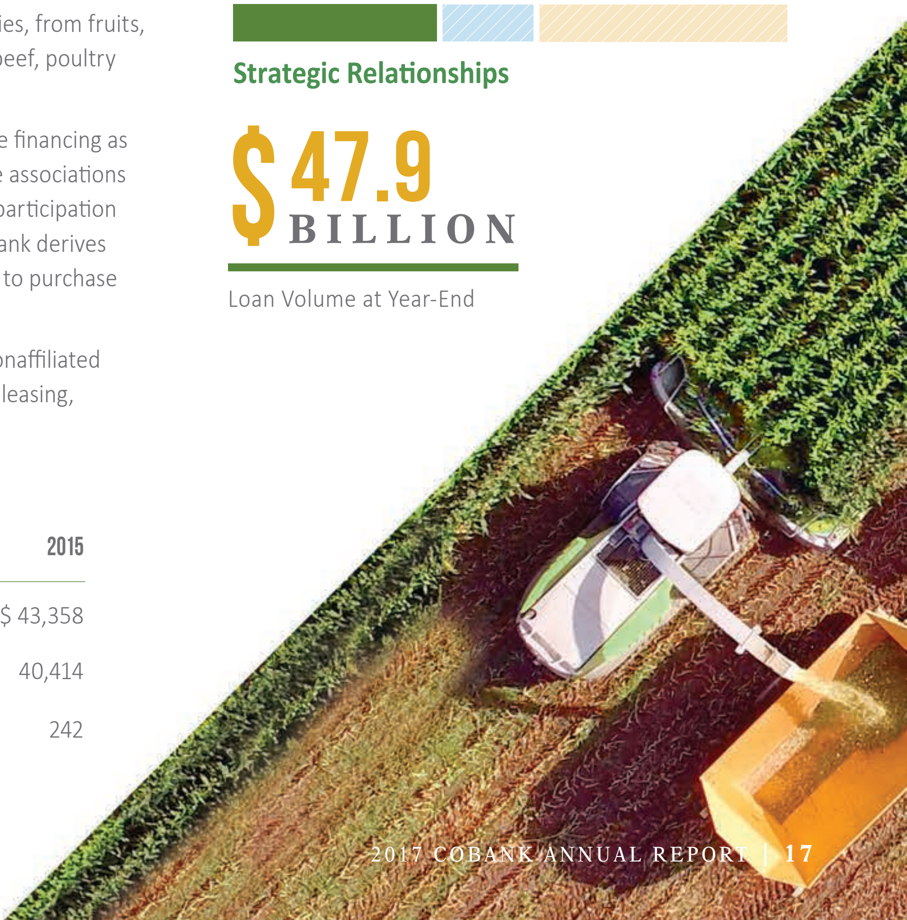
**48%**
OF PORTFOLIO

**Strategic Relationships**

**$47.9 BILLION**

Loan Volume at Year-End

| FOR THE YEAR ($ in millions) | 2017 | 2016 | 2015 |
|---|---|---|---|
| Period-end Loans | $ 47,948 | $ 45,994 | $ 43,358 |
| Average Loans | 46,074 | 43,924 | 40,414 |
| Net Income | 262 | 245 | 242 |



# REGIONAL AGRIBUSINESS

## SOUTH CENTRAL FS
EFFINGHAM, ILLINOIS


1. JOE MEINHART
   Chief Executive Officer, South Central FS
2. BYRON SIKMA
   Retired Chief Executive Officer, South Central FS
3. KURT HARRIS
   Relationship Manager, CoBank

Time, dedication and a series of mergers—most notably with Total Grain Marketing, which also brought GROWMARK into the family—have allowed South Central FS to provide the farming community of Southern Illinois with an incredible variety of services. Today, the co-op offers its 3,000 customer-owners agronomy, fuels, crop protection products, storage and handling systems for seed and grain, and even financial services, via nearly 50 locations across 12 counties.

"We monitor 77 different business units within our company," says Byron Sikma, who retired as South Central's chief executive officer at the end of 2017. "I have to give a lot of credit to our accounting department just for keeping track of them."

The shining jewel of all this activity is a new feed mill just south of Effingham, slated to open in 2018, with more than four times the capacity of South Central's previous feed mill. "The current one we were running seven days a week, 23 hours a day," says Joe Meinhart, South Central's longtime chief financial officer, who has succeeded Sikma as CEO. "We're maxed out. If we wanted to grow with our partner farmers, we needed a larger, new facility with maximized efficiencies."

Sikma and Meinhart recognize that the downturn in commodity prices may have made grain and farm supply cooperatives less attractive to many commercial lenders. "Everything cycles in our business," says Sikma. "Farmers made a lot of money until two years ago, and now we're in one of our down cycles. It goes from a lot of bankers calling us during the good seasons, to times when nobody wants our business."

But CoBank has been a constant, a trusted partner of the business for decades. "When we have a project and we talk to CoBank about it, what we hear is, 'Yeah, we can make this work,'" Sikma says. "I like the can-do attitude, not a reason why we can't do something. That's what I've learned from CoBank."

"A business as complex as South Central FS can be a challenge for some lenders," says Amy Gales, executive vice president for CoBank's Regional Agribusiness Banking Group. "Our experience with all sides of the ag industry helps us understand what this type of business has been able to accomplish, and how it will grow into the future."

## BONGARDS' CREAMERIES
CHANHASSEN, MINNESOTA

Despite the fact that the cooperative is already more than a century old, Bongards' Creameries is still growing, with no end in sight. After recently completing a major expansion at its plant in Perham, Minnesota, the cheese-making co-op is currently more than doubling its capacity at another facility in Tennessee, adding additional cold storage and heavy automation.

"We're going through our business to modernize, automate and improve," says Chris Freeman, chief financial officer. "As your business grows, it gives you an opportunity to update your plants. We're capitalizing on our strong position to invest in the future and benefit our membership."

Bongards' sells natural and processed cheese to many foodservice and restaurant customers throughout the U.S., as well as its own branded cheese products at retailers across the Upper Midwest. Its cheese ends up at major foodservice distributors like Sysco as well as restaurant chains such as Burger King, White Castle, and Carl's Jr.

The company's current growth marks a rebound from a recent episode when the co-op was suffering as a result of a product recall. One of its plants was unable to process whey for several months, a plant was shut down for nearly a week, and the insured losses reached the millions of dollars.

Bongards' deep relationship with CoBank was instrumental in getting them through the tough times. In addition to the loans the bank has extended, with $95 million in total commitments, Bongards' has also been a longtime user of CoBank's Farm Credit Leasing, cash management and export financing services.

"If the relationship were purely transactional, they probably would have backed away," says Freeman. "With CoBank, there is more of a trust factor, and the relationship is more than transactional."

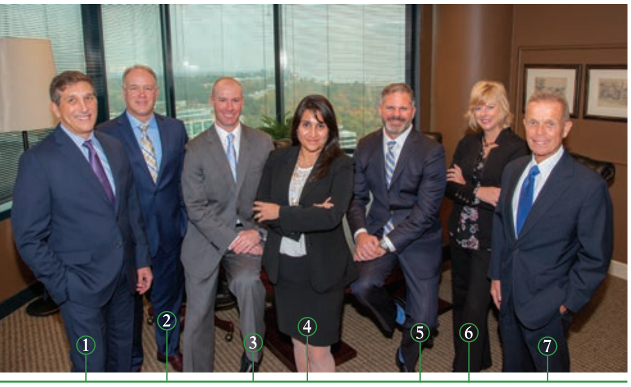
"What is striking about Bongards' is the long-term perspective they have always adopted in running the business and serving their membership," says Mike Hechtner, central region president in CoBank's Regional Agribusiness Banking Group. "It's a mindset that will serve them well as they plan for the next 100 years of business success."


1. CHRIS FREEMAN
   Chief Financial Officer, Bongards' Creameries
2. KEITH GROVE
   Former Chief Executive Officer, Bongards' Creameries
3. DARYL LARSON
   President & Chief Executive Officer, Bongards' Creameries
4. JEFF DOORENBOS
   Lead Relationship Manager, CoBank
5. SCOTT TOMES
   Chief Revenue Officer, Bongards' Creameries
6. AMANDA DUROW
   Senior Credit Officer, CoBank

# CORPORATE AGRIBUSINESS

## CATCHMARK TIMBER TRUST, INC.

ATLANTA, GEORGIA




CatchMark™

1. JERRY BARAG
President, Chief Executive Officer and Director, CatchMark
2. TODD REITZ
Senior Vice President–Forestry Operations, CatchMark
3. ZACHARY CARPENTER
Managing Director, CoBank
4. URSULA GODOY-ARBELAEZ
Director of Finance, CatchMark
5. BRIAN M. DAVIS
Chief Financial Officer, Assistant Secretary and Treasurer, CatchMark
6. HEIDI CHAFE
Director, Capital Markets, CoBank
7. JOHN F. RASOR
Chief Operating Officer, CatchMark

In the U.S. timber industry, Atlanta-based CatchMark Timber Trust, Inc. is an exception. While competitors own, operate and invest in processing and manufacturing paper and other wood products, CatchMark focuses on what it knows best. The company seeks to assemble the highest quality timberlands in the industry, growing trees for harvest and currently concentrating its activities in the American Southeast.

Jerry Barag, CatchMark's CEO, is completely confident with this "pure play" strategy. He notes that diversified timber entities must consider the location of their timber mills and other processing facilities, while CatchMark can focus on acquiring well-stocked properties in strong mill markets for stable and sustainable cash flow.

"We strongly believe that our singleness of purpose helps CatchMark's business success and provides durable growth for our stockholders, supporting a strong dividend," Barag says.

The company's future depends on acquiring productive timberlands as well as managing and positioning these timberlands to capitalize on favorable market dynamics, which require a constant source of capital. CoBank has been a trusted partner to the CatchMark organization for more than a decade—first to its predecessor real estate investment trust, and then to CatchMark after it transitioned to a public company in 2013. In 2017, CoBank and the Farm Credit System committed more than $600 million of debt capital to refinance the company's existing indebtedness as well as provide financing flexibility to allow CatchMark to continue to expand through attractive acquisitions of highly productive and well stocked timberlands.

Brian Davis, CatchMark's chief financial officer, appreciates CoBank and Farm Credit's long-term outlook and deep industry knowledge, which are integral to the business relationship. "What CoBank is good at is delivering capital to agribusiness through cycles," says Davis. "In our business a tree rotation is 25 years while we operate in changeable markets. CatchMark is focused on delivering sustainable growth to stockholders through carefully managed harvests over long-term horizons while steadily expanding through timely acquisitions. We value a lender like CoBank which understands our business requirements and remains flexible so we can accomplish our strategic objectives."

"CatchMark helps show the flexibility that CoBank can provide its agribusiness customers," says Jonathan Logan, CoBank's executive vice president for corporate agribusiness. "Whether you're on a one-year cycle or a 25-year cycle, we understand the ups and downs of sectors we serve, and we'll be with you in good years and bad."

## DARIGOLD
SEATTLE, WASHINGTON

In 2018, Darigold will celebrate its 100th anniversary as a cooperative providing milk and dairy products to consumers throughout its native Pacific Northwest and around the world. Nearly 500 member farming families combine to produce the equivalent of more than 2.8 million gallons of milk for Darigold every day.

But even a century-old operation still has room to grow. In 2015, Darigold began a significant expansion at a processing plant in eastern Washington, a region where milk production has been growing dramatically. The new types of milk powder the plant is able to produce allowed Darigold to further expand into more value-added markets.

Around the same time, the co-op also began refinancing debt, revamping its capital structure and looking for new financing ideas. “Given our expansion activity, it was a good time to assess our overall long-term strategy, which we believed would require meaningful investment to augment growth going forward,” says Amy Humphreys, Darigold’s chief financial officer.

After CoBank and Northwest Farm Credit Services together submitted a joint financing proposal, Darigold chose the two as co-lead lenders for its major refinancing.

“There was no question in my mind that we wanted CoBank in our deal,” says Humphreys. “There’s a lot of competition in terms of what lending institutions offer, but what was unsurpassed with CoBank was their team.” Humphreys cites the quality of the structural advice, competitive capital costs and access to patronage as other factors in their decision.

Understanding the dairy business was another key aspect. The relationship between Darigold and the Farm Credit System begins with Darigold’s member farmers, many of whom have relationships with Northwest FCS. “When we recommended CoBank and Northwest Farm Credit, the members were very pleased given the trust they have established in the Farm Credit System,” says Humphreys. In the end, CoBank and Northwest FCS agented Darigold’s $175 million revolver and $75 million term loan.

“The dairy farmers already have a strong relationship with us as a trusted financial partner,” says Jim Allen, senior vice president for capital markets at Northwest FCS. “The team approach with CoBank allowed us to have a much stronger package of offerings, and a much easier way to build the relationship for the future.”

1. MICHAEL TOUSIGNANT
   Sector Vice President, CoBank
2. AMY HUMPHREYS
   Chief Financial Officer, Darigold
3. BRAD ZORB
   Senior Manager of FP&A and Treasury, Darigold
4. JIM ALLEN
   Senior Vice President, Northwest Farm Credit Services

# STRATEGIC RELATIONSHIPS

## PETE AND GERRY'S
MONROE, NEW HAMPSHIRE

PETE And GERRY'S
ORGANIC EGGS

1. CHRISTOPHER BESSETTE
   Vice President, Yankee Farm Credit
2. JESSE LAFLAMME
   Owner and Chief Executive Farmer, Pete and Gerry's
3. TREVOR BATHEL
   Relationship Manager, CoBank
4. KEITH FORTIER
   Chief Financial Officer and Director of Operations, Pete and Gerry's

From its humble beginnings as a single-barn operation in New Hampshire, Pete and Gerry's has evolved into the country's top-selling organic egg brand, processing more than 720 million eggs each year. But true to its roots, the business is still run like a small family farm.

Jesse Laflamme, the company's self-proclaimed Chief Executive Farmer, represents the fourth generation of his family to operate the farm. Founded by Jesse's grandfather after World War II, Pete and Gerry's has had to reinvent itself through the decades in order to stay competitive in the U.S. egg market.

In the early 1990s, when the market began to shift in favor of industrial-scale egg producers, Pete and Gerry's was faced with the prospect of either going out of business or overhauling its strategy. The solution: Put their own brand on the eggs, specialize in certified organic production and enlist other small family farms as suppliers.

"When we started in organic egg production, we had a huge appreciation for being a small family farm and wanted that to remain true for the ages," Laflamme says. "That's when we decided to focus the future of our company around partnerships with our now 120 small family farms."

To fund its growth, Pete and Gerry's has turned to Yankee Farm Credit, one of CoBank's affiliated Farm Credit associations. Based in Williston, Vermont, Yankee has partnered with CoBank in recent years on a number of transactions for Pete and Gerry's, leveraging CoBank's balance sheet to provide needed lending capacity. Today, CoBank has $14 million committed to the customer relationship led by Yankee.

"Farm Credit has always been there for us," says Laflamme. "As our business evolved, they evolved their approach to our business, and we will always be grateful for that."

Christopher Bessette, vice president, Yankee Farm Credit, says the Laflamme family has remained humble through its years of tremendous growth and success. "The Farm Credit System has the ability to grow with our customers and build relationships that last generations," Bessette says. "It's a pleasure to serve customers who positively impact so many farmers throughout the area. Pete and Gerry's is a success story not just for the Laflamme family but for the dozens of family farms under their umbrella."

## CORTINA HULLING AND SHELLING
WILLIAMS, CALIFORNIA

Almonds flow through the state-of-the-art sorting machine at 2,292 nuts per second at Cortina Hulling and Shelling's new processing facility in Woodland, California. An electronic "eye" in the machine rejects any foreign material, letting only the best-quality nuts get through.

Such equipment isn't cheap—the Woodland facility has two such sorters, at a cost of about $325,000 apiece. But it's necessary given the growth of the almond industry in northern California, where more than 7,000 new acres of almonds were planted in 2017 in Yolo County alone and more than 1 million producing acres in the state.

"Twenty years ago, about 500 million pounds of almonds were harvested in this part of the state," says Cortina General Manager Gary Pronsolino. "This year's estimate is more than 2.2 billion pounds, projected to be 3 billion pounds in three years. The only way we can handle this growth in production is by growing ourselves."

Cortina Hulling and Shelling was founded in 2006 when nine area almond growers banded together to create their own custom hulling and shelling operation. About four years ago, as more growers sought the services of Cortina's operation, the enterprise began planning a newer, more modern facility in the nearby community of Dunnigan Hills.

Over the course of its history, the Cortina group has repeatedly turned to Farm Credit Services of Colusa-Glenn and CoBank for loans, leases and other forms of financing. Recent transactions include over $16 million in leases for buildings and equipment, including solar panels that serve as a source of renewable energy for the operation. Pronsolino says his company has worked with commercial lenders, but has found a meaningful difference with the Farm Credit System. "At Farm Credit, we're on a first name basis," he says. "Everywhere else, it's about money, and here it's all about relationships."

"Farm Credit really caters to and understands ag," says Dan Pronsolino, Gary's son, who manages the Dunnigan Hills plant. "The documentation that comes from commercial banks is so institutional, and you're trying to fit your ag items into their process. When you get papers from Farm Credit, it all just fits right in."

"Partnering with CoBank allows associations like ours to be able to better serve our customers and help them achieve their goals," says Lucas Reimers, chief credit officer for Colusa-Glenn. "The teamwork between our organizations ultimately adds up to a much greater benefit for a thriving operation like Cortina."


1. DAN PRONSOLINO
   Plant Manager, Dunnigan Hills Hulling and Shelling
2. DAVID ALVARADO
   Assistant Manager, Dunnigan Hills Hulling and Shelling
3. BRETT LAUPPE
   Vice President, Senior Relationship Manager, CoBank
4. GARY PRONSOLINO
   General Manager, The Cortina Group
5. VINCENT WURM
   Vice President of Lending, Colusa-Glenn Farm Credit
6. KEN KREBS
   Senior Relationship Manager, CoBank Farm Credit Leasing
7. LUKE REIMERS
   Chief Credit Officer, Colusa-Glenn Farm Credit

# ELECTRIC DISTRIBUTION

## TOMBIGBEE ELECTRIC COOPERATIVE
HAMILTON, ALABAMA


1. BRENDA OVERTON
   Chief Financial Officer, Tombigbee Electric Cooperative
2. KRIS STIDHAM
   Purchasing Manager, Tombigbee Electric Cooperative
3. HEATHER HANEY
   Manager of Billing, Tombigbee Electric Cooperative
4. STEVE FOSHEE
   Chief Executive Officer, Tombigbee Electric Cooperative
5. ALLISON DUNN
   Vice President, Electric Distribution, CoBank
6. MARK CARDEN
   Manager of Engineering & Operations,
   Tombigbee Electric Cooperative
7. BELINDA LOVETT
   Accountant/Human Resources,
   Tombigbee Electric Cooperative

Rural northwestern Alabama hasn't always been hospitable to modern business. Until recently, organizations wanting to hold meetings of any size were forced to cross the border into Tupelo, Mississippi, to find a room that could provide modern Internet service. But one man—Steve Foshee, chief executive of Tombigbee Electric Cooperative—knew the area had potential to be a business center if it could get access to broadband.

Initially, there was some concern about Foshee's vision of a fiber to the home project among the electric co-op's board. Risk, cost and benefit to the community were their top concerns, but after a year-long educational process, they voted to launch. "This was by far the most intense issue that they've ever had to deal with," Foshee says.

Co-op members and the business community also eagerly climbed on board. Says Foshee: "The president of one company said to me, 'Steve, if you hadn't done this fiber project, we were already looking at two communities way outside this area. I can't survive and grow if we don't have a better communication system.'"

Providing electricity to Alabama since 1946, Tombigbee Electric, based in the town of Hamilton, now serves approximately 6,500 member-customers. CoBank is the co-op's exclusive lender, funding its new headquarters in 2015 as well as providing cash management services. Foshee turned to CoBank to finance the broadband expansion as well. The entire project will cost nearly $40 million and take as much as five years to complete.

"We've seen so many rural electric co-ops turn to broadband, and we're proud to be a part of it," says William LaDuca, senior vice president of electric distribution banking for CoBank. "As electrification was necessary to these communities back in the 1930s, high-speed Internet will be vital to their growth in this century."

That growth is now coming to northwestern Alabama. "They're knocking on our doors now," says Foshee. "We're open for business."

# WATER

## GONZALES COUNTY WATER SUPPLY CORP.

GONZALES, TEXAS

Situated midway between Austin, Victoria and San Antonio, Gonzales County isn't seeing much residential growth, since it's too far from these cities to be a bedroom community. But the water needs in this quiet agricultural community are tremendous, with poultry farms, cattle feeding operations and mushroom growing in the area, all requiring huge amounts of water.

The people responsible for making sure all those chickens, cattle and mushrooms get the water they need are the board of directors of the Gonzales County Water Supply Corp. They are each involved in large agricultural operations and several have a strong financial background, including two CPAs and two with banking experience. The board members are just as concerned about what they call "grandma and grandpa" consumers, totaling about 2,600 taps, as they are about large farming operations. "I'd guess you call us a high volume water supply, and consequently our rates are very reasonable," says Barry Miller, general manager. "We move so many millions of gallons of water for a small system like this." And the chicken, cattle and mushroom facilities continue to need more water. "I'll watch the meters at the mushroom facility when they wash down on Friday afternoon," Miller says. "Once in a while I'll have to say, 'Ease up there, and let the storage tanks catch up.'"

As a result, infrastructure upgrades have become more and more of a necessity, including replacing plastic pipes that date back to 1973. Gonzales County WSC has been upgrading those pipes all along, but Miller estimates that there are still 200 miles of pipe out of a total of 700 that need to be upgraded.

Before it was a customer, Gonzales County WSC had an indirect relationship with CoBank: Gonzales receiving loans from Guadalupe Valley Development Corporation, which borrowed funds from CoBank. Three years ago, the board members realized they could cut out the middleman and borrow directly from CoBank, which also allowed Gonzales County WSC to take advantage of CoBank's patronage program. "We don't have to retrain CoBank," Miller says. "You're already familiar with the rural water business." Gonzales chose CoBank to provide $1.2 million in financing for a brand new headquarters, replacing the one it's been in since 1980, and was also an early adopter of the bank's line of credit program.

"Gonzales County is exactly the kind of water system CoBank's mission supports," says Chris Shaffner, sector vice president of water and community facilities banking at CoBank. "It's a rural system that fulfills a vital role in the economy of the surrounding area."


GCWSC

1. GREG TIEKEN
   Board of Directors President, Gonzales County WSC
2. BARRY MILLER
   General Manager, Gonzales County WSC
3. HUNTER HOOK
   Vice President, Rural Water and Community Facilities, CoBank

# POWER, ENERGY & UTILITIES


1. PATRICK F. LEDGER
   Chief Executive Officer, Arizona G&T Cooperatives
2. LIZBETH ROBERTS
   Senior Credit Analyst, Power, Energy & Utilities, CoBank
3. BROCK TAYLOR
   Managing Director, Power, Energy & Utilities, CoBank
4. ROHAN PEASE
   Treasury Services Manager, Arizona G&T Cooperatives
5. PETER SCOTT
   Chief Financial Officer, Arizona G&T Cooperatives
6. KEN KREBS
   Senior Relationship Manager, CoBank Farm Credit Leasing

## ARIZONA GENERATION AND TRANSMISSION COOPERATIVES

BENSON, ARIZONA

On a dusty stretch of Arizona Highway 191, about 75 miles southeast of Tucson, the future of electric generation sit right across the road from the traditional. On one side is a 154-acre 20-megawatt array of solar panels and on the other side is the Apache Generating Station, a 605-megawatt facility that burns coal and natural gas.

Both facilities are operated by Arizona G&T Cooperatives (AzGT), a member-owned power provider serving over 400,000 people in rural areas of Arizona, California and New Mexico. When the $33.5 million solar array went live in September of 2017, U.S. Rep. Martha McSally called the project a "great example of member-driven co-ops figuring out ways to provide reliable power to the community."

Patrick Ledger, chief executive officer of AzGT, says that renewable energy is a key part of the cooperative's long-term strategy to serve its membership. "It's becoming more important for commercial and industrial entities to have some renewables in their portfolio," Ledger says. "Customer demand has forced us to expand our focus on this area, and we are excited about doing that."

The Apache Solar project was financed through an innovative strategy with CoBank's Farm Credit Leasing subsidiary, which enabled the cooperative to take advantage of federal tax credits for solar investments. The lease structure allowed the co-op to monetize the tax benefit in a way that wouldn't otherwise have been available to AzGT as a not-for-profit entity.

"CoBank's participation was absolutely elemental here," says Ledger. "We didn't have the expertise to take advantage of those tax credits without the help of CoBank."

At the Apache Solar project site, more than 77,000 photovoltaic panels are mounted on a motorized single-axis tracking system that follows the sun and maximizes energy production. AzGT's six member distribution cooperatives all signed on for a share of the solar project, which eventually grew to a total of 20 MW, and included a purchase power agreement with an Arizona electrical district.

"AzGT is a clear leader in U.S. power generation," says Todd Telesz, senior vice president of CoBank's Power, Energy and Utilities banking division. "This project should be a guidepost for what solar generation can be to co-ops around the nation."

# COMMUNICATIONS

## OTZ TELEPHONE COOPERATIVE, INC.
KOTZEBUE, ALASKA

Even for a village in Alaska, the town of Kotzebue has to be considered remote, perched above the Arctic Circle on the west coast of the state. In true community fashion, its 3,200 residents have come to depend on OTZ Telephone Cooperative to keep them connected to the wider world—as well as a few thousand more customers in 11 villages across a service territory the size of Indiana.

OTZ's wireless service represents a crucial safety net given the harsh climate and the fact that there are no surface transportation networks connecting any of the villages served by OTZ. But they're dedicated to serving those people nevertheless. "They're all very small and none of them are money markers," says Doug Neal, OTZ's CEO. "You just provide the service and hope the revenues match up with your costs."

Neal fell in love with Kotzebue when he hitchhiked across the continent from Florida in 1982. With the business now in a position of growth, he plans to retire next year after nearly a quarter century with OTZ, and he has seen the co-op and the village come a long way over that time.

OTZ began providing Internet service to the area way back in 1996, with a bank of 15 dial-up modems. "After dinner, my kid and I would come down to the office and see how many modem lights were lit up," says Neal. "The first circuit we used for dial-up was $1,500 a month; next month we'll be spending $85,000."

The co-op's next move is into broadband fiber-to-the-home: "The demand for broadband is insatiable," says Neal. It's also working on providing 4G LTE to Kotzebue and all the satellite villages as well.

OTZ first turned to CoBank for funding in 2013, as an alternative to financing from the USDA's Rural Utilities Service. Neal says he couldn't believe how easy it was to deal with CoBank. When OTZ was working on a new lease agreement with CoBank last year, he asked Ted Koerner, the head of the Communications banking division, to address a couple of legal concerns in the documents, expecting the negotiations to take weeks. "Ted called back and said, 'Yeah, we're good,'" says Neal. "It's a wonderfully easy relationship."

"Our mission is to support co-ops like OTZ and the people of Kotzebue," says Koerner. "No matter how far-flung these communities are, they deserve to grow and thrive like any other city in America, and we're proud to be a part of that."

1. DOUG NEAL
   Chief Executive Officer, OTZ Telephone Cooperative, Inc.
2. ROBBIE WALLACE
   Relationship Manager, CoBank

# PROJECT FINANCE

## SILICON RANCH
NASHVILLE, TENNESSEE


SILICON RANCH

1. MATT BRILL
   Lead Relationship Manager, Project Finance, CoBank
2. REAGAN FARR
   Vice Chairman and Chief Financial Officer, Silicon Ranch
3. DAVID VICKERMAN
   Vice Chairman and Chief Corporate Development Officer, Silicon Ranch
4. MATT KISBER
   President and Chief Executive Officer, Silicon Ranch
5. BRIAN GOLDSTEIN
   Sector Vice President, Project Finance, CoBank

Founded by a team with long-term experience in the public sector, Silicon Ranch is a private business that takes its community responsibilities very seriously. A provider of solar energy to electric cooperatives—first throughout the South, and now across the country—Silicon Ranch was founded by former Tennessee governor Phil Bredesen, who remains the company's chairman. Co-founder and CEO Matt Kisber served in the Tennessee legislature for 20 years before becoming Governor Bredesen's Commissioner of Economic and Community Development, while co-founder and Chief Financial Officer Reagan Farr also served in Bredesen's cabinet as commissioner of the Tennessee Department of Revenue.

The officers' commitment to public service extends to every part of the business. "Our mission aligns perfectly with that core cooperative principle of 'concern for community,'" says Kisber. "We strongly believe that the legacy of solar energy projects extends beyond the implicit environmental benefits to include economic development and community benefits as well. Our plan is to do well by doing good."

Silicon Ranch has doubled its operating portfolio for three consecutive years, with approximately 900 megawatts of PV systems that are contracted, under construction or operating in 14 states from New York to California, and close to one gigawatt more in its development pipeline. Its cooperative customers span both G&T and electric distribution, including several operating projects with Green Power EMC (owned by 38 cooperative member utilities), United Power, Poudre Valley REA, Arkansas Electric Cooperative Corporation and the Tennessee Valley Authority.

"We don't view our relationship with our partners as a project; we view it as a process," says Farr. "That's why we often have version II and III and IV of our projects with the same partner."

CoBank began working with Silicon Ranch in early 2016 with a dedicated revolving credit facility to finance construction for several projects. Since that time CoBank has closed two additional term-loan financings for solar projects, each more than 50MW.

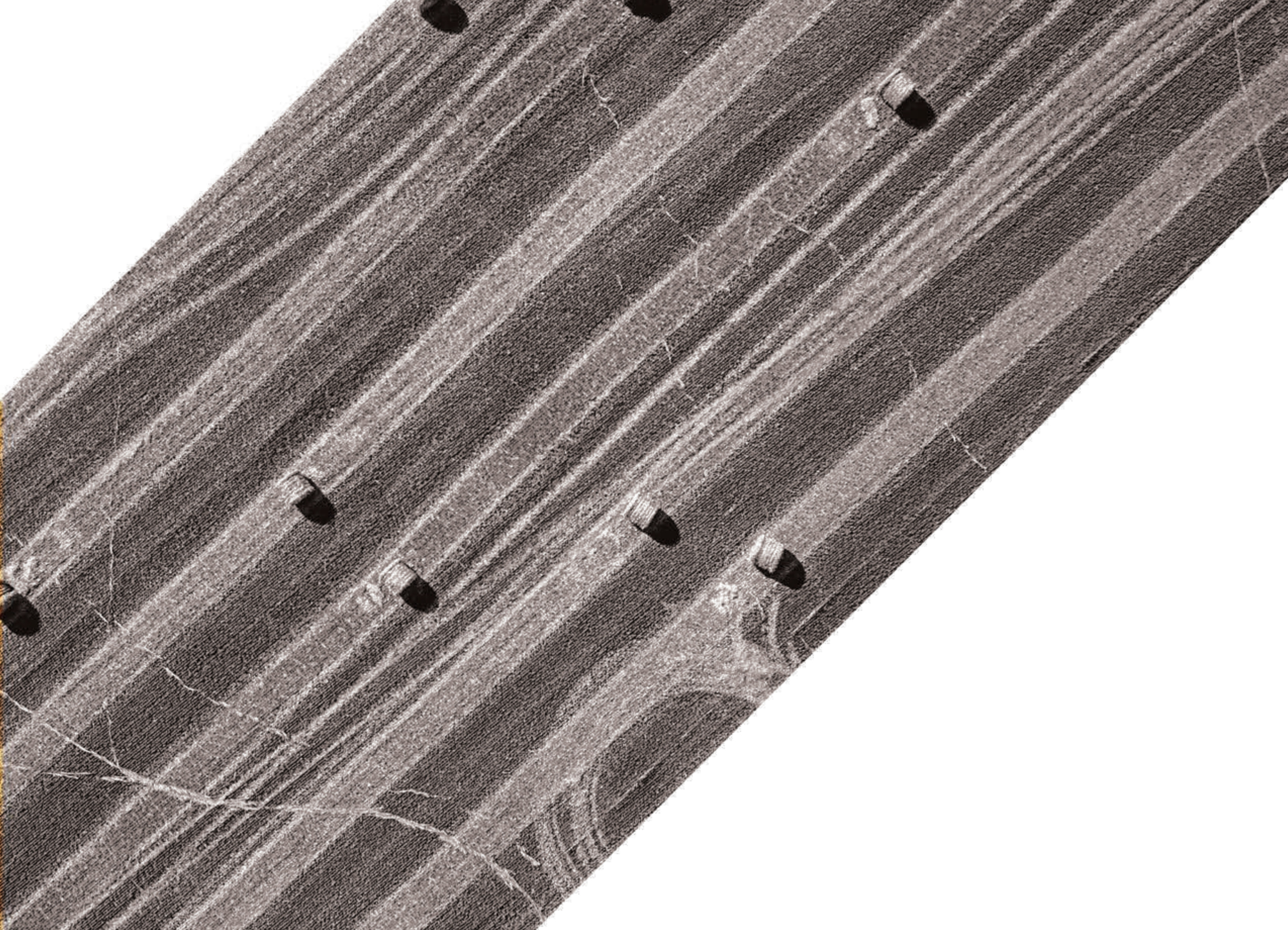
"A lot of financial institutions hold themselves out as having expertise in closing these transactions, every one of which has got its own nuances," says Farr. "CoBank exhibits a level of professionalism and experience in the area that sets it apart from its competitors."

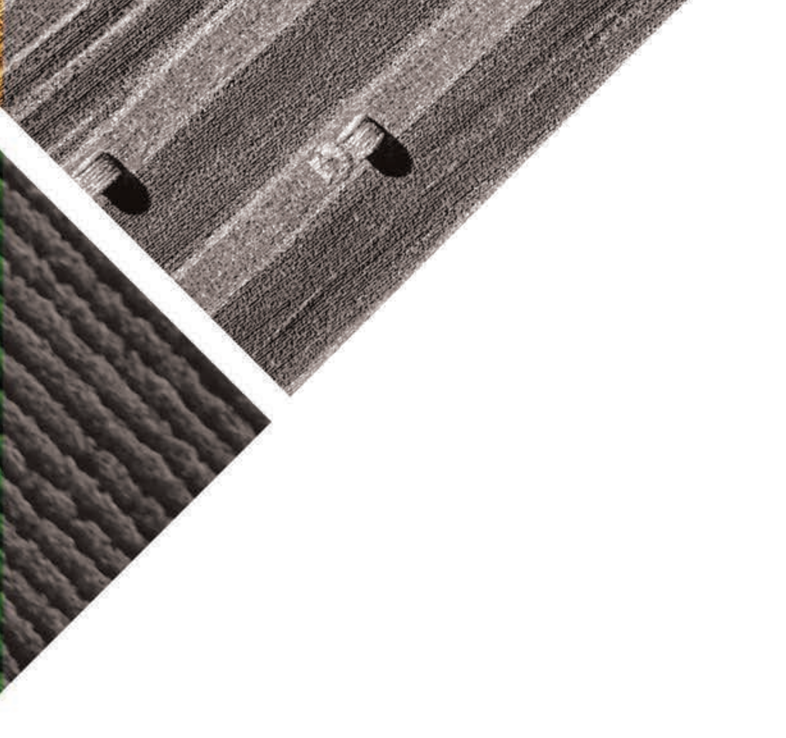
"Of all our independent power producer customers, Silicon Ranch is most in tune with how to tap into the cooperative community," says Brian Goldstein, sector vice president of project finance for CoBank. "Co-ops' generation resources have been predominantly traditional thermal power, so the progress Silicon Ranch has made in the renewable market has been very impressive."


MLT 61
MLT 77
MLT 72
HAMILTON

# VALUE PROPOSITION

COBANK IS A FINANCIALLY STRONG, **DEPENDABLE** COOPERATIVE BANK THAT PROVIDES CREDIT AND FINANCIAL SOLUTIONS TO RURAL AMERICA. WE ARE **KNOWLEDGEABLE**, RESPONSIVE AND COMMITTED TO ENHANCING OUR **CAPACITY** TO DELIVER A SUPERIOR CUSTOMER EXPERIENCE AND COMPETITIVELY PRICED PRODUCTS, WHILE MAINTAINING THE SAFETY AND SOUNDNESS OF THE BANK FOR FUTURE GENERATIONS. WE CONSISTENTLY DEMONSTRATE OUR **FOCUS** ON RURAL AMERICA, REPEATEDLY STRIVE TO BE A TRUSTED ADVISOR FOR OUR CUSTOMERS AND A TRUSTED PARTNER FOR THOSE WITH WHOM WE DO BUSINESS, WHILE PROVIDING A MEANINGFUL RETURN ON SHAREHOLDERS' INVESTMENT AND **OWNERSHIP** IN COBANK.





COBANK 2017
FINANCIAL REPORT

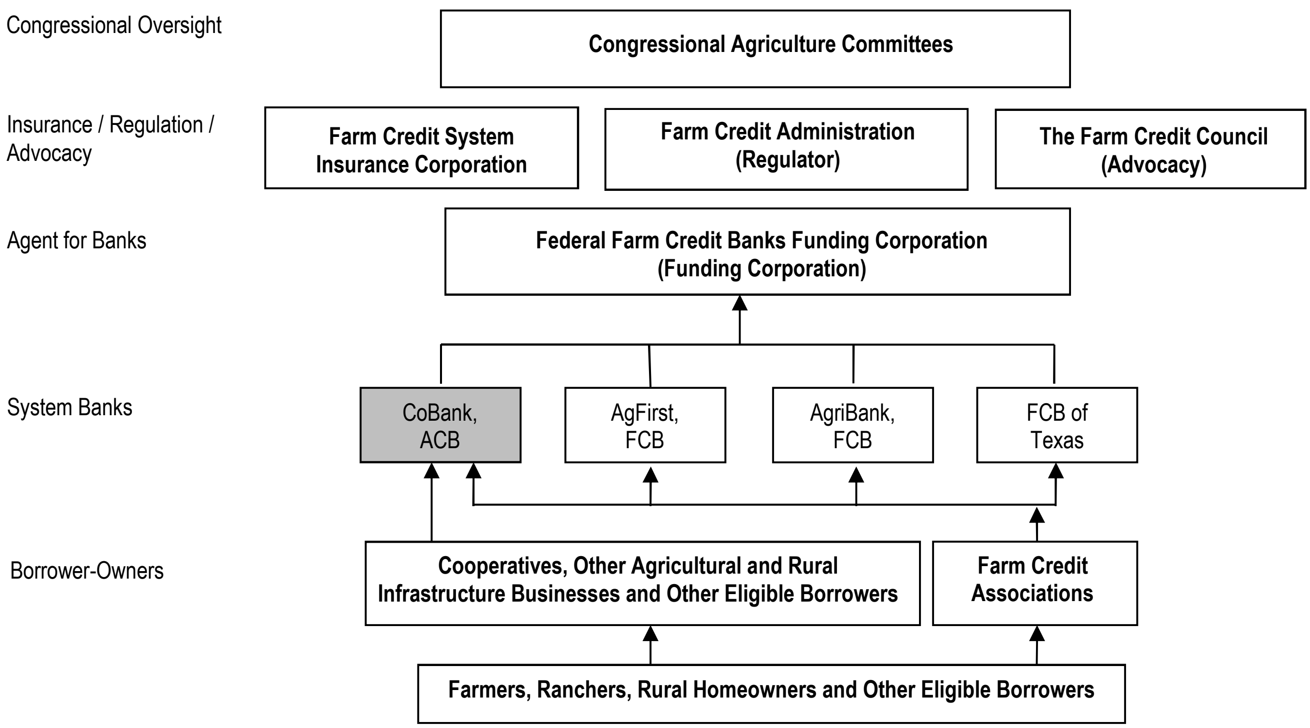
# TABLE OF CONTENTS

## Company Introduction

CoBank, ACB (CoBank or the Bank) is one of the four banks of the Farm Credit System (System) and provides loans, leases and other financial services to vital industries across the rural communities of America. The System is a federally chartered network of borrower-owned cooperative lending institutions and related service organizations. Cooperatives are organizations that are owned and governed by the members who use the cooperative's products or services.

The System was established in 1916 by the U.S. Congress, and is a Government Sponsored Enterprise (GSE). As a member of a GSE, we endeavor to fulfill our mission to a highly diverse customer base irrespective of market conditions. We also fulfill our broader mission as a member of a GSE by supporting rural communities and agriculture in their vital role of providing food security, energy security, economic growth, and a high quality of life to all Americans.

The following chart depicts the structure and ownership of the System.




CoBank is federally chartered under the Farm Credit Act of 1971, as amended (the Farm Credit Act), and is subject to supervision, examination, and safety and soundness regulation by an independent federal agency, the Farm Credit Administration (FCA). We are a mission-based lender with authority to make loans and provide related financial services to eligible borrowers in the agribusiness and rural infrastructure industries, and to certain related entities, as defined by the Farm Credit Act. We are not authorized to accept deposits to fund our operations. Instead, we raise funds primarily by issuing debt securities through the System's agent, the Federal Farm Credit Banks Funding Corporation (Funding Corporation). Such securities are the joint and several obligations of the four System banks.

We are cooperatively owned by our U.S. customers. Our customers consist of agricultural cooperatives; other food and agribusiness companies; rural power, communications and water cooperatives and companies; rural community facilities; Agricultural Credit Associations (Associations), which are regulated, farmer-owned financial institutions and members of the System; and other businesses that serve agriculture and rural communities. We are the primary funding source for certain Associations serving specified geographic regions in the United States. We collectively refer to these entities as our affiliated Associations. We provide a broad range of loans and other financial services through three operating segments: Agribusiness, Strategic Relationships and Rural Infrastructure.

The accompanying consolidated financial statements exclude financial information of our affiliated Associations. CoBank and our affiliated Associations are collectively referred to as the "District." We separately publish certain unaudited combined financial information of the CoBank District, including a condensed statement of condition and statement of income, which can be found on our website at www.cobank.com. Such information is not incorporated by reference into, and should not be viewed as part of, this Annual Report to Shareholders.

System annual and quarterly information statements and press releases for the current fiscal year and the two preceding fiscal years, as well as offering circulars relating to Federal Farm Credit Banks Consolidated Systemwide bonds, medium term notes and discount notes (collectively referred to as Systemwide Debt Securities), are available for inspection at, or will be furnished without charge upon request to, the Federal Farm Credit Banks Funding Corporation, 101 Hudson Street, 35th Floor, Jersey City, New Jersey 07302; telephone (201) 200-8000. These documents are also available on the Funding Corporation's website at www.farmcreditfunding.com. This website also provides a link to each System bank's website where financial and other information of each bank can be found.

The Federal Agricultural Mortgage Corporation (Farmer Mac) is a federally chartered corporation that was formed to provide a secondary market for a variety of loans made to borrowers in rural America. Although Farmer Mac is examined and regulated by the FCA, it is a separate enterprise, and any reference to "the System" herein does not include Farmer Mac. For more information on Farmer Mac and its relationship with System entities, please see "Relationship with the Federal Agricultural Mortgage Corporation" beginning on page 61.

# Financial Condition and Results of Operations

### Overview

CoBank's loans outstanding grew 4 percent to $99.3 billion as of December 31, 2017, compared to $95.3 billion at the end of 2016. Our average loan volume was $96.0 billion during 2017, an increase of 5 percent compared to $91.6 billion in 2016. The increases in both year-end and average loan volume resulted from increased lending across all three of our operating segments.

Our net income grew to $1,125 million in 2017, a $179.6 million increase compared to 2016. This increase included the benefit of $142.3 million in net deferred tax adjustments resulting from the enactment of federal tax legislation in late December 2017 which, among other things, lowered the federal corporate tax rate from 35 percent to 21 percent beginning in 2018. Excluding the impact of these adjustments, our net income increased 4 percent to $983.0 million in 2017 compared to $945.7 million in 2016. This increase primarily resulted from greater net interest income and a lower provision for loan losses, somewhat offset by lower noninterest income and an increase in operating expenses in 2017.

While our overall loan quality measures remain strong, we experienced slight deterioration in loan quality throughout 2017, primarily in our Agribusiness operating segment. Adversely classified loans and accrued interest were 1.00 percent of total loans and accrued interest at December 31, 2017 compared to 0.81 percent at December 31, 2016. Nonaccrual loans increased to $246.8 million at December 31, 2017 from $207.2 million at December 31, 2016 primarily resulting from credit challenges at a limited number of customers in our Rural Infrastructure operating segment. Nonaccrual loans were 0.25 percent of total loans at December 31, 2017 compared to 0.22 percent of total loans at December 31, 2016

Our capital and liquidity positions remain strong as of December 31, 2017. Shareholders' equity increased to $9.1 billion at year-end 2017, compared to $8.6 billion at year-end 2016. Our total capital ratio was 15.24 percent as of December 31, 2017, compared to the regulatory minimum requirement of 8.00 percent (10.50 percent inclusive of the fully phased-in capital conservation buffer). As of year-end 2017, we held a total of $29.2 billion in investments, federal funds sold and other overnight funds, and cash primarily as a liquidity reserve, and our days liquidity was 176 days.

A five-year summary of selected consolidated financial data is shown on the following page.

| Five-Year Summary of Selected CoBank Consolidated Financial Data ($ in Thousands) | | | | | |
|---|---|---|---|---|---|
| **As of and for the Year Ended December 31,** | **2017** | **2016** | **2015** | **2014** | **2013** |
| **Consolidated Statement of Income Data** | | | | | |
| Net Interest Income | **$ 1,392,825** | $ 1,361,778 | $ 1,273,335 | $ 1,231,767 | $ 1,163,433 |
| Provision for Loan Losses/(Loan Loss Reversal) | **42,000** | 63,000 | 10,000 | (15,000) | - |
| Noninterest Income | **175,233** | 184,885 | 169,773 | 124,171 | 132,085 |
| Operating Expenses | **385,673** | 379,702 | 325,315 | 303,800 | 280,094 |
| Provision for Income Taxes | **15,064** | 158,285 | 171,120 | 162,868 | 158,969 |
| **Net Income** | **$ 1,125,321** | $ 945,676 | $ 936,673 | $ 904,270 | $ 856,455 |
| **Net Income Distributed** | | | | | |
| Patronage Distributions: | | | | | |
| Common Stock | **$ 118,570** | $ 114,258 | $ 98,117 | $ 88,745 | $ 76,527 |
| Cash | **491,856** | 473,853 | 415,982 | 378,735 | 338,001 |
| Total Patronage Distributions | **610,426** | 588,111 | 514,099 | 467,480 | 414,528 |
| Preferred Stock Dividends | **84,704** | 77,232 | 59,179 | 53,564 | 62,980 |
| **Total Net Income Distributed** | **$ 695,130** | $ 665,343 | $ 573,278 | $ 521,044 | $ 477,508 |
| **Consolidated Balance Sheet Data** | | | | | |
| Total Loans | **$ 99,265,505** | $ 95,258,281 | $ 89,040,580 | $ 80,382,497 | $ 73,603,375 |
| Less: Allowance for Loan Losses | **576,927** | 558,974 | 486,144 | 481,156 | 447,126 |
| Net Loans | **98,688,578** | 94,699,307 | 88,554,436 | 79,901,341 | 73,156,249 |
| Investment Securities, Federal Funds Sold and Other Overnight Funds | **27,905,378** | 28,515,188 | 24,504,448 | 24,319,943 | 21,688,489 |
| Cash and Cash Equivalents | **1,313,620** | 1,660,517 | 3,113,101 | 1,855,634 | 1,335,024 |
| Other Assets | **1,303,237** | 1,255,614 | 1,298,581 | 1,304,171 | 1,416,695 |
| **Total Assets** | **$ 129,210,813** | $ 126,130,626 | $ 117,470,566 | $ 107,381,089 | $ 97,596,457 |
| Debt Obligations with Maturities ≤ 1Year | **$ 52,568,630** | $ 50,788,645 | $ 45,904,672 | $ 46,263,479 | $ 35,650,715 |
| Debt Obligations with Maturities > 1Year | **65,837,653** | 64,796,055 | 61,968,079 | 52,174,200 | 53,663,787 |
| Reserve for Unfunded Commitments | **93,865** | 103,496 | 115,444 | 115,680 | 167,592 |
| Other Liabilities | **1,650,588** | 1,868,672 | 1,671,902 | 1,458,067 | 1,409,747 |
| **Total Liabilities** | **120,150,736** | 117,556,868 | 109,660,097 | 100,011,426 | 90,891,841 |
| Preferred Stock | **1,500,000** | 1,500,000 | 1,125,000 | 1,125,000 | 961,750 |
| Common Stock | **3,240,445** | 3,072,232 | 2,899,728 | 2,768,546 | 2,677,485 |
| Unallocated Retained Earnings | **4,551,600** | 4,121,409 | 3,845,728 | 3,482,379 | 3,103,926 |
| Accumulated Other Comprehensive Loss | **(231,968)** | (119,883) | (59,987) | (6,262) | (38,545) |
| **Total Shareholders' Equity** | **9,060,077** | 8,573,758 | 7,810,469 | 7,369,663 | 6,704,616 |
| **Total Liabilities and Shareholders' Equity** | **$ 129,210,813** | $ 126,130,626 | $ 117,470,566 | $ 107,381,089 | $ 97,596,457 |
| **Key Financial Ratios** | | | | | |
| **For the Year:** | | | | | |
| Return on Average Common Shareholders' Equity | **14.20 %** | 12.40 % | 13.57 % | 14.27 % | 14.40 % |
| Return on Average Total Shareholders' Equity | **12.75** | 11.25 | 12.34 | 13.07 | 13.15 |
| Return on Average Assets | **0.89** | 0.78 | 0.86 | 0.89 | 0.91 |
| Net Interest Margin | **1.12** | 1.14 | 1.20 | 1.23 | 1.26 |
| Net (Charge-offs) Recoveries / Average Loans | **(0.04)** | (0.00) | (0.01) | (0.00) | 0.03 |
| Patronage Distributions / Total Average Common Stock Owned by Active Borrowers | **20.70** | 21.32 | 19.76 | 18.59 | 17.53 |
| **At Year-end:** | | | | | |
| Debt / Total Shareholders' Equity (: 1) | **13.26** | 13.71 | 14.04 | 13.58 | 13.56 |
| Total Shareholders' Equity / Total Assets | **7.01 %** | 6.80 % | 6.65 % | 6.86 % | 6.87 % |
| Allowance for Credit Losses[(1)] / Total Loans | **0.68** | 0.70 | 0.68 | 0.74 | 0.84 |
| Common Equity Tier 1 Capital Ratio[(2)] | **11.67** | n/a | n/a | n/a | n/a |
| Tier 1 Capital Ratio[(2)] | **13.97** | n/a | n/a | n/a | n/a |
| Total Capital Ratio[(2)] | **15.24** | n/a | n/a | n/a | n/a |
| Tier 1 Leverage Ratio[(2)] | **7.26** | n/a | n/a | n/a | n/a |
| Unallocated Retained Earnings (URE) and URE Equivalents Leverage Ratio[(2)] | **2.96** | n/a | n/a | n/a | n/a |
| Permanent Capital Ratio | **14.29** | 15.47 | 14.95 | 15.70 | 16.72 |

(1) Includes the allowance for loan losses and the reserve for unfunded commitments.

(2) Effective January 1, 2017, CoBank implemented new regulatory capital requirements, as required by the FCA. Therefore, this ratio is not applicable for periods ending prior to this date.

## Net Interest Income

Interest income and interest expense for the major categories of interest-earning assets and interest-bearing liabilities are shown in the following table.

**Average Balances and Rates**

| Year Ended December 31, | 2017 | | | 2016 | | | 2015 | | |
|---|---|---|---|---|---|---|---|---|---|
| ($ in Millions) | Average Balance | Average Rate | Interest Income/ Expense | Average Balance | Average Rate | Interest Income/ Expense | Average Balance | Average Rate | Interest Income/ Expense |
| **Interest-earning Assets** | | | | | | | | | |
| Total Loans | **$ 96,047** | **2.71 %** | **$ 2,603** | $ 91,579 | 2.37 % | $ 2,174 | $ 83,056 | 2.23 % | $ 1,850 |
| Investment Securities, Federal Funds Sold and Other Overnight Funds | **28,851** | **1.86** | **538** | 27,355 | 1.59 | 436 | 23,139 | 1.56 | 360 |
| **Total Interest-earning Assets** | **$ 124,898** | **2.51** | **$ 3,141** | $ 118,934 | 2.19 | $ 2,610 | $ 106,195 | 2.08 | $ 2,210 |
| **Interest-bearing Liabilities** | | | | | | | | | |
| Bonds and Notes | **$ 100,690** | **1.60 %** | **$ 1,607** | $ 95,264 | 1.22 % | $ 1,158 | $ 85,681 | 1.01 % | $ 867 |
| Discount Notes | **13,242** | **0.96** | **127** | 13,019 | 0.53 | 69 | 10,914 | 0.25 | 27 |
| Subordinated Debt | **226** | **2.21** | **5** | 615 | 2.76 | 17 | 902 | 4.10 | 37 |
| Other Notes Payable | **1,120** | **0.80** | **9** | 1,521 | 0.26 | 4 | 1,914 | 0.31 | 6 |
| **Total Interest-bearing Liabilities** | **$ 115,278** | **1.52** | **$ 1,748** | $ 110,419 | 1.13 | $ 1,248 | $ 99,411 | 0.94 | $ 937 |
| **Interest Rate Spread** | | **1.00** | | | 1.06 | | | 1.14 | |
| **Impact of Equity Financing** | **$ 8,837** | **0.12** | | $ 8,452 | 0.08 | | $ 7,668 | 0.06 | |
| **Net Interest Margin and Net Interest Income** | | **1.12 %** | **$ 1,393** | | 1.14 % | $ 1,362 | | 1.20 % | $ 1,273 |

Changes in our interest income, interest expense and net interest income due to volume and rate variances for interest-earning assets and interest-bearing liabilities are summarized in the table below.

**Changes in Net Interest Income Due to Changes in Average Volume and Interest Rates** [1]

| | 2017 | | | 2016 | | |
|---|---|---|---|---|---|---|
| ($ in Millions) | Increase/(Decrease) From Previous Year Due To | | | Increase/(Decrease) From Previous Year Due To | | |
| | Volume | Yield/Rate | Total | Volume | Yield/Rate | Total |
| Total Loans | **$ 77** | **$ 352** | **$ 429** | $ 194 | $ 130 | $ 324 |
| Investment Securities, Federal Funds Sold and Other Overnight Funds | **16** | **86** | **102** | 66 | 10 | 76 |
| **Total Interest Income** | **93** | **438** | **531** | 260 | 140 | 400 |
| **Total Interest Expense** | **(72)** | **572** | **500** | 86 | 226 | 312 |
| **Changes in Net Interest Income** | **$ 165** | **$ (134)** | **$ 31** | $ 174 | $ (86) | $ 88 |

[1] 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.

Net interest income increased $31.0 million, or 2 percent, to $1,393 million in 2017, compared to $1,362 million in 2016. The increase in net interest income was primarily driven by higher average loan volume. A modest increase in earnings on invested capital also contributed to the overall increase in net interest income. These factors were partially offset by a decrease in fair value accretion income resulting from merger accounting as well as slightly lower spreads in our loan portfolio. Average loan volume increased $4.5 billion, or 5 percent, to $96.0 billion in 2017 primarily as a result of growth in lending to Associations in our Strategic Relationships operating segment as well as cooperatives and agricultural export finance customers in our Agribusiness operating segment and rural electric cooperatives and project finance customers in our Rural Infrastructure operating segment. Average investment securities, federal funds sold and other overnight funds increased to $28.9 billion in 2017 from $27.4 billion in 2016.

Our net interest margin declined to 1.12 percent in 2017 from 1.14 percent in 2016, and interest rate spread decreased to 1.00 percent in 2017 from 1.06 percent in 2016. The reduction in our net interest margin included the impact of lower fair value accretion income and slightly lower overall loan spreads, reflective of continued competition for the business of our customers. These drivers were somewhat offset by the modest increase in earnings from our invested capital.

In 2016, our net interest income increased 7 percent to $1,362 million, compared to $1,273 million in 2015. The increase in net interest income was primarily driven by higher average loan volume and increased earnings on balance sheet positioning, somewhat offset by lower spreads in our loan and investment portfolios. Average loan volume increased $8.5 billion, or 10 percent, to $91.6 billion in 2016 primarily as a result of growth in lending to affiliated Associations in our Strategic Relationships operating segment, cooperatives and other food and agribusiness companies in our Agribusiness operating segment, and power and communications customers in our Rural Infrastructure operating segment. Average investment securities, federal funds sold and other overnight funds increased to $27.4 billion in 2016 from $23.1 billion in 2015. Net interest margin declined in 2016 to 1.14 percent from 1.20 percent in 2015, and interest rate spread decreased to 1.06 percent in 2016 from 1.14 percent in 2015. The reduction in net interest margin in 2016 included the impact of lower loan spreads in our Agribusiness and Rural Infrastructure operating segments, spread compression in our investment portfolio, a higher cost of System short-term debt and lower fair value accretion income resulting from merger accounting. These items were somewhat offset by increased earnings on balance sheet positioning including, among other things, interest savings from the redemption of a portion of our subordinated debt during 2016.

**Provision for Loan Losses (Loan Loss Reversal) and Allowance for Credit Losses**

The provision for loan losses (loan loss reversal) reflects our estimate of credit losses inherent in our loan and finance lease portfolios, including unfunded commitments. The allowance for loan losses covers the funded portion of our loans outstanding, while the reserve for unfunded commitments covers losses on unfunded lending commitments. The sum of the allowance for loan losses and the reserve for unfunded commitments is referred to as the allowance for credit losses. We base our allowance for probable and estimable losses on the factors discussed in "Critical Accounting Estimates – Allowance for Credit Losses" on page 68. The table on page 42 summarizes the activity in our allowance for credit losses, by operating segment, for the past five years.

We recorded a $42.0 million provision for loan losses in 2017. The provision largely reflected growth in average loan volume and slight deterioration in credit quality in our Agribusiness operating segment. The $42.0 million total provision for loan losses included a provision of $43.7 million in our Agribusiness operating segment and a loan loss reversal of $1.7 million in our Rural Infrastructure operating segment.

In 2016, we recorded a $63.0 million provision for loan losses also driven by increased exposure resulting from growth in overall lending activity and deterioration in credit quality in our Agribusiness operating segment. The $63.0 million provision for loan losses included a $71.0 million provision for loan losses in our Agribusiness operating segment offset by an $8.0 million loan loss reversal in our Rural Infrastructure operating segment.

Adversely classified loans and accrued interest were 1.00 percent of total loans and accrued interest at December 31, 2017, compared to 0.81 percent at December 31, 2016 and 0.70 percent at December 31, 2015. The increases in adversely classified loans and accrued interest in 2017 and 2016 were primarily driven by continued slight deterioration in credit quality in our Agribusiness operating segment.

Total nonaccrual loans increased $39.6 million to $246.8 million, or 0.25 percent of total loans, at December 31, 2017 from $207.2 million, or 0.22 percent of total loans, at December 31, 2016 primarily resulting from credit challenges at a limited number of customers in our Rural Infrastructure operating segment. Total nonaccrual loans increased $50.4 million to $207.2 million at December 31, 2016 from $156.8 million at December 31, 2015 resulting from credit quality deterioration impacting customers in our Agribusiness operating segment, somewhat offset by activity related to three communications loans, of which one was returned to accruing status and the others were paid off. We recorded loan charge-offs, net of recoveries, of $33.7 million in 2017 compared to $2.1 million and $5.2 million in 2016 and 2015, respectively. The 2017 charge-offs primarily related to a customer in our Agribusiness operating segment.

Our allowance for credit losses was $670.8 million at December 31, 2017, compared to $662.5 million and $601.6 million as of December 31, 2016 and 2015, respectively. The allowance for credit losses represented 0.68 percent of total loans as of the end of 2017, compared to 0.70 percent and 0.68 percent of total loans at December 31, 2016 and 2015, respectively. At December 31, 2017, our allowance for credit losses represented 1.33 percent of non-guaranteed loans excluding wholesale loans to Associations, compared to 1.37 percent and 1.36 percent at December 31, 2016 and 2015, respectively.

Refer to "Enterprise Risk Profile – Credit Risk Management" beginning on page 46 for further information on nonperforming loans, charge-offs, loan quality trends and the factors considered in determining the levels of our provision for loan losses and allowance for credit losses.

**Noninterest Income**

The following table details our noninterest income for each of the last three years.

**Noninterest Income** ($ in Thousands)

| Year Ended December 31, | 2017 | 2016 | 2015 |
|---|---|---|---|
| Net Fee Income | **$ 109,160** | $ 103,365 | $ 104,441 |
| Patronage Income | **63,970** | 58,385 | 43,858 |
| Prepayment Income | **18,585** | 34,142 | 31,946 |
| Losses on Early Extinguishments of Debt | **(42,088)** | (34,197) | (37,455) |
| Gain on Sale of Investment Securities | **9,387** | 4,617 | 22,603 |
| Other-Than-Temporary Impairment Losses on Investment Securities | **-** | (750) | (11,100) |
| Other, Net | **16,219** | 19,323 | 15,480 |
| **Total Noninterest Income** | **$ 175,233** | $ 184,885 | $ 169,773 |

Noninterest income is primarily composed of fee income, patronage income, loan prepayment income and miscellaneous gains and losses, offset by losses on early extinguishment of debt and impairment losses on investment securities.

Total noninterest income decreased in 2017 to $175.2 million, or by 5 percent, from $184.9 million in 2016. The lower level of noninterest income was driven by a $23.4 million increase in losses on early extinguishments of debt, net of prepayment income, and a decrease of $3.1 million in other noninterest income. These items were partially offset by increases in net fee income, patronage income and gains recognized on sales of investment securities of $5.8 million, $5.6 million and $4.8 million, respectively.

Our net fee income, which includes arrangement fees and unused commitment fees, among others, increased to $109.2 million in 2017 compared to $103.4 million in 2016 primarily due to a higher level of arrangement and other fee income in our Agribusiness and Rural Infrastructure operating segments.

Patronage income, which represents patronage received from other System institutions for loans we sold to them, increased to $64.0 million in 2017 compared to $58.4 million in 2016. This increase largely reflects greater levels of loans sold to other System institutions.

Prepayment income decreased to $18.6 million in 2017 from $34.1 million in 2016. We extinguish debt to offset the current and prospective impact of prepayments in our loan and investment portfolios and to maintain a desired mix of interest-earning assets and interest-bearing liabilities. During 2017, we extinguished $897.4 million of Systemwide Debt Securities compared to $2.1 billion in 2016. The 2017 and 2016 debt extinguishments included $474.6 million and $1.8 billion, respectively, in Systemwide Debt Securities sold at market value to other Farm Credit Banks. Losses on early extinguishment of Systemwide Debt Securities were $42.1 million in 2017 compared to $34.2 million in 2016. In 2017, we took advantage of market opportunities to buy back higher-cost debt, which will reduce interest expense and benefit earnings in future periods. As a result, losses on early extinguishments of debt exceeded prepayment income.

During 2017, we sold investment securities with a combined book value of $1.6 billion for gains totaling $9.4 million. In 2016 and 2015, sales of investment securities resulted in gains totaling $4.6 million and $22.6 million, respectively. The sale of investment securities is discussed in "Liquidity and Capital Resources" beginning on page 62.

We recorded no other-than-temporary impairment losses on investment securities during 2017. In 2016, we recorded $0.8 million of impairment losses related to one investment security. In 2015, we recorded impairment losses of $11.1 million on two FHA/VA non-wrapped reperformer mortgage-backed securities (MBS) with a total fair value of $54.5 million. The 2016 and 2015 impairments related to securities originally acquired in connection with our 2012 merger with U.S. AgBank, FCB (AgBank). Such securities were among those identified as credit-impaired investment securities acquired in the merger. The credit quality of our investment portfolio is discussed in "Liquidity and Capital Resources" beginning on page 62.

Other net noninterest income decreased to $16.2 million in 2017 from $19.3 million in 2016 primarily due to proceeds received in 2016 related to the disposition of warrants which had been obtained in lending transactions.

In 2016, total noninterest income increased to $184.9 million, or by 9 percent, from $169.8 million in 2015. The higher level of noninterest income was driven by an increase of $14.5 million in patronage income received from other System institutions on loan participations we sold to them. In addition, only $0.8 million of impairment losses on investment securities were recorded in 2016 while $11.1 million in such losses were recognized in 2015 and losses on early extinguishments of debt, net of prepayment income, declined by $5.5 million. These items were partially offset by a decrease of $18.0 million in gains recognized on sales of investment securities.

### Operating Expenses

The following table details our operating expenses for each of the last three years.

**Analysis of Operating Expenses** ($ in Thousands)

| Year Ended December 31, | 2017 | | 2016 | | 2015 | |
|---|---|---|---|---|---|---|
| Employee Compensation | **$ 172,540** | | $ 165,159 | | $ 150,585 | |
| General and Administrative | **29,331** | | 25,109 | | 24,167 | |
| Information Technology | **35,776** | | 31,696 | | 28,231 | |
| Insurance Fund Premium | **83,686** | | 90,561 | | 59,919 | |
| Travel and Entertainment | **18,247** | | 21,583 | | 18,425 | |
| Farm Credit System Related | **15,823** | | 14,736 | | 12,215 | |
| Occupancy and Equipment | **16,020** | | 16,083 | | 16,220 | |
| Purchased Services | **14,250** | | 14,775 | | 15,553 | |
| **Total Operating Expenses** | **$ 385,673** | | $ 379,702 | | $ 325,315 | |
| Total Operating Expenses/ (Net Interest Income + Net Fee Income) | **25.7** | **%** | 25.9 | % | 23.6 | % |
| Operating Expenses, Excluding Insurance Fund Premium/ (Net Interest Income + Net Fee Income) | **20.1** | | 19.7 | | 19.3 | |

Total operating expenses increased 2 percent in 2017 to $385.7 million, compared to $379.7 million for 2016. Employee compensation expense, which includes salaries, incentive compensation and employee benefits, increased to $172.5 million in 2017 from $165.2 million in 2016 primarily due to an increase in the number of employees to support new business initiatives and maintain high levels of customer service and a higher level of incentive compensation reflective of strong business and financial performance. As of December 31, 2017, we had 1,002 employees, compared to 953 and 883 at December 31, 2016 and 2015, respectively.

General and administrative expenses were $29.3 million in 2017, compared to $25.1 million in 2016. This increase was driven by higher levels of contributions and commitments to charitable, educational and other organizations that benefit the residents, communities and industries we serve in rural America, consistent with our overall corporate social responsibility program and the fulfillment of our mission.

Information technology expenses, which include the cost of hardware, software, network infrastructure and related support services, increased to $35.8 million in 2017 from $31.7 million in 2016 due to greater expenditures to enhance our service offerings, technology platforms and digital banking capabilities.

Insurance Fund premium expenses decreased to $83.7 million in 2017 from $90.6 million in 2016 due to lower premium rates partially offset by growth in our average loan volume. Insurance Fund premium rates are set by the Farm Credit System Insurance Corporation (Insurance Corporation) and were 15 basis points of average outstanding adjusted insured debt obligations for all of 2017 compared to 16 basis points during the first half of 2016 and 18 basis points for the second half of 2016. The Insurance Corporation announced a premium rate of 9 basis points of average outstanding adjusted insured debt obligations for the first half of 2018. Changes in the premium rate generally result from increases or decreases in the overall level of System assets and related debt obligations, the amount of assets in the Insurance Fund and the Insurance Corporation's projections of these balances.

Our travel and entertainment expenses decreased to $18.2 million in 2017 from $21.6 million in 2016. Travel and entertainment expenses include expenditures for customer-facing activities and other business travel. The decrease reflects non-recurring costs incurred in 2016.

Farm Credit System related expenses increased to $15.8 million in 2017 compared to $14.7 million in 2016. These expenses primarily represent our share of costs to fund the operations of the FCA and the Farm Credit Council (FCC), a national trade organization that represents System entities. Each System institution is assessed a pro rata share of the FCA's total expenses based primarily on each institution's average risk-adjusted assets. FCC costs are generally allocated based on the number of directors that represent each district (a System bank and its affiliated Associations) and the level of bank assets. The increase in 2017 costs primarily reflects a greater level of FCA expenses.

Occupancy and equipment expenses decreased by $0.1 million to $16.0 million in 2017 primarily due to expenditures incurred during 2016 associated with our new corporate headquarters in Greenwood Village, Colorado, which was completed in late 2015. Upon completion, the building was sold and CoBank became the lessee. This arrangement is discussed further on page 82.

Purchased services expenses decreased to $14.3 million in 2017 from $14.8 million in 2016 primarily resulting from a lower level of consulting expenditures during 2017.

Total operating expenses as a percent of net interest income plus net fee income were 25.7 percent in 2017 compared to 25.9 percent in 2016 and 23.6 percent in 2015. Excluding the impact of Insurance Fund premium expense, operating expenses as a percent of net interest income plus net fee income were 20.1 percent in 2017, compared to 19.7 percent in 2016 and 19.3 percent in 2015.

The $54.4 million increase in total operating expenses in 2016 compared to 2015 included a $30.6 million increase in Insurance Fund premium expense driven by an increase in the premium rate, which was 16 basis points of average outstanding adjusted insured debt obligations in the first half of 2016 and 18 basis points for the second half of 2016, compared to 13 basis points for all of 2015. CoBank's loan growth from 2015 to 2016 also contributed to the increase in premium expense. Employee compensation expense increased by $14.6 million in 2016 primarily due to an increase in the number of employees, a higher level of accrued incentive compensation reflective of strong business and financial performance as well as accrued one-time separation expenses for senior officers who left the Bank in 2016. Information technology expenses increased by $3.5 million in 2016 due to greater expenditures to enhance our service offerings and technology platforms. Increases in travel and entertainment as well as Farm Credit System related expenses of $3.2 million and $2.5 million, respectively, also contributed to the higher level of total operating expenses during 2016.

**Provision for Income Taxes**

Our provision for income taxes decreased to $15.1 million in 2017 from $158.3 million in 2016. Our effective tax rate was 1.3 percent for 2017 compared to 14.3 percent for 2016. These significant decreases included the benefit of $142.3 million in net deferred tax adjustments resulting from the enactment of federal tax legislation in late December 2017 which, among other things, lowered the federal corporate tax rate from 35 percent to 21 percent beginning in 2018. In accordance with accounting principles generally accepted in the United States of America (GAAP), the change to the lower corporate tax rate led to a remeasurement of our deferred tax liabilities and deferred tax assets in the period of enactment (2017). Our primary deferred tax liabilities relate to timing differences generated by our leasing subsidiary, which is included in our Agribusiness operating segment. Our primary deferred tax assets relate to our allowance for credit losses and employee benefit plans, which impact both our Agribusiness and Rural Infrastructure operating segments. The $142.3 million net adjustment includes a $253.5 million benefit from the remeasurement of deferred tax liabilities, the substantial majority of which, as noted above, relates to our leasing subsidiary. This impact to deferred tax liabilities was somewhat offset by a $111.2 million expense from the remeasurement of deferred tax assets, of which $80.2 million relates to the allowance for credit losses.

Excluding the impact of the $142.3 million adjustment, our provision for income taxes was $157.4 million in 2017 compared to $158.3 million in 2016, and our effective tax rate was 13.8 percent compared to 14.3 percent in 2016. Our effective tax rates are less than the applicable federal and state statutory income tax rates primarily due to tax-deductible patronage distributions. In addition, as more fully discussed in Note 1 to the accompanying consolidated financial statements, a portion of CoBank’s activities are statutorily exempt from income taxes. These tax-exempt activities primarily include wholesale lending to Farm Credit Associations. The decreases in our income tax expense and the effective tax rate were primarily due to a greater portion of earnings attributable to non-taxable business activities and an increase in accrued patronage payable resulting from higher levels of lending in the taxable portion of our business.

Our provision for income taxes decreased to $158.3 million in 2016 from $171.1 million in 2015. Our effective tax rate decreased to 14.3 percent for 2016 compared to 15.4 percent for 2015. The decreases in tax expense and the effective tax rate were driven by higher levels of accrued patronage, which resulted from growth in average patronage-eligible loan volume, an increase in earnings attributable to tax-exempt business activities and an increase in tax credits related to renewable energy transactions.

As a result of the change in federal corporate tax rate, which is effective in 2018, we anticipate that our ongoing effective tax rate will be lower by approximately 35 percent beginning in 2018.

## Operating Segment Financial Review

We conduct lending operations through three operating segments: Agribusiness, Strategic Relationships and Rural Infrastructure. All customer activity, including loans and leases and related income, is specifically assigned to the business units that comprise the operating segments. Investment securities and federal funds sold and other overnight funds, which are primarily held as a liquidity reserve to support our banking operations, are not specifically assigned to operating segments; however, the income from investment securities and federal funds sold and other overnight funds is allocated to the operating segments.

In addition to the operating segments described below, our Banking Services Group (BSG) provides capital markets services, which support our lending divisions. BSG manages syndications and loan sales with over 100 financial institutions, including System institutions. In 2017, we syndicated or sold approximately $17.4 billion of loan commitments to System entities and other financial institutions to help meet customers' credit needs and to effectively diversify risk and manage capital. BSG also includes the Knowledge Exchange Division, which provides the Bank and our customers industry specific research and strategic insight to enhance understanding of emerging trends, business opportunities, and risks.

In addition, we offer non-credit products and services including cash management, online banking, mobile banking, commercial credit card and merchant card processing solutions. Revenues generated from non-credit products and services and by BSG, as well as all related operating expenses, are allocated to the operating segments.

Net income by operating segment is summarized in the table below and is more fully disclosed in Note 14 to the accompanying consolidated financial statements. The following tables also provide period-end and average loan amounts.

**Net Income by Operating Segment** ($ in Thousands)

| Year Ended December 31, | 2017 | 2016 | 2015 |
|---|---|---|---|
| **Operating Segment:** | | | |
| Agribusiness | **$ 629,726** (1) | $ 403,163 | $ 448,931 |
| Strategic Relationships | **261,728** | 244,786 | 241,987 |
| Rural Infrastructure | **240,905** (1) | 307,980 | 255,271 |
| Total Operating Segments | **1,132,359** | 955,929 | 946,189 |
| Corporate/Other | **(7,038)** | (10,253) | (9,516) |
| **Total** | **$ 1,125,321** | $ 945,676 | $ 936,673 |

(1) 2017 net income included the impact resulting from the enactment of federal tax legislation in late 2017, as more fully explained on pages 40, 43 and 45.

**Period-end Loan Portfolio by Operating Segment** ($ in Millions)

| December 31, | 2017 | 2016 | 2015 | 2014 | 2013 |
|---|---|---|---|---|---|
| Agribusiness | **$ 30,304** | $ 28,660 | $ 26,131 | $ 24,359 | $ 21,182 |
| Strategic Relationships | **47,948** | 45,994 | 43,358 | 39,919 | 37,897 |
| Rural Infrastructure | **21,014** | 20,604 | 19,552 | 16,104 | 14,524 |
| **Total Loans** | **$ 99,266** | $ 95,258 | $ 89,041 | $ 80,382 | $ 73,603 |

**Average Loan Portfolio by Operating Segment** ($ in Millions)

| Year Ended December 31, | 2017 | 2016 | 2015 | 2014 | 2013 |
|---|---|---|---|---|---|
| Agribusiness | **$ 29,241** | $ 27,563 | $ 24,872 | $ 23,598 | $ 21,077 |
| Strategic Relationships | **46,074** | 43,924 | 40,414 | 37,804 | 36,565 |
| Rural Infrastructure | **20,732** | 20,092 | 17,770 | 15,192 | 14,215 |
| **Total Average Loans** | **$ 96,047** | $ 91,579 | $ 83,056 | $ 76,594 | $ 71,857 |

The following table presents activity in the allowance for credit losses by operating segment.

**Analysis of the Allowance for Credit Losses** ($ in Thousands)

| | 2017 | 2016 | 2015 | 2014 | 2013 |
|---|---|---|---|---|---|
| **Beginning of Year** | **$ 662,470** | $ 601,588 | $ 596,836 | $ 614,718 | $ 595,079 |
| **Charge-offs:** | | | | | |
| Agribusiness | **(35,675)** | (4,276) | (2,668) | (1,599) | (1,622) |
| Strategic Relationships | **-** | - | - | - | - |
| Rural Infrastructure | **-** | (324) | (5,597) | (4,618) | (26) |
| **Total Charge-offs** | **(35,675)** | (4,600) | (8,265) | (6,217) | (1,648) |
| **Recoveries:** | | | | | |
| Agribusiness | **1,644** | 747 | 1,977 | 2,040 | 20,199 |
| Strategic Relationships | **-** | - | - | - | - |
| Rural Infrastructure | **353** | 1,735 | 1,040 | 1,295 | 1,088 |
| **Total Recoveries** | **1,997** | 2,482 | 3,017 | 3,335 | 21,287 |
| **Net (Charge-offs) Recoveries** | **(33,678)** | (2,118) | (5,248) | (2,882) | 19,639 |
| **Provision (Reversal) Charged (Credited) to Earnings:** | | | | | |
| Agribusiness | **43,650** | 71,000 | (30,800) | 37,000 | (6,000) |
| Strategic Relationships | **-** | - | - | - | - |
| Rural Infrastructure | **(1,650)** | (8,000) | 40,800 | (52,000) | 6,000 |
| **Total Provision (Reversal) Charged (Credited) to Earnings** | **42,000** | 63,000 | 10,000 | (15,000) | - |
| **End of Year** | **$ 670,792** | $ 662,470 | $ 601,588 | $ 596,836 | $ 614,718 |
| **Components:** | | | | | |
| Allowance for Loan Losses | **$ 576,927** | $ 558,974 | $ 486,144 | $ 481,156 | $ 447,126 |
| Reserve for Unfunded Commitments | **93,865** | 103,496 | 115,444 | 115,680 | 167,592 |
| **Total Allowance for Credit Losses (ACL)** | **$ 670,792** | $ 662,470 | $ 601,588 | $ 596,836 | $ 614,718 |
| ACL/Total Loans | **0.68 %** | 0.70 % | 0.68 % | 0.74 % | 0.84 % |
| ACL/Non-guaranteed Loans (Excluding Loans to Associations) | **1.33** | 1.37 | 1.36 | 1.54 | 1.85 |
| ACL/Impaired Loans | **271** | 264 | 382 | 457 | 413 |
| ACL/Nonaccrual Loans | **272** | 320 | 384 | 458 | 416 |
| Net (Charge-offs) Recoveries / Average Loans | **(0.04)** | (0.00) | (0.01) | (0.00) | 0.03 |

**Allowance for Credit Losses by Operating Segment** ($ in Thousands)

| December 31, | 2017 | 2016 | 2015 | 2014 | 2013 |
|---|---|---|---|---|---|
| Agribusiness | **$ 479,904** | $ 470,285 | $ 402,814 | $ 434,305 | $ 396,864 |
| Strategic Relationships | **-** | - | - | - | - |
| Rural Infrastructure | **190,888** | 192,185 | 198,774 | 162,531 | 217,854 |
| **Total Allowance for Credit Losses** | **$ 670,792** | $ 662,470 | $ 601,588 | $ 596,836 | $ 614,718 |

## *Agribusiness*

### Overview

The Agribusiness operating segment includes loans and other financial services provided to a diverse market of cooperatives and other businesses in various agricultural sectors including grain handling and marketing, farm supply, fruits, nuts, vegetables, forest products, dairy, livestock, biofuels and food processing. Primary products and services include term loans, revolving lines of credit, trade finance, capital markets services, as well as risk management, cash management, and investment products. To enhance portfolio diversification, and to assist System partners in meeting the needs of their increasingly diverse customer base, we purchase participations in agribusiness loans from other System entities and participate in syndicated agribusiness loans with other financial institutions.

A portion of Agribusiness loan volume finances seasonal grain inventories, through the use of lines of credit, for cooperative customers. This seasonal loan volume is affected by a number of factors, including grain volume, commodity prices, producer selling patterns, transportation availability, and the relationship between cash and futures prices in the grain commodities markets. Agribusiness loan volume generally reaches a seasonal low in late summer or early fall.

Harvest financing demands result in loan volume increases beginning in the late fall of each year. Peak loan volume typically occurs early in the year when our cooperative customers pay producers' deferred grain payables.

Our Agribusiness customers face challenges including widely fluctuating supplies of commodities in global markets and the attendant price volatility, evolving domestic and global market demand, changing trade agreements, increasing regulation and the impact of currency fluctuations. These trends, along with the need to attract high-quality leadership, manage risk, and remain competitive, have led some of our cooperative customers to consolidate and merge, enter into joint ventures, or form alliances to develop new markets. This consolidation trend has, in some cases, resulted in larger individual and attributed credit commitments, consistent with our mission. We meet our customers' financing needs by maintaining appropriate credit exposure to individual customers and partnering with System entities and commercial banks in loan syndications and participations. We also focus on serving mission-related entities, including small and start-up cooperatives, and supporting our Farm Credit partners in their lending to Young, Beginning and Small (YBS) farmers and ranchers.

The Agribusiness segment includes our Agricultural Export Finance Division (AEFD), which provides trade finance to support U.S. exporters of agricultural products. Obligors consist primarily of financial institutions in foreign countries (primarily emerging markets) who support our exporting customers in selling and shipping agricultural products to international markets. The AEFD utilizes the U.S. government-sponsored export loan guarantee General Sales Manager (GSM) program for a portion of its export financing. As of December 31, 2017, the AEFD had $5.0 billion in loans outstanding, 20 percent of which were guaranteed by the U.S. government under the GSM program, compared to $4.9 billion in loans outstanding as of December 31, 2016, 26 percent of which were guaranteed under the GSM program. Over the last five years, the mix of volume in AEFD has shifted toward a higher level of non-guaranteed volume reflecting a decline in the competitiveness of the GSM program coupled with our ability to support an increasing level of non-guaranteed export transactions. Expanding the export of U.S. agricultural products is an important component of supporting the U.S. economy and balance of trade.

The Agribusiness segment also includes Farm Credit Leasing Services Corporation (FCL), a wholly-owned subsidiary which provides leases and lease-related products and financial services to agribusinesses, agricultural producers, Association partners, and rural infrastructure companies. As of December 31, 2017, FCL had $3.4 billion in leases outstanding compared to $3.2 billion in leases outstanding as of December 31, 2016.

**2017 Performance**

Agribusiness loans outstanding totaled $30.3 billion at December 31, 2017, compared to $28.7 billion at December 31, 2016. Average loan volume increased 6 percent to $29.2 billion in 2017 from $27.6 billion in 2016. The increase in outstanding and average Agribusiness volume resulted primarily from higher levels of seasonal financing at many grain and farm supply cooperatives resulting from greater levels of grain ownership as well as increased lending to agricultural export finance customers.

As previously mentioned, the level of seasonal lending within our Agribusiness operating segment can fluctuate significantly from period to period and is impacted by numerous factors, including commodity prices and inventory levels. The following table shows five-year price trends for certain grain commodities. Prices represent the yearly high and low "nearby" futures price per bushel for corn, soybeans and wheat. Nearby futures contracts represent those contracts with the nearest settlement date.

| Year Ended December 31, | 2017 | 2016 | 2015 | 2014 | 2013 |
|---|---|---|---|---|---|
| **Commodity** | | | | | |
| **Corn:** | | | | | |
| High | **$ 4.05** | $ 4.39 | $ 4.43 | $ 5.23 | $ 7.41 |
| Low | **3.29** | 3.01 | 3.47 | 3.18 | 4.12 |
| **Soybeans:** | | | | | |
| High | **10.80** | 12.09 | 10.62 | 15.37 | 16.13 |
| Low | **9.00** | 8.52 | 8.44 | 9.04 | 12.59 |
| **Wheat:** | | | | | |
| High | **5.75** | 5.24 | 6.15 | 7.44 | 7.91 |
| Low | **3.95** | 3.60 | 4.59 | 4.66 | 6.00 |

Our Agribusiness segment generated $629.7 million in net income for 2017, a $226.5 million increase from the $403.2 million in net income for 2016. This increase included the benefit of $198.2 million in net deferred tax adjustments. Excluding the impact of the remeasurement of net deferred tax liabilities, which is described on page 40, Agribusiness net income increased by $28.3 million in 2017 to $431.5 million. This increase was driven by a lower provision for loan losses as well as greater net interest income. These items were somewhat offset by lower noninterest income as well as an increase in operating expenses.

Net interest income in our Agribusiness segment increased $24.2 million in 2017 as compared to 2016 primarily due to growth in average loan volume, somewhat offset by slight spread compression due to continued strong competition for the business of our customers.

We recorded a $43.7 million provision for loan losses in our Agribusiness operating segment in 2017, compared to $71.0 million in 2016. The 2017 and 2016 provisions for loan losses resulted from a higher level of lending activity, slight deterioration in overall credit quality and an increase in specific reserves or charge-offs associated with a small number of customers.

While overall Agribusiness credit quality remains strong, we expect some further deterioration due to generally lower agricultural commodity prices and other factors impacting certain of our customers. Agribusiness nonaccrual loans increased to $213.0 million at December 31, 2017 from $207.2 million at December 31, 2016 due to credit quality deterioration impacting a small number of food and agribusiness customers. Agribusiness recorded loan charge-offs, net of recoveries, of $34.0 million in 2017 as compared to $3.5 million for 2016. The increase largely related to one customer who experienced significant financial distress in 2017.

Noninterest income in our Agribusiness segment decreased by $12.2 million in 2017 due to higher losses on early extinguishments of debt, net of prepayment income, somewhat offset by higher levels of patronage income received from other System institutions on loan participations we sold to them, an increase in arrangement and other fee income and gains recognized from the sale of investment securities, which are allocated to the operating segments.

Operating expenses in our Agribusiness segment increased by $7.4 million in 2017 primarily due to the increases in employee compensation, information technology and general and administrative expenses described previously.

Agribusiness recorded a $113.7 million net benefit related to income taxes in 2017 as a result of the aforementioned remeasurement of net deferred tax liabilities. Excluding the impact of this item, Agribusiness income tax expense was $84.5 million in 2017, a $3.6 million increase as compared to 2016. The increase primarily resulted from the increase in pre-tax earnings driven by a lower provision for loan losses and greater net interest income, somewhat offset by higher levels of accrued patronage, which resulted from growth in average patronage-eligible loan volume.

## *Strategic Relationships*

### Overview

The Strategic Relationships operating segment includes wholesale loans from the direct funding relationships we have with our affiliated Association customer-owners and our wholesale funding relationships with other System institutions. Our affiliates include Associations operating in 23 states serving the Northwest, West, Southwest, Rocky Mountains, Mid-Plains, and Northeast regions of the United States.

Developing and maintaining strong relationships with Farm Credit Associations and other System institutions is an important strategic focus for the Bank. By working together, the Bank and Associations collectively provide credit and non-credit services to a more diverse set of customers. We maximize the value of these strategic relationships by combining the Associations' strong market presence and local relationship management with our complementary product suite and lending capacity. Our relationships with Associations provide an important competitive advantage in attracting and retaining customers and in fulfilling our collective mission to support agriculture, rural infrastructure and rural communities.

We have seen a number of mergers among affiliated Associations in recent years and expect that this activity may continue as Associations look for ways to better fulfill their mission in a safe and sound manner, while more efficiently providing value-added products and services to their member owners.

### 2017 Performance

As of December 31, 2017, loans in the Strategic Relationships operating segment totaled $47.9 billion, compared to $46.0 billion at December 31, 2016. At year-end 2017 and 2016, these loans included $43.0 billion and $41.5 billion, respectively, in wholesale loans to our affiliated Associations and $4.9 billion and $4.5 billion, respectively, of participations in wholesale loans made by other System banks to certain of their affiliated Associations. Such participations included $3.9 billion as of December 31, 2017 and 2016 in loans made by the Farm Credit Bank of Texas (FCBT). The balance of participations of $1.0 billion and $0.6 billion as of December 31, 2017 and 2016, respectively, represent wholesale loans made by AgFirst Farm Credit Bank. Strategic Relationships average loan volume increased 5 percent to $46.1 billion in 2017 compared to $43.9 billion in 2016. The increases in outstanding and average loan volume resulted from greater Association customer financing requirements from agricultural producers and processors, whose credit needs are being driven by lower cash reserves and reduced profitability resulting from generally lower agricultural commodity prices, and by new customers at the Associations. An increase in participations in wholesale loans made by other System banks also contributed to the increase in Strategic Relationships average loan volume.

Strategic Relationships net income totaled $261.7 million in 2017, compared to $244.8 million for 2016. The increase resulted from higher net interest income and noninterest income somewhat offset by an increase in operating expenses.

Strategic Relationships net interest income increased to $295.7 million for 2017, from $285.1 million for 2016 primarily due to growth in average loan volume partly offset by a lower level of merger-related accretion income.

As a wholesale lender to Associations, we benefit from the diversification of the Association loan portfolios and a strong collateral position. In addition, the earnings, capital and loan loss reserves of the Associations provide an additional layer of protection against losses in their respective loan portfolios. Lower spreads in the Strategic Relationships operating segment are commensurate with the lower risk profile and lower regulatory capital requirements. Notwithstanding the downgrade in the credit quality classification of a participation in a wholesale loan made by FCBT to one of its affiliated Associations as discussed on page 49, loan quality in Strategic Relationships remains strong. No provisions for loan losses or allowance for credit losses have been recorded related to any of our Association wholesale loans.

Strategic Relationships noninterest income increased to $8.4 million in 2017 resulting from gains on the sale of investment securities during 2017, which are allocated to the operating segments.

Operating expenses increased to $42.3 million in 2017 from $41.3 million in 2016 primarily due to the increases in employee compensation, information technology and general and administrative expenses described previously. Strategic Relationships has no income tax expense as the earnings on its business activities are statutorily tax-exempt.

## *Rural Infrastructure*

### Overview

The Rural Infrastructure operating segment includes loans and other financial services provided to cooperatives and other companies in the power and energy, communications, water and waste water industries as well as to community facilities in rural America. Primary products and services provided include term loans, revolving lines of credit, project financing, capital markets services, as well as risk management, cash management and investment products.

There are significant needs for investment in infrastructure to support businesses and residents in rural communities. Traditional sources of investment capital, including public sector financing, may not be available or sufficient to meet those needs. As a part of our congressionally-mandated mission, CoBank provides support for rural infrastructure needs, in partnership with other System entities, commercial banks and government entities. In particular, CoBank regularly partners with the U.S. Department of Agriculture (USDA) through co-lending, USDA loan guarantees and refinancing USDA loans. These activities target rural water and wastewater systems, community facilities, rural energy projects and rural broadband. CoBank will continue to pursue additional opportunities to invest in rural infrastructure to allow rural businesses to compete in a global marketplace and to improve the quality of life in rural communities.

Power and energy industry customers include rural electric generation and transmission cooperatives, electric distribution cooperatives, renewable energy providers, independent power producers, regulated utilities and local distribution companies. While demand for electricity has been relatively stagnant over the past decade, our customers continue to make infrastructure enhancements to meet long-term system requirements, improve system reliability, maintain compliance with environmental mandates and meet evolving consumer demand, which drive an ongoing need for debt capital. Growth in renewable energy projects and environmental mandates also contribute to loan demand from project finance customers.

Communications industry customers include rural local exchange carriers, wireless providers, data transport networks, cable television systems, telecommunications services and data centers. Telecommunications networks are, by their nature, globally interconnected. As a result, many of the larger communications providers are vitally important to bringing necessary products and services to rural America through their networks and partnerships with many of our rural customers. We focus on communications companies of varying sizes that are collectively positioned to provide the necessary range of services, including data and voice (both wireline and wireless), broadband connectivity and video, vital for rural industries and communities. Longer term, growth opportunities may arise from merger and acquisition activity, as industry consolidation continues from carriers seeking to improve operating efficiencies and gain market share in this highly competitive industry. Capital spending may provide additional growth opportunities as data center operators, wireline (fiber optics) and wireless carriers enhance their networks to ready themselves for (5G) data technology and services ("The Internet of Things").

Water industry customers include rural water and waste water companies. Capital expenditure growth in this industry continues primarily as a result of the need to replace aging infrastructure and to meet higher standards for water quality. While government programs have traditionally provided grants and financing, private lending opportunities for construction or interim financing have also emerged, often as a bridge to government grants or loans. With the continuing need for plant upgrades and expected limitations on the availability of government funds, we expect private lending to this industry to continue to grow.

In partnership with other System entities and community banks, we provide funding to rural community facilities including rural health care facilities.

### 2017 Performance

Rural Infrastructure loans outstanding totaled $21.0 billion at December 31, 2017 compared to $20.6 billion at December 31, 2016. Average loan volume increased 3 percent to $20.7 billion in 2017 compared to $20.1 billion in 2016. Growth in Rural Infrastructure outstanding and average loan volume resulted primarily from increased lending to electric distribution and project finance customers, somewhat offset by a lower level of financing to communications borrowers.

Rural Infrastructure net income decreased to $240.9 million for 2017 from $308.0 million for 2016. This decrease included $55.9 million of expense related to net deferred tax adjustments. Excluding the impact of the remeasurement of net deferred tax assets, which is described on page 40, Rural Infrastructure net income decreased by $11.2 million in 2017 to $296.8 million. The decrease was primarily driven by lower noninterest income, loan loss reversal and net interest income. These items were somewhat offset by a decrease in operating expenses in 2017.

Net interest income decreased $2.8 million in 2017 as compared to 2016, primarily due to slight spread compression resulting from continued strong competition for the business of our customers and a lower level of financing to communications customers, which generally carry higher spreads relative to the other sectors in Rural Infrastructure. These items were largely offset by the increase in average loan volume.

Rural Infrastructure recorded a $1.7 million loan loss reversal in 2017 compared to $8.0 million in 2016. The 2017 reversal reflected modest improvement in certain measures of credit quality during the year, which more than offset the impact of growth in average loan volume. The 2016 reversal was largely due to an improvement in credit quality in a small number of communications loans, which more than offset the impact of loan growth.

While credit quality in our Rural Infrastructure operating segment is generally stable, nonaccrual loans in Rural Infrastructure increased to $33.9 million at December 31, 2017 due to credit challenges at a limited number of customers. The Rural Infrastructure segment had no nonaccrual loans at December 31, 2016. Our nonaccrual loans are typically composed of a relatively small number of customers, and thus the balances can fluctuate significantly based on a small number of transactions. Rural Infrastructure recorded loan recoveries, net of charge-offs, of $0.4 million in 2017 as compared to $1.4 million in 2016.

Noninterest income decreased by $8.7 million in 2017 primarily due to higher losses on early extinguishments of debt, net of prepayment income, and proceeds received in 2016 related to the disposition of warrants which had been obtained in lending transactions. These items were somewhat offset by higher levels of arrangement and other fee income as well as patronage income received from other System institutions during 2017.

Rural Infrastructure operating expenses decreased by $1.6 million in 2017 primarily due to a decrease in Insurance Fund premiums, largely offset by increases in employee compensation, information technology and general and administrative expenses described previously.

Rural Infrastructure recorded $128.7 million in income tax expense in 2017, which included the impact of the aforementioned remeasurement of net deferred taxes. Excluding the impact of this item, Rural Infrastructure income tax expense was $72.8 million in 2017, a $5.2 million decrease as compared to 2016. The decrease was primarily due to the decrease in pre-tax earnings driven by the factors discussed above and increased patronage, which resulted from growth in average patronage-eligible loan volume.

# Enterprise Risk Profile

Managing and optimizing risk to our current and anticipated earnings, capital and enterprise value, within our Board approved risk appetite, are essential components of successfully operating the Bank. Our primary risk exposures are: credit, market, liquidity, operational, strategic and reputation, and regulatory and compliance. Credit risk is the risk arising from changes in a customer's or a counterparty's ability or willingness to repay funds borrowed, or otherwise meet agreed-upon obligations. Market risk is the risk arising from movements in interest rates, equity positioning, differences between the timing of contractual maturities, re-pricing characteristics, and prepayments on assets and their related liabilities. Liquidity risk is the risk arising from the Bank's inability to repay its obligations, or issue new obligations to fund borrowers. Operational risk is the risk arising from human errors or misconduct, failures in human capital objectives, inadequate data, systems and technology or process failures including external cyber risks impacting our technology platforms and operations or those affecting critical vendors and customers. Strategic risk is the risk arising from adverse business decisions or lack of responsiveness to changes in the banking/operating environment. Reputation risk is the risk arising from negative external perception and loss of public confidence. Regulatory and compliance risk is the risk to current or anticipated earnings, capital, or reputation arising from failure to comply with laws or regulations.

Business segments and support units have the responsibility of identifying, monitoring and managing these risks. The Risk Management Group is led by the Chief Risk Officer (CRO) and includes both the Credit Management Group and the Enterprise Risk Management Division. The Risk Management Group provides independent oversight and support in the establishment of a risk management framework across the organization. The Risk Management Group works to identify, measure, monitor, control and report the Bank's primary risk exposures against limits and tolerance levels to senior management and the Board of Directors.

The following is a discussion of these primary risks, and our approach to managing them.

### *Credit Risk Management*

Credit risk exists in our lending, leasing, investing, cash management and derivatives activities. Credit risk in these activities arises from changes in a customer's or counterparty's ability or willingness to repay funds borrowed or to meet agreed-upon obligations. Credit risk may be further impacted by changes in collateral values, changes in the prevailing economic environment, fraud, defaults on mortgages or other obligations which collateralize mortgage- and asset-backed investment securities, changes in the credit-worthiness of investment obligors or counterparties who insure or guarantee certain investment securities, and decreases in the value of underlying collateral securing investment securities, primarily residential real estate.

We actively manage credit risk through a well-defined, Board-approved loan portfolio strategy, a structured and centralized credit approval process, a disciplined risk management process, and a sound credit administration program, while considering our responsibility to fulfill our mission of service to rural America. We have established comprehensive credit guidelines and procedures to ensure consistency and integrity of information related to the credit risk in our loan, lease, investment and derivatives portfolios.

Various groups and committees within CoBank have a role in managing credit risk, as described below. Our Board of Directors establishes overall lending and leasing, investment, derivatives and allowance for credit losses policies. It also approves the portfolio strategy and capital adequacy plan and reviews loan volume, loan quality trends, significant high-risk or stressed loans, and the credit quality of our investment and derivatives portfolios.

The CoBank Loan Committee (CLC), which is appointed by the President and Chief Executive Officer (CEO), and includes the Chief Credit Officer (CCO) and senior management of the Credit Management Group and the lending groups, holds ultimate credit authority as authorized by Board policy and provides oversight of all credit activities. The CLC delegates lending authorities to specific committees or groups of individuals based on size of exposure and risk rating. The CLC also approves certain limits for investment obligors and derivative counterparties. It acts on individual credit actions or administrative matters and approves exceptions to exposure limits if conditions warrant.

The Credit Management Group is led by the CCO, who reports to the CRO. The Credit Management Group manages the credit approval process within obligor and concentration limits established for the loan portfolio pursuant to Board policies. As part of the credit approval process for transactions exceeding certain delegated authority thresholds, the Credit Management Group reviews assigned risk ratings for accuracy and conformity with our established guidelines. It also recommends and, for limits below certain thresholds, approves limits with respect to investment obligors and derivative counterparties and manages significant high-risk or stressed loans.

The Risk Management Group oversees the establishment of concentration and portfolio limits, the development of the portfolio strategy, the analysis of the allowance for credit losses and other risk-based modeling and metrics. In addition, the Risk Management Group provides quarterly reporting on the Bank's risk appetite and exposures, as well as an annual risk assessment.

The heads of Internal Audit and Asset Review have a direct reporting responsibility to the Audit Committee of the Board of Directors. They provide independent reporting to the Board of Directors on the quality of the Bank's assets, the Bank's system of internal controls, and material audit and review findings.

The Asset and Liability Committee (ALCO), which includes the CEO, Chief Financial Officer, CRO, CCO, Treasurer, Executive Vice President of Banking Services and Executive Vice President of Infrastructure Banking, monitors credit risk within the investment portfolio and reviews counterparty credit risk arising from derivative transactions.

The Country Risk Committee (CRC) is appointed by the CEO, and includes the CRO and the CCO. It oversees the methodologies for setting country risk grades and establishing maximum country limits, as well as the approval of individual country risk grades and limits.

**Credit Risk Related to Loans**

The key elements of our credit risk management related to lending include our portfolio strategy, the credit approval process, and the use of exposure and concentration limits, each of which is explained below.

Portfolio Strategy

The portfolio strategy provides overall guidance on lending activities and strategies over the next three years, consistent with our strategic business objectives and Board-approved risk appetite. It articulates how we will fulfill our congressionally-mandated mission in a safe and sound manner by managing to the Board-established financial baselines, optimizing the allocation of our risk appetite and resources, and providing an appropriate return on our shareholders' equity by effectively balancing loan growth with profitability and credit risk. Our mission includes supporting our Associations' young, beginning and small farmers; small rural infrastructure entities; start-up cooperatives; local food programs; rural community development; and renewable energy projects. The portfolio strategy helps ensure that CoBank is inclusive in its outreach to all marketplace segments whether it be through lending or investment activities or our corporate social responsibility program.

As part of the annual business and financial planning process, the Board of Directors reviews and approves the Bank's portfolio strategy. Management analyzes performance with respect to the portfolio strategy quarterly and reports the results to the Board of Directors.

Credit Approval

The most critical element in managing and controlling credit risk is the initial decision to make a loan and the resulting structure and terms of the relationship with the borrower.

We place significant emphasis on the evaluation and understanding of a borrower's business and management in the initial credit analysis and the approval process. We emphasize cash flow and repayment capacity as primary sources for repayment of loans, including cash generated from the sale of agricultural commodities as it relates to seasonal lending. Collateral is normally considered a secondary source of repayment. In circumstances where the credit decision places substantial reliance on collateral to repay the loans, independent appraisals may be used to assist in the collateral valuation. Such appraisals are conducted in accordance with FCA regulations and professional appraisal standards.

For wholesale lending within our Strategic Relationships operating segment, the earnings, capital and loan loss reserves of Associations provide an additional layer of protection against losses in their respective loan portfolios. Loans to our affiliated Associations are governed by a General Financing Agreement, as described on page 126.

With the exception of certain nominal lease transactions, no individual has sole credit approval authority within CoBank. All approvals or credit actions are required to be formally documented.

Management assigns a risk rating to each borrower based on two measurements: probability of default (PD) rating and loss given default (LGD) rating. The PD rating system uses a 14-point scale of 1 (highest quality) to 14 (lowest quality). The PD rating is primarily determined by the financial characteristics of the borrower and reflects the probability of default driven by several factors, including business risk, industry risk, management capability and financial condition. The LGD rating is intended to approximate the degree of potential loss in the event the borrower defaults.

Exposure and Concentration Limits

We use exposure and concentration limits to manage risk and volatility in the loan portfolio. Exposure to individual borrowers and related entities is managed through a risk matrix that considers the dollar exposure, type of exposure and risk rating of the borrower. Individual borrower exposures are typically established at the time of loan origination or renewal, with risk ratings formally reviewed at least annually. The dollar exposure, risk rating and type of credit extended further determine the delegated level of authority required to approve the credit. These individual borrower exposures are then further subject to total portfolio limits on exposure to different industries and/or countries. Exposure limits for different industries are reviewed quarterly while exposure limits for different countries are reviewed annually. We allow for more frequent evaluation when appropriate. Exceptions to these exposure limits may be granted by the CLC or the CRC if conditions warrant.

We also manage credit exposures and concentrations in our loan portfolio by syndicating loans and by selling and purchasing loan participations. Our capabilities in syndicating loans and in selling and purchasing loan participations are critical to dynamically managing the loan portfolio, maintaining market discipline, meeting our customers' needs and fulfilling our mission.

While we believe these standards, processes and tools are appropriate to manage our credit risk, there is no assurance that significant deterioration in loan quality will not occur, which could reduce our future earnings.

We are limited to making loans and providing related financial services to eligible borrowers in certain specified industries, as mandated by the Farm Credit Act. As a result, we have a concentration of loans to the agricultural and rural infrastructure industries. The significant risk factors affecting credit conditions in these industries within each of our operating segments are described below.

Agribusiness

The relationship of demand for and supply of U.S. agricultural products in the global marketplace can significantly impact the volume, earnings and loan quality of our Agribusiness operating segment.

Volatility in the prices and supplies of agricultural commodities can affect the profitability and loan quality of our Agribusiness customers. Such volatility results from, among other factors, seasonal and cyclical weather conditions; domestic and global economic growth expectations; the availability of transportation; global production and supply levels; financial investment in the commodity futures markets by non-agricultural interests; and changing export markets and currency exchange rates. Market prices for food products also have a significant effect on a number of customers within our Agribusiness operating segment.

Extreme weather conditions can substantially impact harvests and prices of agricultural products and, ultimately, impact the credit quality of some of our agribusiness borrowers and our Associations' borrowers as their earnings are reduced. Although certain crop losses resulting from weather conditions are mitigated for producers by multi-peril crop insurance, not all crops are covered by insurance. To the extent weather adversely impacts the agricultural sector, the risk of loss in our loan portfolio may increase, which could reduce our earnings.

Major international events, including military conflicts; terrorism; political, geopolitical, currency and global economic disruptions; and trade policies and agreements can affect, among other things, the price of commodities or products used or sold by our borrowers or their access to markets. Such events may also impact country risk or repayment ability of foreign counterparties in our AEFD portfolio. In addition, biological or disease risk in human, livestock or crop populations can impact the supply of and demand for agricultural products. Certain customers also have exposure to counterparties in the commodities exchange markets.

U.S. agriculture has historically received financial support from the U.S. government through direct payments, crop insurance and other benefits. However, the Agricultural Act of 2014 (the Farm Bill), which established the U.S. government's agricultural, rural development and nutrition policy over a five-year period, was signed into law in February 2014 and eliminated direct payments but expanded certain forms of crop insurance. Although most of our direct customers do not generally receive support payments from federal programs, a significant reduction or elimination of support in the future could have a negative impact on the loan quality of certain borrowers, including Associations, who derive a significant share of their earnings from farmers and other producers who could be affected by such a reduction. Other political, legislative and regulatory activities may also impact the level or existence of certain government programs that support agriculture.

Strategic Relationships

The risk factors previously discussed in the "Agribusiness" section can also affect loan quality at Associations; however, the impact of such factors on farmers and other producers served by Associations may not be the same as the impact on cooperatives and other customers served by our Agribusiness operating segment. The loan quality within our Strategic Relationships operating segment is enhanced by our strong collateral position and the earnings, capital and loan loss reserves of the Associations, which provide an additional layer of protection against losses they may have in their loan portfolios.

Rural Infrastructure

Downturns in the general economy, and the rural economy in particular, can reduce commercial and residential demand for services and negatively affect customers in our Rural Infrastructure operating segment.

Fluctuating weather conditions, energy efficiency initiatives, the relative cost and price volatility of various fuel sources, the advent of distributed generation sources and other technological changes, the growth and integration of renewable power sources and protracted low levels of electricity demand can adversely affect our customers in the power industry. The pace and degree of the restructuring and optimization of the electric power industry in the United States may also impact future loan quality. Constraints on carbon emissions and other environmental standards could also adversely impact power customers.

The communications industry is affected by significant competition, evolving technology, and changing customer demands. Regulatory, legislative and technological changes may impact the future competitive position and markets for the communications industry. These factors may place downward pressure on the loan quality of certain sectors of the communications industry. In addition, decreased cash flows and the resultant impact on asset valuation, the inability to successfully integrate acquired companies, or the lack of availability of debt and equity capital could adversely affect certain communications customers.

The water industry faces high capital expenditure requirements due to environmental regulation, aging infrastructure and reduced levels of government support. Top-line revenue growth is also a concern for the water industry given the decline in per capita residential water usage resulting from conservation measures and increased use of water efficient appliances. The inability to adjust rate structures and address the misalignment of rising fixed costs and flat to declining variable revenues, without sacrificing affordability, could adversely affect certain water customers.

**Credit Quality Conditions and Measurements in Our Loan Portfolio**

The following table presents loans and accrued interest receivable classified by management pursuant to our regulator's Uniform Loan Classification System, as a percent of total loans and accrued interest.

**Loan Quality Ratios**

| | December 31, 2017 | | | December 31, 2016 | | |
|---|---|---|---|---|---|---|
| | Wholesale Loans(1) | Commercial Loans(2) | Total Bank | Wholesale Loans(1) | Commercial Loans(2) | Total Bank |
| Acceptable | **99.02 %** | **95.54 %** | **97.22 %** | 100.00 % | 95.64 % | 97.74 % |
| Special Mention | **0.98** | **2.52** | **1.78** | - | 2.81 | 1.45 |
| Substandard | **-** | **1.93** | **1.00** | - | 1.54 | 0.80 |
| Doubtful | **-** | **0.01** | **-** (3) | - | 0.01 | 0.01 |
| Loss | **-** | **-** | **-** | - | - | - |
| **Total** | **100.00 %** | **100.00 %** | **100.00 %** | 100.00 % | 100.00 % | 100.00 % |

(1) Represents loans in our Strategic Relationships operating segment

(2) Represents loans in our Agribusiness and Rural Infrastructure operating segments

(3) Represents less than 0.01 percent of total bank loans and accrued interest

While our overall loan quality remained strong at December 31, 2017, we experienced continued slight deterioration in 2017. The level of adversely classified loans ("Substandard", "Doubtful" and "Loss") and related accrued interest as a percent of total loans and accrued interest increased to 1.00 percent at December 31, 2017 compared to 0.81 percent at December 31, 2016. This increase primarily resulted from slight deterioration in credit quality in our Agribusiness operating segment.

Special Mention loans increased to 1.78 percent of total loans and accrued interest in 2017 from 1.45 percent at December 31, 2016. The increase was driven by the downgrade in the credit quality classification of a participation in a wholesale loan made by FCBT to one of its affiliated Associations totaling $470.8 million, and was somewhat offset by movements in credit quality classifications in our Agribusiness and Rural Infrastructure operating segments. Pursuant to our regulatory requirements, we classify our wholesale loans using the same credit rating methodology as is used with our commercial loans. Our loans to Associations are collateralized by substantially all of the Association assets. In addition, the earnings, capital and loan loss reserves of the Associations provide additional layers of protection against losses in their retail loan portfolios. While the downgrade reflects control weaknesses at that Association, as a result of the collateralization and other mitigants described above, we do not anticipate any losses related to that wholesale loan. As of December 31, 2017, CoBank has not made any provision for loan loss or recorded any allowance for credit loss related to any of our wholesale loans.

**Summary of High-Risk Assets** ($ in Thousands)

| December 31, | 2017 | 2016 | 2015 | 2014 | 2013 |
|---|---|---|---|---|---|
| Nonaccrual Loans | **$ 246,837** | $ 207,247 | $ 156,805 | $ 130,340 | $ 147,849 |
| Accruing Loans 90 Days or More Past Due | **670** | 804 | 754 | 239 | 972 |
| Accruing Restructured Loans | **-** | 42,575 | - | - | - |
| Total Impaired Loans | **247,507** | 250,626 | 157,559 | 130,579 | 148,821 |
| Other Property Owned | **3** | 19 | - | 230 | 2,246 |
| **Total High-Risk Assets** | **$ 247,510** | $ 250,645 | $ 157,559 | $ 130,809 | $ 151,067 |

Total nonaccrual loans were $246.8 million at December 31, 2017 compared to $207.2 million at December 31, 2016. The increase primarily resulted from credit quality deterioration impacting a limited number of customers in our Rural Infrastructure operating segment. As noted previously, our nonaccrual loans are typically composed of a relatively small number of customers, and as such, the balances can fluctuate period to period based on a small number of transactions. Nonaccrual loans as a percent of our total loan portfolio were 0.25 percent as of December 31, 2017 compared to 0.22 percent at December 31, 2016. Over the past 10 years, nonaccrual loans have averaged 0.31 percent of the total loan portfolio.

Accruing restructured loans decreased by $42.6 million as of December 31, 2017 as a result of a communications loan which was restructured at market terms in 2017 and is no longer considered an impaired loan.

Total loan charge-offs, net of recoveries, were $33.7 million in 2017 compared to $2.1 million in 2016. Gross charge-offs in 2017 increased to $35.7 million compared to $4.6 million in 2016, and primarily related to one customer in our Agribusiness operating segment. Charge-offs have historically resulted from a relatively small number of customers. Accordingly, charge-offs can fluctuate significantly period to period based on a small number of loans and leases.

Our allowance for credit losses totaled $670.8 million and represented 0.68 percent of total outstanding loans at the end of 2017, compared to 0.70 percent at December 31, 2016. At December 31, 2017, our allowance for credit losses represented 1.33 percent of non-guaranteed loans outstanding, excluding wholesale loans to Associations, compared to 1.37 percent at December 31, 2016.

As part of our overall assessment of risk in the loan portfolio and the allowance for credit losses as of December 31, 2017, we have considered a wide variety of factors, including volatile commodity prices and supplies; global economic uncertainty; a significant level of industry, borrower and attributed concentration risk resulting from our defined mission of service to rural communities and agriculture; and the imprecision inherent in estimating losses within our loan portfolio.

See "Critical Accounting Estimates – Allowance for Credit Losses" on page 68 for a more complete description of our process to determine the adequacy of our allowance for credit losses.

**Credit Risk Related to Investments and Derivatives**

We minimize credit risk in our investment portfolio by investing primarily in securities issued or guaranteed by the U.S. government or a government-sponsored enterprise (U.S. Agency). At year-end 2017, 55 percent of our $26.9 billion investment portfolio consisted of securities that carry a full faith and credit guarantee of the U.S. government. Such securities include MBS issued by the Government National Mortgage Association (Ginnie Mae), the Export-Import Bank of the United States securities and the U.S. Treasury and other debt securities, including loans backed by the Small Business Administration. Approximately 40 percent of our investment portfolio consisted of securities issued by a U.S. Agency, including MBS issued by the Federal National Mortgage Association (Fannie Mae), the Federal Home Loan Mortgage Corporation (Freddie Mac) and Farmer Mac.

Included within our U.S. agency MBS portfolio are FHA/VA wrapped "reperformer" MBS where residential mortgage loans serving as collateral were cured after a default. The underlying loans supporting the FHA/VA wrapped reperformer MBS are approximately 90 percent government guaranteed or insured, and are further supported by guarantees from either Fannie Mae or Freddie Mac. The Bank's investment portfolio also consisted of non-wrapped reperformer MBS where the underlying loans are also approximately 90 percent government guaranteed or insured but have no guarantees from Fannie Mae or Freddie Mac.

Credit risk in our investment portfolio primarily exists in investment securities that are not guaranteed by the U.S. government or a U.S. Agency, which include our certificates of deposit, FHA/VA non-wrapped reperformer MBS, non-agency MBS, corporate bonds and asset-backed securities (ABS). Our ABS are backed by pools of prime auto loans. Excluding certificates of deposit with commercial banks carrying the highest short-term credit rating, these securities collectively total 2 percent of our total investment portfolio as of December 31, 2017. The portfolio of FHA/VA non-wrapped reperformer MBS carry unique credit risks related to potential deficiencies in documentation or lack of compliance with servicing requirements on underlying loans that could make such loans ineligible for guarantees or insurance.

Credit risk in our investment portfolio could also arise from the inability of guarantors and third-party providers of other credit enhancements to meet their contractual obligations to us.

We recorded no other-than-temporary impairment losses on investment securities in 2017 as compared to $0.8 million and $11.1 million of impairment losses on investment securities in 2016 and 2015, respectively. The credit quality of our investment portfolio as of December 31, 2017 and impairment losses on investment securities are more fully discussed in "Liquidity and Capital Resources" beginning on page 62.

The use of derivative instruments exposes us to counterparty credit risk. Generally, when the fair value of a derivative contract is positive, we are exposed to credit risk. Our counterparty credit risk arising from derivative transactions is managed within credit methodologies and limits approved by the CLC. Credit risk limits are established based on potential future exposure. Customer derivative transactions are typically secured through our loan agreements. For non-customer derivatives not cleared through a central clearinghouse, we minimize this risk by diversifying our derivative positions among various financial institution counterparties, using master netting agreements, and requiring collateral with zero thresholds and daily posting to support credit exposures with active counterparties. We evaluate the creditworthiness of each counterparty, establishing individual credit exposure limits, and deal exclusively with derivative counterparties that have an investment grade credit rating from a major credit rating agency. In addition, we monitor counterparty credit default swap spreads and other market-related information which may indicate reduced creditworthiness of a counterparty. Credit default swap spreads are taken into account in establishing counterparty limits.

We estimate that the amount of losses related to derivatives we could be exposed to in the event of nonperformance by dealer counterparties to our derivative positions, net of collateral held by us, was $0.7 million, $1.1 million and $3.9 million at December 31, 2017, 2016 and 2015, respectively.

We measure counterparty credit risk daily based on the current fair market values of our derivative positions. Employees who are independent of the derivative portfolio management function monitor the derivative exposures against approved limits. Exceptions to approved limits, along with a plan detailing actions to address limit overages, are reported to the CLC. Changes to the counterparty limits must be approved by the CLC.

We also perform stress tests on the derivative portfolio using asset/liability pricing models to analyze the potential effects of market rate changes on fair value, including extreme rate changes. The forward interest rate curves used to project the future expected cash flows for the derivative positions are modeled under potential scenarios which increase and decrease interest rates within a 99 percent confidence interval. These extreme rate scenarios are then used to further evaluate potential counterparty credit risk and to establish placement limits.

Notwithstanding our credit evaluation process and the maintenance of collateral agreements with our derivative counterparties, the failure of a counterparty to perform on its obligations could negatively impact our earnings. Furthermore, although our credit evaluations consider the possibility of default by a counterparty, our ultimate exposure to default by a counterparty could be greater than expected.

The Dodd-Frank Wall Street Reform and Consumer Protection Act (the “Dodd-Frank Act”) requires certain derivative transactions to be cleared through a central clearinghouse and traded on regulated swap execution facilities. The U.S. Commodity Futures Trading Commission has exempted certain qualifying swaps entered into by end-users and financial cooperatives from these requirements. The exemptions do not cover all swaps executed by CoBank and are generally limited to swaps entered into in connection with loans and derivatives for customer-owners. CoBank has also voluntarily chosen to clear some swap transactions for economic and risk management purposes. As a result, certain of our derivative transactions are cleared through a futures commission merchant (FCM) with a clearinghouse or central counterparty (CCP). When these swaps are cleared, a single bilateral swap is divided into two separate swaps with the CCP becoming the counterparty to both of the initial parties to the swap. CCPs have several layers of protection against default including initial and variation margin that is required to be posted by participants. FCMs prequalify counterparties to all cleared swaps, set exposure limits for each counterparty and collect initial and variation margin or settlement payments daily for changes in the value of cleared derivatives. The margin and settlement payments collected from both parties to the swap protects against credit risk in the event of a counterparty default. Initial and variation margin or settlement payment requirements are set by and held for the benefit of the CCP. Additional initial margin may be required and held by the FCM in some instances.

The following table details the notional amount of our derivatives and related exposure to dealer counterparties, which excludes $10.4 billion of derivatives cleared through a central clearinghouse, classified by their S&P Global Ratings (S&P) credit rating as of December 31, 2017.

**Derivative Counterparty Exposure** ($ in Millions)

| | AAA | AA | A | Below A |
|---|---|---|---|---|
| Exposure to Counterparties in Net Gain Position | $ - | $ 29 | $ 20 | $ - |
| Collateral Held | - | 29 | 19 | - |
| Exposure, Net of Collateral | $ - | $ - | $ 1 | $ - |
| Total Notional Amount | $ - | $ 7,862 | $ 5,372 | $ 25 |
| Total Number of Counterparties | - | 4 | 8 | 1 |

The notional amount of our derivatives and related exposure to approximately 150 customer counterparties were $8.0 billion and $80.3 million, respectively, at December 31, 2017 compared to $6.5 billion and $101.4 million, respectively, at December 31, 2016. At December 31, 2017 and 2016, the notional amount of our cleared derivatives was $10.4 billion and $7.1 billion, respectively.

In 2015, the FCA and various other federal agencies, known as the Prudential Regulators under the Dodd-Frank Act, jointly adopted final rules which will subject many non-cleared swaps to margin requirements. Such requirements become effective over the next several years. The Prudential Regulators also issued an interim final rule excluding swaps that qualify for certain exemptions from the scope of the final margin rules. CoBank is eligible for certain regulatory exemptions related to, among other things, transactions with end users and with customer-owners. Accordingly, we do not currently anticipate that adoption of these rules will have a material impact on our use of derivatives or our overall financial position.

In January 2017, our CCP, the Chicago Mercantile Exchange (CME), made certain amendments to its rule book that resulted in changes to the legal characterization of variation margin on centrally cleared derivatives. At December 31, 2016, the rules of the CME, legal agreements, and the legal framework governing the agreements caused posted variation margin to be considered collateral. In the event of default, the collateral posted would be available to offset amounts owed by the defaulting counterparty. Effective January 1, 2017, the rule amendments changed the legal nature of the variation margin so that it is now considered a settlement payment as opposed to collateral. This change resulted in the reclassification of collateral assets for amounts formerly considered variation margin to an offset of the fair value of interest rate swaps and other financial instruments related to our net position for cleared derivative transactions in the accompanying consolidated balance sheet as of December 31, 2017. This change had no impact to our results of operations or cash flows.

## *Market Risk Management*

We are subject to market risk, defined as the risk to current or anticipated earnings or capital arising primarily from movements in interest rates. This risk primarily arises from our equity positioning and differences in the timing between the contractual maturities, repricing characteristics, and prepayments of our assets and the liabilities funding these assets. This risk can also arise from embedded caps or floors in floating rate investments and loans as well as differences between the interest rate indices used to price and fund our assets. Our asset/liability management objective is to manage the mix of interest-earning assets and interest-bearing liabilities to reduce interest rate risk and stabilize our net interest income while optimizing profitability and insulating shareholders' equity from significant adverse fluctuations in market interest rates. While we actively manage our interest rate risk position within policy limits approved by the Board of Directors using strategies established by our ALCO, and within our risk appetite, there can be no assurance that changes in interest rates will not adversely impact our earnings and capital.

The following is a more detailed description of our primary interest rate risks and strategies used to mitigate those risks.

### Equity Positioning Risk

Shareholders' equity serves as an interest-free source of funding for the balance sheet and thus requires that we make decisions about the maturity mix of the assets funded by it. Using equity to fund short-term assets results in increased volatility of net interest income, whereas using equity to fund long-term assets results in increased volatility in the market value of our equity. In February 2015, the ALCO approved a strategy to change the positioning of equity from equally over seven years to equally over the period of two to seven years as a result of changes in interest rates and expectations thereof. There were no changes to this strategy in 2016 or 2017.

### Repricing Risk

Mismatches in interest rate repricing and maturities of assets and liabilities arise from the interaction of customer business needs, our investment portfolio composition and the mix of liabilities funding these assets. In addition, we may also undertake funding strategies designed to maximize earnings on our asset/liability position in certain interest rate environments, including using short-term liabilities to fund longer-term assets. However, funding longer-term assets with shorter-term liabilities exposes the Bank to changes in interest rates and spreads to market indices for debt issuances. If interest rates increase or spreads widen, income would be negatively impacted as higher cost funding is required to continue to fund the longer-term assets.

Exposure to changes in the level and direction of interest rates is managed by adjusting the Bank's mix of interest-sensitive assets and liabilities through various strategies and through the utilization of interest rate risk management products, including interest rate swaps and other derivatives. We do not use derivatives for speculative or trading purposes and regulatory requirements prohibit us from taking speculative derivative positions. Refer to page 56 for additional information related to derivatives.

### Prepayment/Extension Risk

Prepayment risk in our loan portfolio exists in loans that are considered fully prepayable, which represents approximately 24 percent of total fixed-rate loans. Prepayment risk in this portfolio results when intermediate and longer-term fixed interest rates fall and prepayments increase as borrowers refinance to a lower rate. Prepayments can adversely impact loan portfolio income to the extent prepayments exceed the level of fixed-rate callable debt in the portfolio. This funding can be called in lower-rate environments, thus allowing liabilities to reprice to a lower rate. Approximately 79 percent of our fully prepayable loan portfolio is funded with callable debt, which lowers prepayment risk.

The remaining 76 percent of fixed-rate loans contain, at a minimum, make-whole prepayment penalties. These provisions require a borrower to compensate us for the cost we incur in retiring debt funding associated with loan prepayments. This allows us generally to fund our loan assets with debt of similar maturities to manage the risk of prepayments in the loan portfolio.

Extension risk in the loan portfolio occurs when long-term interest rates rise and prepayments decrease more than expected causing the underlying loans to pay down slower than expected. Loan portfolio income will be negatively impacted as additional higher-rate term funding is required to continue to fund extended loans.

Prepayment risk in the investment portfolio results when long-term interest rates fall and prepayments increase as underlying borrowers refinance their mortgages to a lower rate. Prepayments adversely affect investment portfolio income in a falling interest rate environment because investments are predominately funded with non-callable debt and any proceeds from prepaid investments will be reinvested at a lower interest rate. Prepayment risk in our investment portfolio is low based on the type and average life of securities. Purchases of MBS are currently subject to a price risk eligibility test based on a stressed interest rate environment. The test is designed to manage our exposure to prepayment risk at the time of investment purchase. In addition, approximately half of our fixed-rate MBS (other than hybrid adjustable-rate mortgage securities), contain some embedded prepayment protection in the form of planned amortization class (PAC) bands. These PAC securities are structured so that principal payments are expected to follow a predetermined schedule as long as the prepayments of the underlying collateral fall within a prescribed band. Over time, these bands may erode resulting in an incremental increase in prepayment risk within the investment portfolio.

We also fund a portion of our fixed-rate prepayable investment portfolio with short-term liabilities and term fixed-rate callable debt that provide a partial hedge against prepayment risk in certain falling interest rate environments.

The rate we pay on these liabilities reprices downward with a drop in short-term and intermediate-term interest rates. In addition, we are able to retire the short-term liabilities if prepayments increase on the funded assets independent of movements in interest rates.

Extension risk in the investment portfolio occurs when long-term interest rates rise and prepayments decrease more than expected causing the underlying investment securities to pay down at a slower rate than initially expected. In this scenario, investment portfolio income will be negatively impacted as additional higher-rate term funding is required to continue to fund extended securities. Extension risk in the investment portfolio is moderate based on the type and average life of securities purchased. In the same way PAC bands protect against prepayment risk, they also serve to limit extension risk as the amortization of these securities is defined as long as prepayments of the underlying collateral fall within a prescribed band.

**Cap and Floor Risk**

Cap risk is embedded in the floating-rate MBS in our investment portfolio and to a lesser extent floating-rate loans. When short-term interest rates rise, the interest rate paid by the floating-rate MBS or floating-rate loan may become capped and limit the amount of income earned on the asset while underlying funding costs are not capped. Exposure to cap risk is managed by monitoring the concentration of strike levels in our floating-rate MBS and floating-rate loans and related interest rate shock sensitivities. We also purchase interest rate caps and other derivatives to manage cap risk. Further, we have the ability to reduce cap risk by selling our floating-rate investment securities.

Although the Federal Reserve increased the federal funds rate in 2017, interest rates remain at or near historically low levels. During periods of declining interest rates or sustained low interest rates, the interest we receive on floating-rate loans and investments declines or remains low thereby reducing our net interest income. This effect is particularly pronounced during periods of very low or negative interest rates, and adversely impacts our financial condition, cash flows and results of operations. During 2017, we began purchasing interest rate floors to mitigate this risk.

**Basis Risk**

Basis risk arises due to the differences between the interest rate indices used to price our assets and the indices used to fund those assets. We manage our basis risk through match funding, when possible, and using derivatives (primarily interest rate swaps) and other funding strategies. However, basis risk will always exist as unanticipated loan volume changes cause an excess or shortage of some forms of funding. Further, reform and regulation which impacts the LIBOR and other benchmark interest rates could introduce additional basis risks.

**Measurement and Monitoring of Market Risk**

The Enterprise Risk Management Division is responsible for independently measuring and monitoring market risk. We utilize several key risk measurement and monitoring tools to assist in the management of market risk. These include interest rate gap analysis, duration gap analysis, sensitivity analysis of net interest income and market value of equity, and net interest income forecasting, each of which is described in further detail in the following pages.

Interest Rate Gap Analysis

The interest rate gap analysis shown in the following table presents a comparison of interest-earning assets and interest-bearing liabilities in defined repricing timeframes as of December 31, 2017. The interest rate gap analysis is a static indicator that does not reflect future changes in repricing characteristics and may not necessarily indicate the sensitivity of net interest income in a changing interest rate environment.

## Interest Rate Sensitivity Analysis at December 31, 2017 ($ in Millions)

| | One Month or Less | Over One Month Through Six Months | Over Six Months Through One Year | Over One Year Through Five Years | Over Five Years and Not Rate Sensitive | Total |
|---|---|---|---|---|---|---|
| **Interest-earning Assets:** | | | | | | |
| Floating-rate Loans: | | | | | | |
| Adjustable-rate/Indexed-rate Loans | $ 35,975 | $ 6,026 | $ 127 | $ 37 | $ - | $ 42,165 |
| Administered-rate Loans | 16,824 | - | - | - | - | 16,824 |
| Fixed-rate Loans: | | | | | | |
| Fixed-rate Loans[1] | 1,655 | 4,616 | 2,613 | 8,051 | 13,190 | 30,125 |
| Fixed-rate Loans, Prepayable[2] | 160 | 765 | 782 | 4,569 | 3,629 | 9,905 |
| Nonaccrual Loans | - | - | - | - | 247 | 247 |
| Total Loans | 54,614 | 11,407 | 3,522 | 12,657 | 17,066 | 99,266 |
| Federal Funds Sold and Other Overnight Funds | 1,035 | - | - | - | - | 1,035 |
| Investment Securities | 5,551 | 2,957 | 1,585 | 12,405 | 4,372 | 26,870 |
| **Total Interest-earning Assets[3]** | $ 61,200 | $ 14,364 | $ 5,107 | $ 25,062 | $ 21,438 | $ 127,171 |
| **Interest-bearing Liabilities:** | | | | | | |
| Callable Bonds and Notes | $ 121 | $ 355 | $ 784 | $ 4,545 | $ 2,540 | $ 8,345 |
| Noncallable Bonds and Notes | 49,155 | 14,650 | 9,353 | 20,489 | 15,171 | 108,818 |
| Bonds, Medium Term Notes and Discount Notes | 49,276 | 15,005 | 10,137 | 25,034 | 17,711 | 117,163 |
| Effect of Interest Rate Swaps, Forwards, Futures, etc. | 10,195 | (2,395) | (1,169) | (6,531) | (100) | - |
| Cash Investment Services Payable and Other Interest-bearing Liabilities | 983 | 10 | - | - | 250 | 1,243 |
| **Total Interest-bearing Liabilities** | $ 60,454 | $ 12,620 | $ 8,968 | $ 18,503 | $ 17,861 | $ 118,406 |
| Interest Rate Sensitivity Gap (Total Interest-earning Assets less Total Interest-bearing Liabilities) | $ 746 | $ 1,744 | $ (3,861) | $ 6,559 | $ 3,577 | $ 8,765 |
| Cumulative Gap | $ 746 | $ 2,490 | $ (1,371) | $ 5,188 | $ 8,765 | |
| Cumulative Gap/Total Interest-earning Assets | 0.59 % | 1.96 % | (1.08) % | 4.08 % | 6.89 % | |

(1) Prepayment penalties apply that compensate CoBank for economic losses.

(2) Freely prepayable or only minimal prepayment penalties apply.

(3) Does not include $1.3 billion in cash and cash equivalents as of December 31, 2017.

The preceding table excludes $1.3 billion of cash and cash equivalents as of December 31, 2017. Our interest rate sensitivity position at December 31, 2017 may be characterized as “asset sensitive” to net interest income risk. Our net interest income will generally be favorably impacted in the near term in rising interest rate environments.

We continually monitor interest rates and have the ability to reposition our balance sheet as a result of anticipated interest rate changes. If we expected a meaningful change to interest rates, we could shift our position in short order.

Duration Gap Analysis

The duration gap is the difference between the estimated durations of assets and liabilities, which is calculated using an asset/liability model. The duration gap summarizes the extent to which estimated cash flows for assets and liabilities are matched, on average, over time. A positive duration gap means there is increased market value exposure to rising interest rates over the long-term because it indicates that the duration of our assets exceeds the duration of our liabilities. A negative duration gap indicates increased exposure to declining interest rates over the long-term because the duration of our assets is less than the duration of our liabilities. We apply the same interest rate process, prepayment models, and volatility assumptions to generate the portfolio duration gap that we use in our sensitivity analysis, which is discussed below. The duration gap provides a relatively concise and simple measure of the interest rate risk inherent in our balance sheet, but it is not directly linked to expected future earnings performance. Our aggregate positive duration gap was 2.3 months at December 31, 2017 and 2.8 months at December 31, 2016.

Sensitivity Analysis

We use asset/liability models to evaluate the dynamics of our balance sheet and to estimate earnings volatility under different interest rate scenarios. Our analysis includes calculating the impact of significant increases or decreases in interest rates on net interest income, over a 12 month period, and the estimated market value of equity.

Our analysis estimates the effect of immediate and sustained parallel shifts in the yield curve (called “shocks”) of

100, 200 and 300 basis points. Pursuant to regulation and our Board policy, when the three-month Treasury rate is below 4 percent, as it was for each of the periods presented, we perform a shock equal to one-half the three-month Treasury rate. This resulted in downward shocks of -69 basis points, -25 basis points, and -8 basis points at December 31, 2017, 2016 and 2015, respectively. When analyzing net interest income at risk, we also estimate the effect of gradual upward or downward changes in market rates (called “ramps”) over a one-year period of 100, 200 and 300 basis points, where possible.

The following tables summarize the impact of interest rate changes on net interest income and the market value of equity. Market value of equity is the net present value of all future cash flows discounted to a valuation date, using discounting factors derived from observed market rates on the same valuation date. In all cases, the underlying assumptions and hedging strategies are held constant so that results are comparable from scenario to scenario. However, actual results would differ to the extent changes in strategy were undertaken to mitigate the unfavorable impact of interest rate changes.

**Net Interest Income at Risk**

| December 31, | 2017 | 2016 | 2015 |
|---|---|---|---|
| **Scenario:** | | | |
| - 300 bp shock | **n/a** | n/a | n/a |
| - 200 bp shock | **n/a** | n/a | n/a |
| - 100 bp shock | **n/a** | n/a | n/a |
| - 69 bp shock | **(1.9) %** | n/a | n/a |
| - 25 bp shock | **n/a** | (0.7) % | n/a |
| - 8 bp shock | **n/a** | n/a | (0.5) % |
| + 100 bp shock | **2.0** | 2.1 | 3.4 |
| + 200 bp shock | **3.8** | 4.2 | 6.1 |
| + 300 bp shock | **5.4** | 5.7 | 8.4 |
| - 300 bp ramp | **n/a** | n/a | n/a |
| - 200 bp ramp | **n/a** | n/a | n/a |
| - 100 bp ramp | **n/a** | n/a | n/a |
| + 100 bp ramp | **0.6** | 1.0 | 1.6 |
| + 200 bp ramp | **1.2** | 1.8 | 2.4 |
| + 300 bp ramp | **1.6** | 3.4 | 3.2 |

**Market Value of Equity at Risk**

| December 31, | 2017 | 2016 | 2015 |
|---|---|---|---|
| **Scenario:** | | | |
| - 300 bp shock | **n/a** | n/a | n/a |
| - 200 bp shock | **n/a** | n/a | n/a |
| - 100 bp shock | **n/a** | n/a | n/a |
| - 69 bp shock | **2.8 %** | n/a | n/a |
| - 25 bp shock | **n/a** | 1.2 % | n/a |
| - 8 bp shock | **n/a** | n/a | 0.4 % |
| + 100 bp shock | **(4.6)** | (4.9) | (4.7) |
| + 200 bp shock | **(9.3)** | (9.9) | (9.3) |
| + 300 bp shock | **(13.9)** | (14.8) | (13.6) |

Our net interest income is impacted favorably in the rising interest rate scenarios due to an asset sensitive balance sheet position. Our Board limits the amount of adverse change to net interest income and market value of equity under a 200 basis point rate shock. The limit for market value of equity was 15 percent and the limit for net interest income was 10 percent for all three years presented. At December 31, 2017, 2016 and 2015, we were within our policy limits as detailed in the preceding tables.

Forecasting

We update our asset/liability model monthly with information on loans, investment securities, borrowings and derivatives. This “current position” is the starting point for all analysis. The current position data is then combined with assumptions and independent interest rate forecasts, including market implied forward rates, to derive our estimates of future net interest income. Generally, we set assumptions on pricing, maturity characteristics and funding mix using trend analysis of actual asset and liability data.

Net interest income projections are derived utilizing different interest rate scenarios to assess the sensitivity of net interest income to changing interest rates. We obtain independent interest rate projections designed around economic forecasts that estimate the most likely path of interest rates for the planning horizon and alternate views of an expanding economy and a slowing economy. We also review the impact on net interest income of parallel and nonparallel shifts in the yield curve over different time horizons.

### Use of Derivatives

We use derivatives as an integral part of our market risk management activities. To achieve risk management objectives and satisfy the financing needs of our borrowers, we execute various derivative transactions with other financial institutions. Derivatives (primarily interest rate swaps) are used to manage liquidity and the market risk arising from maturity and repricing mismatches between assets and liabilities. In addition, we execute foreign exchange spot and forward contracts to manage currency risk on our relatively nominal amount of loans denominated in foreign currencies. The notional amounts of derivatives, weighted average interest rates to be received and paid, and fair values at December 31, 2017, are shown in the following table. We also discuss derivatives in Note 11 to the accompanying consolidated financial statements.

**Derivative Financial Instruments at December 31, 2017** ($ in Millions)

| Derivative Product | Notional Amount | Weighted Average Receive Rate | Weighted Average Pay Rate | Fair Value |
|---|---|---|---|---|
| Receive Fixed Swaps | $ 14,354 | 1.40 % | 1.47 % | $ (98) |
| Receive Fixed Amortizing Swaps | 4,255 | 2.22 | 1.55 | 35 |
| Pay Fixed Swaps | 3,491 | 1.51 | 1.75 | 18 |
| Pay Fixed Amortizing Swaps | 4,255 | 1.55 | 2.03 | 1 |
| Interest Rate Options | 5,123 | - | - | 37 |
| Foreign Currency Spots and Forwards | 183 | - | - | (3) |
| **Total** | $ 31,661 | 1.57 % | 1.61 % | $ (10) |

The following section includes a summary of our derivatives portfolio by strategy and further explanation of each strategy.

**Notional Amounts of Derivative Financial Instruments by Strategy** ($ in Millions)

| December 31, | 2017 | 2016 | 2015 |
|---|---|---|---|
| Liquidity Management | **$ 9,502** | $ 9,162 | $ 6,999 |
| Equity Positioning | **1,351** | 2,186 | 2,551 |
| Options Risk Management[1] | **4,647** | 2,657 | 2,392 |
| Customer Transactions | **15,989** | 13,067 | 11,753 |
| Foreign Currency Risk Management[2] | **172** | 186 | 205 |
| **Total** | **$ 31,661** | $ 27,258 | $ 23,900 |

(1) Excludes $476 million, $443 million and $424 million of interest rate options at December 31, 2017, 2016 and 2015, respectively, which are classified as customer transactions.

(2) Excludes $11 million, $41 million and $62 million of foreign currency spot and forward contracts at December 31, 2017, 2016 and 2015, respectively, which are classified as customer transactions.

Liquidity Management

Interest rate swaps are executed to improve liquidity, primarily by effectively converting specific longer-term fixed-rate bonds and notes into floating-rate debt indexed to LIBOR or similar short-term rates. The fixed rate received on the swap largely offsets the fixed rate paid on the associated debt leaving a net floating rate payment on the swap. This allows us to issue longer-term fixed-rate debt and still match fund the predominantly short-term repricing nature of our interest-sensitive asset portfolio. Liquidity risk management is discussed further below.

Equity Positioning

We also use interest rate swaps to manage market risk as it relates to investment of our equity. If the cash flows of loans and investments on the balance sheet do not create the targeted maturity for the investment of our equity, we enter into receive-fixed interest rate swaps to produce the desired equity investment maturity profile.

Options Risk Management

In the course of managing risk in our investment and loan portfolios, we periodically hedge cap and floor risk embedded within our floating-rate investments and loans by entering into derivative transactions.

Customer Transactions

Derivatives are offered to customers as a service to enable them to modify or reduce their interest rate and foreign exchange risk by transferring such risk to us. We offset this risk transference by concurrently entering into offsetting agreements with counterparties.

Foreign Currency Risk Management

We enter into foreign exchange spot and forward contracts to manage currency risk on our relatively nominal amount of loans denominated in foreign currencies. Typically, foreign currency contracts are purchased to fund the principal cash flows of the loan and simultaneously sold to lock in the principal and interest cash flows upon the repricing or maturity date of the loan.

## *Liquidity Risk Management*

Liquidity risk is the risk arising from an inability to repay or issue obligations to fund borrowers and operations on a timely basis. We must continually raise funds to provide credit and related services to customers, repay maturing debt obligations and meet other obligations. Our primary sources of liquidity are the ability to issue Systemwide Debt Securities and the use of available cash. As a result of the System's credit quality and standing in the capital markets as a GSE, we have traditionally maintained ready access to debt-funding, notwithstanding volatility in the credit markets. Additionally, if necessary, we could convert high credit quality liquid investments to cash.

One of the ways in which we measure and monitor our liquidity position is by assuming no ability to issue debt and calculating the number of days into the future we could meet maturing debt obligations by using available cash and eligible investments. System banks are required by regulation to maintain a minimum of 90 days of liquidity (cash and readily marketable investments generally discounted by 5 to 10 percent of market value) on a continuous basis and to establish an incremental liquidity reserve. At December 31, 2017, our liquidity was 176 days, compared to 197 days at December 31, 2016. During 2017, we averaged 182 days of liquidity compared to an average of 192 days in 2016.

FCA regulations require each System bank to maintain a three-tiered liquidity reserve. The first tier consists of a sufficient amount of cash and cash-like instruments to cover each bank's maturing debt for 15 days. The second and third tiers contain highly liquid instruments sufficient to cover each bank's maturing debt for the next 15 and subsequent 60 days, respectively. In addition, the banks are required to establish an incremental liquidity reserve composed of eligible investments, which can be drawn upon during an emergency and which is sufficient to cover each bank's liquidity needs beyond 90 days. CoBank has established a minimum liquidity standard of 150 days, which is 60 days greater than the 90 days resulting from the tier one through tier three regulatory standards.

Our liquidity management objectives are to provide a reliable source of funding to borrowers, meet maturing debt obligations, provide additional liquidity if market conditions deteriorate and to fund operations on a cost-effective basis. Approximately 63 percent of our interest-earning assets mature or reprice in one year or less with 48 percent maturing or repricing in one month or less. Match-funding these assets from a maturity perspective would create an unacceptable concentration of short-term liabilities. Instead, we manage this risk by issuing longer-term fixed-rate debt and swapping this debt from a fixed to floating rate using derivative transactions, as previously described, or by issuing term floating-rate debt. By so doing, we reduce the need to fund maturing liabilities on any given business day to a more manageable level. While we believe that sufficient resources are available to meet liquidity management objectives through our debt maturity structure, holdings of liquid assets and access to the capital markets via the Funding Corporation, the volatility of our loan volume and the cash flow requirements from our cash management program causes our liquidity needs to vary significantly from day to day.

The amounts and maturities of our debt obligations are set forth in the table below.

**Debt Maturities as of December 31, 2017** ($ in Millions)

| | Book | Par |
|---|---|---|
| 1 Day [(1)] | $ 993 | $ 993 |
| 2-7 Days | 377 | 377 |
| 8-30 Days | 4,538 | 4,539 |
| 31-90 Days | 10,172 | 10,182 |
| 91-180 Days | 12,576 | 12,597 |
| 181-365 Days | 23,913 | 23,971 |
| 1-5 Years | 46,972 | 47,042 |
| Over 5 Years | 18,865 | 18,839 |
| **Total** | $ 118,406 | $ 118,540 |

(1) Includes $50.9 million of cash collateral payable to derivative counterparties that does not have a stated maturity date.

See Notes 5 and 15 to the accompanying consolidated financial statements for information regarding interest rates and maturities of Systemwide Debt Securities, and contingencies.

Due to the often volatile funding needs of certain customers, in particular Agribusiness customers impacted by seasonal borrowing requirements and changing commodity prices and supplies, we provide a significant amount of revolving loan commitments. At December 31, 2017, commitments to extend credit and commercial letters of credit were $29.0 billion and $178.7 million, respectively. In addition, we provide standby letters of credit, which guarantee payment or performance of an obligation. As of December 31, 2017, the maximum amount of future payments that could potentially be required under standby letters of credit was $1.5 billion. Since many of these commitments may expire without being drawn, the total commitments do not necessarily represent future cash requirements. Our exposure to many of these commitments is mitigated by borrowing base requirements contained in loan agreements. See Note 10 to the accompanying consolidated financial statements for a full discussion of financial instruments with off-balance sheet risk.

Our liquidity plan covers certain contingencies in the event our access to normal funding sources is disrupted. We purchase only high credit quality investments to ensure our investment portfolio is readily marketable and available to serve as a source of contingent funding. Our investment portfolio may also be used as collateral to borrow funds to cover maturing liabilities. We are required by FCA regulations to exclude from our liquidity reserve certificates of deposit that no longer carry one of the two highest short-term credit ratings, non-agency MBS and ABS, which include our FHA/VA non-wrapped reperformer MBS, that are no longer rated triple-A by at least one major rating agency, corporate bonds that no longer carry one of the two highest ratings by at least one major rating agency or any investment whose market value is less than 80 percent of book value. As a result, as of December 31, 2017 and 2016, $437.2 million and $523.9 million, respectively, of securities were not included in our liquidity reserve. Another $122.7 million and $126.6 million of investment securities, including Farmer Mac MBS, are not included in our liquidity reserve as of December 31, 2017 and 2016, respectively, pursuant to regulation.

We have identified certain portions of our loan portfolio that we believe could be sold or participated out in the event our access to normal funding mechanisms is disrupted. These loans serve as an additional source of contingent funding. We also maintain uncommitted lines of credit with various financial institutions that could provide liquidity during unanticipated short-term disruptions in funding. However, it is uncertain whether we would be able to sell or participate loans or fully utilize uncommitted lines of credit in the event of a systemic funding disruption.

An additional source of liquidity is cash provided by our operating activities (primarily generated from net interest income in excess of operating expenses), which totaled $1,097 million, $1,043 million and $971.9 million in 2017, 2016 and 2015, respectively.

The assets of the Insurance Fund would be used to repay maturing Systemwide Debt Securities, to the extent available, if no other sources existed to repay such debt. The Insurance Corporation 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 the Insurance Corporation. Under its existing statutory authority, the Insurance Corporation may use these funds to provide assistance to the System banks in exigent market circumstances that threaten the banks' ability to pay maturing debt obligations. The agreement provides for advances of up to $10 billion and terminates on September 30, 2018, unless otherwise extended. The decision whether to seek funds from the Federal Financing Bank is at the discretion of the Insurance Corporation, 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 would be available if needed by the System.

### *Operational Risk Management*

Operational risk is the risk arising from human errors or misconduct, failures in human capital objectives, inadequate enterprise information management, systems and technology or process failures, and external cyber risk and data security impacting the Bank, our critical vendors or our customers. We utilize a risk management framework, business policies and processes, and employee training and disclosures to manage operational risk. Under this framework, business segments and support units have direct and primary responsibility and accountability for identifying, controlling and monitoring operational risk. Managers maintain controls with the objective of providing proper transaction authorization and execution, proper system operations, safeguarding of assets from misuse or theft, fraud monitoring and ensuring access, reliability and security of financial and other data. Employees receive regular training on business ethics, fraud identification and prevention, compliance with laws and regulations, and information security. Employees are also subject to standards of conduct requirements in the performance of their job responsibilities, including the periodic disclosure of potential conflicts of interest. We also mitigate operational risk through the use of insurance coverages.

Information security risk at financial institutions has increased in recent years as a result of the proliferation of new technologies and the increased activities of organized crime, hackers and other external parties. CoBank and its customers, like many other financial institutions and their customers, have been the target of cyber-attacks aimed at committing fraud. Various companies across many industries as well as financial institutions have reported being victims of cyber-attacks, resulting in, among other things, customer data being compromised, confidential material being disclosed and website service being disrupted. Cybersecurity and the continued development and enhancement of our controls, processes and systems to protect our information systems and data remain a priority for CoBank. To date, we have not experienced any material losses relating to cyber-attacks. Although we believe we have robust information security procedures and controls, our information systems, as well as those our customers use to access our services, may become the target of further cyber-attacks, which could result in material losses. Our risk and exposure to cyber-attacks remain high due to the evolving nature of such attacks. We also rely on numerous other third-party service providers to conduct other aspects of our business operations and face similar risks relating to them. While we conduct security reviews on these third parties, we cannot be sure that their information security protocols are sufficient to withstand a cyber-attack or other security breach.

Business continuity and disaster recovery planning are important mitigants to potential operational risks. Critical business units, including our Information Technology Division, are required to develop, maintain and test such plans at least annually to ensure that continuity and recovery activities, if needed, could sustain critical functions including systems and information supporting customers and business operations. While we believe that we have designed effective business continuity policies and procedures, there is no absolute assurance that business disruption or operational losses would not occur in the event of a disaster.

Our Risk Management Group is responsible for coordinating the completion of risk assessments and ensuring that operational risk management is integrated into business decision-making activities. Our internal audit function validates internal controls through risk-based, regular audits, and reports on the effectiveness of internal controls to executive management and the Audit Committee of the Board of Directors. In addition, the CEO reports annually to the Audit Committee of the Board of Directors on the current state of the Bank's risks and controls. The asset review function evaluates the adequacy and effectiveness of the Bank's internal control processes related to loan quality, collateral, credit administration and risk identification. The Audit Committee of the Board of Directors reviews, modifies as necessary, and approves the scope and level of review performed by the internal audit and asset review functions.

The Enterprise Risk Management Division, which is part of the Risk Management Group, is responsible for measuring, aggregating and monitoring enterprise-wide risk. This Division oversees the establishment of certain risk-based modeling and metrics, performs model validation and is responsible for vendor risk management.

To enhance our governance and internal controls, we apply policies and procedures that mirror the material provisions of the Sarbanes-Oxley Act of 2002, including section 404, *Management Assessment of Internal Controls Over Financial Reporting.*

### *Strategic and Reputation Risk Management*

Strategic risk is the risk to current or anticipated earnings, capital, or enterprise value arising from adverse business decisions or lack of responsiveness to changes in the banking/operating environment. Reputation risk is the risk arising from negative external perception about CoBank. The Bank is subject to a wide variety of reputation risks both within and outside its control, including, among other things, credit difficulties with individual customers or industries, business disputes, lawsuits, credit market disruptions, regulatory events, public criticism by competitors, public allegations of misconduct and misunderstanding of our lending authorities or congressionally-mandated mission. As a member of the System, CoBank could be indirectly impacted by events that damage the reputation of another System entity.

Effective Board governance, strong management, solid business plan execution and business practices ensuring conformity with laws and regulations and consistency with CoBank's mission are key controls in ensuring strategic alignment and managing and mitigating the Bank's reputation risk.

The Board has adopted leading industry practices in its governance of CoBank. Consistent with these practices, CoBank directors are required to meet prescribed qualifications standards prior to standing for election. Directors are required to complete initial training upon election and subsequent training during their tenure. The Board conducts annual self-evaluations and a periodic peer evaluation. As part of its ongoing processes, the Board is required to convene a restructuring committee at least once every five years to review current governance practices and make recommendations for changes to those practices to ensure a strong and equitable governance structure is maintained. In 2014, a Board restructuring committee was convened to examine key aspects of governance at CoBank, including board size, director terms, voting methods, the number and geography of voting regions, and eligibility requirements for director candidates. In 2015, CoBank shareholders approved bylaw amendments implementing a plan to reduce the size of the Board of Directors. Pursuant to the plan, which began to take effect in 2016, a total of 10 Board seats will be eliminated by 2020, reducing the number of elected directors on the Board from 24 to 14. The Board will also have up to four appointed directors and will continue to have two outside directors with no customer or System affiliations.

The Bank regularly communicates with customer-owners to ensure they have the information they need to accurately evaluate the Bank's overall business and financial performance. Furthermore, customers, System partners and others have regular access to members of the Board of Directors and management through numerous customer and industry meetings and events held by the Bank throughout the year, which helps to ensure the Bank is aligned with the interests of its members.

CoBank's executive management team possesses the requisite banking skills and experience, financial expertise and sophistication to run the Bank. CoBank identifies and develops leaders from within the organization through talent management and development processes, and attracts high-quality talent from external sources.

The controls and processes surrounding credit risk, market risk, liquidity risk and operational risk mitigate reputation risk by lowering the likelihood of significant problems in each of those areas. In addition, the Bank has a formal crisis communications plan in place in order to help it manage communications with stakeholders if an unplanned, reputation-impacting event occurs.

We place considerable emphasis on ethical behavior and ensure that our directors and employees receive regular training related to business ethics, fraud identification and prevention, compliance with laws and regulations, and information security. In addition, as discussed on page 173, each year all employees certify their compliance with our Associate Responsibilities and Conduct Policy. Senior officers and other senior professionals with financial reporting or critical decision making responsibilities also annually certify compliance with the Bank's code of ethics.

As a mission-based lender, CoBank is committed to mission objectives that expand market penetration into an increasingly diverse customer base. Our Board-directed activities include supporting causes and programs that support the health and welfare of rural communities and the industries we serve across rural America. By strengthening relationships with key stakeholders and enriching service to agriculture, rural infrastructure and rural communities, CoBank's corporate social responsibility program aims to make a positive impact in our marketplace. The Bank also supports and participates in various committees which manage the System's reputation and business practices. These committees, which consist of representatives from Farm Credit banks and Associations, coordinate business and operational issues across System institutions.

### *Regulatory and Compliance Risk Management*

Regulatory and compliance risk is the risk to current or anticipated earnings, capital, or reputation arising from failure to comply with laws or regulations. We are subject to a variety of regulatory and compliance risks. We actively manage and mitigate these risks through quarterly evaluation and monitoring within the Bank's Enterprise Risk Management framework. We have designated a Chief Regulatory, Legislative and Compliance Officer as an integrated second line of defense along with the CRO and CCO roles. CoBank monitors and comments on emerging regulatory requirements. Our Compliance Group provides assistance to business lines with the implementation of new requirements, and performs internal reviews of the Bank's compliance with legal and regulatory requirements on an as-needed basis or to address complex compliance areas. The Bank's risk management of regulatory and compliance risk is closely coordinated with the General Counsel to address potential litigation risk that may arise from ongoing business activities. Our internal audit and asset review divisions also review compliance with regulatory requirements. In addition, we are subject to review by the FCA and other governmental authorities, which could lead to enforcement actions, fines and penalties or the assertion of private litigation claims and damages. While we believe that we have adopted appropriate risk management and compliance programs, legal and compliance risks will continue to exist. Further, additional legal proceedings and other contingencies, the outcome of which cannot be predicted with certainty, will arise from time to time.

## Other Risk Factors

### Joint and Several Liability for the Debt of the Farm Credit System

Farm Credit System banks and Associations are not authorized to accept deposits and therefore cannot use deposits as a funding source. Instead, banks raise funds for their operations primarily through Systemwide Debt Securities issued on the banks' behalf by the Funding Corporation. Systemwide Debt Securities are the joint and several liabilities of the System banks and are not obligations of, nor are they guaranteed by, the U.S. government or a U.S. Agency or instrumentality thereof, other than the System banks. Under the Farm Credit Act, each System bank is primarily liable for the portion of the Systemwide Debt Securities issued on its behalf. At December 31, 2017, we were primarily liable for $117.2 billion of Systemwide Debt Securities. Additionally, each System bank is contingently liable for Systemwide Debt Securities of the other System banks. At December 31, 2017, the total aggregate principal amount of the outstanding Systemwide Debt Securities was $265.2 billion.

Although the System banks have established mutual covenants and measures, which are monitored on a quarterly basis, there is no assurance that these would be sufficient to protect a System bank from liability should another System bank default and the Insurance Fund be insufficient to cure the default. See Note 5 to the accompanying consolidated financial statements for a more complete description of the interbank agreements among the System banks.

The Insurance Fund, which totaled $4.9 billion as of December 31, 2017, is available from the Insurance Corporation to ensure the timely payment by each System bank of its primary obligations on Systemwide Debt Securities and can also be used by the Insurance Corporation for its operating expenses and for other mandatory and permitted purposes. Under the Farm Credit Act, before joint and several liability can be invoked, available amounts in the Insurance Fund would first be exhausted. There is no assurance, however, that the Insurance Fund would have sufficient resources to fund a System bank's defaulted obligations. If the Insurance Fund was insufficient, then the remaining System banks would be required to pay the default amount in proportion to their respective available collateral positions. Available collateral approximates the amount of total shareholders' equity of the System banks. The Insurance Corporation does not insure any payments on our subordinated debt, certain other debt obligations, preferred stock or common stock. See Note 5 to the accompanying consolidated financial statements for more information about the Insurance Fund.

The System does not have a guaranteed line of credit from the U.S. Treasury or the Federal Reserve. However, the Insurance Corporation 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 the Insurance Corporation. Under its existing statutory authority, the Insurance Corporation may use these funds to provide assistance to the System banks in exigent market circumstances that threaten the banks' ability to pay maturing debt obligations. The agreement provides for advances of up to $10 billion and terminates on September 30, 2018, unless otherwise extended. The decision whether to seek funds from the Federal Financing Bank is at the discretion of the Insurance Corporation, 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 would be available if needed by the System.

To the extent we must fund our allocated portion of another System bank's portion of the Systemwide Debt Securities due to a default, our earnings and total shareholders' equity would be reduced, possibly materially.

### Reforms Impacting Government Sponsored Enterprises Could Have an Adverse Impact on our Business

The System is a GSE and, as a member of the System, CoBank benefits from ready access to debt funding and favorable debt-funding costs. Our individual credit ratings are also positively impacted by the GSE status of the System. In addition, as provided in our charter, portions of our business activities, including lending to Associations, are exempt from many forms of taxation, including federal income taxes.

As a direct result of the financial difficulties experienced by the housing-related GSEs, with both Fannie Mae and Freddie Mac having been placed into conservatorship by the U.S. government, GSE status has been and will continue to be a topic of debate and concern to various stakeholders, including the public and Congress. Congressional deliberations over structural reform of the housing-related GSEs began in 2011 and are likely to continue for a number of years. The Bank and the System are under the jurisdiction of the U.S. Senate and House of Representatives Committees on Agriculture and thus have not been the subject of this specific congressional scrutiny. However, there could be some risk that further efforts to reform GSEs would impact the System's status or erode some of the GSE-related benefits that it currently enjoys, including favorable funding costs and funding flexibility.

### Recent Changes in U.S. Tax Law Could Have a Material Impact on Our Business

New U.S. tax laws resulting from legislation commonly known as the Tax Cuts and Jobs Act of 2017 (TCJA) were enacted in late 2017. Among other things, the TCJA reduced the federal corporate tax rate from 35 percent to 21 percent. While the Bank realized a net benefit from the decrease in the federal corporate tax rate in our 2017 financial results, and anticipates that our ongoing effective tax rate, which includes federal and state income taxes, will be lower by approximately 35 percent, the full impact of the TCJA is difficult to predict and may not be fully known for several years. Changes that could affect the Bank's business and customers include, but are not limited to, modifications to deductions surrounding interest expense and equipment purchases, tax incentives related to renewable energy initiatives and the overall changes in the competitive environment impacting financial institutions.

**Our Funding Costs Could Be Negatively Impacted by Downgrades of the Long-Term U.S. Sovereign Credit Rating and the System's Long-Term Debt Rating**

As a member of the System, we have historically benefited from the favorable funding costs and funding flexibility associated with the debt securities issued through the Funding Corporation. The credit ratings of GSEs, including the System, are influenced by the sovereign credit rating of the United States. S&P currently maintains the long-term sovereign credit rating of the United States of AA+, which continues to drive the AA+ long-term debt rating of the System. Both Moody's Investors Service (Moody's) and Fitch Ratings Inc. (Fitch) currently maintain the long-term sovereign credit rating for the United States and its agency securities of AAA, which continues to drive the AAA long-term debt rating of the System. Any future downgrades could negatively impact funding costs, earnings and funding flexibility for CoBank and other System institutions.

**Our Funding is Dependent Upon the System's Ability to Access the Capital Markets**

The primary source of liquidity for CoBank and the other System institutions is the ability to issue Systemwide Debt Securities. This access has provided the System with a dependable source of funding. The System's ability to continue to issue Systemwide Debt Securities depends, in part, on the conditions in the capital markets, which are outside the System's control. As a result, the System cannot make any assurances that it will be able to fund itself by issuing Systemwide Debt Securities. If the System cannot issue Systemwide Debt Securities or cannot access the capital markets, CoBank's funding would be negatively impacted, which would have a negative effect on our financial condition and results of operations, which could be material.

**We are Subject to Liquidity Risk with Respect to Certain Investments and Derivatives**

We are subject to liquidity risk in the course of our investing activities, particularly with respect to our investments in non-agency MBS and ABS, FHA/VA non-wrapped reperformer MBS and corporate bonds, which together represent approximately 2 percent of our investment securities held for liquidity as of December 31, 2017. In volatile market conditions, it could be difficult to sell such investments, if the need arises, and the discounts from face value would likely be significant. In addition, because of the inherent uncertainty of determining the fair value of investments that do not have a readily available market value, the fair value of our investments may differ significantly from the values that would have been used had a ready market existed for the investments.

Our 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. Collateral is exchanged between parties daily with zero posting thresholds for all counterparties. Likewise, the Bank is required to pledge initial margin and make daily settlement payments related to our cleared derivative transactions. As a result of these derivative contracts, we are exposed to liquidity risk when changes in interest rates require us to post collateral to our counterparties, or make settlement payments for changes in the fair value of cleared derivatives. As of December 31, 2017, our counterparties had posted $50.9 million in cash as collateral with us. Additionally, initial margin and settlement payments totaling $32.0 million and $104.6 million, respectively, were held by our CCP for our cleared derivatives as of December 31, 2017.

**CoBank and Our Affiliated Associations Face Intense Competition in a Rapidly Changing Financial Services Industry**

CoBank and our affiliated Associations face intense competition from commercial banks, thrift institutions, insurance companies, finance companies, mortgage banking companies, other GSEs, U.S. Agencies and the U.S. government. Future results may become increasingly sensitive to fluctuations in the volume and cost of lending activities. Furthermore, continued technological advances and the growth of e-commerce have altered how many financial services get delivered to customers and have introduced new competitors for certain services. There can be no assurance that CoBank or our affiliated Associations will be able to continue to successfully compete in the markets we serve or to effectively adapt to technological or other changes impacting the financial services marketplace.

**Uncertainty Surrounding Potential Changes to LIBOR**

On July 27, 2017, the United Kingdom Financial Conduct Authority announced that it intends to stop persuading or compelling banks to submit LIBOR rates after 2021. Furthermore, in the United States, efforts to identify a set of alternative U.S. dollar reference interest rates include proposals by the Alternative Reference Rates Committee of the Federal Reserve Board and the Federal Reserve Bank of New York. At this time, it is not possible to predict whether any such changes will occur, whether LIBOR will be phased out or any such alternative reference rates or other reforms to LIBOR will be enacted in the United Kingdom, the United States or elsewhere. Uncertainty as to the nature of such potential changes, alternative reference rates or other reforms may adversely affect the trading market for LIBOR-based instruments, including certain of our borrowings, loans, investments and derivatives. Reform of, or the replacement or disappearance of, LIBOR and other "benchmarks" may adversely affect the rates of interest we pay on Systemwide Debt as well as the value of and return on our loans and investments and the value and effectiveness of our derivatives. This could have an adverse effect on our cash flows. Moreover, if LIBOR is replaced, we will need to take steps to restructure our LIBOR-based instruments, which could adversely affect our operations.

**Relationship with the Federal Agricultural Mortgage Corporation**

Farmer Mac is a federally chartered corporation that was established to create a secondary market for agricultural mortgages and other loans. Although Farmer Mac is statutorily defined as an institution of the System and is examined and regulated by the FCA, it is financially and operationally separate and distinct from the System, and any reference to "the System" herein does not include Farmer Mac. Neither CoBank nor any other System entity is liable for any debt or obligation of Farmer Mac. Further, the assets of the Insurance Fund do not support any debt or obligation of Farmer Mac nor do the System's independent credit ratings apply to Farmer Mac, which has not been rated by any NRSRO. Except for contractual obligations arising from business transactions between Farmer Mac and certain System institutions, Farmer Mac is not liable for any debt or obligation of any System entity, including Systemwide Debt Securities, either directly or on a joint and several basis.

We believe that if Farmer Mac, as an institution of the System, were to experience financial difficulty, it could create financial, reputational, political and/or regulatory risk to the System.

**We Are Subject to Risks Arising From Changes to Our Collaborative Partnerships With Other System Entities**

CoBank's collaborative partnerships with other System entities is key to the Bank's financial growth, strength and stability. These collaborations are rooted in the philosophy that working constructively together optimizes our ability to fulfill our mission to serve rural America. Notwithstanding the importance of these relationships, System-wide exposures could result from negative perception or inter-related financial risks arising from other System institutions. The failure to maintain effective System cooperation in mitigating these exposures could adversely affect our financial condition, results of operations and ability to meet the needs of our customers.

**Our Ability to Attract and Retain Qualified Board Members, Senior Officers and Employees is Critical to Successfully Fulfilling Our Mission**

The success of CoBank is dependent on the talents and efforts of our Board members, senior officers and employees, and the competition for individuals who possess the requisite knowledge of the banking, agricultural, finance and other relevant industries is intense. The failure to attract and retain qualified Board members, senior officers and employees could adversely affect our business performance, competitive position and the ability to fulfill our mission.

## Liquidity and Capital Resources

**Funding**

We use our capital in addition to short-term and long-term debt to fund our assets. Our debt consists primarily of Systemwide Debt Securities issued on CoBank's behalf by the Funding Corporation. Refer to Notes 5 and 6 to the accompanying consolidated financial statements for additional information regarding our debt obligations.

As a member of the System, CoBank has traditionally maintained ready access to debt funding. As of December 31, 2017, Systemwide Debt Securities were rated AAA by Moody's and Fitch, and AA+ by S&P.

**Investment Securities, Cash, Federal Funds Sold and Other Overnight Funds**

We hold investment securities, cash, federal funds sold and other overnight funds primarily to maintain a liquidity reserve and to manage short-term surplus funds. In accordance with Board-approved policies, we purchase high credit quality investment securities with the aim of ensuring that the investment portfolio is readily marketable and available to serve as a source of liquidity in the event of disruption to our normal funding sources.

Our investment securities decreased $0.9 billion to $26.9 billion at December 31, 2017 compared to $27.8 billion at December 31, 2016. The following table summarizes our investment securities and related unrealized gains/losses by asset class.

**Investment Securities** ($ in Millions)

| December 31, 2017 | Amortized Cost | Fair Value | Unrealized Gains (Losses) |
|---|---|---|---|
| Certificates of Deposit | $ 775 | $ 775 | $ - |
| U.S. Treasury Debt | 11,137 | 11,029 | (108) |
| U.S. Agency Debt | 3,369 | 3,356 | (13) |
| Residential Mortgage-Backed: | | | |
| Ginnie Mae | 1,876 | 1,856 | (20) |
| U.S. Agency | 6,758 | 6,718 | (40) |
| FHA/VA Non-Wrapped Reperformer | 235 | 257 | 22 |
| Non-Agency | 26 | 29 | 3 |
| Commercial Mortgage-Backed: | | | |
| U.S. Agency | 2,504 | 2,499 | (5) |
| Agricultural Mortgage-Backed: | | | |
| Farmer Mac | 79 | 78 | (1) |
| Corporate Bonds | 40 | 40 | - |
| Asset-Backed and Other | 225 | 233 | 8 |
| **Total** | $ 27,024 | $ 26,870 | $ (154) |
| **December 31, 2016** | | | |
| Certificates of Deposit | $ 775 | $ 776 | $ 1 |
| U.S. Treasury Debt | 11,189 | 11,141 | (48) |
| U.S. Agency Debt | 5,132 | 5,144 | 12 |
| Residential Mortgage-Backed: | | | |
| Ginnie Mae | 538 | 541 | 3 |
| U.S. Agency | 6,714 | 6,711 | (3) |
| FHA/VA Non-Wrapped Reperformer | 268 | 275 | 7 |
| Non-Agency | 63 | 71 | 8 |
| Commercial Mortgage-Backed: | | | |
| U.S. Agency | 2,649 | 2,641 | (8) |
| Agricultural Mortgage-Backed: | | | |
| Farmer Mac | 99 | 97 | (2) |
| Corporate Bonds | 40 | 40 | - |
| Asset-Backed and Other | 319 | 328 | 9 |
| **Total** | $ 27,786 | $ 27,765 | $ (21) |

At each reporting period, we perform impairment assessments of our investment securities based on evaluations of both current and future market and credit conditions and expected cash flows. Subsequent changes in market and credit conditions or expected cash flows could change these evaluations.

As all of our investment securities are classified as "available for sale", we recognize changes in the fair value of our investment securities in accumulated other comprehensive income (loss), a component of shareholders' equity, unless losses are credit-related and considered other-than-temporary, in which case that portion of the loss is recorded in earnings. We recorded unrealized losses on our investment securities of $154.0 million in 2017 compared to unrealized losses of $21.1 million in 2016. The unrealized losses/gains recorded in both periods primarily related to the impact of changes in market interest rates on the valuations of fixed-rate securities.

Approximately 95 percent of our investment securities are composed of securities that carry an explicit or implicit government guarantee. Another 3 percent are certificates of deposit with commercial banks. Credit risk in our investment portfolio primarily exists in investment securities that are not guaranteed by the U.S. government or a U.S. Agency, which include our certificates of deposit, FHA/VA non-wrapped reperformer MBS (i.e., investment securities where residential mortgage loans serving as collateral were cured after a default), non-agency MBS, corporate bonds and ABS. Excluding certificates of deposit, with which the counterparties carry the highest short-term credit rating, these securities collectively total $558.8 million (fair value) or 2 percent of our total investment securities as of December 31, 2017. Credit risks associated with the portfolio of FHA/VA non-wrapped reperformer MBS and certain other investment securities are discussed on page 50. Credit risk in our investment portfolio also arises from counterparties to short-term investments and from the inability of guarantors and third-party providers of other credit enhancements to meet their contractual obligations to us.

We recorded no other-than-temporary impairment losses in 2017. In 2016, we recorded $0.8 million of impairment losses related to one investment security. In 2015, we recorded $11.1 million in impairment losses related to two FHA/VA non-wrapped reperformer MBS due to lower projected cash flows resulting from loan modification activity in the underlying collateral. One of these securities was subsequently sold during 2015 for total proceeds of $21.3 million, which resulted in a gain of $0.8 million.

In 2017, we sold nine U.S. Agency debt securities with a combined book value of $1.6 billion as well as six non-agency MBS with a combined book value of $26.4 million. The U.S. Agency debt securities were sold to better position our overall investment portfolio. The non-agency MBS had been previously impaired and were excluded from our liquidity reserve, and were sold due to favorable market conditions.

In 2016, we sold six U.S. Agency debt investment securities and a U.S. Treasury debt investment security with a combined book value of $751.5 million for total proceeds of $752.4 million for balance sheet positioning purposes. We also sold three FHA/VA non-wrapped reperformer MBS with a combined book value of $52.0 million for total proceeds of $54.9 million. These securities had been previously impaired and were excluded from our liquidity reserve, and were sold due to favorable market conditions. In addition, we sold six non-impaired corporate bonds with a combined book value of $76.0 million for total proceeds of $76.8 million. These corporate bonds were sold to manage credit exposure.

In 2015, in addition to the sale of the credit-impaired security discussed above, we also sold three non-agency ABS and one agency debt security with a combined book value of $127.8 million for total proceeds of $149.6 million. The three non-agency ABS had been previously impaired and were excluded from our liquidity reserve, and were sold due to favorable market conditions. For income tax purposes, the sale of these previously-impaired securities generated a capital loss. The sale of the agency debt security was consummated in order to generate capital gains and thereby utilize the substantial majority of this capital loss.

**Derivatives**

We use derivatives for the purposes described on page 56. Derivatives are recorded at fair value as assets or liabilities in the accompanying consolidated balance sheets. Changes in the fair value of these derivatives are accounted for as gains or losses through current period earnings or as a component of accumulated other comprehensive income (loss), depending on the use of the derivatives and whether they qualify for hedge accounting treatment. Net changes in the fair value of derivatives and hedged items recorded in the accompanying consolidated statements of income resulted in total losses of $2.6 million for 2017 and had less than a $0.1 million impact in the 2016 period. Changes in the fair value of derivatives recorded as other comprehensive income (loss) totaled a loss of $12.6 million in 2017 and a gain of $2.0 million in 2016.

**Capital**

We believe that a sound capital position is critical to our long-term financial success and future growth. Our shareholders' equity is primarily composed of common and preferred stock and retained earnings, and totaled $9.1 billion and $8.6 billion at December 31, 2017 and 2016, respectively. The increase in 2017 was primarily due to our earnings of $1,125 million, partially offset by $491.9 million in cash patronage, $84.7 million in preferred stock dividends and $112.1 million in other comprehensive loss. Other comprehensive loss for 2017 was primarily driven by changes in the fair values of fixed-rate investment securities due to changes in market interest rates.

Effective January 1, 2017, CoBank implemented new regulatory capital requirements (the New Capital Regulations), as required by the FCA. Under the New Capital Regulations, common equity tier 1, which includes common stock and retained earnings, is the largest component of the Bank's capital structure. Preferred stock is also included in tier 1 regulatory capital, subject to certain limitations. In addition, our allowance for credit losses is included in tier 2 regulatory capital, subject to certain limitations. See "New Capital Regulations" below for detailed discussion related to the

FCA's capital adequacy regulations which require us to maintain certain minimum capital requirements.

In December 2016, our shareholders approved an increase in the amount of preferred stock that CoBank may have outstanding at any time from $1.5 billion to $2.5 billion effective January 1, 2017, and provided authorization for the Bank to issue preferred stock up to the new limit through December 31, 2026. These measures allow us to access outside capital more quickly and efficiently in response to dynamic market conditions, without the necessity of obtaining shareholder approval for each issuance. However, any preferred stock issuances would still require approval from the Board of Directors and the FCA. As of December 31, 2017, we had $1.5 billion of preferred stock outstanding.

On April 8, 2016, we issued $375 million of Series I non-cumulative perpetual preferred stock. We used the net proceeds from the Series I preferred stock issuance to increase our regulatory capital and for general corporate purposes. Dividends on the Series I preferred stock, if declared by the Board of Directors in its sole discretion, are non-cumulative and are payable semi-annually in arrears at a fixed annual rate of 6.25 percent from the date of issuance up to, but excluding, October 1, 2026. Thereafter, dividends will accrue at an annual rate equal to the 3-month USD LIBOR plus 4.66 percent and will be payable quarterly.

All of our outstanding preferred stock is included in tier 1 capital and permanent capital for regulatory capital purposes. Through December 31, 2016, all of our outstanding preferred stock was included in permanent capital, total surplus, and core surplus pursuant to the regulatory capital requirements effective at that time. All of our outstanding preferred stock ranks equally, both as to dividends and upon liquidation, and senior to all of our outstanding common stock.

We had no subordinated debt outstanding at December 31, 2017 compared to $500.0 million and $904.7 million at December 31, 2016 and 2015, respectively. For regulatory capital purposes under the New Capital Regulations, subject to certain limitations, our subordinated debt was included in tier 2 capital and permanent capital through the redemption date of June 15, 2017. Through December 31, 2016, subordinated debt was included as total surplus and permanent capital, and excluded from total liabilities for purposes of calculating the net collateral ratio, also subject to certain limitations. On June 15, 2017, we redeemed all of our outstanding floating-rate subordinated notes due 2022 totaling $500.0 million. The redemption price was 100 percent of the principal amount, together with accrued and unpaid interest up to, but excluding, the date of redemption. On April 15, 2016, we redeemed all of our outstanding 7.875 percent subordinated notes due in 2018 totaling $404.7 million. The redemption price was 100 percent of the principal amount, together with accrued and unpaid interest up to, but excluding, the date of redemption. For information relating to a complaint filed by a number of investors who had held the subordinated notes due in 2018 alleging CoBank impermissibly redeemed the subordinated notes, see Note 15 to the accompanying consolidated financial statements.

We may from time to time seek to retire our outstanding debt or equity securities through calls, tender offers and/or exchanges, open market purchases, privately negotiated transactions or otherwise. Such calls, tender offers, exchanges, open market purchases or new issuances, if any, will depend on prevailing market conditions, the Bank's capital position and liquidity requirements, contractual restrictions, changes to capital regulations and other factors.

**New Capital Regulations**

In 2016, the FCA adopted the New Capital Regulations relating to regulatory capital requirements for System banks, including CoBank, and Associations. The New Capital Regulations took effect January 1, 2017. The stated objectives of the New Capital Regulations are as follows:

- To modernize capital requirements while ensuring that System institutions continue to hold sufficient regulatory capital to fulfill the System's mission as a government-sponsored enterprise;
- To ensure that the System's capital requirements are comparable to the Basel III framework and the standardized approach that the federal banking regulatory agencies have adopted, but also to ensure that the rules recognize the cooperative structure and the organization of the System;
- To make System regulatory capital requirements more transparent; and
- To meet certain requirements of the Dodd-Frank Wall Street Reform and Consumer Protection Act (the Dodd-Frank Act).

The New Capital Regulations, among other things, replaced existing core surplus and total surplus requirements with common equity tier 1 (CET1), tier 1 and total capital (tier 1 plus tier 2) risk-based capital ratio requirements. The New Capital Regulations also added a tier 1 leverage ratio for all System institutions, which replaced the existing net collateral ratio for System banks. In addition, the New Capital Regulations established a capital conservation buffer and a leverage buffer; enhanced the sensitivity of risk weightings; and, for System banks only, required additional public disclosures. The revisions to the risk-weightings included alternatives to the use of credit ratings, as required by the Dodd-Frank Act.

The New Capital Regulations set the following minimum risk-based requirements:

- A CET1 capital ratio of 4.5 percent;
- A tier 1 capital ratio (CET1 capital plus additional tier 1 capital) of 6 percent; and
- A total capital ratio (tier 1 capital plus tier 2) of 8 percent.

The New Capital Regulations also set a minimum tier 1 leverage ratio (tier 1 capital divided by total assets) of 4 percent, of which at least 1.5 percent must consist of unallocated retained earnings (URE) and URE equivalents, which are nonqualified allocated equities with certain characteristics of URE.

The New Capital Regulations established a capital cushion (capital conservation buffer) of 2.5 percent above the risk-based CET1, tier 1 and total capital requirements. In addition, the New Capital Regulations established a leverage capital cushion (leverage buffer) of 1 percent above the tier 1 leverage ratio requirement. If capital ratios fall below the regulatory minimum plus buffer amounts, capital distributions (equity redemptions, cash dividend payments, and cash patronage payments) and discretionary senior executive bonuses are restricted or prohibited without prior FCA approval. The New Capital Regulations established a three-year phase-in of the capital conservation buffer beginning January 1, 2017. There is no phase-in of the leverage buffer.

As shown in the following table, at December 31, 2017, our capital and leverage ratios exceeded regulatory minimums, which are noted parenthetically. If these capital standards are not met, the FCA can impose restrictions, including limiting our ability to pay patronage distributions, retire equities and pay preferred stock dividends.

**2017 Regulatory Capital Requirements and Ratios**

| | December 31, 2017 | | |
|---|---|---|---|
| | Actual | Actual Buffer | Required Buffer |
| Common Equity Tier 1 Capital Ratio (4.5%) | 11.67 % | 7.17 % | 2.5 % [1] |
| Tier 1 Capital Ratio (6.0%) | 13.97 | 7.97 | 2.5 [1] |
| Total Capital Ratio (8.0%) | 15.24 | 7.24 | 2.5 [1] |
| Tier 1 Leverage Ratio (4.0%) | 7.26 | 3.26 | 1.0 |
| Unallocated Retained Earnings (URE) and URE Equivalents Leverage Ratio (1.5%) | 2.96 | n/a | n/a |
| Permanent Capital Ratio (7.0%) | 14.29 | n/a | n/a |

(1) The capital conservation buffer will be phased in over three years, reaching its full value of 2.5 percent in 2020.

The New Capital Regulations also require new disclosures, including the components of the ratios displayed above. See pages 133 through 141 for more information on the required disclosures.

**Previous Capital Regulations**

FCA regulations in effect through December 31, 2016 included requirements to maintain regulatory capital at or above minimum levels for our permanent capital ratio, total surplus ratio, core surplus ratio, and net collateral ratio. Our capital and collateral ratios calculated in accordance with the FCA regulations effective through December 31, 2016 are summarized as follows.

- The permanent capital ratio is quarterly average permanent capital (generally shareholders' equity and subordinated debt subject to certain limitations, excluding accumulated other comprehensive income (loss) and other deductions) as a percentage of quarterly average risk-adjusted assets.
- The total surplus ratio is quarterly average total surplus (quarterly average permanent capital, net of purchased stock) as a percentage of quarterly average risk-adjusted assets.
- The core surplus ratio is quarterly average core surplus (generally unallocated retained earnings, non-cumulative preferred stock and a portion of common stock) as a percentage of quarterly average risk-adjusted assets.
- The net collateral ratio is net collateral (generally net loans, cash and investments) divided by total liabilities, as adjusted to exclude subordinated debt (subject to certain limitations) and the fair value of certain derivatives.

Pursuant to FCA guidance effective through December 31, 2016, a portion of our common stock was included in core surplus, subject to certain conditions. Through December 31, 2016, the FCA required us to also calculate our core surplus ratio excluding common stock and had established a 3.0 percent minimum for such ratio. As of December 31, 2016, our core surplus ratio excluding common stock was 9.55 percent. As displayed in the following table, at December 31, 2016, 2015, 2014, 2013 and 2012, we exceeded the minimum regulatory capital requirements effective through December 31, 2016, which are noted parenthetically.

**2012 - 2016 Regulatory Capital Requirements and Ratios**

| December 31, | 2016 | 2015 | 2014 | 2013 | 2012 |
|---|---|---|---|---|---|
| Permanent Capital Ratio (7.0%) | 15.47 % | 14.95 % | 15.70 % | 16.72 % | 16.14 % |
| Total Surplus Ratio (7.0%) | 14.52 | 14.07 | 14.81 | 15.74 | 15.22 |
| Core Surplus Ratio (5.59%)[1] | 11.02 | 10.29 | 10.47 | 10.82 | 10.06 |
| Net Collateral Ratio (104.0%)[2] | 106.94 | 106.82 | 107.22 | 107.57 | 107.08 |

(1) Through December 31, 2016, the regulatory minimum core surplus ratio was 3.5 percent, but the FCA required the higher 5.59 percent during a period in which we included a portion of our common stock as core surplus.

(2) Through December 31, 2016, the regulatory minimum net collateral ratio was 103.0 percent, but the FCA required the higher 104.0 percent during a period in which we had subordinated debt outstanding.

**Capital Adequacy and Business Planning**

In conjunction with the annual business and financial planning process, the Board of Directors reviews and approves a capital adequacy plan which includes target levels for capital and capital ratio baselines. When reviewing the capital adequacy plan and setting an appropriate target equity level, the Board considers the following: the Bank's overall risk profile; capital composition; loan volume projections;

anticipated future capital needs; and the Bank's capital levels in comparison to commercial banks and regulatory minimum capital standards. The Board-established baselines under the New Capital Regulations are 8 percent for the CET1 capital ratio, 9.5 percent for the tier 1 capital ratio, 11.5 percent for the total capital ratio and 5.5 percent for the tier 1 leverage ratio. As of December 31, 2016, the Board-established capital ratio baselines were 11 percent for the permanent capital and total surplus ratios, 7 percent for the core surplus ratio, 6 percent for the core surplus ratio excluding common stock, and 106 percent for the net collateral ratio.

The Board balances the amount required to properly capitalize the Bank with the desire to distribute a level of patronage that provides appropriate returns to our customer-owners. The Board may increase or decrease these patronage levels (provided we remain within the regulatory capital minimums) based on its ongoing evaluation of the Bank's business.

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.

**Capital Plans**

In accordance with the Farm Credit Act, cooperatives and other eligible borrowers are required to purchase equity in CoBank as a condition of borrowing. Eligible borrowers that borrow on a patronage basis have voting rights while they are active borrowers. Generally, for borrowers other than affiliated Associations, the minimum initial borrower investment is equal to the lesser of one thousand dollars or 2 percent of the amount of the loan. The minimum initial investment for borrowers other than affiliated Associations is generally received by CoBank in cash at the time the borrower receives the loan proceeds. Affiliated Associations provide an initial and ongoing voting stock investment of 4 percent of their average outstanding loan balance. Collectively, the customer-owners that hold voting stock elect our Board of Directors.

We operate on a cooperative basis and return a significant portion of our earnings to our customer-owners in the form of patronage distributions. All patronage payments and retirements of equity require the prior approval of our Board of Directors, which may increase or decrease such payments based upon the Bank's current or projected business performance and capital levels. In addition, patronage payments can only be made if the Bank is in compliance with minimum regulatory capital requirements and preferred stock dividends for the immediately preceding period have been paid in full.

Patronage distributions are made in the form of cash and common stock, as shown in the following table. Eligible shareholders will receive patronage distributions from CoBank for 2017 in the first quarter of 2018. Patronage distributions increased in both 2017 and 2016 primarily as a result of loan growth in each of our operating segments.

**Patronage Distributions** ($ in Thousands)

| Year Ended December 31, | 2017 | 2016 | 2015 |
|---|---|---|---|
| Common Stock | **$ 118,570** | $ 114,258 | $ 98,117 |
| Cash | **491,856** | 473,853 | 415,982 |
| **Total Patronage Distributions** | **$ 610,426** | $ 588,111 | $ 514,099 |
| Patronage Distributions/ Total Average Common Stock Owned by Active Borrowers | **20.70 %** | 21.32 % | 19.76 % |

Our capital plans govern the level of capital investment required by customer-owners. Capital plans in effect during 2015, 2016 and 2017 included a plan for cooperative customers, a plan for affiliated Associations, a plan for nonaffiliated entities and a plan for loan participations purchased from System entities. Effective January 1, 2016, a plan for financial service members was added.

The targeted equity level for the cooperative capital plan is 8 percent of the 10-year historical average loan volume. Additionally, when a borrower's loans are paid in full, stock is retired over a 10-year loan base period beginning in the year following loan payoff, subject to Board approval and compliance with minimum regulatory capital requirements. Pursuant to the capital plans in effect during 2015, 2016 and 2017, the targeted patronage rate for the cooperative capital plan was 100 basis points of the current year average loan volume. The cash portion of patronage was 75 percent for all cooperative capital plan members with the remaining portion paid in common stock.

The capital plan for loan participations purchased from System entities was similar to the cooperative capital plan described above.

The targeted equity level for the affiliated Association capital plan is 4 percent of the one-year historical average loan volume. There is no stock retirement feature for this capital plan. Pursuant to the capital plans in effect during 2015, 2016 and 2017, the targeted patronage rate for the affiliated Association capital plan was 45 basis points of the current year average loan volume, with all patronage being paid in cash.

The targeted equity level for the nonaffiliated entity capital plan is 4 percent of the five-year historical average loan volume. Additionally, when these borrowers' loans are paid in full, stock is retired over a five-year loan base period beginning in the year following loan payoff, subject to Board approval and compliance with minimum regulatory capital requirements. Pursuant to the capital plans in effect during 2015, 2016 and 2017, the targeted patronage rate for the nonaffiliated entity capital plan was 45 basis points of the current year average loan volume. The cash portion of patronage was 20 percent for all nonaffiliated entity capital plan members, with the remaining portion paid in common stock.

In 2015, CoBank shareholders approved bylaw amendments recommended by the Board to authorize the issuance of a single share of $100 dollars par value Class A common stock to eligible customers receiving certain financial services from the Bank who are not otherwise shareholders. These members are not entitled to vote or receive patronage. When a financial service member's activity concludes, the stock requirement may be retired, subject to Board approval and compliance with minimum regulatory capital requirements. This new capital plan was effective as of January 1, 2016.

Changes to Capital Plans and Patronage Programs

In August 2017, we announced changes to our capital plans and patronage programs for eligible customer-owners designed to address a number of marketplace challenges. Such challenges include, among others, higher minimum capital requirements under the New Capital Regulations in addition to other increased regulatory costs, the impact of a prolonged low interest rate environment on returns on invested capital, decreased returns on equity and assets, declining spreads and net interest margin driven by intense competition in the banking industry, and low and declining spreads in rural electric and water loans. These changes are intended to strengthen CoBank's long-term capacity to serve customers' borrowing needs, enhance the Bank's ability to capitalize future customer growth, and ensure equitability among different customer segments.

Pursuant to the changes approved by our Board of Directors, CoBank created two separate capital plans for cooperative and other eligible direct borrowers under which targeted patronage levels and cash/equity splits will be more equitably balanced between the earnings generated by different customer portfolios and the use of the Bank by its patronage-eligible members. Pursuant to these new plans, Agribusiness, communications and project finance customers are in one plan, while rural electric and water customers are in another. In addition, target patronage levels for all customers and partners are reduced under the new plans.

Capital plans and patronage programs for each customer or loan type are summarized in the following table.

**New Capital Plans and Patronage Programs**

| | | Target Patronage[2] | | Cash / Equity Split[3] | |
|---|---|---|---|---|---|
| **Customer or Loan Type** | **Equity Requirement[1]** | **Former Plan** | **New Plan** | **Former Plan** | **New Plan** |
| Agribusiness, Communications and Project Finance | 8 % | 100 bps | 95 bps | 75 / 25 % | 75 / 25 % |
| Rural Electric and Water | 8 | 100 | 80 | 75 / 25 | 60 / 40 |
| Loans Purchased from Farm Credit Partners | 8 | 100 | 95 | 75 / 25 | 75 / 25 |
| Affiliated Associations | 4 | 45 | 36 | 100 / 0 | 100 / 0 |
| Non-affiliated Farm Credit and Other Financing Institutions | 4 | 45 | 26 | 20 / 80 | 20 / 80 |

[1] Cooperatives and other eligible direct borrowers fulfill their equity requirement over time through the equity portion of their annual patronage distributions, as do loans purchased from other Farm Credit institutions, and non-affiliated Farm Credit and other financing institutions. Affiliated Associations capitalize their wholesale loans from the Bank in full on an annual basis.

[2] Target patronage is defined as the number of basis points (bps) of current-year average loan volume for eligible borrowers.

[3] Once borrowers reach their target equity requirement, they effectively receive 100 percent of their patronage distribution in cash.

For cooperatives and other eligible direct borrowers as well as for loans purchased from other Farm Credit institutions, the new target patronage levels take effect for 2018. Affiliated Associations and non-affiliated Farm Credit and other financing institutions will transition to their new targeted patronage levels over a multi-year period ending in 2020. Patronage for affiliated Associations is targeted at 45, 40 and 36 basis points for 2018, 2019 and 2020, respectively. Patronage for non-affiliated Farm Credit and other financing institutions is targeted at 35, 30 and 26 basis points for 2018, 2019 and 2020, respectively. Patronage distributions, if approved by the Board of Directors in its sole discretion, are made in March following the calendar year to which they relate. No changes were made to target equity requirements for any borrower or commercial partner. In addition, the capital plan for financial service members remains unchanged.

## Critical Accounting Estimates

Management's discussion and analysis of the financial condition and results of operations are based on the Bank's consolidated financial statements, which we prepare in accordance with GAAP. In preparing these financial statements, we make estimates and assumptions. Our financial position and results of operations are affected by these estimates and assumptions, which are integral to understanding reported results.

Note 1 to the accompanying consolidated financial statements contains a summary of our significant accounting policies. We consider certain of these policies to be critical to the presentation of our financial condition, as they require us to make complex or subjective judgments that affect the value of certain assets and liabilities. Some of these estimates relate to matters that are inherently uncertain. Most accounting policies are not, however, considered critical. Our critical accounting policies relate to determining the level of our allowance for credit losses and the valuation of financial instruments with no ready markets (primarily derivatives and certain investment securities). Management has reviewed these critical accounting policies with the Audit Committee of the Board of Directors.

Certain of the statements below contain forward-looking statements, which are more fully discussed on page 71.

**Allowance for Credit Losses**

Our allowance for loan losses is an adjustment to the value of our total loan and finance lease portfolio for inherent credit losses related to outstanding balances. We provide line of credit financing to customers to cover short-term and variable needs, the usage of which, particularly for farm supply and grain marketing customers, is influenced by a number of factors, including changing commodity prices and supplies. As a result, we have significant unfunded commitments for which we maintain a separate reserve. This reserve is reported as a liability on the Bank's consolidated balance sheet. We refer to the combined amounts of the allowance for loan losses and the reserve for unfunded commitments as the "allowance for credit losses."

Our allowance for credit losses reflects our assessment of the risk of probable and estimable loss related to outstanding balances and unfunded commitments in our loan and finance lease portfolio. The allowance for credit losses is maintained at a level consistent with this assessment, considering such factors as loss experience, portfolio quality, portfolio concentrations, production conditions, modeling imprecision, our mission, and economic and environmental factors specific to our business segments.

The allowance for credit losses is based on our regular evaluation of our loan and finance lease portfolio. We establish the allowance for credit losses via a process that begins with estimates of probable loss within the portfolio. Our methodology consists of analysis of specific individual credits and evaluation of the remaining portfolio. We evaluate significant individual credit exposures, including adversely classified loans, based upon the borrower's overall financial condition, resources, payment record and projected viability. We also evaluate the prospects for support from any financially viable guarantors and the estimated net realizable value of any collateral. Senior-level committees approve specific credit and reserve-related activities. The Audit and Risk Committees of the Board of Directors review the allowance for credit losses on a quarterly basis, and the Board of Directors approves the year-end allowance for credit losses.

In 2015, we enhanced our methodology for estimating the allowance for credit losses related to non-impaired commercial loans. Enhancements included incorporating a view of probability of default over a longer period; aligning certain loss given default assumptions more closely with internal guidance; and modifying the loss emergence period assumption. While these changes did not materially impact the overall level of the allowance for credit losses, they did impact the distribution of the allowance for credit losses between our Agribusiness and Rural Infrastructure operating segments. No significant changes were made to our methodology for estimating the allowance for credit losses in 2017 or 2016.

Our determination of the allowance for credit losses for commercial loans is sensitive to the assigned risk ratings and probabilities of default, assumptions surrounding loss given default and loss emergence timing and the overall level of exposure within our loan portfolio. Changes in these components underlying this critical accounting estimate could increase or decrease our provision for loan losses. Such a change would increase or decrease net income and the related allowance for loan losses and reserve for unfunded commitments, which could have a material effect on the Bank's financial position and results of operations.

To analyze the impact of assumptions on our provision for loan losses and the related allowance for credit losses, we changed a critical assumption to reflect the impact of deterioration or improvement in loan quality. In the event that 10 percent of loans (calculated on a pro-rata basis across all risk ratings), excluding wholesale loans to Associations and guaranteed loans, experienced downgrades or upgrades of one risk rating category, the provision for loan losses and related allowance for credit losses would have increased or decreased by $30.9 million at December 31, 2017.

**Valuation of Financial Instruments with No Ready Markets and Other-Than-Temporary Impairment Analyses**

We use fair value measurements to record fair value adjustments to certain financial instruments and to determine fair value disclosures. All of our investment securities and derivative instruments are reported at their estimated fair value on the accompanying consolidated balance sheets. We also estimate the amount of other-than-temporary impairment for certain investment securities.

As discussed in Note 12 to the accompanying consolidated financial statements, we maximize the use of observable inputs when measuring fair value. Observable inputs reflect market-derived or market-based information obtained from independent sources, while unobservable inputs primarily reflect our estimates about market data.

The fair value of our derivative financial instruments is the estimated amount to be received to sell a derivative asset or paid to transfer or extinguish a derivative liability in active markets among willing participants at the reporting date. Estimated fair value is determined through internal market valuation models. These models use an income approach and incorporate benchmark interest rate curves, volatilities, counterparty credit quality, and other inputs that are observable directly or indirectly in the marketplace. For derivative transactions with dealers, we compare internally calculated derivative valuations to counterparty results. The fair value of collateral assets and liabilities related to derivative contracts is their face value, plus accrued interest, as these instruments are cash balances; therefore, fair value approximates face value.

The fair value of nearly all investment securities is determined by a third-party pricing service that uses valuation models to estimate current market prices. For a small portion of our investment securities, market value is calculated internally using third-party models. Inputs and assumptions related to all of these models are typically observable in the marketplace. Such models incorporate prepayment assumptions and underlying mortgage- or asset-backed collateral information to generate cash flows that are discounted using appropriate benchmark interest rate curves and volatilities. These third-party valuation models also incorporate information regarding non-binding broker/dealer quotes, available trade information, historical cash flows, credit ratings, and other market information. Such valuations represent an estimated exit price, or price to be received by a seller in active markets to sell the investment securities to a willing participant.

Credit risk in our portfolio of investment securities is primarily limited to the 3 percent of securities that are certificates of deposit with commercial banks, with which the counterparties carry the highest short-term credit rating, and the 2 percent of securities that do not carry an explicit or implied government guarantee. In instances where the fair value of investment securities is less than the carrying value, we estimate the component of unrealized losses attributable to credit losses. In 2015, we enhanced our process for estimating such losses. These enhancements primarily included using third-party credit and cash flow models which utilize loan level data to project future performance. These improvements did not materially impact the overall level of expected losses. Model projections are influenced by such factors as interest rates, economic conditions, including housing prices, and the performance, type and age of collateral. The model considers projected prepayment rates, current and historical loan level performance information and loss severity estimates. Loss severity results are derived using model-estimated home price assumptions at the time of default. No significant changes were made to our methodology for estimating credit losses in 2017 or 2016.

All models used for these financial statement estimates or for independent risk monitoring purposes are periodically reviewed and validated in accordance with our policies.

The degree of management judgment involved in determining the fair value and impairment of a financial instrument is dependent upon the availability of observable market inputs. For financial instruments that trade actively and have observable market prices and inputs, there is minimal subjectivity involved. When observable market prices and inputs are not fully available, management judgment is necessary to estimate fair value and impairment. Changes in market conditions may reduce the availability of market prices or observable data. For example, reduced liquidity in the capital markets or changes in secondary market activities could result in observable market inputs becoming unavailable. When market data is not available, we use valuation techniques requiring more management judgment to estimate the appropriate fair value measurement and level of impairment, if any. Changes in assumptions could affect these estimates.

At December 31, 2017, approximately 22 percent of total assets, or $28.2 billion, consisted of financial instruments recorded at fair value. Over 99 percent of these financial instruments used valuation methodologies involving market-based or market-derived information to measure fair value. The remaining financial instruments were measured using model-based techniques, consisting of our Farmer Mac MBS and a small portion of our ABS. At December 31, 2017, less than 1 percent of total liabilities, or $0.1 billion, consisted of financial instruments recorded at fair value, the substantial majority of which are valued using methodologies involving market-based or market-derived information. The fair value of investment securities with previously recorded other-than-temporary impairment losses was $9.6 million at December 31, 2017.

## Business Outlook

We continue to face market conditions that could make the business environment less favorable for CoBank in the future. Although interest rates have increased recently, they remain low by historical standards and continue to limit returns on capital and investment securities. Monetary policy as established by the Federal Reserve and the policies of other central banks around the world could create further uncertainty regarding interest rates and asset valuations. The direction of the U.S. economic, trade and foreign policies remains uncertain. Negotiations are underway to rewrite the North American Free Trade Agreement, the outcome of which could impact the U.S. economy and our customers. Competition for the business of our customers across most of the industries we serve continues to be intense. Agricultural commodity prices have remained relatively low due to strong global supplies and are subject to volatility driven by weather conditions and other factors. Customers in many of the industries we serve are impacted by commodity prices and agricultural yields, fluctuations in the value of the U.S. dollar, weather, and ongoing political and regulatory uncertainty. Although the Farm Bill will remain in effect through fiscal year 2018, there is considerable uncertainty as to the content and timing of the next farm bill. Many of our power customers are impacted by energy efficiency initiatives, price volatility of various fuel sources including coal and natural gas, changing regulation of carbon dioxide emissions, renewable energy standards and customer demand for distributed generation. Rapidly changing technology and customer demands create uncertainty in the communications industry. These challenges could reduce the credit quality and impact the level of loan demand in certain sectors of our loan portfolio.

The enactment of the TCJA in late December 2017 generated a one-time earnings benefit of $142.3 million in 2017 and we anticipate it will lower our ongoing effective tax rate, which includes federal and state income taxes, by approximately 35 percent in future periods. Management and the Board of Directors are analyzing these significant changes to determine how best to maximize the value of realized and anticipated benefits for our customer-owners and other stakeholders.

We continue to focus on delivering the credit and financial services our customers need to compete, grow and achieve business success, enhancing our enterprise risk management capabilities and maintaining our financial strength. In addition, we continue to collaborate with our affiliated Associations to enhance our business models to further our collective mission. We believe that our strong liquidity and capital will continue to provide the capacity to support customers in all market conditions. We also believe that paying patronage is an important part of our value proposition as it effectively lowers the net cost of borrowing for our customer-owners. We continue our disciplined approach to managing risk and monitoring asset quality. We also continue to make prudent investments in our people, processes, data infrastructure and technology, including enhancing our digital banking capabilities, to strengthen the value and improve the experience we provide to our customers.

Under the guidance of our Board of Directors and through the focus of an experienced executive management team, we expect to achieve continued success through execution of our business strategies and by creating mutually beneficial partnerships with other System institutions, maintaining effective access to the agency debt capital markets, educating policy makers and other key stakeholders of the critical mission of CoBank and the System, prudently optimizing current lending authorities and maintaining compliance with laws and regulations. We continue to explore strategic alliances and other opportunities with our customers, other System institutions, financial service providers and other public and private entities as we strive to better fulfill our mission in rural America in a safe and sound manner.

## Forward Looking Statements

Certain of the statements contained in this annual report that are not historical facts are forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Our actual results may differ materially from those included in the forward-looking statements that relate to our plans, projections, expectations and intentions. Forward-looking statements are typically identified by words such as "believe," "expect," "anticipate," "intend," "estimate," "plan," "project," "may," "will," "should," "would," "could" or similar expressions. Although we believe that the information expressed or implied in such forward-looking statements is reasonable, we can give no assurance that such projections and expectations will be realized or the extent to which a particular plan, projection or expectation may be realized. These forward-looking statements are based on current knowledge and are subject to various risks and uncertainties, including, but not limited to:

- Changes in economic, marketplace or regulatory environments that negatively impact the agricultural, power, communications, water and leasing industries;
- The level of interest rates and relationships between various interest rate indices and actions taken by the Federal Reserve to manage the monetary policy of the United States;
- Currency fluctuations that impact the value of the U.S. dollar in global markets;
- Adverse food safety and weather events, disease, and other unfavorable conditions that periodically occur and impact agricultural productivity and income;
- Changes in levels of global crop production, exports, usage and inventories;
- Credit performance of the loan portfolio;
- Performance of underlying collateral, including farmland values and specialized property that secures rural infrastructure credits;
- Loan portfolio growth and seasonal factors;
- Weak U.S. economic conditions;
- Weaknesses in other developed and emerging economies;
- Government policies and political developments in the United States and other countries in which we do business;
- Geopolitical uncertainties throughout the world that may impact the industries we lend to, or, economic, fiscal or monetary conditions;
- Changes in the U.S. government's support of the System, the agricultural industry, agricultural exports, rural infrastructure and rural economies;
- Legislative or regulatory actions that affect current and ongoing operations of the System or the banking, financial services, agricultural, power, communications, water and leasing industries;
- Legislative or regulatory actions that affect our relationships with our employees;
- Actions taken by the U.S. Congress relative to other government-sponsored enterprises, including the Federal National Mortgage Association (Fannie Mae), the Federal Home Loan Mortgage Corporation (Freddie Mac), the Federal Home Loan Banks and Farmer Mac;
- Actions taken by the U.S. government to manage U.S. trade, immigration or fiscal policies;
- Changes impacting the Bank or its customers as a result of the implementation of the TCJA;
- A decrease in the credit outlook or ratings of U.S. government debt and agency debt, including Systemwide Debt Securities;
- Cybersecurity risks, including a failure or breach of our operational or security systems or infrastructure, that could adversely affect our business, financial performance and reputation;
- Technology changes implemented by the Bank, its counterparties or competitors;
- Changes in assumptions underlying the valuations of financial instruments;
- Changes in the bases for our estimates underlying the allowance for credit losses;
- Failure of our investment portfolio to perform as expected or deterioration in the credit quality of such investments;
- The resolution of legal proceedings and related matters;
- Environmental-related conditions or laws impacting our lending activities;
- Nonperformance by counterparties under our derivative and vendor contracts;
- Reform and regulation which impacts LIBOR and other benchmark interest rates; and
- Our ability to continue to partner with various System and other entities in light of ongoing consolidation within the System and the industries we serve.

We expressly disclaim any obligation to update or revise any forward-looking statements, whether as a result of new information, future events or otherwise, except as required by law.

## Report of Independent Registered Public Accounting Firm

To the Board of Directors of CoBank, ACB:

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

We have audited the accompanying consolidated balance sheets of CoBank, ACB and its subsidiaries (the Company) as of December 31, 2017, 2016 and 2015, and the related consolidated statements of income, comprehensive income, changes in shareholders' equity and cash flows for each of the three years in the period ended December 31, 2017, including the related notes (collectively referred to as the "consolidated financial statements"). We also have audited the Company's internal control over financial reporting as of December 31, 2017, based on criteria established in Internal Control - Integrated Framework (2013) issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO).

In our opinion, the consolidated financial statements referred to above present fairly, in all material respects, the financial position of the Company as of December 31, 2017, 2016 and 2015, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2017 in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2017 , 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 consolidated 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 Management's Report on Internal Control Over Financial Reporting appearing on page 129 of the 2017 Annual Report to Shareholders. Our responsibility is to express opinions on the Company's consolidated 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 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 consolidated 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 consolidated financial statements included performing procedures to assess the risks of material misstatement of the consolidated financial statements, whether due to error or fraud, and performing procedures that respond to those risks. Such procedures included examining, on a test basis, evidence regarding the amounts and disclosures in the consolidated financial statements. Our audits also included evaluating the accounting principles used and significant estimates made by management, as well as evaluating the overall presentation of the consolidated financial statements. 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

Denver, Colorado
March 1, 2018

We have served as the Company's auditor since 1989.

# Consolidated Balance Sheets
**CoBank, ACB**

($ in Thousands)

| As of December 31, | 2017 | 2016 | 2015 |
|---|---|---|---|
| **Assets** | | | |
| Total Loans | **$ 99,265,505** | $ 95,258,281 | $ 89,040,580 |
| Less: Allowance for Loan Losses | **576,927** | 558,974 | 486,144 |
| Net Loans | **98,688,578** | 94,699,307 | 88,554,436 |
| Cash and Cash Equivalents | **1,313,620** | 1,660,517 | 3,113,101 |
| Federal Funds Sold and Other Overnight Funds | **1,035,000** | 750,000 | - |
| Investment Securities | **26,870,378** | 27,765,188 | 24,504,448 |
| Accrued Interest Receivable | **381,544** | 348,652 | 331,448 |
| Interest Rate Swaps and Other Financial Instruments | **180,845** | 208,434 | 295,989 |
| Other Assets | **740,848** | 698,528 | 671,144 |
| **Total Assets** | **$ 129,210,813** | $ 126,130,626 | $ 117,470,566 |
| **Liabilities** | | | |
| Bonds and Notes | **$ 118,406,283** | $ 115,085,880 | $ 106,970,066 |
| Subordinated Debt | **-** | 498,820 | 902,685 |
| Accrued Interest Payable | **309,340** | 281,154 | 289,718 |
| Interest Rate Swaps and Other Financial Instruments | **86,732** | 162,724 | 113,397 |
| Reserve for Unfunded Commitments | **93,865** | 103,496 | 115,444 |
| Other Liabilities | **1,254,516** | 1,424,794 | 1,268,787 |
| **Total Liabilities** | **120,150,736** | 117,556,868 | 109,660,097 |
| Commitments and Contingent Liabilities (Note 15) | | | |
| **Shareholders' Equity** | | | |
| Preferred Stock | **1,500,000** | 1,500,000 | 1,125,000 |
| Common Stock | **3,240,445** | 3,072,232 | 2,899,728 |
| Unallocated Retained Earnings | **4,551,600** | 4,121,409 | 3,845,728 |
| Accumulated Other Comprehensive Loss | **(231,968)** | (119,883) | (59,987) |
| **Total Shareholders' Equity** | **9,060,077** | 8,573,758 | 7,810,469 |
| **Total Liabilities and Shareholders' Equity** | **$ 129,210,813** | $ 126,130,626 | $ 117,470,566 |

*The accompanying notes are an integral part of the consolidated financial statements.*

# Consolidated Statements of Income
**CoBank, ACB**

($ in Thousands)

| Year Ended December 31, | 2017 | 2016 | 2015 |
|---|---|---|---|
| **Interest Income** | | | |
| Loans | **$ 2,603,019** | $ 2,173,387 | $ 1,849,946 |
| Investment Securities, Federal Funds Sold and Other Overnight Funds | **538,121** | 436,226 | 359,834 |
| Total Interest Income | **3,141,140** | 2,609,613 | 2,209,780 |
| **Interest Expense** | **1,748,315** | 1,247,835 | 936,445 |
| Net Interest Income | **1,392,825** | 1,361,778 | 1,273,335 |
| Provision for Loan Losses | **42,000** | 63,000 | 10,000 |
| Net Interest Income After Provision for Loan Losses | **1,350,825** | 1,298,778 | 1,263,335 |
| **Noninterest Income** | | | |
| Net Fee Income | **109,160** | 103,365 | 104,441 |
| Patronage Income | **63,970** | 58,385 | 43,858 |
| Prepayment Income | **18,585** | 34,142 | 31,946 |
| Losses on Early Extinguishments of Debt | **(42,088)** | (34,197) | (37,455) |
| Gains on Sale of Investment Securities | **9,387** | 4,617 | 22,603 |
| Total Other-Than-Temporary Impairment Losses | **-** | (750) | (11,100) |
| Other, Net | **16,219** | 19,323 | 15,480 |
| Total Noninterest Income | **175,233** | 184,885 | 169,773 |
| **Operating Expenses** | | | |
| Employee Compensation | **172,540** | 165,159 | 150,585 |
| General and Administrative | **29,331** | 25,109 | 24,167 |
| Information Technology | **35,776** | 31,696 | 28,231 |
| Insurance Fund Premium | **83,686** | 90,561 | 59,919 |
| Travel and Entertainment | **18,247** | 21,583 | 18,425 |
| Farm Credit System Related | **15,823** | 14,736 | 12,215 |
| Occupancy and Equipment | **16,020** | 16,083 | 16,220 |
| Purchased Services | **14,250** | 14,775 | 15,553 |
| Total Operating Expenses | **385,673** | 379,702 | 325,315 |
| Income Before Income Taxes | **1,140,385** | 1,103,961 | 1,107,793 |
| Provision for Income Taxes | **15,064** | 158,285 | 171,120 |
| **Net Income** | **$ 1,125,321** | $ 945,676 | $ 936,673 |

*The accompanying notes are an integral part of the consolidated financial statements.*

# Consolidated Statements of Comprehensive Income
**CoBank, ACB**

($ in Thousands)

| Year Ended December 31, | 2017 | 2016 | 2015 |
|---|---|---|---|
| **Net Income** | **$ 1,125,321** | $ 945,676 | $ 936,673 |
| **Other Comprehensive (Loss) Income, Net of Tax**: | | | |
| Net Change in Unrealized Losses on Investment Securities Not Other-Than-Temporarily Impaired | **(105,571)** | (58,215) | (34,271) |
| Net Change in Unrealized Losses on Other-Than-Temporarily Impaired Investment Securities | **(1,733)** | (2,904) | (10,176) |
| Net Change in Unrealized (Losses) Gains on Interest Rate Swaps and Other Financial Instruments | **(12,274)** | 2,450 | (6,697) |
| Net Pension Adjustment | **7,493** | (1,227) | (2,581) |
| **Other Comprehensive Loss** | **(112,085)** | (59,896) | (53,725) |
| **Comprehensive Income** | **$ 1,013,236** | $ 885,780 | $ 882,948 |

*The accompanying notes are an integral part of the consolidated financial statements.*

# Consolidated Statements of Changes in Shareholders' Equity
**CoBank, ACB**

($ in Thousands)

| | Preferred Stock | Common Stock | Unallocated Retained Earnings | Accumulated Other Comprehensive Income (Loss) | Total Shareholders' Equity |
|---|---|---|---|---|---|
| **Balance at December 31, 2014** | $ 1,125,000 | $ 2,768,546 | $ 3,482,379 | $ (6,262) | $ 7,369,663 |
| Comprehensive Income (Loss) | | | 936,673 | (53,725) | 882,948 |
| Preferred Stock: | | | | | |
| Dividends | | | (59,179) | | (59,179) |
| Common Stock: | | | | | |
| Issuances | | 65,615 | | | 65,615 |
| Redemptions | | (32,550) | | | (32,550) |
| Patronage Distribution: | | | | | |
| Cash | | | (415,982) | | (415,982) |
| Common Stock | | 98,117 | (98,117) | | - |
| Other | | | (46) | | (46) |
| **Balance at December 31, 2015** | $ 1,125,000 | $ 2,899,728 | $ 3,845,728 | $ (59,987) | $ 7,810,469 |
| Comprehensive Income (Loss) | | | 945,676 | (59,896) | 885,780 |
| Preferred Stock: | | | | | |
| Dividends | | | (77,232) | | (77,232) |
| Issuance | 375,000 | | (4,652) | | 370,348 |
| Common Stock: | | | | | |
| Issuances | | 87,355 | | | 87,355 |
| Redemptions | | (29,109) | | | (29,109) |
| Patronage Distribution: | | | | | |
| Cash | | | (473,853) | | (473,853) |
| Common Stock | | 114,258 | (114,258) | | - |
| **Balance at December 31, 2016** | $ 1,500,000 | $ 3,072,232 | $ 4,121,409 | $ (119,883) | $ 8,573,758 |
| Comprehensive Income (Loss) | | | **1,125,321** | **(112,085)** | **1,013,236** |
| Preferred Stock: | | | | | |
| Dividends | | | **(84,704)** | | **(84,704)** |
| Common Stock: | | | | | |
| Issuances | | **75,531** | | | **75,531** |
| Redemptions | | **(25,888)** | | | **(25,888)** |
| Patronage Distribution: | | | | | |
| Cash | | | **(491,856)** | | **(491,856)** |
| Common Stock | | **118,570** | **(118,570)** | | **-** |
| **Balance at December 31, 2017** | **$ 1,500,000** | **$ 3,240,445** | **$ 4,551,600** | **$ (231,968)** | **$ 9,060,077** |

*The accompanying notes are an integral part of the consolidated financial statements.*

# Consolidated Statements of Cash Flows
**CoBank, ACB**

($ in Thousands)

| Year Ended December 31, | 2017 | 2016 | 2015 |
|---|---|---|---|
| **Cash Flows Provided by Operating Activities** | | | |
| Net Income | **$ 1,125,321** | $ 945,676 | $ 936,673 |
| Adjustments to Reconcile Net Income to Net Cash Provided by Operating Activities: | | | |
| Provision for Loan Losses | **42,000** | 63,000 | 10,000 |
| Remeasurement of Deferred Tax Liabilities / Deferred Tax Assets | **(142,323)** | - | - |
| Deferred Income Taxes | **12,873** | 26,934 | 63,443 |
| Depreciation and Amortization/Accretion, Net | **151,965** | 90,591 | 54,563 |
| Net Gains on Sale of Investment Securities | **(9,387)** | (4,617) | (22,603) |
| Losses on Impairment of Available-for-Sale Investments | **-** | 750 | 11,100 |
| (Increase) Decrease in Accrued Interest Receivable | **(32,892)** | (17,204) | 16,957 |
| Increase in Other Assets | **(18,869)** | (105,043) | (131,608) |
| Increase (Decrease) in Accrued Interest Payable | **28,186** | (8,565) | 18,648 |
| (Decrease) Increase in Other Liabilities | **(17,630)** | 58,168 | 21,643 |
| Net (Gains) Losses on Interest Rate Swaps and Other Financial Instruments | **(26,872)** | 1,127 | (2,890) |
| (Payments) Proceeds from Termination of Interest Rate Swaps | **(395)** | 1,911 | 6,909 |
| Purchase of Interest Rate Caps and Floors | **(14,424)** | (9,327) | (9,636) |
| Other | **(525)** | (810) | (1,273) |
| Net Cash Provided by Operating Activities | **1,097,028** | 1,042,591 | 971,926 |
| **Cash Flows Used in Investing Activities** | | | |
| Net Increase in Loans | **(4,068,160)** | (6,254,420) | (8,709,222) |
| Investment Securities: | | | |
| Purchases | **(19,925,597)** | (23,312,600) | (9,346,942) |
| Proceeds from Maturities and Prepayments | **19,097,511** | 19,195,177 | 8,928,325 |
| Proceeds from Sales | **1,492,332** | 869,565 | 167,831 |
| Net Increase in Federal Funds Sold and Other Overnight Funds | **(285,000)** | (750,000) | - |
| Construction of Corporate Headquarters | **-** | (2,989) | (48,163) |
| Proceeds from Sale-Leaseback of Corporate Headquarters | **-** | 7,653 | - |
| Net Cash Used in Investing Activities | **(3,688,914)** | (10,247,614) | (9,008,171) |
| **Cash Flows Provided by Financing Activities** | | | |
| Bonds and Notes Proceeds | **69,289,769** | 69,707,578 | 63,856,174 |
| Bonds and Notes Retired | **(65,484,957)** | (61,164,794) | (53,460,058) |
| Net Decrease in Notes Payable and Other Interest-bearing Liabilities | **(553,387)** | (327,754) | (786,131) |
| Subordinated Debt Redemption | **(500,000)** | (404,685) | - |
| Proceeds from Corporate Headquarters Transaction | **-** | - | 83,417 |
| Preferred Stock Issued, Net | **-** | 370,348 | - |
| Preferred Stock Dividends Paid | **(84,456)** | (71,086) | (56,291) |
| Common Stock Issued | **75,531** | 87,355 | 65,615 |
| Common Stock Retired | **(25,888)** | (29,109) | (32,550) |
| Cash Patronage Distribution Paid | **(471,623)** | (415,414) | (376,464) |
| Net Cash Provided by Financing Activities | **2,244,989** | 7,752,439 | 9,293,712 |
| Net (Decrease) Increase in Cash and Cash Equivalents | **(346,897)** | (1,452,584) | 1,257,467 |
| Cash and Cash Equivalents at Beginning of Year | **1,660,517** | 3,113,101 | 1,855,634 |
| Cash and Cash Equivalents at End of Year | **$ 1,313,620** | $ 1,660,517 | $ 3,113,101 |

*The accompanying notes are an integral part of the consolidated financial statements.*

# Supplemental Consolidated Statements of Cash Flows Information
**CoBank, ACB**

($ in Thousands)

| Year Ended December 31, | 2017 | 2016 | 2015 |
|---|---|---|---|
| **Supplemental Noncash Investing and Financing Activities** | | | |
| Net Change in Accrued Purchases of Securities | **$ 14,852** | $ (99,247) | $ - |
| Net Change in Receivables from Sale of Investment Securities | **99,863** | 13,826 | 3,113 |
| Change in Unrealized Losses on Investment Securities, Before Taxes | **(132,864)** | (78,613) | (57,903) |
| Patronage in Common Stock | **118,570** | 114,258 | 98,117 |
| Removal of Corporate Headquarters from Balance Sheet in Sale-Leaseback Accounting | **-** | (76,063) | - |
| Reclassification of Collateral Asset to an Offset of the Fair Value of Interest Rate Swaps and Other Financial Instruments (refer to Note 11) | **70,415** | - | - |
| **Supplemental Noncash Fair Value Changes Related to Hedging Activities** | | | |
| Decrease in Interest Rate Swaps and Other Financial Instrument Assets | **$ 27,589** | $ 87,555 | $ 159,667 |
| Decrease in Bonds and Notes Related to Hedging Activities | **(44,558)** | (148,256) | (162,016) |
| (Decrease) Increase in Interest Rate Swaps and Other Financial Instrument Liabilities | **(75,992)** | 49,327 | 1,777 |
| **Supplemental Disclosure of Cash Flow Information** | | | |
| Interest Paid | **$ 1,645,399** | $ 1,234,540 | $ 885,197 |
| Income Taxes Paid | **13,173** | 141,952 | 137,436 |

*The accompanying notes are an integral part of the consolidated financial statements.*

## Note 1 – Description of Business and Summary of Significant Accounting Policies

**Description of Business**

CoBank, ACB (CoBank or the Bank) is one of the four banks of the Farm Credit System (System). CoBank provides loans, leases and other financial services to support agriculture, rural infrastructure and rural communities across the United States. The System is a federally chartered network of borrower-owned lending institutions composed of cooperatives and related service organizations. The System was established in 1916 by the U.S. Congress and is a Government Sponsored Enterprise (GSE). We are federally chartered under the Farm Credit Act of 1971, as amended (the Farm Credit Act), and are subject to supervision, examination and safety and soundness regulation by an independent federal agency, the Farm Credit Administration (FCA).

We are cooperatively owned by our U.S. customers. Our customers consist of agricultural cooperatives; other food and agribusiness companies; rural power, communications and water cooperatives and companies; rural community facilities; Agricultural Credit Associations (Associations), which are regulated, farmer-owned financial institutions and members of the System; and other businesses that serve agriculture and rural communities. We are the primary funding source for certain Associations serving specified geographic regions in the United States. We collectively refer to these entities as our affiliated Associations.

Our wholly-owned leasing subsidiary, Farm Credit Leasing Services Corporation (FCL), specializes in lease financing and related services for a broad range of equipment, machinery, vehicles and facilities.

In conjunction with other System entities, the Bank jointly owns three service organizations: the Federal Farm Credit Banks Funding Corporation (Funding Corporation), the FCS Building Association and the Farm Credit Association Captive Insurance Corporation. The Funding Corporation issues, markets and processes Federal Farm Credit Banks Consolidated Systemwide bonds, medium term notes and discount notes (collectively referred to as Systemwide Debt Securities) and also provides financial management and reporting services for the combined entities of the System. The FCS Building Association leases premises and equipment to the FCA as required by the Farm Credit Act. The Farm Credit Association Captive Insurance Company is a reciprocal insurer that provides insurance services such as directors and officers liability, fiduciary liability and a bankers bond to System organizations.

We have a minority ownership interest in AgVantis, Inc., which is chartered under the Farm Credit Act as a service organization to provide a range of support and technology services to certain Associations. We also have small equity interests in certain other System banks and Associations as required in connection with the purchase and sale of participation loans.

Copies of CoBank's financial reports are available on request by calling or visiting one of our banking center locations and through our website at www.cobank.com. Copies of financial reports of our affiliated Associations and the System are available on their respective websites.

**Summary of Significant Accounting Policies**

<u>Basis of Presentation and Principles of Consolidation</u>

The consolidated financial statements include the accounts of CoBank, CoBank, FCB and FCL. All significant intercompany accounts and transactions have been eliminated.

The accompanying consolidated financial statements exclude financial information of our affiliated Associations. CoBank and our affiliated Associations are collectively referred to as the "District." We separately publish certain unaudited combined financial information of the CoBank District, including a condensed statement of condition and statement of income, which can be found on our website at www.cobank.com. Such information is not incorporated by reference into, and should not be considered part of, this annual report.

We prepare our financial statements in conformity with accounting principles generally accepted in the United States of America (GAAP) and prevailing practices within the financial services industry. These principles require us to make estimates and assumptions that affect the amounts reported in the consolidated financial statements and accompanying notes. Actual results may differ from those estimates. Significant estimates are discussed in these notes to the consolidated financial statements, as applicable. Certain reclassifications have been made to amounts reported in previous years to conform to the 2017 presentation.

<u>Loans</u>

We report loans, excluding leases, at their principal amount outstanding and accrue interest income based upon the daily principal amount outstanding. For loans purchased at a discount, we amortize unearned income using the straight-line method, which approximates the interest method. We defer loan origination fees and costs, and amortize them over the life of the related loan as an adjustment to yield.

Except as otherwise noted, leases are included with loans in the consolidated financial statements and related notes. We record leases as either direct financing or operating leases. Under direct financing leases, unearned finance income from lease contracts represents the excess of gross lease receivables over the cost of leased equipment, net of estimated residual values. Residual values, which are reviewed at least annually, represent the estimated amount to be received at lease termination from the disposition of leased assets. We amortize net unearned finance income to interest income using the interest method. Under operating leases, property is recorded at cost and depreciated on a straight-line basis over the lease term to an estimated residual or salvage value. We recognize revenue as earned ratably over the term of the operating lease.

In the normal course of business, we manage lending credit exposures by selling or syndicating loans to System entities and other financial institutions. Such transactions include the transfer of participating interests, as defined pursuant to GAAP. We account for these transactions as sales and, accordingly, the assets transferred are not recognized in our consolidated balance sheets.

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 loans. Impaired loans include loans that are in nonaccrual status, accruing restructured, or past due 90 days or more and still accruing interest.

A loan is considered contractually past due when any principal repayment or interest payment required by the loan instrument is not received on or before the due date. A loan remains contractually past due until 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.

We do not accrue interest income on impaired loans unless they are adequately secured and in the process of collection. When interest accruals are suspended, accrued and unpaid interest income is reversed with current year accruals charged to earnings and prior-year amounts charged off against the allowance for loan losses.

For nonaccrual loans, we primarily apply cash receipts against the outstanding principal balance. If collectability of the loan balance is fully expected and certain other criteria are met, we recognize interest payments as interest income. We may return such loans to accrual status when the borrower is current, has demonstrated payment performance, collection of future payments is fully expected and there are no unrecovered charge-offs.

Generally, troubled debt restructurings (TDRs) are reported as either performing or nonperforming loans. Accruing restructured loans, which represent performing TDRs, are those for which the contractual terms and conditions have been amended or otherwise revised to incorporate certain monetary concessions because the borrower was experiencing financial difficulty at the time of restructuring. Such a loan that is subsequently refinanced at a current market rate with no concessionary terms is accounted for as a new loan and is no longer reported as a TDR. We place the loan in nonaccrual status if the borrower's ability to meet the revised contractual terms is uncertain.

We establish an impairment reserve if the fair value of assets held for operating leases decreases to below book value and such difference is not recoverable.

Allowance for Loan Losses and Reserve for Unfunded Commitments

Our allowance for loan losses is an adjustment to the value of our total loan and finance lease portfolio for inherent credit losses related to outstanding balances. We also maintain a separate reserve for unfunded commitments which is reported as a liability on the Bank's consolidated balance sheet. The reserve for unfunded commitments represents an additional reserve for binding commitments to extend credit and for commercial letters of credit. We had $29.0 billion and $178.7 million of commitments to extend credit and commercial letters of credit, respectively, at December 31, 2017. The amount of our allowance for loan losses and reserve for unfunded commitments can fluctuate based on the seasonal nature of borrowings in the agriculture industry, which is impacted by various factors including changing commodity prices and supplies. We refer to the combined amounts of the allowance for loan losses and the reserve for unfunded commitments as the "allowance for credit losses." At December 31, 2017, our allowance for credit losses totaled $670.8 million, of which $576.9 million related to the allowance for loan losses and $93.9 million related to the reserve for unfunded commitments.

The allowance for credit losses is maintained at a level we consider sufficient to absorb losses inherent in the loan and finance lease portfolio and in unfunded commitments. We base the allowance for credit losses on our regular evaluation of these portfolios.

To determine our allowance for credit losses, we divide our loans and finance leases into two broad categories: those that are impaired and those that are not. A loan or finance lease is impaired when, based on current information and events, it is probable that we will not collect all amounts due under the contractual terms. Impairment of loans and finance leases is measured based on the fair value of the collateral, if the loan or finance lease is collateral dependent, or the present value of expected future cash flows discounted at the effective interest rate of the contract. In limited cases, we base the impairment on observable market prices. Changes in the financial condition of our borrowers and in the general economy will cause these estimates, appraisals and evaluations to change.

For loans and finance leases that are not individually assessed for impairment, we establish an allowance for credit losses for losses that are both probable and estimable as of the balance sheet date. The evaluation of this portion of our portfolio generally considers default rates from industry data, internal risk ratings, loss given default assumptions, loss timing, historical recovery rates, specific industry conditions, weather conditions, general economic and political conditions, and changes in the character, composition and performance of the portfolio, among other factors. We also consider overall portfolio indicators, including trends in internally risk-rated exposures, classified exposures, and historical charge-offs and recoveries. Additionally, we consider borrower, industry, geographic and portfolio concentrations, including current developments within operating segments, and modeling imprecision. Changes in these factors, or our assumptions and estimates thereof, could result in a change in the allowance for credit losses and could have a direct and material impact on the provision for loan losses and our results of operations. The total allowance for credit losses is available to absorb probable and estimable credit losses within our entire portfolio.

We increase or decrease the allowance for credit losses by recording a provision or reversal for loan losses in the statement of income. We record loan losses against the allowance for loan losses when management determines that any portion of the loan or finance lease is uncollectible. We add subsequent recoveries, if any, to the allowance for loan losses. Transfers between the allowance for loan losses and the reserve for unfunded commitments can occur in conjunction with funding a seasonal line of credit or other loan and decreasing a related unfunded commitment or, conversely, receiving a loan payment and increasing a related unfunded commitment. Newly-executed loan commitments will also increase this liability.

We also assess the credit risk associated with off-balance sheet loan commitments and letters of credit and determine the appropriate level of reserve for unfunded commitments that should be recorded.

In 2015, we enhanced our methodology for estimating the allowance for credit losses related to non-impaired commercial loans. Enhancements included incorporating a view of probability of default over a longer period; aligning certain loss given default assumptions more closely with internal guidance; and modifying the loss emergence period assumption. While these changes did not materially impact the overall level of the allowance for credit losses, they did impact the distribution of the allowance for credit losses between our Agribusiness and Rural Infrastructure operating segments. No significant changes were made to our methodology for estimating the allowance for credit losses in 2017 or 2016.

Cash and Cash Equivalents

For purposes of these financial statements, cash represents demand deposits at banks and deposits in the process of clearing, which are used for operating or liquidity purposes.

Federal Funds Sold and Other Overnight Funds

Federal funds sold transactions involve lending excess reserve balances on a short-term basis, generally overnight. The Bank also places deposits with commercial banks, which earn interest overnight. Such investments are reported at their estimated fair value.

Investment Securities

We classify investment securities as available-for-sale and report them at their estimated fair value. We have no trading or held-to-maturity securities. We amortize or accrete purchased premiums and discounts using the constant yield method, which approximates the interest method, over the terms of the respective securities. We report unrealized gains and losses, net of applicable income taxes and credit losses, in the accumulated other comprehensive income (loss) component of shareholders' equity on the consolidated balance sheets. We use the specific identification method for determining cost in computing realized gains and losses on sales of investment securities.

We evaluate investments in a loss position to determine if such a loss is other-than-temporary. If losses are deemed to be other-than-temporary, we record the portion related to credit losses in earnings and the portion related to all other factors in other comprehensive income (loss). For additional information, refer to Note 4.

Premises and Equipment

We carry premises and equipment at cost less accumulated depreciation and amortization. We provide for depreciation and amortization on the straight-line method over the estimated useful lives of the assets. We record gains and losses on dispositions in current operating results. We record maintenance and repairs to operating expenses when incurred and capitalize improvements.

We capitalize leased property and equipment meeting certain criteria and depreciate such assets using the straight-line method over the terms of the respective leases.

During 2014, CoBank entered into a build-to-suit arrangement for the construction of a new corporate headquarters in Greenwood Village, Colorado. CoBank moved into the new headquarters building in late 2015 and commenced a lease agreement at that time. Rental payments associated with the lease total approximately $103.0 million over a 15-year term. The lease also contains three 5-year options to extend.

In 2015, the building and lease were sold to an investor. However, for accounting purposes, the sale transaction was not recognized until all construction contingencies were finalized, which did not occur until 2016. As a result, as of December 31, 2015, the $76.1 million in funding provided for the construction of the building was classified as an 'Other Asset' and the $83.4 million in proceeds received to date for the sale of the building were classified as an 'Other Liability' in the accompanying consolidated balance sheet. Upon resolution of all construction contingencies in 2016, the building asset was removed from the balance sheet and sale-leaseback accounting treatment was applied to this transaction.

Mineral Rights

As a result of our 2012 merger with U.S. AgBank, FCB (AgBank), we own mineral rights in Arizona, California, Colorado, Kansas, Nevada, New Mexico, Oklahoma and Utah. As required by the merger agreement, the net earnings from these mineral rights are passed on directly to certain Associations. Mineral income is primarily generated from royalties on natural gas and crude oil production, leasing bonuses and rental payments. This income may vary from year to year based on fluctuations in energy demand, prices and production. In 2017, net mineral income passed directly to these Associations totaled $7.7 million compared to $7.5 million in 2016 and $13.9 million in 2015. As a result of the agreement to pass the net earnings from mineral rights to certain Associations, these mineral rights have no carrying value in our consolidated balance sheet.

Derivative Financial Instruments and Hedging Activities

We record derivatives as assets or liabilities at their fair value on the consolidated balance sheets. We record changes in the fair value of a derivative in current period earnings or accumulated other comprehensive income (loss), depending on the use of the derivative and whether it qualifies for fair value or cash flow hedge accounting. For derivatives not designated as hedging instruments, we record the related change in fair value in current period earnings.

We formally document all relationships between derivatives and hedged items, as well as risk management objectives and strategies for undertaking various hedge transactions. This process includes linking all derivatives that are designated as fair value or cash flow hedges to assets and liabilities on the consolidated balance sheet or to forecasted transactions.

We also formally assess (both at the hedge's inception and on an ongoing basis) whether the derivatives that are used in hedging transactions have been effective in offsetting changes in the fair value or cash flows of hedged items and whether those derivatives are expected to remain effective in future periods. We typically use regression analyses or other statistical analyses to assess the effectiveness of hedges. Hedge accounting is discontinued prospectively if: (i) it is determined that the derivative is no longer effective in offsetting changes in the fair value or cash flows of a hedged item; (ii) the derivative expires or is sold, terminated or exercised; or (iii) management determines that the fair value or cash flow hedge designation is no longer appropriate.

If we determine that a derivative no longer qualifies as an effective fair value or cash flow hedge, or if management removes the hedge designation, we continue to carry the derivative on the balance sheet at fair value, with changes in fair value recognized in current period earnings as part of noninterest income. For discontinued cash flow hedges, we amortize the component of other comprehensive income (loss) to net interest income over the original term of the hedge contract. For additional information, refer to Note 11.

Systemwide Debt Securities

We, along with the other System banks, obtain funds for lending activities and operations primarily from the sale of debt securities issued by System banks through the Funding Corporation. These debt securities are composed of bonds, medium-term notes and discount notes and are collectively referred to as Systemwide Debt Securities. Pursuant to the Farm Credit Act, Systemwide Debt Securities are the general unsecured joint and several obligations of the System banks and each System bank is primarily liable for the portion of the Systemwide Debt Securities issued on its behalf. CoBank accounts for its joint and several liabilities for all Systemwide Debt Securities as a contingent liability. We do not record a liability unless it is probable that we will be required to pay an amount and that amount can be reasonably estimated. At December 31, 2017, CoBank was primarily liable for $117.2 billion of Systemwide Debt Securities, which was recorded as a liability on our consolidated balance sheet.

Fair Value Measurements

Our fair value measurements represent the estimated amount to be received to sell an asset or paid to transfer or extinguish a liability (an exit price) in active markets among willing participants at the reporting date. We maximize the use of observable inputs and minimize the use of unobservable inputs when measuring fair value. The classification of assets and liabilities measured at fair value within the disclosure hierarchy is based on three levels of inputs to the fair value measurement process, which are described in Note 12.

Fair Value of Guarantor's Obligations

We provide standby letters of credit, which are irrevocable undertakings to guarantee payment of a specified financial obligation. As a guarantor, we recognize a liability for the fair value of the obligation undertaken in issuing the guarantee. Our liability for the fair value of these obligations is determined by applying a risk-adjusted spread percentage to those obligations.

Employee Benefit Plans

Our employee benefit plans are described in Note 8. The net expense for employee benefit plans is recorded as employee compensation expense. For defined benefit pension plans, we use the "Projected Unit Credit" actuarial method for financial reporting and funding purposes.

The anticipated costs of benefits related to postretirement health care and life insurance are accrued during the period of the employees' active service and are classified as employee compensation expense.

Income Taxes

CoBank operates as a non-exempt cooperative, which qualifies for tax treatment under Subchapter T of the Internal Revenue Code. Accordingly, amounts distributed as qualified patronage distributions to borrowers in the form of cash or stock may be deducted from taxable income and are generally included in the recipients' taxable income. We base provisions for income taxes for financial reporting purposes only on those taxable earnings that will not be distributed as qualified patronage distributions. Substantially all of the Bank's statutorily tax-exempt activities reside in CoBank, FCB, a wholly-owned subsidiary of CoBank.

We record deferred tax assets and liabilities for temporary differences between the financial statement carrying amounts of existing assets and liabilities and their respective tax bases except for our nontaxable entity. We measure these deferred amounts using the current marginal statutory tax rate on the taxable portion of our business activities. Calculating deferred tax assets and liabilities involves various management estimates and assumptions as to future taxable earnings. We expect to fully realize deferred tax assets based on the projected level of future taxable income and other factors.

See Note 9 for further information regarding income taxes, including a discussion of the impact of the enactment of federal tax legislation in late 2017.

Subsequent Events

We have evaluated subsequent events through March 1, 2018, which is the date the financial statements were issued.

## Note 2 – Recently Issued or Adopted Accounting Pronouncements

New U.S. tax laws resulting from legislation commonly known as the Tax Cuts and Jobs Act of 2017 (TCJA) were enacted in late 2017. Among other things, the TCJA reduced the federal corporate tax rate from 35 percent to 21 percent. In accordance with GAAP, the change to a lower corporate tax rate led to a remeasurement of our deferred tax liabilities and deferred tax assets in the period of enactment (2017). For deferred tax amounts originally recorded in accumulated other comprehensive income/(loss), this remeasurement resulted in a disproportionate effect of $26.6 million which remained lodged in accumulated other comprehensive loss as of December 31, 2017. In February 2018, the Financial Accounting Standards Board (FASB) issued guidance requiring that this stranded tax effect be reclassified from accumulated other comprehensive income/(loss) to retained earnings. For all entities, this guidance becomes effective for financial statements issued for fiscal years beginning after December 15, 2018, and interim periods within those fiscal years. Early adoption is permitted. CoBank plans to record this reclassification during the first quarter of 2018 which will result in increases to accumulated other comprehensive loss and retained earnings by $26.6 million.

In August 2017, the FASB issued Accounting Standards Update (ASU), "Derivatives and Hedging (Topic 815): Targeted Improvements to Accounting for Hedging Activities." The new guidance will make more financial and non-financial hedging strategies eligible for hedge accounting. It also amends the presentation and disclosure requirements and changes how companies assess effectiveness. It is intended to more closely align hedge accounting with companies' risk management strategies, simplify the application of hedge accounting, and increase transparency as to the scope and results of hedging programs. For public business entities, the ASU becomes effective for financial statements issued for fiscal years beginning after December 15, 2018, and interim periods within those fiscal years. The new guidance may be adopted immediately, provided that all of the amendments are adopted as of the beginning of the year. We are reviewing the guidance to determine the effect on our financial position and results of operations.

In August 2016, the FASB issued ASU, "Statement of Cash Flows (Topic 230): Classification of Certain Cash Receipts and Cash Payments." The ASU is intended to reduce diversity in practice in how certain transactions are classified in the statement of cash flows. The guidance addresses, among other issues, the presentation of debt prepayment or extinguishment costs and settlement of zero-coupon debt instruments in the statement of cash flows. For public business entities, the ASU becomes effective for financial statements issued for fiscal years beginning after December 15, 2017, and interim periods within those fiscal years. Early application is permitted, provided that all of the amendments are adopted in the same period. While adoption will not have a significant impact on our statement of cash flows as a whole, the classification of certain transactions will change as a result of this guidance. Specifically, losses on early extinguishments of debt will be presented within financing activities whereas such cash outflows are currently being captured within operating activities. The adoption of this guidance will not impact our financial condition or results of operations.

In June 2016, the FASB issued ASU, "Financial Instruments – Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments." The ASU introduces a new model for recognizing credit losses on financial instruments based on an estimate of current expected credit losses. The new model will apply to: (1) loans, accounts receivable, trade receivables, and other financial assets measured at amortized cost; (2) loan commitments and certain other off-balance sheet credit exposures; (3) debt securities and other financial assets measured at fair value through other comprehensive income/(loss); and (4) beneficial interests in securitized financial assets. For public business entities that are not U.S. Securities and Exchange Commission filers the ASU becomes effective in fiscal years beginning after December 15, 2020, including interim periods within those fiscal years, and early application is permitted. We are reviewing the guidance to determine the effect on our consolidated financial position and results of operations.

In February 2016, the FASB issued ASU, "Leases." This guidance is intended to improve financial reporting about leasing transactions and affects all organizations that lease assets. The ASU 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. This guidance becomes effective for interim and annual periods beginning after December 15, 2018, and early application is permitted. Based on our preliminary review and analysis, the new lease accounting guidance will have an insignificant impact on our consolidated financial condition and results of operations, and will have no impact on our cash flows.

In January 2016, the FASB issued ASU, "Financial Instruments – Overall: Recognition and Measurement of Financial Assets and Financial Liabilities." The guidance affects, among other things, the presentation and disclosure requirements for financial instruments. For public entities, the ASU eliminates the requirement to disclose the methods and significant assumptions used to estimate the fair value of financial instruments carried at amortized cost. The guidance becomes effective for the first interim reporting period within the annual reporting periods after December 15, 2017. Early adoption is permitted. We do not anticipate this guidance to have a material effect, if any, on our consolidated financial position, results of operations or cash flows.

In May 2015, the FASB issued ASU, "Fair Value Measurement (Topic 820): Disclosures for Investments in Certain Entities that Calculate Net Asset Value per Share (or Its Equivalent)." The amendments apply to reporting entities that elect to measure the fair value of an investment using the net asset value (NAV) per share (or its equivalent) practical expedient. The amendments remove the requirement to categorize within the fair value hierarchy all investments for which fair value is measured using the NAV per share practical expedient. The amendments also remove the requirement to make certain disclosures for all investments that are eligible to be measured at fair value using the NAV per share practical expedient. Rather, those disclosures are limited to investments for which the entity has elected to measure the fair value using that practical expedient. We adopted this standard in 2016. The adoption did not impact our consolidated financial condition, results of operations or cash flows. Our qualified defined benefit plans assets contain certain investments which are valued using the NAV per share practical expedient. Adoption of this guidance had a minimal impact on our disclosures, which are contained in Note 8.

In April 2015, the FASB issued guidance entitled "Simplifying the Presentation of Debt Issuance Costs." The guidance requires debt issuance costs to be presented in the balance sheet as a direct deduction from the carrying value of the associated debt liability, consistent with the presentation of a debt discount. We adopted this standard in 2015. The adoption of this guidance resulted in the presentation of $53.9 million of debt issuance costs, previously recorded as Other Assets, as a direct deduction from the carrying value of the associated Bonds and Notes, as well as Subordinated Debt balances at December 31, 2015. The adoption did not impact our results of operations or overall financial condition.

In August 2014, the FASB issued guidance entitled "Presentation of Financial Statements — Going Concern." The guidance governs management's responsibility to evaluate whether there is substantial doubt about an entity's ability to continue as a going concern. This guidance requires management to perform interim and annual assessments of an entity's ability to continue as a going concern within one year after the date the financial statements are issued. Substantial doubt exists if it is probable that the entity will be unable to meet its obligations for the assessed period. This guidance became effective for interim and annual periods ending after December 15, 2016. Management completed its initial assessment as of December 31, 2016. No matters were identified with regard to our ability to continue as a going concern in adopting this standard.

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. As such, a substantial majority of our contracts would be excluded from the scope of this new guidance. The guidance becomes effective in 2018. We do not anticipate this guidance to have a material impact, if any, on our consolidated financial position, results of operations or cash flows.

# Note 3 – Loans, Loan Quality and Allowance for Credit Losses

### Loans Outstanding

Loans outstanding by operating segment are shown below.

($ in Millions)

| December 31, | 2017 | | 2016 | | 2015 | |
|---|---|---|---|---|---|---|
| | Amount | % | Amount | % | Amount | % |
| Agribusiness | **$ 30,304** | **31 %** | $ 28,660 | 30 % | $ 26,131 | 29 % |
| Strategic Relationships | **47,948** | **48** | 45,994 | 48 | 43,358 | 49 |
| Rural Infrastructure | **21,014** | **21** | 20,604 | 22 | 19,552 | 22 |
| **Total** | **$ 99,266** | **100 %** | $ 95,258 | 100 % | $ 89,041 | 100 % |
| Loans Purchased | **$ 16,910** | | $ 17,883 | | $ 14,614 | |
| Loans Sold | **17,617** | | 18,485 | | 16,928 | |

We have loans outstanding in all 50 states as well as certain foreign countries and a limited number of U.S. territories. Our agricultural export finance loan portfolio, which is part of our Agribusiness operating segment, includes U.S. government-sponsored trade financing programs which guarantee payment in the event of default by the borrower of generally 98 percent of loan principal outstanding and varying percentages of interest due. Of the $5.0 billion in agricultural export finance loans outstanding as of December 31, 2017, 20 percent were guaranteed by the U.S. government under one of these trade financing programs, primarily the General Sales Manager program of the U.S. Department of Agriculture's Commodity Credit Corporation.

We make loans to customers in various industries. For the years ended December 31, 2017, 2016 and 2015, total loans outstanding (excluding wholesale loans to Associations) did not exceed 10 percent for any specific industry.

Wholesale loans to our affiliated Associations represented 43 percent, 43 percent and 44 percent of total loans outstanding at December 31, 2017, 2016 and 2015, respectively. As of December 31, 2017, our affiliated Associations provided financing and other financial services to farmer-owners for rural real estate, equipment, working capital, agricultural production and operating purposes in the Northwest, West, Southwest, Rocky Mountains, Mid-Plains and Northeast regions of the United States. Participations in loans made by other System banks to their affiliated Associations represented 5 percent of our total loans outstanding at December 31, 2017, 2016 and 2015.

Unamortized loan premiums and discounts, and unamortized deferred loan fees and costs totaled $73.4 million, $70.9 million and $66.1 million as of December 31, 2017, 2016 and 2015, respectively.

**Allowance for Credit Losses**

The following tables present the changes in the components of our allowance for credit losses and the details of the ending balances. The allowance for credit losses includes the allowance for loan losses and the reserve for unfunded commitments. The elements of our allowance for credit losses are presented by operating segment.

| | Agribusiness | Strategic Relationships[1] | Rural Infrastructure | Total |
|---|---|---|---|---|
| **December 31, 2017** | | | | |
| **Allowance for Loan Losses** | | | | |
| Beginning Balance | $ 393,548 | $ - | $ 165,426 | $ 558,974 |
| Charge-offs | (35,675) | - | - | (35,675) |
| Recoveries | 1,644 | - | 353 | 1,997 |
| Provision for Loan Losses (Loan Loss Reversal) | 43,650 | - | (1,650) | 42,000 |
| Transfers from Reserve for Unfunded Commitments[2] | 7,911 | - | 1,720 | 9,631 |
| Ending Balance | 411,078 | - | 165,849 | 576,927 |
| **Reserve for Unfunded Commitments** | | | | |
| Beginning Balance | 76,737 | - | 26,759 | 103,496 |
| Transfers to Allowance for Loan Losses[2] | (7,911) | - | (1,720) | (9,631) |
| Ending Balance | 68,826 | - | 25,039 | 93,865 |
| **Allowance for Credit Losses** | $ 479,904 | $ - | $ 190,888 | $ 670,792 |
| **Allowance for Credit Losses** | | | | |
| Ending Balance, Allowance for Credit Losses Related to Loans: | | | | |
| Individually Evaluated for Impairment | $ 36,556 | $ - | $ 8,300 | $ 44,856 |
| Collectively Evaluated for Impairment | 443,348 | - | 182,588 | 625,936 |
| **Total** | $ 479,904 | $ - | $ 190,888 | $ 670,792 |
| **Loans** | | | | |
| Ending Balance for Loans and Related Accrued Interest: | | | | |
| Individually Evaluated for Impairment | $ 212,980 | $ 48,051,811 | $ 33,857 | $ 48,298,648 |
| Collectively Evaluated for Impairment | 30,196,160 | - | 21,070,306 | 51,266,466 |
| **Total** | $ 30,409,140 | $ 48,051,811 | $ 21,104,163 | $ 99,565,114 |

(1) As a result of our strong collateral position with respect to loans to Associations, along with the earnings, capital, portfolio diversification and loss reserves of Associations that serve as an additional layer of protection against losses, no allowance for credit losses is recorded in our Strategic Relationships operating segment.

(2) These transfers generally occur as a result of advances on or repayments of seasonal lines of credit or other loans.

| | Agribusiness | Strategic Relationships[1] | Rural Infrastructure | Total |
|---|---|---|---|---|
| **December 31, 2016** | | | | |
| **Allowance for Loan Losses** | | | | |
| Beginning Balance | $ 313,204 | $ - | $ 172,940 | $ 486,144 |
| Charge-offs | (4,276) | - | (324) | (4,600) |
| Recoveries | 747 | - | 1,735 | 2,482 |
| Provision for Loan Losses (Loan Loss Reversal) | 71,000 | - | (8,000) | 63,000 |
| Transfers from (to) Reserve for Unfunded Commitments[2] | 12,873 | - | (925) | 11,948 |
| Ending Balance | 393,548 | - | 165,426 | 558,974 |
| **Reserve for Unfunded Commitments** | | | | |
| Beginning Balance | 89,610 | - | 25,834 | 115,444 |
| Transfers (to) from Allowance for Loan Losses[2] | (12,873) | - | 925 | (11,948) |
| Ending Balance | 76,737 | - | 26,759 | 103,496 |
| **Allowance for Credit Losses** | $ 470,285 | $ - | $ 192,185 | $ 662,470 |
| **Allowance for Credit Losses** | | | | |
| Ending Balance, Allowance for Credit Losses Related to Loans: | | | | |
| Individually Evaluated for Impairment | $ 31,551 | $ - | $ - | $ 31,551 |
| Collectively Evaluated for Impairment | 438,734 | - | 192,185 | 630,919 |
| **Total** | $ 470,285 | $ - | $ 192,185 | $ 662,470 |
| **Loans** | | | | |
| Ending Balance for Loans and Related Accrued Interest: | | | | |
| Individually Evaluated for Impairment | $ 207,247 | $ 46,060,386 | $ - | $ 46,267,633 |
| Collectively Evaluated for Impairment | 28,539,237 | - | 20,692,216 | 49,231,453 |
| **Total** | $ 28,746,484 | $ 46,060,386 | $ 20,692,216 | $ 95,499,086 |
| **December 31, 2015** | | | | |
| **Allowance for Loan Losses** | | | | |
| Beginning Balance | $ 329,633 | $ - | $ 151,523 | $ 481,156 |
| Charge-offs | (2,668) | - | (5,597) | (8,265) |
| Recoveries | 1,977 | - | 1,040 | 3,017 |
| (Loan Loss Reversal) Provision for Loan Losses | (30,800) | - | 40,800 | 10,000 |
| Transfers from (to) Reserve for Unfunded Commitments[2] | 15,062 | - | (14,826) | 236 |
| Ending Balance | 313,204 | - | 172,940 | 486,144 |
| **Reserve for Unfunded Commitments** | | | | |
| Beginning Balance | 104,672 | - | 11,008 | 115,680 |
| Transfers (to) from Allowance for Loan Losses[2] | (15,062) | - | 14,826 | (236) |
| Ending Balance | 89,610 | - | 25,834 | 115,444 |
| **Allowance for Credit Losses** | $ 402,814 | $ - | $ 198,774 | $ 601,588 |
| **Allowance for Credit Losses** | | | | |
| Ending Balance, Allowance for Credit Losses Related to Loans: | | | | |
| Individually Evaluated for Impairment | $ 15,085 | $ - | $ 3,930 | $ 19,015 |
| Collectively Evaluated for Impairment | 387,729 | - | 194,844 | 582,573 |
| **Total** | $ 402,814 | $ - | $ 198,774 | $ 601,588 |
| **Loans** | | | | |
| Ending Balance for Loans and Related Accrued Interest: | | | | |
| Individually Evaluated for Impairment | $ 87,998 | $ 43,421,344 | $ 68,807 | $ 43,578,149 |
| Collectively Evaluated for Impairment | 26,107,889 | - | 19,562,084 | 45,669,973 |
| **Total** | $ 26,195,887 | $ 43,421,344 | $ 19,630,891 | $ 89,248,122 |

(1) As a result of our strong collateral position with respect to loans to Associations, along with the earnings, capital, portfolio diversification and loss reserves of Associations that serve as an additional layer of protection against losses, no allowance for credit losses is recorded in our Strategic Relationships operating segment.

(2) These transfers generally occur as a result of advances on or repayments of seasonal lines of credit or other loans.

The information in the tables under the Credit Quality, Aging Analysis and Impaired Loans captions is presented by operating segment, with guaranteed and non-guaranteed loans in our Agribusiness segment separately identified.

**Credit Quality**

The following table presents our loans and accrued interest classified, by management, pursuant to our regulator's Uniform Loan Classification System.

| December 31, 2017 | Agribusiness Non-Guaranteed | Agribusiness Guaranteed | Strategic Relationships | Rural Infrastructure | Total |
|---|---|---|---|---|---|
| Acceptable | $ 27,452,294 | $ 998,215 | $ 47,581,031 | $ 20,765,915 | $ 96,797,455 |
| Special Mention | 1,076,344 | - | 470,780 | 222,166 | 1,769,290 |
| Substandard | 878,047 | - | - | 116,082 | 994,129 |
| Doubtful | 4,240 | - | - | - | 4,240 |
| Loss | - | - | - | - | - |
| **Total** | $ 29,410,925 | $ 998,215 | $ 48,051,811 | $ 21,104,163 | $ 99,565,114 |
| **December 31, 2016** | | | | | |
| Acceptable | $ 25,785,154 | $ 1,258,464 | $ 46,060,386 | $ 20,236,049 | $ 93,340,053 |
| Special Mention | 1,007,981 | - | - | 380,218 | 1,388,199 |
| Substandard | 687,781 | - | - | 75,949 | 763,730 |
| Doubtful | 7,104 | - | - | - | 7,104 |
| Loss | - | - | - | - | - |
| **Total** | $ 27,488,020 | $ 1,258,464 | $ 46,060,386 | $ 20,692,216 | $ 95,499,086 |
| **December 31, 2015** | | | | | |
| Acceptable | $ 23,311,424 | $ 1,689,855 | $ 43,421,344 | $ 19,195,561 | $ 87,618,184 |
| Special Mention | 748,701 | 19 | - | 252,984 | 1,001,704 |
| Substandard | 445,300 | - | - | 181,489 | 626,789 |
| Doubtful | 588 | - | - | 857 | 1,445 |
| Loss | - | - | - | - | - |
| **Total** | $ 24,506,013 | $ 1,689,874 | $ 43,421,344 | $ 19,630,891 | $ 89,248,122 |

**Aging Analysis**

The following tables present an aging of past due loans and accrued interest.

| December 31, 2017 | Agribusiness Non-Guaranteed | Agribusiness Guaranteed | Strategic Relationships | Rural Infrastructure | Total |
|---|---|---|---|---|---|
| 30-89 Days Past Due | $ 33,503 | $ - | $ - | $ - | $ 33,503 |
| 90 Days Past Due | 14,190 | - | - | - | 14,190 |
| **Total Past Due** | $ 47,693 | $ - | $ - | $ - | $ 47,693 |
| Current | 29,363,232 | 998,215 | 48,051,811 | 21,104,163 | 99,517,421 |
| **Total** | $ 29,410,925 | $ 998,215 | $ 48,051,811 | $ 21,104,163 | $ 99,565,114 |
| **Accruing Loans 90 Days or More Past Due** | $ 670 | $ - | $ - | $ - | $ 670 |
| **December 31, 2016** | | | | | |
| 30-89 Days Past Due | $ 17,353 | $ - | $ - | $ - | $ 17,353 |
| 90 Days Past Due | 41,625 | - | - | - | 41,625 |
| **Total Past Due** | $ 58,978 | $ - | $ - | $ - | $ 58,978 |
| Current | 27,429,042 | 1,258,464 | 46,060,386 | 20,692,216 | 95,440,108 |
| **Total** | $ 27,488,020 | $ 1,258,464 | $ 46,060,386 | $ 20,692,216 | $ 95,499,086 |
| **Accruing Loans 90 Days or More Past Due** | $ 804 | $ - | $ - | $ - | $ 804 |

| December 31, 2015 | Agribusiness Non-Guaranteed | Agribusiness Guaranteed | Strategic Relationships | Rural Infrastructure | Total |
|---|---|---|---|---|---|
| 30-89 Days Past Due | $ 10,644 | $ - | $ - | $ - | $ 10,644 |
| 90 Days Past Due | 2,977 | - | - | 24,914 | 27,891 |
| **Total Past Due** | $ 13,621 | $ - | $ - | $ 24,914 | $ 38,535 |
| Current | 24,492,392 | 1,689,874 | 43,421,344 | 19,605,977 | 89,209,587 |
| **Total** | $ 24,506,013 | $ 1,689,874 | $ 43,421,344 | $ 19,630,891 | $ 89,248,122 |
| **Accruing Loans 90 Days or More Past Due** | $ 754 | $ - | $ - | $ - | $ 754 |

### Impaired Loans

Impaired loan information is shown in the following table. Loans past due 90 days or more and still accruing interest are adequately secured and in the process of collection.

| December 31, 2017 | Agribusiness Non-Guaranteed | Agribusiness Guaranteed(1) | Strategic Relationships(1) | Rural Infrastructure | Total |
|---|---|---|---|---|---|
| Nonaccrual Loans(2) | **$ 212,980** | **$ -** | **$ -** | **$ 33,857** | **$ 246,837** |
| Accruing Loans 90 Days or More Past Due | **670** | **-** | **-** | **-** | **670** |
| Accruing Restructured Loans | **-** | **-** | **-** | **-** | **-** |
| **Total Impaired Loans** | **$ 213,650** | **$ -** | **$ -** | **$ 33,857** | **$ 247,507** |
| **December 31, 2016** | | | | | |
| Nonaccrual Loans(2) | $ 207,247 | $ - | $ - | $ - | $ 207,247 |
| Accruing Loans 90 Days or More Past Due | 804 | - | - | - | 804 |
| Accruing Restructured Loans | - | - | - | 42,575 | 42,575 |
| **Total Impaired Loans** | $ 208,051 | $ - | $ - | $ 42,575 | $ 250,626 |
| **December 31, 2015** | | | | | |
| Nonaccrual Loans(2) | $ 87,998 | $ - | $ - | $ 68,807 | $ 156,805 |
| Accruing Loans 90 Days or More Past Due | 754 | - | - | - | 754 |
| Accruing Restructured Loans | - | - | - | - | - |
| **Total Impaired Loans** | $ 88,752 | $ - | $ - | $ 68,807 | $ 157,559 |

(1) There were no impaired loans in our Agribusiness Guaranteed or Strategic Relationships portfolios for any of the periods presented.

(2) Included in nonaccrual loans at December 31, 2017, 2016 and 2015 are $17.3 million, $34.8 million and $58.3 million, respectively, of loans that qualify as troubled debt restructurings.

The following tables present information on impaired loans and amounts in the allowance for loan losses.

| December 31, 2017 | Agribusiness Non-Guaranteed | Agribusiness Guaranteed[1] | Strategic Relationships[1] | Rural Infrastructure | Total |
|---|---|---|---|---|---|
| **Impaired Loans With No Related Allowance for Loan Losses** | | | | | |
| Carrying Amount | **$ 99,838** | **$ -** | **$ -** | **$ -** | **$ 99,838** |
| Unpaid Principal | **141,715** | **-** | **-** | **-** | **141,715** |
| Average Balance | **102,234** | **-** | **-** | **9,277** | **111,511** |
| Interest Income Recognized | **2,487** | **-** | **-** | **4,118** | **6,605** |
| **Impaired Loans With Related Allowance for Loan Losses** | | | | | |
| Carrying Amount | **113,812** | **-** | **-** | **33,857** | **147,669** |
| Unpaid Principal | **122,027** | **-** | **-** | **34,841** | **156,868** |
| Allowance for Loan Losses | **36,556** | **-** | **-** | **8,300** | **44,856** |
| Average Balance | **111,929** | **-** | **-** | **7,206** | **119,135** |
| Interest Income Recognized | **49** | **-** | **-** | **-** | **49** |
| **Total Impaired Loans** | | | | | |
| Carrying Amount | **213,650** | **-** | **-** | **33,857** | **247,507** |
| Unpaid Principal | **263,742** | **-** | **-** | **34,841** | **298,583** |
| Allowance for Loan Losses | **36,556** | **-** | **-** | **8,300** | **44,856** |
| Average Balance | **214,163** | **-** | **-** | **16,483** | **230,646** |
| Interest Income Recognized | **2,536** | **-** | **-** | **4,118** | **6,654** |
| **December 31, 2016** | | | | | |
| **Impaired Loans With No Related Allowance for Loan Losses** | | | | | |
| Carrying Amount | $ 79,908 | $ - | $ - | $ 42,575 | $ 122,483 |
| Unpaid Principal | 88,820 | - | - | 53,940 | 142,760 |
| Average Balance | 45,536 | - | - | 42,560 | 88,096 |
| Interest Income Recognized | 2,292 | - | - | 4,050 | 6,342 |
| **Impaired Loans With Related Allowance for Loan Losses** | | | | | |
| Carrying Amount | 128,143 | - | - | - | 128,143 |
| Unpaid Principal | 139,028 | - | - | - | 139,028 |
| Allowance for Loan Losses | 31,551 | - | - | - | 31,551 |
| Average Balance | 89,156 | - | - | 12,888 | 102,044 |
| Interest Income Recognized | 3 | - | - | - | 3 |
| **Total Impaired Loans** | | | | | |
| Carrying Amount | 208,051 | - | - | 42,575 | 250,626 |
| Unpaid Principal | 227,848 | - | - | 53,940 | 281,788 |
| Allowance for Loan Losses | 31,551 | - | - | - | 31,551 |
| Average Balance | 134,692 | - | - | 55,448 | 190,140 |
| Interest Income Recognized | 2,295 | - | - | 4,050 | 6,345 |

[1] There were no impaired loans in our Agribusiness Guaranteed or Strategic Relationships portfolios for any of the periods presented.

| December 31, 2015 | Agribusiness Non-Guaranteed | Agribusiness Guaranteed[(1)] | Strategic Relationships[(1)] | Rural Infrastructure | Total |
|---|---|---|---|---|---|
| **Impaired Loans With No Related Allowance for Loan Losses** | | | | | |
| Carrying Amount | $ 20,739 | $ - | $ - | $ 43,893 | $ 64,632 |
| Unpaid Principal | 29,757 | - | - | 56,131 | 85,888 |
| Average Balance | 18,062 | - | - | 55,351 | 73,413 |
| Interest Income Recognized | 2,142 | - | - | 1,285 | 3,427 |
| **Impaired Loans With Related Allowance for Loan Losses** | | | | | |
| Carrying Amount | 68,013 | - | - | 24,914 | 92,927 |
| Unpaid Principal | 76,594 | - | - | 28,810 | 105,404 |
| Allowance for Loan Losses | 15,085 | - | - | 3,930 | 19,015 |
| Average Balance | 51,656 | - | - | 15,896 | 67,552 |
| Interest Income Recognized | 12 | - | - | - | 12 |
| **Total Impaired Loans** | | | | | |
| Carrying Amount | 88,752 | - | - | 68,807 | 157,559 |
| Unpaid Principal | 106,351 | - | - | 84,941 | 191,292 |
| Allowance for Loan Losses | 15,085 | - | - | 3,930 | 19,015 |
| Average Balance | 69,718 | - | - | 71,247 | 140,965 |
| Interest Income Recognized | 2,154 | - | - | 1,285 | 3,439 |

(1) There were no impaired loans in our Agribusiness Guaranteed or Strategic Relationships portfolios for any of the periods presented.

Interest income forgone on nonaccrual and accruing restructured loans is as follows:

| Year Ended December 31, 2017 | |
|---|---|
| Interest Income Which Would Have Been Recognized Per Original Terms | $ 16,068 |
| Less: Interest Income Recognized | (5,882) |
| **Forgone Interest Income** | $ 10,186 |

### Commitments on Impaired Loans

There were $32.5 million in commitments available to be drawn by borrowers whose loans were classified as impaired at December 31, 2017.

### Troubled Debt Restructurings

Troubled debt restructurings (TDRs) are loans in which we have granted a concession because the borrower is experiencing financial difficulty. Concessions may include payment deferrals, term extensions and/or interest rate reductions. TDRs classified as nonaccrual loans, along with other impaired loans, may be returned to accruing status upon meeting specific criteria, as more fully described in Note 1. A summary of the number of modifications that qualified as TDRs and the dollar amounts before and after modification is as follows:

| December 31, | 2017 | 2016 | 2015 |
|---|---|---|---|
| Number of Loan Modifications that Qualified as a TDR | - | 1 | - |
| Total Loan Amount Before Modification | $ - | $ 24,214 | $ - |
| Total Loan Amount After Modification | - | 24,214 | - |

Subsequent to their restructuring, there have been no payment defaults on our TDR-classified loans.

**Leases Outstanding**

A summary of the components of FCL's net investment in direct financing leases and property on operating leases is as follows:

($ in Millions)

| December 31, | 2017 | 2016 | 2015 |
|---|---|---|---|
| **Net Investment in Direct Financing Leases:** | | | |
| Minimum Lease Payments to be Received, Net of Participation Interests | **$ 2,096** | $ 2,074 | $ 2,038 |
| Estimated Residual Values of Leased Property (Unguaranteed) | **1,159** | 925 | 783 |
| Initial Direct Costs | **32** | 28 | 25 |
| Less: Unearned Finance Income | **(332)** | (297) | (286) |
| Net Investment in Direct Financing Leases | **$ 2,955** | $ 2,730 | $ 2,560 |
| **Property on Operating Leases:** | | | |
| Vehicles and Other Equipment | **$ 777** | $ 823 | $ 852 |
| Initial Direct Costs | **(1)** | (1) | 5 |
| Total | **776** | 822 | 857 |
| Less: Accumulated Depreciation | **(363)** | (380) | (374) |
| Net Property on Operating Leases | **$ 413** | $ 442 | $ 483 |
| **Year Ended December 31,** | **2017** | **2016** | **2015** |
| Depreciation Expense | **$ 148** | $ 150 | $ 157 |

At December 31, 2017, gross minimum lease payments to be received for direct financing leases and minimum future rental revenue for noncancelable operating leases are as follows:

($ in Millions)

| Year | Minimum Lease Payments | Minimum Future Rental Revenue |
|---|---|---|
| 2018 | $ 612 | $ 69 |
| 2019 | 489 | 36 |
| 2020 | 360 | 23 |
| 2021 | 245 | 17 |
| 2022 | 117 | 10 |
| Subsequent Years | 273 | 3 |

# Note 4 – Investment Securities

A summary of investment securities available-for-sale follows. See Note 12 for disclosures about estimated fair values of financial instruments, including investments.

($ in Millions)

| December 31, 2017 | Amortized Cost | Gross Unrealized Gains | Gross Unrealized Losses | Fair Value |
|---|---|---|---|---|
| Certificates of Deposit | **$ 775** | **$ -** | **$ -** | **$ 775** |
| U.S. Treasury Debt | **11,137** | **8** | **(116)** | **11,029** |
| U.S. Agency Debt | **3,369** | **7** | **(20)** | **3,356** |
| Residential Mortgage-Backed Securities (MBS): | | | | |
| Ginnie Mae | **1,876** | **1** | **(21)** | **1,856** |
| U.S. Agency | **6,758** | **24** | **(64)** | **6,718** |
| FHA/VA Non-Wrapped Reperformer | **235** | **22** | **-** | **257** |
| Non-Agency | **26** | **3** | **-** | **29** |
| Commercial MBS: | | | | |
| U.S. Agency | **2,504** | **3** | **(8)** | **2,499** |
| Agricultural MBS: | | | | |
| Farmer Mac | **79** | **-** | **(1)** | **78** |
| Corporate Bonds | **40** | **-** | **-** | **40** |
| Asset-Backed and Other | **225** | **8** | **-** | **233** |
| **Total** | **$ 27,024** | **$ 76** | **$ (230)** | **$ 26,870** |

($ in Millions)

| December 31, 2016 | Amortized Cost | Gross Unrealized Gains | Gross Unrealized Losses | Fair Value |
|---|---|---|---|---|
| Certificates of Deposit | $ 775 | $ 1 | $ - | $ 776 |
| U.S. Treasury Debt | 11,189 | 38 | (86) | 11,141 |
| U.S. Agency Debt | 5,132 | 32 | (20) | 5,144 |
| Residential MBS: | | | | |
| Ginnie Mae | 538 | 3 | - | 541 |
| U.S. Agency | 6,714 | 44 | (47) | 6,711 |
| FHA/VA Non-Wrapped Reperformer | 268 | 9 | (2) | 275 |
| Non-Agency | 63 | 8 | - | 71 |
| Commercial MBS: | | | | |
| U.S. Agency | 2,649 | 4 | (12) | 2,641 |
| Agricultural MBS: | | | | |
| Farmer Mac | 99 | - | (2) | 97 |
| Corporate Bonds | 40 | - | - | 40 |
| Asset-Backed and Other | 319 | 10 | (1) | 328 |
| **Total** | $ 27,786 | $ 149 | $ (170) | $ 27,765 |

($ in Millions)

| December 31, 2015 | Amortized Cost | Gross Unrealized Gains | Gross Unrealized Losses | Fair Value |
|---|---|---|---|---|
| U.S. Treasury Debt | $ 7,174 | $ 36 | $ (22) | $ 7,188 |
| U.S. Agency Debt | 5,842 | 41 | (26) | 5,857 |
| Residential MBS: | | | | |
| Ginnie Mae | 901 | 5 | - | 906 |
| U.S. Agency | 7,762 | 55 | (54) | 7,763 |
| FHA/VA Non-Wrapped Reperformer | 336 | 9 | (3) | 342 |
| Non-Agency | 118 | 12 | (1) | 129 |
| Commercial MBS: | | | | |
| U.S. Agency | 1,986 | 1 | (5) | 1,982 |
| Agricultural MBS: | | | | |
| Farmer Mac | 126 | - | (2) | 124 |
| Corporate Bonds | 166 | - | - | 166 |
| Asset-Backed and Other | 36 | 12 | (1) | 47 |
| **Total** | $ 24,447 | $ 171 | $ (114) | $ 24,504 |

A summary of the contractual maturity, amortized cost, fair value and weighted average yield of investment securities by type at December 31, 2017 is as follows:

**Certificates of Deposit**

($ in Millions)

| Contractual Maturity | Amortized Cost | Fair Value | Weighted Average Yield |
|---|---|---|---|
| In One Year or Less | $ 775 | $ 775 | 1.58 % |
| One to Five Years | - | - | - |
| Five to Ten Years | - | - | - |
| After Ten Years | - | - | - |
| **Total** | $ 775 | $ 775 | 1.58 |

**U.S. Treasury Debt Securities**

($ in Millions)

| Contractual Maturity | Amortized Cost | Fair Value | Weighted Average Yield |
|---|---|---|---|
| In One Year or Less | $ 896 | $ 893 | 1.04 % |
| One to Five Years | 7,056 | 7,008 | 1.74 |
| Five to Ten Years | 3,185 | 3,128 | 1.94 |
| After Ten Years | - | - | - |
| **Total** | $ 11,137 | $ 11,029 | 1.74 |

**U.S. Agency Debt Securities**

($ in Millions)

| Contractual Maturity | Amortized Cost | Fair Value | Weighted Average Yield |
|---|---|---|---|
| In One Year or Less | $ 1,076 | $ 1,079 | 2.52 % |
| One to Five Years | 1,097 | 1,094 | 2.00 |
| Five to Ten Years | 1,196 | 1,183 | 1.75 |
| After Ten Years | - | - | - |
| **Total** | $ 3,369 | $ 3,356 | 2.08 |

**Ginnie Mae Residential MBS**

($ in Millions)

| Contractual Maturity | Amortized Cost | Fair Value | Weighted Average Yield |
|---|---|---|---|
| In One Year or Less | $ - | $ - | - % |
| One to Five Years | 3 | 3 | 2.53 |
| Five to Ten Years | 6 | 6 | 2.66 |
| After Ten Years | 1,867 | 1,847 | 2.49 |
| **Total** | $ 1,876 | $ 1,856 | 2.49 |

**U.S. Agency Residential MBS**

($ in Millions)

| Contractual Maturity | Amortized Cost | Fair Value | Weighted Average Yield |
|---|---|---|---|
| In One Year or Less | $ - | $ - | - % |
| One to Five Years | 17 | 17 | 2.16 |
| Five to Ten Years | 24 | 24 | 1.81 |
| After Ten Years | 6,717 | 6,677 | 2.40 |
| **Total** | $ 6,758 | $ 6,718 | 2.40 |

**FHA/VA Non-Wrapped Reperformer Residential MBS**

($ in Millions)

| Contractual Maturity | Amortized Cost | Fair Value | Weighted Average Yield |
|---|---|---|---|
| In One Year or Less | $ - | $ - | - % |
| One to Five Years | - | - | - |
| Five to Ten Years | - | - | - |
| After Ten Years | 235 | 257 | 4.86 |
| **Total** | $ 235 | $ 257 | 4.86 |

## Non-Agency Residential MBS

($ in Millions)

| Contractual Maturity | Amortized Cost | Fair Value | Weighted Average Yield |
|---|---|---|---|
| In One Year or Less | $ - | $ - | - % |
| One to Five Years | - | - | - |
| Five to Ten Years | - | - | - |
| After Ten Years | 26 | 29 | 7.44 |
| **Total** | $ 26 | $ 29 | 7.44 |

## U.S. Agency Commercial MBS

($ in Millions)

| Contractual Maturity | Amortized Cost | Fair Value | Weighted Average Yield |
|---|---|---|---|
| In One Year or Less | $ - | $ - | - % |
| One to Five Years | 1,234 | 1,232 | 1.85 |
| Five to Ten Years | 1,270 | 1,267 | 1.88 |
| After Ten Years | - | - | - |
| **Total** | $ 2,504 | $ 2,499 | 1.86 |

## Farmer Mac Agricultural MBS

($ in Millions)

| Contractual Maturity | Amortized Cost | Fair Value | Weighted Average Yield |
|---|---|---|---|
| In One Year or Less | $ - | $ - | - % |
| One to Five Years | - | - | - |
| Five to Ten Years | - | - | - |
| After Ten Years | 79 | 78 | 2.88 |
| **Total** | $ 79 | $ 78 | 2.88 |

## Corporate Bonds

($ in Millions)

| Contractual Maturity | Amortized Cost | Fair Value | Weighted Average Yield |
|---|---|---|---|
| In One Year or Less | $ 40 | $ 40 | 1.97 % |
| One to Five Years | - | - | - |
| Five to Ten Years | - | - | - |
| After Ten Years | - | - | - |
| **Total** | $ 40 | $ 40 | 1.97 |

## Asset-Backed Securities and Other

($ in Millions)

| Contractual Maturity | Amortized Cost | Fair Value | Weighted Average Yield |
|---|---|---|---|
| In One Year or Less | $ 6 | $ 6 | 4.19 % |
| One to Five Years | 194 | 194 | 1.24 |
| Five to Ten Years | - | - | - |
| After Ten Years | 25 | 33 | 15.52 |
| **Total** | $ 225 | $ 233 | 2.92 |

While the substantial majority of our residential mortgage-backed securities (MBS) and a portion of our asset-backed securities (ABS) have contractual maturities in excess of 10 years, expected maturities for these securities are shorter than contractual maturities because of structured cash flow features and because borrowers have the right to call or prepay obligations.

The following tables show the fair value and gross unrealized losses for investments in a loss position aggregated by security type, and the length of time the securities have been in a continuous unrealized loss position at December 31, 2017, 2016 and 2015, respectively. The continuous loss position is based on the date the impairment first occurred.

| ($ in Millions) | Less Than 12 Months | | Greater Than 12 Months | |
|---|---|---|---|---|
| | **Fair Value** | **Unrealized Losses** | **Fair Value** | **Unrealized Losses** |
| **December 31, 2017** | | | | |
| Certificates of Deposit | **$ 280** | **$ -** | **$ -** | **$ -** |
| U.S. Treasury Debt | **6,048** | **(46)** | **2,953** | **(70)** |
| U.S. Agency Debt | **977** | **(5)** | **1,039** | **(15)** |
| Residential MBS: | | | | |
| Ginnie Mae | **1,540** | **(21)** | **53** | **-** |
| U.S. Agency | **2,109** | **(21)** | **1,406** | **(43)** |
| FHA/VA Non-Wrapped Reperformer | **21** | **-** | **-** | **-** |
| Non-Agency | **1** | **-** | **7** | **-** |
| Commercial MBS: | | | | |
| U.S. Agency | **814** | **(4)** | **356** | **(4)** |
| Agricultural MBS: | | | | |
| Farmer Mac | **-** | **-** | **78** | **(1)** |
| Corporate Bonds | **10** | **-** | **-** | **-** |
| Asset-Backed and Other | **77** | **-** | **127** | **-** |
| **Total** | **$ 11,877** | **$ (97)** | **$ 6,019** | **$ (133)** |

| ($ in Millions) | Less Than 12 Months | | Greater Than 12 Months | |
|---|---|---|---|---|
| | Fair Value | Unrealized Losses | Fair Value | Unrealized Losses |
| **December 31, 2016** | | | | |
| Certificates of Deposit | $ - | $ - | $ - | $ - |
| U.S. Treasury Debt | 5,441 | (86) | - | - |
| U.S. Agency Debt | 1,165 | (14) | 491 | (6) |
| Residential MBS: | | | | |
| Ginnie Mae | 84 | - | 21 | - |
| U.S. Agency | 1,403 | (10) | 1,492 | (37) |
| FHA/VA Non-Wrapped Reperformer | 9 | - | 21 | (2) |
| Non-Agency | - | - | 11 | - |
| Commercial MBS: | | | | |
| U.S. Agency | 1,245 | (11) | 333 | (1) |
| Agricultural MBS: | | | | |
| Farmer Mac | 31 | - | 66 | (2) |
| Corporate Bonds | 10 | - | - | - |
| Asset-Backed and Other | 294 | - | 5 | (1) |
| **Total** | $ 9,682 | $ (121) | $ 2,440 | $ (49) |
| **December 31, 2015** | | | | |
| U.S. Treasury Debt | $ 4,429 | $ (22) | $ - | $ - |
| U.S. Agency Debt | 2,200 | (12) | 826 | (14) |
| Residential MBS: | | | | |
| Ginnie Mae | 23 | - | 12 | - |
| U.S. Agency | 739 | (5) | 1,866 | (49) |
| FHA/VA Non-Wrapped Reperformer | 65 | - | 62 | (3) |
| Non-Agency | 24 | - | 16 | (1) |
| Commercial MBS: | | | | |
| U.S. Agency | 1,368 | (5) | 179 | - |
| Agricultural MBS: | | | | |
| Farmer Mac | - | - | 124 | (2) |
| Corporate Bonds | 106 | - | - | - |
| Asset-Backed and Other | - | - | 7 | (1) |
| **Total** | $ 8,954 | $ (44) | $ 3,092 | $ (70) |

As of December 31, 2017, with the exception of the securities in the following table, we expect to collect all principal and interest payments on our investment securities. We do not intend to sell the securities in unrealized loss positions, and it is not likely that we will be required to sell such securities, for regulatory, liquidity or other purposes before an anticipated recovery of our cost basis occurs.

We recorded no other-than-temporary impairment (OTTI) losses in 2017. In 2016, we recorded $0.8 million of impairment losses related to one investment security. In 2015, we recorded $11.1 million in impairment losses related to two FHA/VA non-wrapped reperformer MBS due to lower projected cash flows resulting from loan modification activity in the underlying collateral. One of these securities was subsequently sold during 2015 for total proceeds of $21.3 million, which resulted in a gain of $0.8 million. The following table summarizes OTTI losses recorded in earnings by security type in 2016 and 2015.

| ($ in Millions) | Number of Securities | OTTI |
|---|---|---|
| **Year Ended December 31, 2016** | | |
| FHA/VA Non-Wrapped Reperformer Residential MBS | 1 | $ 1 |
| **Total** | 1 | $ 1 |
| **Year Ended December 31, 2015** | | |
| FHA/VA Non-Wrapped Reperformer Residential MBS | 2 | $ 11 |
| **Total** | 2 | $ 11 |

The fair value of our securities with previously recorded OTTI losses was $9.6 million, $35.0 million and $104.0 million at December 31, 2017, 2016 and 2015, respectively.

The following table details the activity related to the credit loss component of investment securities that have been written down for OTTI.

**Credit Losses on Impaired Investments** ($ in Millions)

| | 2017 | 2016 | 2015 |
|---|---|---|---|
| Beginning of Year | **$ 10** | $ 29 | $ 57 |
| Additional Credit Impairments Related to Securities Previously Impaired | **-** | - | 10 |
| Initial Credit Impairments Related to Securities Not Previously Impaired | **-** | 1 | 1 |
| Sales of Investments with Credit Impairments | **(5)** | (18) | (37) |
| Subsequent Accretion for Increases in Cash Flows Expected to be Collected | **-** | (2) | (2) |
| **End of Year** | **$ 5** | $ 10 | $ 29 |

In 2015, we enhanced our process for estimating the component of unrealized losses attributable to credit losses for impaired investment securities. These enhancements primarily included using third-party credit and cash flow models which utilize loan level data to project future performance of MBS and ABS. These improvements did not materially impact the overall level of expected losses. Model projections are influenced by factors such as interest rates, economic conditions, including housing prices, and the performance, type and age of collateral. Projected prepayment rates ranged from 12 percent to 57 percent (conditional prepayment rate) for impaired investment securities at December 31, 2017. The model considers current and historical loan level performance information and the factors listed above to estimate future defaults. Default rates ranged from 4 percent to 13 percent for impaired investment securities at December 31, 2017. Loss severity results are derived using model estimated home price assumptions at the time of default and ranged from zero to 65 percent for impaired investment securities at December 31, 2017.

## Note 5 – Bonds and Notes

We are primarily liable for the following bonds and notes:

($ in Millions)

| December 31, | 2017 | 2016 | 2015 |
|---|---|---|---|
| Bonds | **$ 100,950** | $ 100,987 | $ 89,677 |
| Medium-term Notes | **89** | 95 | 118 |
| Discount Notes | **16,124** | 12,210 | 15,019 |
| Total Systemwide Debt Securities | **117,163** | 113,292 | 104,814 |
| Cash Investment Services Payable | **941** | 1,501 | 1,833 |
| Other | **302** | 293 | 323 |
| **Total Bonds and Notes** | **$ 118,406** | $ 115,086 | $ 106,970 |

### Systemwide Debt Securities

We, along with the other System banks, obtain funds for lending activities and operations primarily from the sale of debt securities issued by System banks through the Funding Corporation. These debt securities are composed of bonds, medium-term notes and discount notes and are collectively referred to as Systemwide Debt Securities. Pursuant to the Farm Credit Act, Systemwide Debt Securities are the general unsecured joint and several obligations of the System banks. Systemwide Debt Securities are not obligations of, and are not guaranteed by, the U.S. government or any agency or instrumentality thereof, other than the System banks. Bonds and medium-term notes are issued at fixed or floating interest rates. Bonds have original maturities of three months to 30 years, while medium-term notes have original maturities ranging from one to 30 years. Discount notes are issued with maturities ranging from one to 365 days. The weighted average remaining maturity of CoBank's discount notes outstanding at December 31, 2017 was 131 days.

### Other Bonds and Notes

Cash investment services payable mature within one year. Other bonds and notes include cash collateral payable to derivative counterparties that have posted collateral to us.

Other bonds and notes also includes $250.0 million at December 31, 2017 and $205.0 million at December 31, 2016 and 2015 in funding pursuant to a bond guarantee program offered by the Rural Utilities Service (RUS) agency of the United States Department of Agriculture. At December 31, 2017, CoBank could borrow an additional $250.0 million to fund rural electric and telecommunications infrastructure loans under the program. This funding is provided under a bond purchase agreement with the Federal Financing Bank (FFB) and a bond guarantee agreement with RUS, which provides guarantees to the FFB. As part of the bond guarantee agreement with RUS, we are required to pledge collateral in an amount at least equal to the principal balance of the notes outstanding. The bonds outstanding mature in 6-9 years.

### Maturities and Rates

The aggregate maturities and the weighted average interest rates of CoBank's Systemwide Debt Securities at December 31, 2017 are shown in the following table. Weighted average interest rates include the effect of related derivative financial instruments.

($ in Millions)

**Maturities and Rates of Systemwide Debt Securities**

| | Bonds | | Medium-term Notes | | Discount Notes | | Total | |
|---|---|---|---|---|---|---|---|---|
| Year of Maturity | Amount | Weighted Average Interest Rate | Amount | Weighted Average Interest Rate | Amount | Weighted Average Interest Rate | Amount | Weighted Average Interest Rate |
| 2018 | $ 35,451 | 1.44 % | $ - | - % | $ 16,124 | 1.27 % | $ 51,575 | 1.39 % |
| 2019 | 25,964 | 1.50 | 1 | 6.67 | - | - | 25,965 | 1.50 |
| 2020 | 10,711 | 1.69 | - | - | - | - | 10,711 | 1.69 |
| 2021 | 5,753 | 1.88 | 4 | 7.35 | - | - | 5,757 | 1.89 |
| 2022 | 4,539 | 2.06 | - | - | - | - | 4,539 | 2.06 |
| 2023 and thereafter | 18,532 | 2.88 | 84 | 5.77 | - | - | 18,616 | 2.90 |
| **Total** | $ 100,950 | 1.80 | $ 89 | 5.85 | $ 16,124 | 1.27 | $ 117,163 | 1.73 |

Certain Systemwide Debt Securities include debt which may be called on the first call date and, subsequently, called daily or on each interest payment date thereafter. At December 31, 2017, callable debt was $8.4 billion, with the range of first call dates being from January 2018 through December 2021.

### Conditions for Issuing Systemwide Debt

Certain conditions must be met before we can participate in the issuance of Systemwide Debt Securities. One such condition of participation, required by the Farm Credit Act and FCA regulations, is that we must maintain specified, eligible, unencumbered assets at least equal in value to the total amount of debt obligations outstanding for which we are primarily liable. Such assets exceeded applicable debt by $9.3 billion at December 31, 2017. This requirement does not provide holders of Systemwide Debt Securities with a security interest in any of our assets.

In addition, because System banks are contingently liable for Systemwide Debt Securities of the other System banks, the banks have entered into agreements to provide for mutual protection. The System banks and the Funding Corporation operate under a Third Amended and Restated Market Access Agreement (MAA) designed to address certain Funding Corporation statutory responsibilities. The MAA financial conditions establish mechanisms for monitoring, limiting and ultimately denying a troubled System bank's access to and participation in Systemwide debt issuances, thereby limiting other System banks' exposure to statutory joint and several liabilities. The MAA promotes the identification and resolution of financial problems of individual System banks in a timely manner. As required by the MAA, the System banks and the Funding Corporation undertake a periodic formal review of the MAA to consider whether any amendments are appropriate. A review of the MAA was undertaken in 2016 and modifications were made effective January 1, 2017 to adapt to new FCA capital regulations that became effective on January 1, 2017. For discussion related to the FCA's capital regulations, see Note 7.

The System banks and the Funding Corporation have also entered into an Amended and Restated Contractual Interbank Performance Agreement (CIPA). The CIPA establishes an agreed-upon standard of financial condition and performance for the System banks and their affiliated Associations (the Districts). The CIPA measures various ratios taking into account the capital, asset quality, earnings, interest rate risk and liquidity of the Districts and System banks. At December 31, 2017, 2016 and 2015, all System banks, including CoBank, were in compliance with all of the conditions of participation for the issuance of Systemwide Debt Securities. Periodically, the ratios in the CIPA model are reviewed to take into consideration current performance standards in the financial services industry. A review was conducted during 2016, however no adjustments to the CIPA model were made.

**Insurance Fund**

The Farm Credit Act established the Farm Credit System Insurance Corporation (Insurance Corporation) to administer the Farm Credit Insurance Fund (Insurance Fund). The Insurance Corporation insures the timely payment of principal and interest on Systemwide Debt Securities and carries out various other responsibilities.

The primary sources of funds for the Insurance Fund are premiums paid by the System banks and earnings on the Insurance Corporation assets. Premiums are determined and assessed to System banks semi-annually by the Insurance Corporation.

Each System bank is required to pay premiums into the Insurance Fund until the assets in the Insurance Fund reach the "secure base amount" (SBA), which is defined in the Farm Credit Act as 2 percent of the aggregate outstanding insured Systemwide Debt Securities (adjusted to reflect the reduced risk on loans or investments guaranteed by the U.S. or state governments) or such other percentage of the aggregate outstanding insured Systemwide Debt Securities as the Insurance Corporation in its sole discretion determines to be actuarially sound. When the amount in the Insurance Fund exceeds the SBA, the Insurance Corporation is required to reduce premiums, and, in some instances, may refund excess amounts, but must still ensure that premiums are sufficient to maintain the level of the Insurance Fund at the SBA. There were no premium refunds from the Insurance Corporation in the years ended December 31, 2017, 2016 and 2015.

The Insurance Corporation premium rates were 15 basis points of average outstanding adjusted insured debt obligations for all of 2017, 16 basis points in the first half of 2016 and 18 basis points in the second half of 2016. For the year ended December 31, 2015, the Insurance Corporation premium rate was 13 basis points of adjusted insured debt obligations.

The Insurance Fund is available to assist with the timely payment of principal and interest on Systemwide Debt Securities, in the event of a default by a System bank, to the extent that net assets are available in the Insurance Fund. No other liabilities reflected in our financial statements are insured by the Insurance Corporation.

In addition, the Insurance Fund could be used to ensure the retirement of System entities' protected borrower equity at par or stated value and for other specified purposes. The Insurance Fund is also available for discretionary uses of providing assistance to certain troubled System institutions and to cover the operating expenses of the Insurance Corporation. The Insurance Fund does not insure the obligations of the Federal Agricultural Mortgage Corporation (Farmer Mac).

At December 31, 2017, the assets of the Insurance Fund aggregated $4.9 billion. However, due to the other authorized uses of the Insurance Fund, there is no assurance that any available amount in the Insurance Fund will be sufficient to fund the timely payment of principal or interest on Systemwide Debt Securities in the event of a default by any System bank having primary liability thereon.

The Insurance Corporation 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 the Insurance Corporation. Under its existing statutory authority, the Insurance Corporation may use these funds to provide assistance to the System banks in exigent market circumstances that threaten the banks' ability to pay maturing debt obligations. The agreement provides for advances of up to $10 billion and terminates on September 30, 2018 unless otherwise extended. The decision whether to seek funds from the Federal Financing Bank is at the discretion of the Insurance Corporation, 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 would be available if needed by the System.

**Early Extinguishment of Debt**

During 2017, we recorded losses of $42.1 million on the early extinguishment of $897.4 million of Systemwide Debt Securities, which included $474.6 million in Systemwide Debt Securities sold at market value to other Farm Credit Banks. During 2016 and 2015, we recorded losses of $34.2 million and $37.5 million, respectively, on the early extinguishment of $2.1 billion and $5.8 billion of Systemwide Debt Securities, respectively. The $2.1 billion and $5.8 billion in Systemwide Debt Securities extinguished in 2016 and 2015, respectively, included $1.8 billion and $5.4 billion in Systemwide Debt Securities sold at market value to other Farm Credit Banks, respectively. All losses on early extinguishment of debt are reported as a component of noninterest income.

# Note 6 – Subordinated Debt

We had no subordinated debt outstanding at December 31, 2017 compared to $500.0 million and $904.7 million at December 31, 2016 and 2015, respectively.

On April 15, 2016, we redeemed all of our outstanding 7.875 percent subordinated notes due in 2018 totaling $404.7 million. The redemption price was 100 percent of the principal amount, together with accrued and unpaid interest up to, but excluding, the date of redemption. For information relating to a complaint filed by a number of investors who had held the subordinated notes alleging CoBank impermissibly redeemed the subordinated notes, see Note 15.

On June 15, 2017, we redeemed all of our outstanding floating-rate subordinated notes due 2022 totaling $500.0 million. The redemption price was 100 percent of the principal amount, together with accrued and unpaid interest up to, but excluding, the date of redemption.

# Note 7 – Shareholders' Equity

**Description of Equities**

As of December 31, 2017, we had $1.5 billion of preferred stock and $3.2 billion of common stock outstanding, as summarized in the table below.

**Preferred and Common Stock**

| | Stock | | |
|---|---|---|---|
| | Preferred | Class A | Class A |
| Shares Authorized (000) | n/a [1] | Unlimited | Unlimited |
| Shares Outstanding (000) | 9,600 | 1,262 | 31,142 |
| Voting or Nonvoting | Nonvoting | Nonvoting | Voting |
| Par / Face Value (per share) | n/a [1] | $ 100 | $ 100 |

[1] Shares authorized and par/face value varies by issuance. Refer to the table on the following page.

Pursuant to our bylaws, we have a single class of common equity – Class A common stock; however, only Class A shareholders that are directly eligible to borrow from CoBank, that borrow on a patronage basis and that are active borrowers, have voting rights. No other class of shareholders has voting rights.

The changes in the number of shares of common stock outstanding during 2017, 2016 and 2015 are summarized in the following table.

**Shares of Common Stock** (in Thousands)

| | 2017 | 2016 | 2015 |
|---|---|---|---|
| Beginning of the Year | **30,722** | 28,997 | 27,685 |
| Issuances | **1,941** | 2,016 | 1,638 |
| Retirements | **(259)** | (291) | (326) |
| End of the Year | **32,404** | 30,722 | 28,997 |

In December 2016, our shareholders approved an increase in the amount of preferred stock that CoBank may have outstanding at any time from $1.5 billion to $2.5 billion effective January 1, 2017, and provided authorization for the Bank to issue preferred stock up to the new limit through December 31, 2026. These measures allow us to access third-party capital more quickly and efficiently in response to dynamic market conditions, without the necessity of obtaining shareholder approval for each issuance. However, any preferred stock issuances would still require approval from the Board of Directors and the FCA.

Holders of common equities may not pledge, hypothecate or otherwise grant a security interest in such equities except as consented to by the Bank under FCA regulations. We have a statutory first lien on CoBank common stock. We pay dividends only on preferred stock.

In case of liquidation or dissolution, preferred stock, common stock and unallocated retained earnings would be distributed to shareholders, after the payment of all liabilities pursuant to FCA regulations, in the following order:
(1) retirement of all Series E, Series F, Series G, Series H and Series I preferred stock at par plus all accrued but unpaid dividends for the then current dividend period; (2) retirement of all common stock at par; (3) retirement of all patronage surplus (a component of unallocated retained earnings) in amounts equal to the face amount of the applicable nonqualified written notices of allocation or such other notice; and (4) remaining unallocated retained earnings and reserves shall be paid to the holders of common stock in proportion to patronage to the extent possible.

### Preferred Stock

The following table summarizes our outstanding preferred stock as of December 31, 2017.

**Preferred Stock as of December 31, 2017**

| | Series E | Series F | Series G | Series H | Series I |
|---|---|---|---|---|---|
| Type | Non-Cumulative Perpetual | Non-Cumulative Perpetual | Non-Cumulative Perpetual | Non-Cumulative Perpetual | Non-Cumulative Perpetual |
| Issue Date | January 2012 | October 2012 | April 2013 | November 2014 | April 2016 |
| Shares Outstanding (000) | 225 | 4,000 | 2,000 | 3,000 | 375 |
| Amount Outstanding (000) | $225,000 | $400,000 | $200,000 | $300,000 | $375,000 |
| Par Value (per share) | $1,000 | $100 | $100 | $100 | $1,000 |
| Current Dividend Rate (%) | 3-month USD LIBOR + 1.18 (2.888% at December 31, 2017) | 6.25% | 6.125% | 6.20% | 6.25% |
| Next Change in Dividend Rate (% and dates) | n/a | 3-month USD LIBOR + 4.557% beginning on October 1, 2022 | n/a | 3-month USD LIBOR + 3.744% beginning on January 1, 2025 | 3-month USD LIBOR + 4.66% beginning on October 1, 2026 |
| Dividend Frequency | Quarterly | Quarterly | Quarterly | Quarterly | Semi-Annual; Quarterly beginning on October 1, 2026 |
| Optional Redemption Begins (Date)[1] | July 2012 and each five year anniversary thereafter at par plus accrued dividends | Quarterly calls on or after October 1, 2022 at par plus accrued dividends | Quarterly calls on or after July 1, 2018 at par plus accrued dividends | Quarterly calls on or after January 1, 2025 at par plus accrued dividends | Quarterly calls on or after October 1, 2026 at par plus accrued dividends |

[1] Our preferred stock may also be redeemed at any time after the occurrence of a Regulatory Event (as defined in the terms of the preferred stock) at par plus accrued interest.

On April 8, 2016, we issued $375 million of Series I non-cumulative perpetual preferred stock. We used the net proceeds from the Series I preferred stock issuance to increase our regulatory capital and for general corporate purposes. Dividends on the Series I preferred stock, if declared by the Board of Directors in its sole discretion, are non-cumulative and are payable semi-annually in arrears at a fixed annual rate of 6.25 percent from the date of issuance up to, but excluding, October 1, 2026. Thereafter, dividends will accrue at an annual rate equal to the 3-month USD LIBOR plus 4.66 percent and will be payable quarterly.

All of our outstanding preferred stock ranks equally, both as to dividends and upon liquidation, and senior to all of our outstanding common stock.

If preferred stock dividends are not paid for 18 consecutive months on any of our preferred stock, holders of all outstanding preferred stock, voting as a single class, will have the right to appoint two non-voting observers to attend our Board of Directors meetings until full dividends for a one-year period are paid. In addition, other than pursuant to an order issued by our regulator, we may not enter into agreements restricting our ability to declare or pay preferred stock dividends.

All stock retirements, including preferred stock redemptions, require the approval of our Board of Directors. Payments of preferred stock dividends also require the approval of our Board of Directors.

### Capitalization Requirements

In accordance with the Farm Credit Act, eligible commercial borrowers are required to purchase common stock in CoBank as a condition of borrowing. The minimum initial borrower investment is equal to the lesser of one thousand dollars or 2 percent of the amount of the loan. The minimum initial investment is generally received in cash at the time the borrower receives the loan proceeds.

Association customers are also required to invest in our common stock, as discussed on page 126. Additionally, effective January 1, 2016, eligible financial service members who are not otherwise shareholders have a one hundred dollar capitalization requirement and do not participate in patronage distributions.

Most agricultural export finance customers, customers of FCL and certain other borrowers are not required to purchase, nor do they own, common stock in CoBank. Likewise, they do not participate in patronage distributions.

Retirements of common stock, if any, are determined annually after the Board of Directors sets the target equity level. Net cash retirements are made at the sole discretion of the Board of Directors and are at book value not to exceed par or face value.

### Patronage

As a cooperative bank, we return a portion of our earnings to eligible common shareholders in the form of patronage distributions. Eligible common shareholders will receive total patronage for 2017 of $610.4 million, of which $491.9 million will be paid in cash in 2018 and the balance will be paid in common stock. For 2016 and 2015, total patronage was $588.1 million and $514.1 million, respectively, of which $473.9 million and $416.0 million, respectively, was paid in cash in the subsequent year. All patronage distributions require the approval of our Board of Directors.

**Regulatory Capitalization Requirements and Restrictions**

The FCA's capital adequacy regulations require us to maintain certain minimum capital requirements and collateral standards.

We are prohibited from retiring stock or making certain other distributions to shareholders unless prescribed capital standards are met. All such minimum regulatory capital requirements and collateral standards were met as of December 31, 2017.

Effective January 1, 2017, CoBank implemented new regulatory capital requirements (the New Capital Regulations), as required by the FCA. At December 31, 2017, our capital and leverage ratios exceeded regulatory minimums as noted in the following table.

**Regulatory Capital Ratios**

| | Regulatory Minimum | December 31, 2017 |
|---|---|---|
| Common Equity Tier 1 Capital Ratio | 4.5 % | 11.67 % |
| Tier 1 Capital Ratio | 6.0 | 13.97 |
| Total Capital Ratio | 8.0 | 15.24 |
| Tier 1 Leverage Ratio | 4.0 | 7.26 |
| Unallocated Retained Earnings (URE) and URE Equivalents Leverage Ratio | 1.5 | 2.96 |
| Permanent Capital Ratio | 7.0 | 14.29 |

The New Capital Regulations require new disclosures, including the components of the ratios displayed above. See pages 133 through 141 for more information on the required disclosures. At December 31, 2016 and 2015, we exceeded the minimum regulatory capital requirements effective through December 31, 2016.

**Accumulated Other Comprehensive Income/(Loss)**

Changes in accumulated other comprehensive income/(loss) for 2017, 2016 and 2015 are presented in the following tables.

**Changes in Accumulated Other Comprehensive Income (Loss) by Component[(1)]**

| | Unrealized Gains/(Losses) On Investment Securities | | Unrealized Gains/(Losses) on Interest Rate Swaps and Other Financial Instruments | Net Pension Adjustment | Total |
|---|---|---|---|---|---|
| | Non-OTTI | OTTI | | | |
| **Balance at December 31, 2016** | **$ (19,627)** | **$ 4,969** | **$ (37,707)** | **$ (67,518)** | **$ (119,883)** |
| Other comprehensive income (loss) before reclassifications | **(100,251)** | **1,939** | **(22,578)** | **4,211** | **(116,679)** |
| Amounts reclassified from accumulated other comprehensive income (loss) | **(5,320)** | **(3,672)** | **10,304** | **3,282** | **4,594** |
| Net current-period other comprehensive income (loss) | **(105,571)** | **(1,733)** | **(12,274)** | **7,493** | **(112,085)** |
| **Balance at December 31, 2017** | **$ (125,198)** | **$ 3,236** | **$ (49,981)** | **$ (60,025)** | **$ (231,968)** |
| **Balance at December 31, 2015** | $ 38,588 | $ 7,873 | $ (40,157) | $ (66,291) | $ (59,987) |
| Other comprehensive loss before reclassifications | (56,662) | (1,297) | (583) | (5,400) | (63,942) |
| Amounts reclassified from accumulated other comprehensive income (loss) | (1,553) | (1,607) | 3,033 | 4,173 | 4,046 |
| Net current-period other comprehensive income (loss) | (58,215) | (2,904) | 2,450 | (1,227) | (59,896) |
| **Balance at December 31, 2016** | $ (19,627) | $ 4,969 | $ (37,707) | $ (67,518) | $ (119,883) |

(1) Amounts are presented net of tax. Amounts reclassified shown in parentheses indicate a decrease in accumulated other comprehensive income or an increase in accumulated other comprehensive income (loss).

| Changes in Accumulated Other Comprehensive Income (Loss) by Component [1] | Unrealized Gains/(Losses) On Investment Securities | | Unrealized Gains/(Losses) on Interest Rate Swaps and Other Financial Instruments | Net Pension Adjustment | Total |
|---|---|---|---|---|---|
| | Non-OTTI | OTTI | | | |
| **Balance at December 31, 2014** | $ 72,859 | $ 18,049 | $ (33,460) | $ (63,710) | $ (6,262) |
| Other comprehensive loss before reclassifications | (29,176) | (9,959) | (10,062) | (7,197) | (56,394) |
| Amounts reclassified from accumulated other comprehensive income (loss) | (5,095) | (217) | 3,365 | 4,616 | 2,669 |
| Net current-period other comprehensive loss | (34,271) | (10,176) | (6,697) | (2,581) | (53,725) |
| **Balance at December 31, 2015** | $ 38,588 | $ 7,873 | $ (40,157) | $ (66,291) | $ (59,987) |

[1] Amounts are presented net of tax. Amounts reclassified shown in parentheses indicate a decrease in accumulated other comprehensive income or an increase in accumulated other comprehensive income (loss).

The following tables present the effect of reclassifications out of accumulated other comprehensive income (loss) on net income for the years ended December 31, 2017, 2016 and 2015.

**Reclassifications from Accumulated Other Comprehensive Income (Loss)**

| Year Ended December 31, 2017 | Amount Reclassified from Accumulated Other Comprehensive Income (Loss) | Location of Gain/Loss Recognized in Income Statement |
|---|---|---|
| **Unrealized gains (losses) on available-for-sale investment securities:** | | |
| Sales gains and losses | **$ 5,692** | Noninterest Income - Other, Net |
| Tax effect | **(372)** | Provision for Income Taxes |
| **Unrealized gains (losses) on OTTI investment securities:** | | |
| Sales gains and losses | **3,695** | Noninterest Income - Other, Net |
| Tax effect | **(23)** | Provision for Income Taxes |
| **Unrealized gains (losses) on interest rate swaps and other financial instruments:** | | |
| Interest rate contracts | **(6,701)** | Interest Expense |
| Foreign exchange contracts | **(6,157)** | Interest Income |
| Tax effect | **2,554** | Provision for Income Taxes |
| **Pension and other benefit plans:** | | |
| Net actuarial gain/loss | **(4,265)** | Operating Expenses - Employee Compensation |
| Prior service cost/credit | **(1,029)** | Operating Expenses - Employee Compensation |
| Tax effect | **2,012** | Provision for Income Taxes |
| **Total reclassifications** | **$ (4,594)** | |

**Reclassifications from Accumulated Other Comprehensive Income (Loss)**

| Year Ended December 31, 2016 | | Amount Reclassified from Accumulated Other Comprehensive Income (Loss) | Location of Gain/Loss Recognized in Income Statement |
|---|---|---|---|
| **Unrealized gains (losses) on available-for-sale investment securities:** | | | |
| Sales gains and losses | $ | 1,708 | Noninterest Income - Other, Net |
| Tax effect | | (155) | Provision for Income Taxes |
| **Unrealized gains (losses) on OTTI investment securities:** | | | |
| Sales gains and losses | | 2,909 | Noninterest Income - Other, Net |
| Holding gains and losses | | (750) | Noninterest Income - Net OTTI Losses Included in Earnings |
| Tax effect | | (552) | Provision for Income Taxes |
| **Unrealized gains (losses) on interest rate swaps and other financial instruments:** | | | |
| Interest rate contracts | | (4,520) | Interest Expense |
| Foreign exchange contracts | | 1,135 | Interest Income |
| Tax effect | | 352 | Provision for Income Taxes |
| **Pension and other benefit plans:** | | | |
| Net actuarial gain/loss | | (5,739) | Operating Expenses - Employee Compensation |
| Prior service cost/credit | | (992) | Operating Expenses - Employee Compensation |
| Tax effect | | 2,558 | Provision for Income Taxes |
| **Total reclassifications** | $ | (4,046) | |

| Year Ended December 31, 2015 | | Amount Reclassified from Accumulated Other Comprehensive Income (Loss) | Location of Gain/Loss Recognized in Income Statement |
|---|---|---|---|
| **Unrealized gains (losses) on available-for-sale investment securities:** | | | |
| Sales gains and losses | $ | 8,217 | Noninterest Income - Other, Net |
| Tax effect | | (3,122) | Provision for Income Taxes |
| **Unrealized gains (losses) on OTTI investment securities:** | | | |
| Sales gains and losses | | 14,386 | Noninterest Income - Other, Net |
| Holding gains and losses | | (11,100) | Noninterest Income - Net OTTI Losses Included in Earnings |
| Tax effect | | (3,069) | Provision for Income Taxes |
| **Unrealized gains (losses) on interest rate swaps and other financial instruments:** | | | |
| Interest rate contracts | | (2,393) | Interest Expense |
| Foreign exchange contracts | | (2,280) | Interest Income |
| Tax effect | | 1,308 | Provision for Income Taxes |
| **Pension and other benefit plans:** | | | |
| Net actuarial gain/loss | | (6,850) | Operating Expenses - Employee Compensation |
| Prior service cost/credit | | (595) | Operating Expenses - Employee Compensation |
| Tax effect | | 2,829 | Provision for Income Taxes |
| **Total reclassifications** | $ | (2,669) | |

## Note 8 – Employee Benefit Plans and Incentive Compensation Plans

### Employee Benefit Plans

We have employer-funded, qualified defined benefit pension plans, which are noncontributory and cover employees hired prior to January 1, 2007. Depending on the date of hire, benefits are determined either by a formula based on years of service and final average pay, or by the accumulation of a cash balance with interest credits and contribution credits based on years of service and eligible compensation. Effective January 1, 2007, the Bank closed the remaining qualified defined benefit pension plan to new participants.

We also have noncontributory, unfunded nonqualified supplemental executive retirement plans (SERPs) covering certain senior officers and specified other senior managers. In addition, we have a noncontributory, unfunded nonqualified executive retirement plan (ERP) covering certain former senior officers. The defined benefit pension plans, SERPs and ERP are collectively referred to as Retirement Plans. We hold assets in trust accounts related to our SERPs and ERP; however, such funds remain Bank assets and are not included as plan assets in the accompanying disclosures.

We have a 401(k) savings plan pursuant to which we match a certain percentage of employees' elective contributions. In addition, under this plan, employees hired on or after January 1, 2007 receive additional, non-elective employer defined contributions. Our contributions to the 401(k) savings plan, which are recorded as employee compensation expense, were $9.8 million, $7.7 million and $7.0 million for 2017, 2016 and 2015, respectively. For eligible senior managers, including our senior officers, we also have a nonqualified deferred compensation plan, which includes benefits not provided under the employee savings plan due to certain Internal Revenue Code limitations.

Eligible retirees also have other postretirement benefits (OPEB), which primarily include access to health care benefits. Most participants pay the full premiums associated with these postretirement health care benefits. Premiums are adjusted annually.

The following table provides a summary of the changes in the plans' benefit obligations and fair values of assets over the three-year period ended December 31, 2017, as well as a statement of funded status as of December 31 of each year.

| | Retirement Plans | | | Other Postretirement Benefits | | |
|---|---|---|---|---|---|---|
| | **2017** | **2016** | **2015** | **2017** | **2016** | **2015** |
| **Change in Benefit Obligation:** | | | | | | |
| Benefit Obligation at Beginning of Year | **$ 358,074** | $ 347,562 | $ 349,798 | **$ 3,054** | $ 4,011 | $ 4,962 |
| Service Cost | **6,469** | 6,570 | 7,461 | **78** | 141 | 175 |
| Interest Cost on Benefit Obligation | **14,960** | 15,376 | 13,942 | **125** | 174 | 194 |
| Plan Participant Contributions | **-** | - | - | **515** | 523 | 417 |
| Plan Amendments | **-** | 683 | 5,483 | **-** | - | - |
| Actuarial Loss (Gain) | **20,345** | 6,459 | (12,544) | **172** | (719) | (223) |
| Benefits Paid | **(19,078)** | (18,576) | (16,578) | **(1,010)** | (1,076) | (1,514) |
| **Benefit Obligation at End of Year** | **380,770** | 358,074 | 347,562 | **2,934** | 3,054 | 4,011 |
| **Change in Plan Assets:** | | | | | | |
| Fair Value of Plan Assets at Beginning of Year | **283,712** | 279,483 | 290,247 | **-** | - | - |
| Actual Return on Plan Assets | **44,753** | 16,127 | 625 | **-** | - | - |
| Employer Contributions | **14,631** | 6,678 | 5,189 | **495** | 553 | 1,097 |
| Benefits Paid | **(19,078)** | (18,576) | (16,578) | **(1,010)** | (1,076) | (1,514) |
| Plan Participant Contributions | **-** | - | - | **515** | 523 | 417 |
| **Fair Value of Plan Assets at End of Year** | **324,018** | 283,712 | 279,483 | **-** | - | - |
| Funded Status – Fair Value of Plan Assets Less Than Benefit Obligation | **(56,752)** | (74,362) | (68,079) | **(2,934)** | (3,054) | (4,011) |
| **Net Amount Recognized - December 31** | **$ (56,752)** | $ (74,362) | $ (68,079) | **$ (2,934)** | $ (3,054) | $ (4,011) |

The projected benefit obligation and the accumulated benefit obligation for the Retirement Plans as of December 31 of each year are as follows.

| | 2017 | 2016 | 2015 |
|---|---|---|---|
| Projected Benefit Obligation: | | | |
| Funded Qualified Plans | **$ 335,973** | $ 315,845 | $ 308,763 |
| SERP/ERP | **44,797** | 42,229 | 38,799 |
| **Total** | **$ 380,770** | $ 358,074 | $ 347,562 |
| Accumulated Benefit Obligation: | | | |
| Funded Qualified Plans | **$ 320,407** | $ 298,741 | $ 287,046 |
| SERP/ERP | **38,462** | 35,639 | 33,696 |
| **Total** | **$ 358,869** | $ 334,380 | $ 320,742 |

The $324.0 million in fair value of plan assets shown in the table on page 104 relates only to the qualified retirement plans. As depicted in the preceding table, such plans had a projected benefit obligation and an accumulated benefit obligation of $336.0 million and $320.4 million, respectively, as of December 31, 2017.

We hold assets in trust accounts related to our SERPs and ERP. Such assets had a fair value of $37.8 million as of December 31, 2017, which is included in other assets in the consolidated balance sheet. Unlike the assets related to the qualified plans, those funds remain Bank assets and would be subject to general creditors in a bankruptcy or liquidation. Accordingly, they are not included as part of the assets in the table on page 104. As depicted in the preceding table, our SERPs and ERP had a projected benefit obligation and an accumulated benefit obligation of $44.8 million and $38.5 million, respectively, as of December 31, 2017.

The following table provides the amounts recognized in the consolidated balance sheets as of December 31 of each year.

| | Retirement Plans | | | Other Postretirement Benefits | | |
|---|---|---|---|---|---|---|
| | 2017 | 2016 | 2015 | 2017 | 2016 | 2015 |
| Accrued Benefit Liabilities | **(56,752)** | (74,362) | (68,079) | **(2,934)** | (3,054) | (4,011) |
| **Net Amounts Recognized** | **$ (56,752)** | $ (74,362) | $ (68,079) | **$ (2,934)** | $ (3,054) | $ (4,011) |

The following table presents the components of net periodic benefit cost for the plans.

| | Retirement Plans | | | Other Postretirement Benefits | | |
|---|---|---|---|---|---|---|
| | 2017 | 2016 | 2015 | 2017 | 2016 | 2015 |
| Service Cost | **$ 6,469** | $ 6,570 | $ 7,461 | **$ 78** | $ 141 | $ 175 |
| Interest Cost on Benefit Obligation | **14,960** | 15,376 | 13,942 | **125** | 174 | 194 |
| Expected Return on Plan Assets | **(17,443)** | (18,414) | (19,517) | **-** | - | - |
| Amortization of Prior Service Cost | **1,029** | 992 | 595 | **-** | - | - |
| Recognized Actuarial Loss | **4,504** | 5,913 | 7,006 | **(239)** | (174) | (157) |
| **Net Periodic Benefit Cost** | **$ 9,519** | $ 10,437 | $ 9,487 | **$ (36)** | $ 141 | $ 212 |

We anticipate that our total pension expense for the Retirement Plans will be approximately $9.8 million in 2018, as compared to $9.5 million in 2017.

The following table displays the amounts included in accumulated other comprehensive income (loss), a component of shareholders' equity, related to our pension and other postretirement benefit plans.

| Amounts Included in Accumulated Other Comprehensive Loss (Income) Pre-Tax at December 31, 2017 | Qualified Retirement Plans | Nonqualified Retirement Plans | Other Postretirement Benefits | Total |
|---|---|---|---|---|
| Net Actuarial Loss (Gain) | $ 74,608 | $ 16,874 | $ (2,807) | $ 88,675 |
| Prior Service Cost | 6,096 | 579 | - | 6,675 |
| **Amount Recognized in Accumulated Other Comprehensive Loss (Income)** [1] | $ 80,704 | $ 17,453 | $ (2,807) | $ 95,350 |

[1] Amount recognized in accumulated other comprehensive (income) loss, net of tax, is a loss of $60.0 million as of December 31, 2017. Approximately $6.0 million, net of tax, will be amortized from accumulated other comprehensive (income) loss into net periodic benefit cost in 2018.

**Assumptions**

We measure plan obligations and annual expense using assumptions designed to reflect future economic conditions. As pension benefits will be paid to current and future retiree for many years, the computations of pension expenses and benefits are based on assumptions about discount rates, estimates of annual increases in compensation levels, mortality rates and expected rates of return on plan assets.

The weighted average rate assumptions used in the measurement of our benefit obligations are as follows:

| | 2017 | 2016 | 2015 |
|---|---|---|---|
| Discount Rate | **3.75 %** | 4.30 % | 4.55 % |
| Rate of Compensation Increase | **3.60** | 4.75 | 4.75 |

The weighted average rate assumptions used in the measurement of our net periodic benefit cost are as follows:

| | 2017 | 2016 | 2015 |
|---|---|---|---|
| Discount Rate | **4.30 %** | 4.55 % | 4.10 % |
| Expected Rate of Return on Plan Assets (Qualified Plans Only) | **6.00** | 6.63 | 7.25 |
| Rate of Compensation Increase | **4.75** | 4.75 | 4.75 |

The discount rates are calculated using a spot yield curve method developed by an independent actuary. The approach maps a high-quality bond yield curve to the duration of the plans' liabilities, thus approximating each cash flow of the liability stream to be discounted at an interest rate specifically applicable to its respective period in time.

We establish the expected rate of return on plan assets based on current target asset allocations and the anticipated future long-term returns for those asset classes. The expected rate of return on plan assets assumption is also consistent with the pension plans' long-term interest rate assumption used for funding purposes.

Assumed health care cost trend rates have an effect on the amounts reported for other postretirement benefits. For measurement purposes, a 7.8 percent annual rate of increase in the per capita cost of covered health care benefits was assumed for 2017. The rate was assumed to decrease gradually to 4.5 percent through 2026 and remain at that level thereafter. A 1-percentage-point increase in the assumed health care cost trend rate would increase total annual service and interest cost by $19 and total other postretirement benefit obligations by $186 as of December 31, 2017. Conversely, a 1-percentage-point decrease in the assumed health care cost trend rate would decrease total annual service and interest cost by $16 and total other postretirement benefit obligations by $162.

**Plan Assets**

The asset allocation target ranges for the pension plans follow the investment policy adopted by our retirement trust committee. This policy provides for a certain level of committee flexibility in selecting target allocation percentages. The actual asset allocations at December 31, 2017, 2016 and 2015 are shown in the following table, along with the adopted range for target allocation percentages by asset class. The actual allocation percentages reflect the market values at year-end and may vary during the course of the year. Plan assets are generally rebalanced to a level within the target range each year at the direction of the committee.

**Retirement Plan Assets**

| | Target Allocation Range | Percentage of Plan Assets at December 31, | | |
|---|---|---|---|---|
| | | 2017 | 2016 | 2015 |
| **Asset Category** | | | | |
| Domestic Equity | 32.5-42.5 % | **41 %** | 45 % | 45 % |
| Domestic Fixed Income | 32.5-42.5 | **35** | 35 | 36 |
| International Equity, Emerging Markets Equity and Fixed Income | 10-30 | **19** | 15 | 14 |
| Hedge Funds | 0-10 | **5** | 5 | 5 |
| **Total** | 100 % | **100 %** | 100 % | 100 % |

The assets of the pension plans consist primarily of investments in various domestic equity, international equity and bond funds. These funds do not contain any significant investments in a single entity, industry, country or commodity, thereby mitigating concentration risk. No CoBank stock or debt is included in these investments.

The following table presents major categories of plan assets that are measured at fair value at December 31, 2017 for each of the fair value hierarchy levels as defined in Note 12.

**Fair Value Measurements**

**December 31, 2017**

| | Level 1 | Level 2 | Level 3 | NAV [(1)] | Total |
|---|---|---|---|---|---|
| **Asset Category** | | | | | |
| Cash | $ 486 | $ - | $ - | $ - | $ 486 |
| Domestic Equity: | | | | | |
| Large-cap Growth Funds[(2)] | 61,023 | - | - | 56,256 | 117,279 |
| Small-cap Growth Fund[(2)] | - | - | - | 14,839 | 14,839 |
| International Equity: | | | | | |
| International Funds[(3)] | 33,140 | - | - | 6,250 | 39,390 |
| Fixed Income: | | | | | |
| Total Return Funds[(4)] | 70,103 | - | - | - | 70,103 |
| Bond Funds[(5)] | 3,978 | 40,036 | - | - | 44,014 |
| Emerging Markets: | | | | | |
| Equity and Fixed Income Funds[(6)] | 7,960 | - | - | 15,159 | 23,119 |
| Hedge Funds[(7)] | - | - | - | 14,788 | 14,788 |
| **Total** | $ 176,690 | $ 40,036 | $ - | $ 107,292 | $ 324,018 |

(1) Certain investments that are measured at fair value using the net asset value (NAV) per share as a practical expedient have not been classified in the fair value hierarchy. The fair value amounts presented in this table are intended to permit reconciliation of the fair value hierarchy to the net assets in the pension plans.

(2) Funds invest primarily in diversified portfolios of common stocks of U.S. companies.

(3) Funds invest primarily in a diversified portfolio of equities of non-U.S. companies.

(4) Fund invests primarily in a diversified portfolio of investment grade debt securities and cash instruments.

(5) Funds invest primarily in U.S. Treasury debt securities and corporate bonds of U.S. companies.

(6) Funds invest in equities and corporate debt securities of companies located in emerging international markets.

(7) Funds invest in diversified portfolios of stocks, bonds and various other financial instruments.

Level 1 plan assets are funds with quoted daily net asset values that are directly observable by market participants. The fair value of these funds is the net asset value at close of business on the reporting date. Level 2 plan assets are funds with quoted net asset values that are not directly observable by market participants. A significant portion of the underlying investments in these funds have individually observable market prices, which are utilized by the plan's trustee to determine a net asset value at close of business on the reporting date. Level 3 plan assets are funds with unobservable net asset values and supported by limited or no market activity. There were no purchases or sales of Level 3 plan assets in the current year. No transfers into or out of the three levels of assets occurred in the current year.

Investment strategy and objectives are described in the pension plans' formal investment policy document. The basic strategy and objectives are to manage portfolio assets with a long-term time horizon appropriate for the participant demographics and cash flow requirements; to optimize long-term funding requirements by generating rates of return sufficient to fund liabilities and exceed the long-term rate of inflation; and to provide competitive investment returns as measured against appropriate benchmarks.

### Expected Contributions

We expect to contribute approximately $3.7 million to our funded, qualified defined benefit pension plans in 2018 and a net $0.3 million, after reflecting collected retiree premiums, to our other postretirement benefit plans in 2018. We also expect to contribute approximately $2.4 million to our trust accounts related to our SERPs and ERP in 2018. Our actual 2018 contributions could differ from the estimates noted above.

### Estimated Future Benefit Payments

We expect to make the following benefit payments, which reflect expected future service, as appropriate.

**Estimated Benefit Payments**

| Year: | Retirement Benefits | Other Postretirement Benefits |
|---|---|---|
| 2018 | $ 20,957 | $ 260 |
| 2019 | 23,609 | 227 |
| 2020 | 23,272 | 226 |
| 2021 | 23,265 | 225 |
| 2022 | 24,179 | 228 |
| 2023 to 2027 | 127,237 | 1,091 |

### Incentive Compensation Plans

We have a broad-based, Board-approved short-term incentive compensation plan covering substantially all employees pursuant to which annual cash awards may be earned. Criteria used to determine amounts payable include the achievement of specified financial measures and strategic business objectives, which are approved annually by the Compensation Committee of the Board of Directors. Individual performance is also considered in the determination of the amounts payable.

We also have a Board-approved long-term incentive compensation plan, pursuant to which cash awards may be earned by senior officers and specified other senior managers who have a significant impact on long-term financial performance. Criteria used to determine amounts payable include achievement of certain Bank financial targets and strategic business objectives over a three-year performance period. Cash awards are to be paid subsequent to completion of each three-year period, subject to approval by the Compensation Committee of the Board of Directors.

Under the terms of the short-term incentive compensation plan, a minimum return on active patron stock investment must be achieved in order for a payout to be approved.

Likewise, a minimum return on active patron stock investment must be achieved in each year within the three-year performance period for a full payout under the long-term incentive plan. The required minimum return on active patron stock investment was 11 percent for all performance periods disclosed herein.

# Note 9 – Income Taxes

The components of the provision for income taxes are as follows:

| Year Ended December 31, | 2017 | 2016 | 2015 |
|---|---|---|---|
| **Current:** | | | |
| Federal | **$ 118,961** | $ 111,685 | $ 95,673 |
| State | **25,553** | 19,666 | 12,004 |
| **Total Current** | **144,514** | 131,351 | 107,677 |
| **Deferred:** | | | |
| Federal | **(126,622)** | 27,839 | 56,438 |
| State | **(2,828)** | (905) | 7,005 |
| **Total Deferred** | **(129,450)** | 26,934 | 63,443 |
| **Total** | **$ 15,064** | $ 158,285 | $ 171,120 |
| Comprehensive Tax Provision | | | |
| Allocable to: | | | |
| Pre-Tax Income | **$ 15,064** | $ 158,285 | $ 171,120 |
| Shareholders' Equity - | | | |
| Amounts Allocated to: | | | |
| Investment Securities | **(13,186)** | (18,047) | (15,263) |
| Derivatives | **4,156** | (411) | (2,978) |
| Pension Liability | **17,050** | (752) | (1,582) |
| **Total** | **$ 23,084** | $ 139,075 | $ 151,297 |

The components of deferred tax assets and liabilities are shown below.

| December 31, | 2017 | 2016 | 2015 |
|---|---|---|---|
| Allowance for Credit Losses | **$ 146,734** | $ 219,920 | $ 206,062 |
| Employee Benefits | **36,988** | 61,679 | 53,290 |
| Unrealized Net Losses | | | |
| on Investment Securities | | | |
| and Derivatives | **24,256** | 15,226 | - |
| Loan Origination Fees | **6,170** | 8,847 | 9,102 |
| Other Deferred Tax Assets | **41,052** | 45,553 | 43,815 |
| **Gross Deferred Tax Assets** | **255,200** | 351,225 | 312,269 |
| Leasing | **459,245** | 689,890 | 644,589 |
| Unrealized Net Gains | | | |
| on Investment Securities | | | |
| and Derivatives | **-** | - | 3,232 |
| Other Deferred Tax Liabilities | **18,024** | 31,448 | 26,837 |
| **Gross Deferred Tax Liabilities** | **477,269** | 721,338 | 674,658 |
| **Net Deferred Tax Liabilities** | **$ (222,069)** | $ (370,113) | $ (362,389) |

Deferred income taxes are provided for the change in temporary differences between the basis of certain assets and liabilities for financial reporting and income tax reporting purposes except for our nontaxable entity. The expected future tax rates are based upon enacted tax laws.

We have concluded that it is more likely than not that the deferred tax assets will be realized based on our history of earnings, sources of taxable income in carry back periods, and our ability to implement tax planning strategies.

The significant decrease in tax expense and net deferred tax liabilities in 2017 included the benefit of $142.3 million in net deferred tax adjustments resulting from the enactment of federal tax legislation in late December 2017 which, among other things, lowered the federal corporate tax rate from 35 percent to 21 percent beginning in 2018. In accordance with GAAP, the change to the lower corporate tax rate led to a remeasurement of our deferred tax liabilities and deferred tax assets in the period of enactment (2017). The $142.3 million net adjustment includes a $253.5 million benefit from the remeasurement of deferred tax liabilities somewhat offset by a $111.2 million expense from the remeasurement of deferred tax assets.

Excluding the impact of the $142.3 million adjustment, the effective tax rate was 13.8 percent for the year ended December 31, 2017 compared to 14.3 percent in 2016 and 15.4 percent in 2015. The effective tax rates were less than the statutory income tax rate primarily due to $610.4 million, $588.1 million and $514.1 million of patronage distributions for the years ended December 31, 2017, 2016 and 2015, respectively, which are tax deductible, if made by our taxable entity, as permitted by Subchapter T of the Internal Revenue Code. The nontaxable activities conducted in the FCB subsidiary also contributed to a lower effective tax rate.

| Year Ended December 31, | 2017 | 2016 | 2015 |
|---|---|---|---|
| Federal Tax at Statutory Rate | **$ 399,135** | $ 386,386 | $ 387,727 |
| State Tax, Net | **15,435** | 12,237 | 12,063 |
| Patronage Distributions | | | |
| Allocated by: | | | |
| Taxable Entity | **(104,466)** | (98,905) | (84,373) |
| Nontaxable Entity | **(110,056)** | (106,765) | (95,128) |
| Effect of Nontaxable Entity | **(29,651)** | (26,958) | (47,672) |
| Tax-Exempt Activities | **(55)** | (109) | (103) |
| Credits Related to Renewable | | | |
| Energy Transactions | **(12,933)** | (10,399) | (3,146) |
| Remeasurement of Deferred Tax | | | |
| Liabilities / Deferred Tax Assets | **(142,323)** | - | - |
| Other | **(22)** | 2,798 | 1,752 |
| **Provision for Income Taxes** | **$ 15,064** | $ 158,285 | $ 171,120 |

A reconciliation of the beginning and ending amount of unrecognized tax benefits, excluding interest and penalties, is as follows:

| | | |
|---|---|---|
| **Year Ended December 31, 2017** | | |
| Balance at Beginning of Year | **$** | **4,167** |
| Additions Based on Tax Positions Related to the Current Year | | **1,203** |
| Additions for Tax Positions of Prior Years | | **175** |
| Reductions for Tax Positions of Prior Years | | **(39)** |
| Lapse of Applicable Statute of Limitations | | **(906)** |
| **Balance at End of Year** | **$** | **4,600** |
| **Year Ended December 31, 2016** | | |
| Balance at Beginning of Year | $ | 4,036 |
| Additions Based on Tax Positions Related to the Current Year | | 865 |
| Additions for Tax Positions of Prior Years | | 270 |
| Reductions for Tax Positions of Prior Years | | (109) |
| Settlements | | (2) |
| Lapse of Applicable Statute of Limitations | | (893) |
| **Balance at End of Year** | $ | 4,167 |
| **Year Ended December 31, 2015** | | |
| Balance at Beginning of Year | $ | 5,487 |
| Additions Based on Tax Positions Related to the Current Year | | 757 |
| Additions for Tax Positions of Prior Years | | 150 |
| Reductions for Tax Positions of Prior Years | | (100) |
| Settlements | | (585) |
| Lapse of Applicable Statute of Limitations | | (1,673) |
| **Balance at End of Year** | $ | 4,036 |

The total amount of unrecognized tax benefits that, if recognized, would impact the effective tax rate is $5.4 million. We do not currently believe that the unrecognized tax benefits will change significantly within the next 12 months.

CoBank is no longer subject to federal tax examination for periods before 2014.

CoBank files tax returns in most states each year and is under continuous examination by various state taxing authorities. With few exceptions, we are no longer subject to state and local income tax examinations by taxing authorities for periods before 2014. For all open audits, any potential adjustments have been considered in establishing our reserve for uncertain tax positions as of December 31, 2017.

We recognize accrued interest and penalties related to unrecognized tax benefits as a component of the provision for income taxes. During the year ended December 31, 2017, we recognized an increase of approximately $0.3 million in interest and penalties. We had approximately $1.5 million of interest and penalties accrued at December 31, 2017 and $1.2 million at December 31, 2016 and 2015.

# Note 10 – Financial Instruments With Off-Balance Sheet Risk

We utilize various financial instruments with off-balance sheet risk to satisfy the financing needs of our borrowers and to manage our exposure to interest rate risk. Such financial instruments include commitments to extend credit and commercial letters of credit. Commitments to extend credit are agreements to lend to a borrower provided that certain contractual conditions are met. 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, 2017, outstanding commitments to extend credit and commercial letters of credit were $29.0 billion and $178.7 million, respectively.

Since many of these commitments may expire without being drawn, the total commitments do not necessarily represent future cash requirements. Our exposure to many of these commitments is mitigated by borrowing base requirements contained in loan agreements. However, these credit-related financial instruments have off-balance sheet credit risk because their amounts are not reflected on the consolidated balance sheets until funded or drawn upon. The credit risk associated with issuing commitments and commercial letters of credit is substantially the same as that involved in extending loans to borrowers. Therefore, management applies the same credit policies to these commitments. The amount of collateral obtained, if deemed necessary upon extension of credit, is based on management's credit evaluation of the borrower. As discussed in Note 1, we maintain a reserve for unfunded commitments.

For a fee, we provide financial standby letters of credit for borrowers, which are irrevocable commitments to guarantee payment of a specified financial obligation. We also provide performance standby letters of credit which are irrevocable agreements by us, as a guarantor, to make payments to the guaranteed party in the event a specified third-party fails to perform under a nonfinancial contractual obligation, such as a third-party failing to timely deliver certain commodities at a specified time and place. We also issue indemnification agreements that function like guarantees. These indemnification agreements contingently require us, as the indemnifying party guarantor, to make payments to an indemnified party under certain specified circumstances. Certain recourse provisions would enable us, as a guarantor, to recover from third parties any of the amounts paid under guarantees, thereby limiting our maximum potential exposure.

As of December 31, 2017, the maximum potential amount of future payments that we may be required to make under our outstanding standby letters of credit was $1.5 billion, with a fair value of $10.3 million, which is included in other liabilities in the consolidated balance sheet. Payment/performance risk of the standby letters of credit guarantee is assessed using the same internal customer credit ratings that we use to manage credit risk in our loan portfolio. These outstanding standby letters of credit have expiration dates ranging from January 2018 to June 2033.

# Note 11 – Derivative Financial Instruments and Hedging Activities

### Risk Management Objectives and Strategies

We maintain an overall market interest rate risk management strategy that incorporates the use of derivative financial instruments to manage liquidity and to minimize significant unplanned fluctuations in earnings that are caused by interest rate volatility. Our goal is to manage interest rate sensitivity by modifying the repricing frequency or effective maturity of certain balance sheet assets and liabilities. We also maintain a foreign exchange risk management strategy to reduce the impact of currency fluctuations on our relatively nominal amount of foreign currency-denominated loans. As a result of interest rate and foreign exchange rate fluctuations, fixed-rate assets and liabilities will appreciate or depreciate in market value. The effect of this unrealized appreciation or depreciation is expected to be substantially offset by gains and losses on the derivative instruments that are linked to these assets and liabilities. Interest rate and foreign exchange fluctuations also cause interest income and interest expense of variable-rate assets and liabilities to increase or decrease. The effect of this variability in earnings is expected to be substantially offset by gains and losses on the derivative instruments that are linked to these assets and liabilities.

### Uses of Derivatives

To achieve risk management objectives and satisfy the financing needs of our borrowers, we execute various derivative transactions with other financial institutions. Derivatives (primarily interest rate swaps) are used to manage liquidity and the interest rate risk arising from maturity and repricing mismatches between assets and liabilities. Under interest rate swap arrangements, we agree with a counterparty to exchange, at specified intervals, payment streams calculated on a specified notional amount, with at least one payment stream based on a specified floating-rate index. We use a variety of interest rate swaps including the exchange of floating-rate for fixed-rate swaps and fixed-rate for floating-rate swaps with payment obligations tied to specific indices. In addition, we execute foreign exchange spot and forward contracts to manage currency risk on loans denominated in foreign currencies. We also enter into derivatives for our customers as a service to enable them to transfer, modify or reduce their interest rate risk and foreign exchange risk by transferring such risk to us. We substantially offset this risk transference by concurrently entering into offsetting agreements with counterparties.

The notional amounts and related activity of derivatives at December 31, 2017, 2016 and 2015 are shown in the following table.

**Activity in the Notional Amounts of Derivative Financial Instruments**

| ($ in Millions) | Swaps | Caps / Floors | Spots / Forwards | Total |
|---|---|---|---|---|
| **December 31, 2016** | **$ 23,931** | **$ 3,100** | **$ 227** | **$ 27,258** |
| Additions /Accretion | **7,607** | **3,400** | **3,030** | **14,037** |
| Maturities /Amortization | **(4,594)** | **(777)** | **(3,074)** | **(8,445)** |
| Terminations | **(589)** | **(600)** | **-** | **(1,189)** |
| **December 31, 2017** | **$ 26,355** | **$ 5,123** | **$ 183** | **$ 31,661** |
| **December 31, 2015** | $ 20,817 | $ 2,816 | $ 267 | $ 23,900 |
| Additions /Accretion | 7,490 | 429 | 3,606 | $ 11,525 |
| Maturities /Amortization | (3,669) | (145) | (3,646) | $ (7,460) |
| Terminations | (707) | - | - | (707) |
| **December 31, 2016** | $ 23,931 | $ 3,100 | $ 227 | $ 27,258 |
| **December 31, 2014** | $ 19,755 | $ 2,961 | $ 208 | $ 22,924 |
| Additions /Accretion | 8,388 | 200 | 2,233 | 10,821 |
| Maturities /Amortization | (5,906) | (345) | (2,174) | (8,425) |
| Terminations | (1,420) | - | - | (1,420) |
| **December 31, 2015** | $ 20,817 | $ 2,816 | $ 267 | $ 23,900 |

### Accounting for Derivative Instruments and Hedging Activities

We record derivatives as assets or liabilities at their fair value on the consolidated balance sheets. We record changes in the fair value of a derivative in current period earnings or accumulated other comprehensive income (loss), depending on the use of the derivative and whether it qualifies for hedge accounting. For fair value hedge transactions that hedge changes in the fair value of assets or liabilities, changes in the fair value of the derivative will generally be offset in the statement of income by changes in the hedged item's fair value attributable to the risk being hedged. For cash flow hedge transactions, in which we hedge the variability of future cash flows related to a variable-rate or foreign currency denominated asset or liability, changes in the fair value of the derivative are reported in accumulated other comprehensive income (loss). The gains and losses on the derivatives that we report in accumulated other comprehensive income (loss) will be reclassified as earnings in the periods in which earnings are affected by the variability of the cash flows of the hedged item. We record the ineffective portion of all hedges in current period earnings.

For our customer transactions, which are not designated as hedging instruments, we record the related changes in fair value in current period earnings. We substantially offset this risk transference by concurrently entering into offsetting agreements with counterparties, with the changes in fair value of these transactions also recorded in current period earnings.

### Fair Value Hedges

The majority of the fair value hedging activity relates to entering into interest rate swaps primarily to convert our non-prepayable fixed-rate debt to floating-rate debt to achieve our liquidity management strategy. The amount converted depends on contractual interest rates and maturities. For the remaining fair value hedges, we enter into receive-fixed, pay-floating swaps to align our equity positioning strategy with our risk management strategy. For fair value hedges, the amount of hedge ineffectiveness is recognized as net interest income in current period earnings.

### Cash Flow Hedges

We purchase interest rate caps and floors to hedge cap and floor risk embedded within a portion of our floating-rate investment securities and loans. The interest rate caps hedge floating-rate debt cash flows that fund the cash flows from floating-rate investment securities. If the strike rates in the purchased interest rate caps are exceeded, we receive cash flows on the derivative to hedge our floating-rate funding exposure above such strike levels. The interest rate floors hedge cash flows from floating-rate loans. If market index rates underlying our floating rate loans decline below strike levels, we receive cash flows on the derivative. We also enter into foreign exchange spot and forward contracts to manage currency risk on loans denominated in foreign currencies. Typically, foreign currency contracts are purchased to fund the principal cash flows of the loan and simultaneously sold to lock in the principal and interest cash flows upon repricing or maturity date of the loan. For cash flow hedges, the amount of hedge ineffectiveness, the amount excluded from effectiveness assessment, and the amounts reclassified from accumulated other comprehensive income (loss) into current period earnings are all reflected in net interest income. At December 31, 2017, we expect that $9.1 million of expense will be reclassified from accumulated other comprehensive income (loss) into earnings in the next 12 months, based on the anticipated cash flows of existing financial instruments. The maximum term over which we are hedging our exposure to the variability of future cash flows for all forecasted transactions is approximately 18 years.

### Derivatives Not Designated As Hedges

Changes in the fair value of customer derivatives and related offsetting agreements with counterparties are recognized immediately as noninterest income/expense in current period earnings.

### Counterparty Credit Risk

The use of derivatives for risk management introduces credit risk related to customers and counterparties. Generally, when the fair value of a derivative contract is positive, we are exposed to credit risk.

Derivative transactions with our customers are typically secured through our loan agreements. As of December 31, 2017, 2016 and 2015, the notional amount of derivatives with our customers totaled $8.0 billion, $6.5 billion and $5.8 billion, respectively.

The majority of our non-customer derivatives are transacted with derivative counterparties and governed by master swap agreements, which include bilateral collateral arrangements, requiring the Bank or our counterparties to post collateral on a daily basis with thresholds set at zero for all active counterparties. The master swap agreements also include netting agreements requiring the net settlement of covered contracts with the same counterparty in the event of default by the other party. The “net” mark-to-market exposure represents the netting of the positive and negative exposures with that counterparty. Notwithstanding these protections, we are exposed to credit risk with these counterparties due to the timing of daily margining activities. As of December 31, 2017, 2016 and 2015, the notional amount of derivatives with our non-customer counterparties totaled $13.3 billion, $13.7 billion and $15.4 billion, respectively, which excludes the $10.4 billion, $7.1 billion and $2.7 billion, respectively, of cleared derivatives discussed below.

We record derivative exposures and related cash collateral balances at gross amounts in our consolidated balance sheets. Pursuant to our master swap agreements, as of December 31, 2017, our non-customer counterparties had posted $50.9 million in cash as collateral with us. We estimate that the amount of losses related to derivatives we could be exposed to in the event of nonperformance by dealer counterparties to our derivative positions, net of collateral held by us, was $0.7 million, $1.1 million and $3.9 million at December 31, 2017, 2016 and 2015.

The Dodd-Frank Wall Street Reform and Consumer Protection Act (the “Dodd-Frank Act”) requires certain derivative transactions to be cleared through a central clearinghouse and traded on regulated swap execution facilities. The U.S. Commodity Futures Trading Commission has exempted certain qualifying swaps entered into by end-users and financial cooperatives from these new requirements. The exemptions do not cover all swaps executed by CoBank and are generally limited to swaps entered into in connection with loans and derivatives for customer-owners. CoBank has also voluntarily chosen to clear some swap transactions for economic and risk management purposes. As a result, certain of our derivative transactions are cleared through a futures commission merchant (FCM) with a clearinghouse or central counterparty (CCP). When these swaps are cleared, a single bilateral swap is divided into two separate swaps with the CCP becoming the counterparty to both of the initial parties to the swap. CCPs have several layers of protection against default including initial and variation margin or settlement payments that are required to be posted by participants. FCMs prequalify counterparties to all cleared swaps, set exposure limits for each counterparty and collect initial and variation margin or settlement payments daily for changes in the value of cleared derivatives. The margin and settlement payments collected from both parties to the swap protect against credit risk in the event of a counterparty default. Initial and variation margin or settlement payment requirements are set by and held for the benefit of the CCP. Additional initial margin may be required and held by the FCM in some instances. At December 31, 2017, 2016 and 2015, the notional amount of our cleared derivatives was $10.4 billion, $7.1 billion and $2.7 billion, respectively. Initial margin and settlement payments totaling $32.0 million and $104.6 million, respectively, were held by our CCP for our cleared derivatives as of December 31, 2017. Initial and variation margin totaling $22.4 million and $70.4 million, respectively, were pledged for our cleared derivatives as of December 31, 2016, and $23.7 million and $34.1 million, respectively, as of December 31, 2015.

### Hedge Terminations

During 2017, 2016 and 2015, we terminated approximately $918.2 million, $223.3 million and $820.2 million, respectively, in notional value of interest rate swaps for asset-liability management purposes. These swaps were accounted for as fair value hedges.

We terminated interest rate swaps with customers and offsetting dealer counterparties totaling $270.5 million, $483.3 million, and $599.9 million of notional value in 2017, 2016 and 2015, respectively. Proceeds from the customer terminations were offset by proceeds from the offsetting dealer terminations.

A summary of the impact of derivative financial instruments on our consolidated balance sheets as of December 31, 2017, 2016 and 2015 is shown below.

**Fair Value of Derivative Financial Instruments**

| As of December 31, 2017 | Fair Value of Derivative Assets[1] | Fair Value of Derivative Liabilities[2] |
|---|---|---|
| **Derivatives Designated as Hedging Instruments** | | |
| Interest Rate Contracts | $ 37,479 | $ 88,382 |
| Foreign Exchange Contracts | 113 | 3,109 |
| Total Derivatives Designated as Hedging Instruments | $ 37,592 | $ 91,491 |
| **Derivatives Not Designated as Hedging Instruments** | | |
| Interest Rate Contracts | $ 142,801 | $ 99,378 |
| Foreign Exchange Contracts | 452 | 427 |
| Total Derivatives Not Designated as Hedging Instruments | $ 143,253 | $ 99,805 |
| Settlement Payments | - | (104,564) |
| **Total Derivatives** | $ 180,845 | $ 86,732 |

[1] These assets make up the “Interest Rate Swaps and Other Financial Instruments" assets in the consolidated balance sheet as of December 31, 2017.

[2] These liabilities make up the “Interest Rate Swaps and Other Financial Instruments" liabilities in the consolidated balance sheet as of December 31, 2017.

**Fair Value of Derivative Financial Instruments**

| As of December 31, 2016 | Fair Value of Derivative Assets[1] | Fair Value of Derivative Liabilities[2] |
|---|---|---|
| **Derivatives Designated as Hedging Instruments** | | |
| Interest Rate Contracts | $ 51,148 | $ 53,390 |
| Foreign Exchange Contracts | 3,710 | 770 |
| Total Derivatives Designated as Hedging Instruments | $ 54,858 | $ 54,160 |
| **Derivatives Not Designated as Hedging Instruments** | | |
| Interest Rate Contracts | $ 151,191 | $ 105,849 |
| Foreign Exchange Contracts | 2,385 | 2,715 |
| Total Derivatives Not Designated as Hedging Instruments | $ 153,576 | $ 108,564 |
| **Total Derivatives** | $ 208,434 | $ 162,724 |

[1] These assets make up the “Interest Rate Swaps and Other Financial Instruments” assets in the consolidated balance sheet as of December 31, 2016.

[2] These liabilities make up the “Interest Rate Swaps and Other Financial Instruments” liabilities in the consolidated balance sheet as of December 31, 2016.

**Fair Value of Derivative Financial Instruments**

| As of December 31, 2015 | Fair Value of Derivative Assets[1] | Fair Value of Derivative Liabilities[2] |
|---|---|---|
| **Derivatives Designated as Hedging Instruments** | | |
| Interest Rate Contracts | $ 141,499 | $ 2,912 |
| Foreign Exchange Contracts | 2,286 | 1,010 |
| Total Derivatives Designated as Hedging Instruments | $ 143,785 | $ 3,922 |
| **Derivatives Not Designated as Hedging Instruments** | | |
| Interest Rate Contracts | $ 149,753 | $ 106,770 |
| Foreign Exchange Contracts | 2,451 | 2,705 |
| Total Derivatives Not Designated as Hedging Instruments | $ 152,204 | $ 109,475 |
| **Total Derivatives** | $ 295,989 | $ 113,397 |

[1] These assets make up the “Interest Rate Swaps and Other Financial Instruments” assets in the consolidated balance sheet as of December 31, 2015.

[2] These liabilities make up the “Interest Rate Swaps and Other Financial Instruments” liabilities in the consolidated balance sheet as of December 31, 2015.

A summary of the impact of derivative financial instruments on our consolidated statements of income and comprehensive income for the years ended December 31, 2017, 2016 and 2015 is shown in the following tables.

**Derivative Financial Instruments in Fair Value Hedging Relationships**

| | Net Amount of Gain or (Loss) Recognized in Income on Derivative and Hedged Item[1] | | |
|---|---|---|---|
| **Year Ended December 31,** | **2017** | **2016** | **2015** |
| Interest Rate Contracts | **$ 977** | $ 1,109 | $ 2,777 |
| **Total** | **$ 977** | $ 1,109 | $ 2,777 |

[1] Located in Interest Expense in the consolidated statements of income for the years ended December 31, 2017, 2016 and 2015.

**Derivative Financial Instruments in Cash Flow Hedging Relationships**

| **Year Ended December 31, 2017** | **Amount of Gain or (Loss) Recognized in Accumulated Other Comprehensive Income (Loss) on Derivative[1]** | **Amount of Gain or (Loss) Reclassified from Accumulated Other Comprehensive Income (Loss) to Income on Derivative[1]** | **Amount of Gain or (Loss) Recognized in Income on Derivative[2]** |
|---|---|---|---|
| Interest Rate Contracts | **$ (19,504)** | **$ (6,701)** [3] | **$ 11** |
| Foreign Exchange Contracts | **(5,936)** | **(6,157)** [4] [5] | **843** [4] |
| **Total** | **$ (25,440)** | **$ (12,858)** | **$ 854** |

[1] Effective portion

[2] Ineffective portion and amount excluded from effectiveness assessment.

[3] Located in Interest Expense in the consolidated statement of income for the year ended December 31, 2017.

[4] Located in Interest Income – Loans in the consolidated statement of income for the year ended December 31, 2017.

[5] Fully offset by a $6,157 gain on foreign currency denominated loans (hedged items) which is also located in Interest Income – Loans in the consolidated statement of income for the year ended December 31, 2017.

**Derivative Financial Instruments in Cash Flow Hedging Relationships**

| **Year Ended December 31, 2016** | **Amount of Gain or (Loss) Recognized in Accumulated Other Comprehensive Income (Loss) on Derivative[1]** | **Amount of Gain or (Loss) Reclassified from Accumulated Other Comprehensive Income (Loss) to Income on Derivative[1]** | **Amount of Gain or (Loss) Recognized in Income on Derivative[2]** |
|---|---|---|---|
| Interest Rate Contracts | $ (3,009) | $ (4,520) [3] | $ - |
| Foreign Exchange Contracts | 1,664 | 1,135 [4] [5] | 1,505 [4] |
| **Total** | $ (1,345) | $ (3,385) | $ 1,505 |

[1] Effective portion

[2] Ineffective portion and amount excluded from effectiveness assessment.

[3] Located in Interest Expense in the consolidated statement of income for the year ended December 31, 2016.

[4] Located in Interest Income – Loans in the consolidated statement of income for the year ended December 31, 2016.

[5] Fully offset by a ($1,135) loss on foreign currency denominated loans (hedged items) which is also located in Interest Income – Loans in the consolidated statement of income for the year ended December 31, 2016.

### Derivative Financial Instruments in Cash Flow Hedging Relationships

| Year Ended December 31, 2015 | Amount of Gain or (Loss) Recognized in Accumulated Other Comprehensive Income (Loss) on Derivative[1] | Amount of Gain or (Loss) Reclassified from Accumulated Other Comprehensive Income (Loss) to Income on Derivative[1] | Amount of Gain or (Loss) Recognized in Income on Derivative[2] |
|---|---|---|---|
| Interest Rate Contracts | $ (11,941) | $ (2,393) [3] | $ - |
| Foreign Exchange Contracts | (2,407) | (2,280) [4] [5] | 193 [4] |
| **Total** | $ (14,348) | $ (4,673) | $ 193 |

[1] Effective portion

[2] Ineffective portion and amount excluded from effectiveness assessment.

[3] Located in Interest Expense in the consolidated statement of income for the year ended December 31, 2015.

[4] Located in Interest Income – Loans in the consolidated statement of income for the year ended December 31, 2015.

[5] Fully offset by a $2,280 gain on foreign currency denominated loans (hedged items) which is also located in Interest Income – Loans in the consolidated statement of income for the year ended December 31, 2015.

### Derivative Financial Instruments not Designated as Hedging Relationships[1]

| | Net Amount of Gain or (Loss) Recognized in Income On Derivative[2] | | |
|---|---|---|---|
| **Year Ended December 31,** | **2017** | **2016** | **2015** |
| Interest Rate Contracts | **$ (3,929)** | $ (998) | $ 812 |
| Foreign Exchange Contracts | **354** | (77) | (169) |
| **Total** | **$ (3,575)** | $ (1,075) | $ 643 |

[1] Primarily represents our derivative agreements with customers and related offsetting derivative agreements with counterparties.

[2] Located in Other Noninterest Income/Expense in the consolidated statements of income for the years ended December 31, 2017, 2016 and 2015.

### Asset/Liability Offsetting

As noted previously, derivative transactions with swap dealers include bilateral collateral and netting agreements that require the net settlement of covered contracts. Derivative transactions with customers and counterparties are collateralized through loan agreements. Notwithstanding collateral and netting provisions, our derivative assets and liabilities are not offset in the accompanying consolidated balance sheets. The amount of collateral received or pledged is calculated on a net basis, by counterparty.

The following tables summarize derivative assets and liabilities, related accrued interest and amounts of collateral exchanged pursuant to our agreements.

**Offsetting of Financial and Derivative Instruments**

| | Gross Amounts of Assets/Liabilities Presented in the Consolidated Balance Sheets | Amounts Not Offset In the Consolidated Balance Sheets: Cash Collateral Received/ Pledged[1] | Amounts Not Offset In the Consolidated Balance Sheets: Investment Securities Received/Pledged as Collateral | Net Amount |
|---|---|---|---|---|
| **As of December 31, 2017** | | | | |
| Assets: | | | | |
| Interest Rate Swaps and Other Financial Instruments: | | | | |
| Dealer | $ 84,969 | $ (50,910) | $ - | $ 34,059 |
| Customer | 83,351 | - | - | 83,351 |
| Clearinghouse | 12,525 | - | - | 12,525 |
| Accrued Interest Receivable on Derivative Contracts | 8,616 | - | - | 8,616 |
| Liabilities: | | | | |
| Interest Rate Swaps and Other Financial Instruments: | | | | |
| Dealer | 37,784 | (3,050) | - | 34,734 |
| Customer | 41,189 | - | - | 41,189 |
| Clearinghouse | 7,759 | - | (31,999) | - [2] |
| Accrued Interest Payable on Derivative Contracts | 7,415 | - | - | 7,415 |

[1] Cash collateral received is recognized in the consolidated balance sheets.

[2] Cash and investment securities pledged as collateral fully offset the related gross liability on the consolidated balance sheet.

**Offsetting of Financial and Derivative Instruments**

| | Gross Amounts of Assets/Liabilities Presented in the Consolidated Balance Sheets | Amounts Not Offset In the Consolidated Balance Sheets: Cash Collateral Received/ Pledged[1] | Amounts Not Offset In the Consolidated Balance Sheets: Investment Securities Received/Pledged as Collateral[1] | Net Amount |
|---|---|---|---|---|
| **As of December 31, 2016** | | | | |
| Assets: | | | | |
| Interest Rate Swaps and Other Financial Instruments: | | | | |
| Dealer | $ 94,898 | $ (85,941) | $ (6,918) | $ 2,039 |
| Customer | 104,028 | - | - | 104,028 |
| Clearinghouse | 9,508 | - | - | 9,508 |
| Accrued Interest Receivable on Derivative Contracts | 40,782 | - | - | 40,782 |
| Liabilities: | | | | |
| Interest Rate Swaps and Other Financial Instruments: | | | | |
| Dealer | 42,219 | (570) | - | 41,649 |
| Customer | 34,568 | - | - | 34,568 |
| Clearinghouse | 85,937 | (70,415) | (22,448) | - [2] |
| Accrued Interest Payable on Derivative Contracts | 4,500 | - | - | 4,500 |
| **As of December 31, 2015** | | | | |
| Assets: | | | | |
| Interest Rate Swaps and Other Financial Instruments: | | | | |
| Dealer | $ 152,222 | $ (115,191) | $ (34,665) | $ 2,366 |
| Customer | 137,132 | - | - | 137,132 |
| Clearinghouse | 6,635 | - | - | 6,635 |
| Accrued Interest Receivable on Derivative Contracts | 67,228 | - | - | 67,228 |
| Liabilities: | | | | |
| Interest Rate Swaps and Other Financial Instruments: | | | | |
| Dealer | 63,904 | (1,570) | - | 62,334 |
| Customer | 6,574 | - | - | 6,574 |
| Clearinghouse | 42,919 | (34,103) | (23,747) | - [2] |
| Accrued Interest Payable on Derivative Contracts | 5,278 | - | - | 5,278 |

[1] Cash collateral received is recognized in the consolidated balance sheets whereas investment securities received are not recognized in the consolidated balance sheets.

[2] Cash and investment securities pledged as collateral fully offset the related gross liability on the consolidated balance sheet.

# Note 12 – Disclosure About Estimated Fair Value of Financial Instruments

The fair value of financial instruments represents the estimated amount to be received to sell an asset or paid to transfer or extinguish a liability (an exit price) in active markets among willing participants at the reporting date. The FASB has established a three-level fair value hierarchy aimed at maximizing the use of observable inputs – that is, inputs that reflect the assumptions market participants would use in pricing an asset or liability. Observable inputs are based on market data obtained from sources independent of the reporting entity. Unobservable inputs are supported by limited or no market activity and require significant management judgment or estimation.

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 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.

A description of the methods, assumptions and inputs to the valuation process used to determine or estimate the fair value of each class of financial instruments within the three-level hierarchy follows.

**Level 1**

Level 1 inputs are quoted prices in active markets for identical assets or liabilities. Our Level 1 assets at December 31, 2017 consist of assets held in a trust account related to deferred compensation and our SERPs and ERP. The trust account includes investments in securities that are actively traded and have quoted net asset value prices that are directly observable in the marketplace.

**Level 2**

Level 2 inputs include quoted prices for similar assets and liabilities in active markets; quoted prices in markets that are not active; and inputs that are observable, or can be corroborated, for substantially the full term of the asset or liability. Our Level 2 assets and liabilities at December 31, 2017 include our derivative contracts, collateral balances related to derivative contracts, certificates of deposit, federal funds sold and other overnight funds, U.S. Treasury and agency debt investment securities, Ginnie Mae MBS, non-agency MBS, corporate bonds, the substantial majority of agency MBS and the majority of ABS.

The fair value of federal funds sold and other overnight funds is generally their face value, plus accrued interest, as these instruments are readily convertible to cash and are short-term in nature.

The fair value of our investment securities classified as Level 2 is determined by a third-party pricing service that uses valuation models to estimate current market prices. Inputs and assumptions related to these models are typically observable in the marketplace. Such models incorporate prepayment assumptions and underlying collateral information to generate cash flows that are discounted using appropriate benchmark interest rate curves and volatilities. These third-party valuation models also incorporate information regarding non-binding broker/dealer quotes, available trade information, historical cash flows, credit ratings, and other market information. The estimated fair values of investment securities also appear in Note 4.

The fair value of our derivative financial instruments is estimated using internal market valuation models. These models use an income approach and incorporate benchmark interest rate curves (primarily the USD LIBOR/swap curve), volatilities, counterparty credit quality and other inputs that are observable directly or indirectly in the marketplace. We compare internally calculated derivative valuations to broker/dealer quotes to substantiate the results. The fair value of collateral assets and liabilities related to derivative contracts is their face value, plus accrued interest, as these instruments are cash balances; therefore, fair value approximates face value.

The following table presents information about valuation techniques and inputs to Level 2 fair value measurements.

**Information About Valuation Techniques and Inputs to Level 2 Fair Value Measurements**

| | Valuation Technique | Inputs |
|---|---|---|
| Federal Funds Sold and Other Overnight Funds | Carrying Value | Par/Principal Plus Accrued Interest |
| Certificates of Deposit | Third-Party Pricing Service | Benchmark Yield Curve<br>Quoted Prices |
| Investment Securities (excluding certificates of deposit) | Third-Party Pricing Service | Prepayment Rate<br>Lifetime Default Rate<br>Loss Severity<br>Benchmark Yield Curve<br>Quoted Prices |
| Interest Rate Swaps and Other Financial Instruments | Discounted Cash Flow | Benchmark Yield Curve<br>Counterparty Credit Risk<br>Volatility |
| Collateral Assets and Collateral Liabilities | Carrying Value | Par/Principal Plus Accrued Interest |

**Level 3**

Level 3 inputs are unobservable and supported by limited or no market activity. Our Level 3 assets at December 31, 2017 include our Farmer Mac MBS, FHA/VA non-wrapped reperformer MBS and a small portion of agency MBS and ABS. Based on the lack of active trading volume and an orderly market for these securities, we classified these securities as Level 3. Fair value for all Farmer Mac MBS and a small portion of our Level 3 ABS is calculated internally using third-party models. Fair value for FHA/VA non-wrapped reperformer MBS, Level 3 agency MBS and the substantial majority of our Level 3 ABS is estimated through a third-party pricing service that uses valuation models to estimate current market prices. Inputs into all of these valuation models include underlying collateral data and projected losses as well as information for prepayment speeds and discounting spreads. Due to the lack of marketplace information, the inputs into these valuation models primarily represent management assumptions, with some corroboration to market inputs where information is available.

Level 3 assets at December 31, 2017 also include $105.0 million of loans originally measured at cost, which were written down to fair value as a result of impairment. The valuation of these assets is based on either the fair value of the underlying collateral, if the loan is collateral dependent, or the present value of expected future cash flows. Such valuations may include the use of independent appraisals or other market-based information to develop a management estimate of fair value. As a result, these fair value measurements fall under Level 3 in the fair value hierarchy; however, they are excluded from the tables on pages 119 and 120 because they are not measured on a recurring basis.

Our Level 3 liabilities at December 31, 2017 include standby letters of credit whose market value is internally calculated based on information that is not observable either directly or indirectly in the marketplace.

No transfers into or out of the three levels of assets or liabilities occurred in 2017. In 2016, three FHA/VA Wrapped Reperformer MBS, included in U.S. agency MBS, with a total fair value of $102.7 million at December 31, 2016 were transferred out of Level 2 and into Level 3. These investments were downgraded by rating agencies during 2016 at which time pricing inputs were no longer observable. No other transfers into or out of the three levels of assets or liabilities occurred in 2016 or 2015.

The following table presents quantitative information about Level 3 fair value measurements as of December 31, 2017.

**Quantitative Information About Valuation Techniques and Unobservable Inputs to Level 3 Fair Value Measurements**

| ($ in Millions) | Fair Value | Valuation Technique | Unobservable Inputs | Range |
|---|---|---|---|---|
| **Assets** | | | | |
| Investment Securities: | | | | |
| U.S. Agency MBS | $ 125 | Third-Party Pricing Service | Prepayment Rate | * |
| | | | Lifetime Default Rate | * |
| | | | Loss Severity | * |
| FHA/VA Non-Wrapped Reperformer MBS | 257 | Third-Party Pricing Service | Prepayment Rate | * |
| | | | Lifetime Default Rate | * |
| | | | Loss Severity | * |
| Farmer Mac MBS | 78 | Discounted Cash Flow | Prepayment Rate | 9-15 percent |
| | | | Mark-to-Market Spread | 1 percent |
| Asset-Backed | 27 | Third-Party Pricing Service | Prepayment Rate | * |
| | | | Lifetime Default Rate | * |
| | | | Loss Severity | * |
| Other (included in Asset-Backed) | 12 | Discounted Cash Flow | Prepayment Rate | 0 percent |
| Impaired Loans | 105 | Appraisal / Discounted Cash Flow | Income/Expense Data | ** |
| | | | Comparable Sales | ** |
| | | | Replacement Cost | ** |
| **Liabilities** | | | | |
| Standby Letters of Credit | $ 10 | Discounted Cash Flow | Mark-to-Market Spread | 0.2-1 percent |

* Excludes ranges which are determined by a third-party pricing service

** Range of inputs are unique to each collateral property

**Assets and Liabilities Measured at Fair Value on a Recurring Basis**

The following tables present the assets and liabilities that are measured at fair value on a recurring basis at December 31, 2017, 2016 and 2015 for each of the fair value hierarchy levels.

**Assets and Liabilities Measured at Fair Value on a Recurring Basis**

**December 31, 2017**

| ($ in Millions) | Level 1 | Level 2 | Level 3 | Total |
|---|---|---|---|---|
| **Assets** | | | | |
| Federal Funds Sold and | | | | |
| Other Overnight Funds | $ - | $ 1,035 | $ - | $ 1,035 |
| Investment Securities: | | | | |
| Certificates of Deposit | - | 775 | - | 775 |
| U.S. Treasury Debt | - | 11,029 | - | 11,029 |
| U.S. Agency Debt | - | 3,356 | - | 3,356 |
| Residential MBS: | | | | |
| Ginnie Mae | - | 1,856 | - | 1,856 |
| U.S. Agency | - | 6,593 | 125 | 6,718 |
| FHA/VA Non-Wrapped | | | | |
| Reperformer | - | - | 257 | 257 |
| Non-Agency | - | 29 | - | 29 |
| Commercial MBS: | | | | |
| U.S. Agency | - | 2,499 | - | 2,499 |
| Agricultural MBS: | | | | |
| Farmer Mac | - | - | 78 | 78 |
| Corporate Bonds | - | 40 | - | 40 |
| Asset-Backed and Other | - | 194 | 39 | 233 |
| Interest Rate Swaps and | | | | |
| Other Financial Instruments | - | 181 | - | 181 |
| Assets Held in Trust | | | | |
| (included in Other Assets) | 81 | - | - | 81 |
| Collateral Assets (included | | | | |
| in Other Assets) | - | 3 | - | 3 |
| **Total Assets** | $ 81 | $ 27,590 | $ 499 | $ 28,170 |
| **Liabilities** | | | | |
| Interest Rate Swaps and | | | | |
| Other Financial Instruments | $ - | $ 87 | $ - | $ 87 |
| Collateral Liabilities | | | | |
| (included in Bonds and Notes) | - | 51 | - | 51 |
| Standby Letters of Credit | | | | |
| (included in Other Liabilities) | - | - | 10 | 10 |
| **Total Liabilities** | $ - | $ 138 | $ 10 | $ 148 |

**Assets and Liabilities Measured at Fair Value on a Recurring Basis**

**December 31, 2016**

| ($ in Millions) | Level 1 | Level 2 | Level 3 | Total |
|---|---|---|---|---|
| **Assets** | | | | |
| Federal Funds Sold and | | | | |
| Other Overnight Funds | $ - | $ 750 | $ - | $ 750 |
| Investment Securities: | | | | |
| Certificates of Deposit | - | 776 | - | 776 |
| U.S. Treasury Debt | - | 11,141 | - | 11,141 |
| U.S. Agency Debt | - | 5,144 | - | 5,144 |
| Residential MBS: | | | | |
| Ginnie Mae | - | 541 | - | 541 |
| U.S. Agency | - | 6,564 | 147 | 6,711 |
| FHA/VA Non-Wrapped | | | | |
| Reperformer | - | - | 275 | 275 |
| Non-Agency | - | 71 | - | 71 |
| Commercial MBS: | | | | |
| U.S. Agency | - | 2,641 | - | 2,641 |
| Agricultural MBS: | | | | |
| Farmer Mac | - | - | 97 | 97 |
| Corporate Bonds | - | 40 | - | 40 |
| Asset-Backed and Other | - | 289 | 39 | 328 |
| Interest Rate Swaps and | | | | |
| Other Financial Instruments | - | 208 | - | 208 |
| Assets Held in Trust | | | | |
| (included in Other Assets) | 69 | - | - | 69 |
| Collateral Assets (included | | | | |
| in Other Assets) | - | 71 | - | 71 |
| **Total Assets** | $ 69 | $ 28,236 | $ 558 | $ 28,863 |
| **Liabilities** | | | | |
| Interest Rate Swaps and | | | | |
| Other Financial Instruments | $ - | $ 163 | $ - | $ 163 |
| Collateral Liabilities | | | | |
| (included in Bonds and Notes) | - | 86 | - | 86 |
| Standby Letters of Credit | | | | |
| (included in Other Liabilities) | - | - | 10 | 10 |
| **Total Liabilities** | $ - | $ 249 | $ 10 | $ 259 |

| Assets and Liabilities Measured at Fair Value on a Recurring Basis | | | | |
|---|---|---|---|---|
| **December 31, 2015** | | | | |
| **Assets** | | | | |
| Investment Securities: | | | | |
| U.S. Treasury Debt | $ - | $ 7,188 | $ - | $ 7,188 |
| U.S. Agency Debt | - | 5,857 | - | 5,857 |
| Residential MBS: | | | | |
| Ginnie Mae | - | 906 | - | 906 |
| U.S. Agency | - | 7,711 | 52 | 7,763 |
| FHA/VA Non-Wrapped Reperformer | - | - | 342 | 342 |
| Non-Agency | - | 129 | - | 129 |
| Commercial MBS: | | | | |
| U.S. Agency | - | 1,982 | - | 1,982 |
| Agricultural MBS: | | | | |
| Farmer Mac | - | - | 124 | 124 |
| Corporate Bonds | - | 166 | - | 166 |
| Asset-Backed and Other | - | - | 47 | 47 |
| Interest Rate Swaps and Other Financial Instruments | - | 296 | - | 296 |
| Assets Held in Trust (included in Other Assets) | 63 | - | - | 63 |
| Collateral Assets (included in Other Assets) | - | 36 | - | 36 |
| **Total Assets** | $ 63 | $ 24,271 | $ 565 | $ 24,899 |
| **Liabilities** | | | | |
| Interest Rate Swaps and Other Financial Instruments | $ - | $ 113 | $ - | $ 113 |
| Collateral Liabilities (included in Bonds and Notes) | - | 115 | - | 115 |
| Standby Letters of Credit (included in Other Liabilities) | - | - | 10 | 10 |
| **Total Liabilities** | $ - | $ 228 | $ 10 | $ 238 |

The following table presents the changes in Level 3 assets and liabilities measured at fair value on a recurring basis:

**Level 3 Assets and Liabilities Measured at Fair Value on a Recurring Basis**

| ($ in Millions) | U.S. Agency Residential MBS | Farmer Mac Agricultural MBS | FHA/VA Non-Wrapped Reperformer Residential MBS | Asset-Backed Securities and Other | Standby Letters of Credit |
|---|---|---|---|---|---|
| **Balance at December 31, 2016** | **$ 147** | **$ 97** | **$ 275** | **$ 39** | **$ 10** |
| Total Gains or Losses (Realized/Unrealized): | | | | | |
| Included in Other Comprehensive Income | **(1)** | **-** | **15** | **(1)** | **-** |
| Purchases | **-** | **-** | **-** | **2** | **-** |
| Issuances | **-** | **-** | **-** | **3** | **7** |
| Settlements | **(23)** | **(19)** | **(41)** | **(7)** | **(7)** |
| Accretion | **2** | **-** | **8** | **3** | **-** |
| **Balance at December 31, 2017** | **$ 125** | **$ 78** | **$ 257** | **$ 39** | **$ 10** |
| **Balance at December 31, 2015** | $ 52 | $ 124 | $ 342 | $ 47 | $ 10 |
| Transfers In | 103 | - | - | - | - |
| Total Gains or Losses (Realized/Unrealized): | | | | | |
| Included in Other Comprehensive Income | (8) | - | 1 | (2) | - |
| Sales | - | - | (24) | - | - |
| Issuances | - | - | - | - | 8 |
| Settlements | 8 | (27) | (52) | (10) | (8) |
| Accretion | (8) | - | 8 | 4 | - |
| **Balance at December 31, 2016** | $ 147 | $ 97 | $ 275 | $ 39 | $ 10 |
| **Balance at December 31, 2014** | $ 57 | $ 150 | $ 391 | $ 93 | $ 9 |
| Total Gains or Losses (Realized/Unrealized): | | | | | |
| Included in Other Noninterest Income | - | - | (10) | 14 | - |
| Included in Other Comprehensive Income | 2 | - | 18 | (13) | - |
| Purchases | - | - | - | 4 | - |
| Sales | - | - | (21) | (44) | - |
| Issuances | - | - | - | - | 6 |
| Settlements | (8) | (25) | (51) | (10) | (5) |
| Accretion | 1 | (1) | 15 | 3 | - |
| **Balance at December 31, 2015** | $ 52 | $ 124 | $ 342 | $ 47 | $ 10 |

### Estimated Fair Value of Certain Other Financial Instruments

The following table presents the estimated fair values of financial instruments that are recorded in the consolidated balance sheets at cost, as well as certain off-balance sheet financial instruments, as of December 31, 2017, 2016 and 2015.

($ in Millions)

| | December 31, 2017 | | | December 31, 2016 | | | December 31, 2015 | | |
|---|---|---|---|---|---|---|---|---|---|
| | Carrying Amount | Estimated Fair Value | Fair Value Hierarchy | Carrying Amount | Estimated Fair Value | Fair Value Hierarchy | Carrying Amount | Estimated Fair Value | Fair Value Hierarchy |
| **Financial Assets:** | | | | | | | | | |
| Net Loans | **$ 98,689** | **$ 99,742** | **Level 3** | $ 94,699 | $ 95,664 | Level 3 | $ 88,554 | $ 89,501 | Level 3 |
| **Financial Liabilities:** | | | | | | | | | |
| Bonds and Notes | **$ 118,406** (1) | **$ 118,859** (1) | **Level 3** (1) | $ 115,086 (2) | $ 115,660 (2) | Level 3 (2) | $ 106,970 (3) | $ 107,537 (3) | Level 3 (3) |
| Subordinated Debt | **-** | **-** | **Level 3** | 499 | 478 | Level 3 | 903 | 926 | Level 3 |
| **Off-Balance Sheet Financial Instruments:** | | | | | | | | | |
| Commitments to Extend Credit | **$ -** | **$ (92)** | **Level 3** | $ - | $ (102) | Level 3 | $ - | $ (106) | Level 3 |

(1) Includes $51 million in Level 2 collateral liabilities carried at fair value as of December 31, 2017.

(2) Includes $86 million in Level 2 collateral liabilities carried at fair value as of December 31, 2016.

(3) Includes $115 million in Level 2 collateral liabilities carried at fair value as of December 31, 2015.

### Net Loans

Our loan portfolio includes fixed- and floating-rate loans. Since no active trading market exists for most of our loans, fair value is estimated by discounting the expected future cash flows using current interest rates at which similar loans would be made to borrowers with similar credit risk.

### Bonds and Notes

Bonds and notes 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 U.S. Treasury yield curve and an estimated yield-spread relationship between Farm Credit debt securities and U.S. Treasury securities. We estimate an appropriate yield-spread taking into consideration bank and security dealer yield indications, observed new Government Sponsored Enterprise debt security pricing, and pricing levels in the related USD interest rate swap market.

### Subordinated Debt

The fair value of subordinated debt is estimated based upon quotes obtained from a broker/dealer.

### Commitments to Extend Credit

The fair value of commitments to extend credit is estimated by applying a risk-adjusted spread percentage to these obligations.

The following table presents information about valuation techniques and inputs to other fair value measurements.

**Information About Valuation Techniques and Inputs to Other Fair Value Measurements**

| | Valuation Technique | Input |
|---|---|---|
| Net Loans | Discounted Cash Flow | Prepayment Rate<br>Mark-to-Market Spread<br>Benchmark Yield Curve<br>Probability of Default<br>Loss Given Default |
| Bonds and Notes | Discounted Cash Flow | Benchmark Yield Curve<br>Farm Credit Spread |
| Subordinated Debt | Non-binding Broker/Dealer Quote | Price for Similar Security |
| Commitments to Extend Credit | Discounted Cash Flow | Mark-to-Market Spread |

## Note 13 – Related Party Transactions

In the ordinary course of business, we enter into loan transactions with customers, the officers or directors of which may also serve on our Board of Directors. Such loans are subject to special review and reporting requirements contained in the FCA regulations, are reviewed and approved only at the most senior loan committee level within the Bank and are regularly reported to the Board of Directors. Except as noted below, all related party loans are made in accordance with established policies on substantially the same terms, including interest rates and collateral requirements, as those prevailing at the time for comparable transactions with unrelated borrowers.

During 2010, we made a $4.0 million loan to Dixie Electric Membership Corporation (DEMCO), with which Richard W. Sitman, a member of our Board of Directors, is affiliated. The loan was made to refinance a portion of DEMCO's existing long-term indebtedness. CoBank's pricing policy was unintentionally misapplied to this loan and the loan was closed with an interest rate of 3.25 percent, which is lower than rates on similar loans to unrelated borrowers. As of December 31, 2017, there was $1.6 million outstanding on this loan, which is 5 percent of the Bank's total exposure to DEMCO.

Total loans outstanding to customers whose officers or directors serve on our Board of Directors amounted to $10.0 billion at December 31, 2017. During 2017, $27.6 billion of advances on loans were made and repayments totaled $27.2 billion. None of these loans outstanding at December 31, 2017 were delinquent, in nonaccrual or accruing restructured status or, in the opinion of management, involved more than a normal risk of collectability.

## Note 14 – Segment Financial Information

We conduct lending operations through three operating segments: Agribusiness, Strategic Relationships and Rural Infrastructure.

The accompanying table presents condensed disaggregated information for the segments. Allocations of resources and corporate items, as well as measurement of financial performance, are made at these operating segment levels. All customer activity, including loans and leases and related income, is specifically assigned to the business units that make up the operating segments. Investment securities and federal funds sold and other overnight funds, which are primarily held as a liquidity reserve to support our banking operations, are not specifically assigned to operating segments; however, the income from investment securities and federal funds sold and other overnight funds is allocated to the operating segments. Information to reconcile the total reportable segments to the total CoBank financial statements is shown as "Corporate/Other." Intersegment transactions are insignificant.

We do not hold significant assets in any foreign country. Substantially all of our agricultural export finance loans are U.S. dollar-denominated and 20 percent of these loans are guaranteed by a U.S. government-sponsored loan guarantee program. For the three years ended December 31, 2017, 2016 and 2015, no customer made up 10 percent or more of our gross or net interest income.

## Segment Financial Information

| | Agribusiness | Strategic Relationships | Rural Infrastructure | Subtotal | Corporate/ Other | Total CoBank |
|---|---|---|---|---|---|---|
| **2017 Results of Operations** ($ in Thousands): | | | | | | |
| Net Interest Income | $ 679,651 | $ 295,674 | $ 429,003 | $ 1,404,328 | $ (11,503) | $ 1,392,825 |
| Provision for Loan Losses (Loan Loss Reversal) | 43,650 | - | (1,650) | 42,000 | - | 42,000 |
| Noninterest Income (Expense) | 106,890 | 8,361 | 60,561 | 175,812 | (579) | 175,233 |
| Operating Expenses | 226,892 | 42,307 | 121,596 | 390,795 | (5,122) | 385,673 |
| (Income Tax Benefit) Provision for Income Taxes | (113,727) (2) | - | 128,713 (2) | 14,986 | 78 | 15,064 |
| **Net Income** | $ 629,726 | $ 261,728 | $ 240,905 | $ 1,132,359 | $ (7,038) | $ 1,125,321 |
| **Selected Financial Information at December 31, 2017** ($ in Millions): | | | | | | |
| Loans | $ 30,304 | $ 47,948 | $ 21,014 | $ 99,266 | $ - | $ 99,266 |
| Less: Allowance for Loan Losses | (411) | - | (166) | (577) | - | (577) |
| **Net Loans** | $ 29,893 | $ 47,948 | $ 20,848 | $ 98,689 | $ - | $ 98,689 |
| **Total Assets** | $ 30,193 | $ 48,121 | $ 21,054 | $ 99,368 | $ 29,843 (1) | $ 129,211 |
| (1) Other assets are composed of: | | | | | | |
| Federal Funds Sold and Other Overnight Funds | | | | | | $ 1,035 |
| Investment Securities | | | | | | 26,870 |
| Other Assets | | | | | | 1,938 |
| (2) The 2017 (income tax benefit) provision for income taxes included the impact resulting from the enactment of federal tax legislation in late 2017, as more fully explained in Note 9. | | | | | | |
| **2016 Results of Operations** ($ in Thousands): | | | | | | |
| Net Interest Income | $ 655,473 | $ 285,129 | $ 431,848 | $ 1,372,450 | $ (10,672) | $ 1,361,778 |
| Provision for Loan Losses (Loan Loss Reversal) | 71,000 | - | (8,000) | 63,000 | - | 63,000 |
| Noninterest Income (Expense) | 119,048 | 936 | 69,300 | 189,284 | (4,399) | 184,885 |
| Operating Expenses | 219,490 | 41,279 | 123,200 | 383,969 | (4,267) | 379,702 |
| Provision for Income Taxes | 80,868 | - | 77,968 | 158,836 | (551) | 158,285 |
| **Net Income** | $ 403,163 | $ 244,786 | $ 307,980 | $ 955,929 | $ (10,253) | $ 945,676 |
| **Selected Financial Information at December 31, 2016** ($ in Millions): | | | | | | |
| Loans | $ 28,660 | $ 45,994 | $ 20,604 | $ 95,258 | $ - | $ 95,258 |
| Less: Allowance for Loan Losses | (393) | - | (166) | (559) | - | (559) |
| **Net Loans** | $ 28,267 | $ 45,994 | $ 20,438 | $ 94,699 | $ - | $ 94,699 |
| **Total Assets** | $ 28,673 | $ 46,134 | $ 20,535 | $ 95,342 | $ 30,789 (1) | $ 126,131 |
| (1) Other assets are composed of: | | | | | | |
| Federal Funds Sold and Other Overnight Funds | | | | | | $ 750 |
| Investment Securities | | | | | | 27,765 |
| Other Assets | | | | | | 2,274 |
| **2015 Results of Operations** ($ in Thousands): | | | | | | |
| Net Interest Income | $ 604,182 | $ 283,889 | $ 393,744 | $ 1,281,815 | $ (8,480) | $ 1,273,335 |
| (Loan Loss Reversal) Provision for Loan Losses | (30,800) | - | 40,800 | 10,000 | - | 10,000 |
| Noninterest Income (Expense) | 118,075 | (3,811) | 57,752 | 172,016 | (2,243) | 169,773 |
| Operating Expenses | 193,849 | 38,091 | 94,335 | 326,275 | (960) | 325,315 |
| Provision for Income Taxes | 110,277 | - | 61,090 | 171,367 | (247) | 171,120 |
| **Net Income** | $ 448,931 | $ 241,987 | $ 255,271 | $ 946,189 | $ (9,516) | $ 936,673 |
| **Selected Financial Information at December 31, 2015** ($ in Millions): | | | | | | |
| Loans | $ 26,131 | $ 43,358 | $ 19,552 | $ 89,041 | $ - | $ 89,041 |
| Less: Allowance for Loan Losses | (313) | - | (173) | (486) | - | (486) |
| **Net Loans** | $ 25,818 | $ 43,358 | $ 19,379 | $ 88,555 | $ - | $ 88,555 |
| **Total Assets** | $ 26,127 | $ 43,467 | $ 19,457 | $ 89,051 | $ 28,420 (1) | $ 117,471 |
| (1) Other assets are composed of: | | | | | | |
| Investment Securities | | | | | | $ 24,504 |
| Other Assets | | | | | | 3,916 |

## Note 15 – Commitments and Contingent Liabilities

Under the Farm Credit Act of 1971, as amended, we are primarily liable for the portion of outstanding Systemwide Debt Securities issued by CoBank. We are also contingently liable, as defined in statutory joint and several liability provisions, for the outstanding Systemwide Debt Securities issued by the other System banks. Total Systemwide Debt Securities of the System were $265.2 billion at December 31, 2017.

There are several mechanisms in place affecting exposure to statutory joint and several liabilities. System banks are statutorily required to maintain eligible, unencumbered assets at a level at least equal in value to the total amount of debt for which such System bank is primarily liable. In addition, in the event of a default by a System bank, the Insurance Fund would be required to make timely payment of principal and interest on Systemwide Debt Securities, to the extent that net assets are available in the Insurance Fund, before the joint and several liability of the System banks would be triggered. At December 31, 2017, the aggregated assets of the Insurance Fund totaled $4.9 billion. Finally, System banks must maintain certain financial criteria in order to participate in Systemwide debt issuances. If these criteria are not met, a troubled System bank's access to and participation in Systemwide debt issuances could be limited or denied.

On at least a quarterly basis, we assess our liabilities and contingencies in connection with outstanding legal proceedings utilizing the latest information available. For those matters where it is probable that we will incur a loss, and the amount of the loss can be reasonably estimated, we record a liability in our consolidated financial statements. For other matters, where a loss is not probable or the amount of the loss is not estimable, we will not accrue legal reserves.

In June 2016, a lawsuit was commenced by the filing of a complaint in the United States District Court Southern District of New York against CoBank by a number of investors (the "Plaintiffs") who had held CoBank's 7.875 percent Subordinated Notes due in 2018 (the "Notes"). The Notes were redeemed at par plus accrued interest by CoBank in April 2016 due to the occurrence of a "Regulatory Event" (as defined under the terms of the Notes). The Plaintiffs have asserted a breach of contract claim and a breach of implied covenant of good faith and fair dealing claim alleging that CoBank impermissibly redeemed the Notes. The Plaintiffs have requested damages in an amount to be determined at trial, reasonable attorneys' fees and any other such relief as the court may deem just and proper. CoBank filed its answer in September 2016 and discovery concluded in January 2018. CoBank intends to vigorously defend against these allegations. The likelihood of any outcome of this proceeding cannot be determined at this time.

While the outcome of legal proceedings is inherently uncertain, based on information currently available, advice of legal counsel and available insurance coverage, we believe that the liabilities, if any, arising from our legal proceedings will not have a material adverse effect on our consolidated financial position, results of operations or cash flows. However, in the event of unexpected future developments, it is possible that the ultimate resolution of these matters, if unfavorable, may be material to the Bank's consolidated financial position, results of operations or cash flows.

We have various other commitments outstanding and contingent liabilities as discussed elsewhere in these notes to consolidated financial statements, including commitments to extend credit as discussed in Note 10.

# Note 16 – Quarterly Financial Information

Unaudited quarterly results of operations for the years ended December 31, 2017, 2016 and 2015, are shown in the table below.

**Quarterly Financial Information** (Unaudited)

| 2017 | First | Second | Third | Fourth | Total |
|---|---|---|---|---|---|
| Net Interest Income | **$ 356,114** | **$ 347,218** | **$ 338,494** | **$ 350,999** | **$ 1,392,825** |
| Provision for Loan Losses | **15,000** | **-** | **23,000** | **4,000** | **42,000** |
| Noninterest Income and Expenses, Net | **37,685** | **44,656** | **74,876** | **53,223** | **210,440** |
| Provision for Income Taxes (Income Tax Benefit) | **40,621** | **42,805** | **28,983** | **(97,345)** (1) | **15,064** |
| **Net Income** | **$ 262,808** | **$ 259,757** | **$ 211,635** | **$ 391,121** | **$ 1,125,321** |
| **2016** | **First** | **Second** | **Third** | **Fourth** | **Total** |
| Net Interest Income | $ 336,877 | $ 345,941 | $ 334,011 | $ 344,949 | $ 1,361,778 |
| Provision for Loan Losses | 8,000 | 20,000 | 20,000 | 15,000 | 63,000 |
| Noninterest Income and Expenses, Net | 43,305 | 43,535 | 44,822 | 63,155 | 194,817 |
| Provision for Income Taxes | 42,260 | 39,103 | 37,475 | 39,447 | 158,285 |
| **Net Income** | $ 243,312 | $ 243,303 | $ 231,714 | $ 227,347 | $ 945,676 |
| **2015** | **First** | **Second** | **Third** | **Fourth** | **Total** |
| Net Interest Income | $ 315,285 | $ 309,362 | $ 315,201 | $ 333,487 | $ 1,273,335 |
| Provision for Loan Losses | 10,000 | - | - | - | 10,000 |
| Noninterest Income and Expenses, Net | 27,725 | 28,562 | 38,217 | 61,038 | 155,542 |
| Provision for Income Taxes | 45,334 | 48,471 | 41,161 | 36,154 | 171,120 |
| **Net Income** | $ 232,226 | $ 232,329 | $ 235,823 | $ 236,295 | $ 936,673 |

(1) The income tax benefit in the fourth quarter of 2017 resulted from the enactment of federal tax legislation in late 2017, as more fully explained in Note 9.

# Note 17 – Affiliated Associations

CoBank is chartered by the FCA to serve the Associations that provide credit and related financial services to or for the benefit of eligible borrowers/shareholders for qualified purposes in specific geographic areas in the United States. Associations do not participate in the issuance of Systemwide Debt Securities. Therefore, we are the primary funding source for our affiliated Associations. As of December 31, 2017, we have 22 affiliated Associations serving 23 states across the Northwest, West, Southwest, Rocky Mountains, Mid-Plains, and Northeast regions of the United States.

The Associations originate and service long-term real estate mortgage loans as well as short- and intermediate-term loans for agricultural and other purposes to full and part-time farmers. Associations may also make loans to, among others, processing and marketing entities, farm-related businesses, and rural residents for home purchase and improvements. The Associations may also purchase eligible loan participations from System entities and other lending institutions. Additionally, the Associations may serve as an intermediary in offering multi-peril crop insurance and credit life insurance, and providing additional financial services to borrowers.

The Farm Credit Act and FCA regulations require us to monitor and approve certain activities of our affiliated Associations. CoBank and our affiliated Associations operate under a creditor/debtor relationship evidenced by a General Financing Agreement (GFA) entered into separately with each Association. The GFA sets forth the creditor/debtor relationship between us and each Association and also references certain requirements contained in the Farm Credit Act and FCA regulations. The Associations' respective boards of directors are expected to establish and monitor the necessary policies and procedures to comply with all FCA regulations. In all other respects, the lending relationship with the Associations is substantially similar to that with our other borrowers.

We make loans to the Associations, which, in turn, make loans to their eligible borrowers. We have senior secured interests in substantially all of the Associations' assets, which extend to the underlying collateral of the Associations' loans to their customers. The total wholesale loans outstanding to our affiliated Associations were $43.0 billion at December 31, 2017. During 2017, $100.7 billion of advances on wholesale loans were made to our affiliated Associations and repayments totaled $99.1 billion.

Our bylaws permit our Board of Directors to set the required level of Association investment in the Bank within a range of 4 to 6 percent of the one-year historical average of Association borrowings. In 2017, the required investment level was 4 percent. There are no capital sharing agreements between us and our affiliated Associations.

Our affiliated Associations are considered customers and thus operate independently and maintain an arms-length relationship with us, except to the extent that the Farm Credit Act requires us, as the funding bank, to monitor and approve certain activities of these Associations. Accordingly, the financial information of affiliated Associations is not included in our consolidated financial statements.

Effective January 1, 2015, Frontier Farm Credit (Frontier), one of our affiliated Associations, and Farm Credit Services of America (FCSAmerica), an Association affiliated with AgriBank, FCB, formed a strategic alliance. As part of the alliance, Frontier and FCSAmerica have integrated their day-to-day business operations, systems and leadership teams while continuing to exist as separate Associations. Each Association has its own board, with representatives participating in a coordinating committee to facilitate board governance between the two organizations. CoBank continues to serve as the funding bank for Frontier.

Effective November 1, 2015, Farm Credit Services Southwest became a wholly-owned subsidiary of Farm Credit West, ACA, another of our affiliated Associations.

Effective January 1, 2016, two of our affiliated Associations, Farm Credit Services of East Central Oklahoma, ACA, and Chisholm Trail Farm Credit, ACA, merged to form Oklahoma AgCredit, ACA.

Effective January 1, 2017, two of our affiliated Associations, Farm Credit of Southwest Kansas, ACA, and American AgCredit, ACA, merged and are doing business as American AgCredit, ACA. During 2016, these two entities operated under a joint management agreement pursuant to which the President and CEO of American AgCredit, ACA, served as the CEO of both Associations.

Effective October 1, 2017, one of our affiliated Associations, Farm Credit of Ness City, FLCA (Ness City), merged into another of our affiliated Associations, High Plains Farm Credit, ACA (High Plains). During 2017, the two entities operated under a joint management agreement pursuant to which the CEO, Chief Financial Officer and Chief Credit Officer of High Plains jointly served in these positions for Ness City.

# Report of Management

**CoBank, ACB**

March 1, 2018

To our Shareholders:

The consolidated financial statements of CoBank, ACB (CoBank) are prepared by management, which is responsible for their integrity and objectivity, including amounts that must necessarily be based on judgments and estimates. The consolidated financial statements have been prepared in conformity with accounting principles generally accepted in the United States of America as appropriate in the circumstances. The consolidated financial statements, in the opinion of management, fairly present, in all material respects, the consolidated financial position of CoBank. Other consolidated financial information included in the Annual Report to Shareholders is consistent with that in the financial statements.

To meet its responsibility for reliable consolidated financial information, management depends on 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 must be related to the benefits derived. To monitor compliance, CoBank's internal audit staff performs audits of the accounting records, reviews accounting systems and internal controls, and recommends improvements as deemed appropriate. CoBank's 2017, 2016 and 2015 consolidated financial statements have been audited by PricewaterhouseCoopers LLP, independent auditors. In addition, our independent auditors have audited our internal control over financial reporting as of December 31, 2017, 2016 and 2015. CoBank is also examined by the Farm Credit Administration.

The president and chief executive officer, as delegated by the Board of Directors, has overall responsibility for CoBank's system of internal controls and financial reporting, subject to the review of the audit committee of the Board of Directors. The president and chief executive officer reports periodically on those matters to the audit committee. The audit committee consults regularly with management and meets periodically with the independent auditors and internal auditors to review the scope and results of their work. The audit committee reports regularly to the Board of Directors. Both the independent auditors and the internal auditors have direct access to the audit committee, which is composed solely of directors who are not officers or employees of CoBank.

The undersigned certify that this CoBank Annual Report to Shareholders has been reviewed by the undersigned and has been prepared in accordance with all applicable statutory or regulatory requirements and that the information contained herein is true, accurate and complete to the best of their knowledge.

Kevin G. Riel
Chair of the Board

Thomas E. Halverson
President and
Chief Executive Officer

David P. Burlage
Chief Financial Officer

# Management's Report on Internal Control Over Financial Reporting
**CoBank, ACB**

Our management is responsible for establishing and maintaining adequate internal control over financial reporting. CoBank's internal control over financial reporting is a process designed under the supervision of our president and chief executive officer and our chief financial officer to provide reasonable assurance regarding the reliability of financial reporting and the preparation of the Bank's financial statements for external reporting purposes in accordance with U.S. generally accepted accounting principles. As of the end of the Bank's 2017 fiscal year, management conducted an assessment of the effectiveness of the Bank's internal control over financial reporting based on criteria established in *Internal Control – Integrated Framework (2013)* issued by the Committee of Sponsoring Organizations of the Treadway Commission. Based on this assessment, our management concluded that the Bank's internal control over financial reporting is effective as of December 31, 2017.

Our internal control over financial reporting includes policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect transactions and dispositions of assets; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with U.S. generally accepted accounting principles, and that receipts and expenditures are being made only in accordance with authorizations of management and the directors of CoBank; and (iii) 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 our financial statements.

The effectiveness of the Bank's internal control over financial reporting as of December 31, 2017 has been audited by PricewaterhouseCoopers LLP, independent auditors, as stated in their report appearing on pages 72 and 73, which expresses an unqualified opinion on the effectiveness of the Bank's internal control over financial reporting as of December 31, 2017. There have been no changes in the Bank's internal control over financial reporting that occurred during our most recent fiscal quarter (i.e., the fourth quarter of 2017) that have materially affected, or are reasonably likely to materially affect, the Bank's internal control over financial reporting.

# Controls and Procedures
**CoBank, ACB**

We maintain a system of disclosure controls and procedures. Disclosure controls and procedures include, without limitation, controls and procedures designed to ensure that information disclosed by us in our quarterly and annual reports is accumulated and communicated to our management, including our president and chief executive officer and our chief financial officer, as appropriate, to allow timely decisions to be made regarding disclosure. The president and chief executive officer and the chief financial officer have evaluated our disclosure controls and procedures as of the end of the period covered by this annual report and have concluded that our disclosure controls and procedures are effective as of that date.

We also maintain a system of internal controls. The term “internal controls,” as defined by the American Institute of Certified Public Accountants’ Codification of Statement on Auditing Standards, AU-C Section 315, means a process effected by those charged with governance, management and other personnel that is designed to provide reasonable assurance about the achievement of the entity’s objectives with regard to the reliability of financial reporting, effectiveness and efficiency of operations, and compliance with applicable laws and regulations. We continually assess the adequacy of our internal controls over financial reporting and enhance our controls in response to internal control assessments and internal and external audit and regulatory recommendations. There have been no significant changes in our internal controls or in other factors that could significantly affect such controls subsequent to the date we carried out our evaluations. In accordance with our internal control procedures, these financial statements were prepared under the oversight of the audit committee of our Board of Directors.

# Annual Report to Shareholders Disclosure Information Required by Farm Credit Administration Regulations

**CoBank, ACB**

*(Unaudited)*

In accordance with Farm Credit Administration (FCA) regulations, CoBank has prepared this Annual Report to Shareholders for the year ended December 31, 2017, in accordance with all applicable statutory or regulatory requirements.

| | Section | Location |
|---|---|---|
| **Description of Business** | | |
| Territory served, eligible borrowers, types of lending activities engaged in, financial services offered, and related Farm Credit organizations. | Notes to Financial Statements | Note 1<br>Note 17 |
| Significant developments within the last 5 years that had or could have a material impact on earnings or interest rates to borrowers, acquisitions or dispositions of material assets, material changes in the manner of conducting business, seasonal characteristics, concentration of assets, and dependence, if any, upon a single customer or a few customers. | Management's Discussion and Analysis<br>Notes to Financial Statements | Pages 33 to 71<br>Pages 80 to 127 |
| **Description of Property** | | |
| Location of Property<br>CoBank leases its national office building which is located in Greenwood Village, Colorado. CoBank also leases various facilities which are described on the inside back cover of this Annual Report to Shareholders. CoBank leases banking center offices in Ames, IA; Atlanta, GA; Austin, TX; Enfield, CT; Fargo, ND; Louisville, KY; Lubbock, TX; Minneapolis, MN; Omaha, NE; Rocklin, CA; Spokane, WA; Sterling, CO; St. Louis, MO; and Wichita, KS. CoBank leases office space in Washington D.C. and Singapore. Farm Credit Leasing Services Corporation leases its headquarters office in Minneapolis, MN, as well as outside sales offices in Atlanta, GA; Celina, OH; Enfield, CT; Louisville, KY; Lubbock, TX; New Smyrna Beach, FL; Omaha, NE; Rocklin, CA; St. Louis, MO and Wichita, KS, some of which are located in CoBank banking centers.<br><br>CoBank has a national charter and, as a result, serves customers across rural America. Travel to customer locations may be difficult due to the rural nature of many of our customers' operations. In order to provide the appropriate level of customer contact and to optimize the efficiency of management travel, CoBank utilizes a variety of transportation to serve its customers, including aircraft (both commercial and fractional interest). | Office Locations | Inside Back Cover |
| **Legal Proceedings and Enforcement Actions** | Notes to Financial Statements | Note 15 |
| **Description of Capital Structure** | Notes to Financial Statements | Note 7 |
| **Description of Liabilities** | | |
| Debt Outstanding | Notes to Financial Statements | Notes 5 and 6 |
| Contingent Liabilities | Notes to Financial Statements | Note 15 |
| **Selected Financial Data for the Five Years Ended December 31, 2017** | Five-Year Summary of Selected Consolidated Financial Data | Page 35 |
| **Management's Discussion and Analysis of Financial Condition and Results of Operations** | Management's Discussion and Analysis | Pages 33 to 71 |
| **Directors and Senior Officers** | | |
| Directors' Information | Board of Directors Disclosure | Pages 142 to 156 |
| Senior Officers' Information | Senior Officers | Pages 157 to 171 |
| Transactions with Directors and Senior Officers | Notes to Financial Statements | Note 13 |

# Annual Report to Shareholders Disclosure Information Required by Farm Credit Administration Regulations

**CoBank, ACB**

*(Unaudited)*

| | Section | Location |
|---|---|---|
| **Involvement in Certain Legal Proceedings**<br>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. | | |
| **Relationship with Independent Auditors**<br>There has been no change in independent auditors or no disagreements on any matters of accounting principle or financial statement disclosure during the period. | | |
| **Financial Statements**<br>Financial Statements and Footnotes | Financial Information................................. | Pages 74 to 127 |
| **Report of Management** | Report of Management .............................. | Page 128 |
| **Report of Independent Auditors** | Report of Independent Auditors.................. | Pages 72 to 73 |
| **Aggregate Fees Incurred for Services Rendered by Independent Auditors** | Board of Directors Disclosure..................... | Page 144 |
| **Credit and Services to Young, Beginning and Small Farmers and Ranchers and Producers or Harvesters of Aquatic Products** | Young, Beginning and Small Farmers ........ | Page 174 |
| **Unincorporated Business Entities** | Unincorporated Business Entities .............. | Page 175 |
| **Regulatory Capital Disclosures** | Regulatory Capital Disclosures…………… | Pages 133 to 141 |

# Regulatory Capital Disclosures

**CoBank, ACB**

*(Unaudited) ($ in Thousands, Except as Noted)*

***Overview***

As described in “New Capital Regulations” beginning on page 64 of this annual report, the Farm Credit Administration (FCA) adopted final rules (the New Capital Regulations) relating to regulatory capital requirements for the Farm Credit System (System) in 2016, which became effective January 1, 2017. The New Capital Regulations include public disclosure requirements set forth in Title 12 of the Code of Federal Regulations parts 628.61 through 628.63.

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

| Disclosure Requirement | Description | 2017 Annual Report Reference |
|---|---|---|
| Scope of Application | Corporate entity and consolidated subsidiaries | Page 133 |
| | Description of entity consolidation | Page 133 |
| | Restrictions on transfers of funds or capital | Page 133 |
| Capital Structure | Terms and conditions of capital instruments | Note 7 - Pages 99 to 100; Page 134 |
| | Regulatory capital components | Page 134 |
| Capital Adequacy | Capital adequacy assessment | Pages 65 to 66 |
| | Risk-weighted assets | Page 135 |
| | Regulatory capital ratios | Page 65; Note 7 - Page 101 |
| Capital Buffers | Quantitative disclosures | Pages 64 to 65, 135 |
| Credit Risk | Credit risk management and policies | Pages 46 to 48 |
| | Summary of exposures | Page 136 |
| | Geographic distribution | Page 137 |
| | Industry distribution | Page 138 |
| | Contractual maturity | Page 138 |
| | Impaired loans and allowance for credit losses | Note 1 - Pages 81 to 82; Note 3 - Pages 87 to 92 |
| Counterparty Credit Risk-Related Exposures | General description | Pages 50, 139 |
| | Counterparty exposures | Note 11 - Pages 110 to 116; Page 139 |
| Credit Risk Mitigation | General description | Pages 139 to 140 |
| | Exposures with reduced capital requirements | Note 11 - Pages 110 to 116; Pages 43, 48, 49, 50 to 51, 139 to 140 |
| Securitization | General description | Pages 140 to 141 |
| | Securitization exposures | Pages 62 to 63, Note 4 - Pages 93 to 96; Note 12 - Pages 117 to 121; Page 141 |
| Equities | General description | Page 141 |
| Interest Rate Risk for Non-Trading Activities | General description | Pages 52 to 55, 141 |
| | Interest rate sensitivity | Page 55 |

***Scope of Application***

The disclosures contained herein relate to CoBank, ACB (CoBank or the Bank) and include the accounts of CoBank, CoBank, FCB and Farm Credit Leasing Services Corporation (FCL). These entities are also consolidated in our financial statements prepared in accordance with accounting principles generally accepted in the United States of America (GAAP). There are no consolidated entities for which any capital requirement is deducted from the Bank’s total regulatory capital nor are there restrictions on transfers of funds or total capital with the entities described above. FCL is required to comply with the New Capital Regulations on a standalone basis, but it is not required to make the disclosures contained herein for CoBank as a whole. FCL’s capital ratios exceeded the minimum regulatory requirements at December 31, 2017.

In conjunction with other System entities, the Bank jointly owns the following service organizations: the Federal Farm Credit Banks Funding Corporation (Funding Corporation), the FCS Building Association (FCSBA) and the Farm Credit Association Captive Insurance Corporation. The investments in the Funding Corporation and the FCSBA are deducted from capital because only the institution that issued the equities may count the amount as capital. The Bank’s investment in the Farm Credit Association Captive Insurance Corporation and certain investments in unincorporated business entities are included in risk-weighted assets and are not deducted from any capital component, in accordance with FCA regulations.

*(Unaudited) ($ in Thousands, Except as Noted)*

### *Capital Structure*

Common equity tier 1 capital, which includes common stock and retained earnings, is the largest component of the Bank's capital structure. Preferred stock is included in total tier 1 regulatory capital, subject to certain limitations. Refer to Note 7 to the consolidated financial statements in this annual report for information on the terms and conditions of the main features of our common stock and preferred stock. Our allowance for credit losses is included in tier 2 regulatory capital, subject to certain limitations. See Note 1 to the consolidated financial statements in this annual report for a description of our allowance for credit losses. As discussed in Note 6 to the consolidated financial statements in this annual report, CoBank redeemed all of its outstanding subordinated debt on June 15, 2017 and therefore it is no longer included in regulatory capital as of December 31, 2017. The following table provides a summary of the Bank's regulatory capital components.

**Regulatory Capital Components**

| Three Months Ended December 31, 2017 | | Average Balance |
|---|---|---|
| **Common Equity Tier 1 Capital (CET1)** | | |
| Common Cooperative Equities: | | |
| Statutory Minimum Purchased Borrower Stock | $ | 2,484 |
| Other Required Member Purchased Stock | | 643,833 |
| Allocated Equities: | | |
| Qualified Allocated Equities Subject to Retirement | | 2,299,310 |
| Nonqualified Allocated Equities Subject to Retirement | | - |
| Nonqualified Allocated Equities Not Subject to Retirement | | 2,691,581 |
| Unallocated Retained Earnings | | 2,012,692 |
| Paid-In Capital | | - |
| Regulatory Adjustments and Deductions Made to CET1 | | (58,028) |
| **Total CET1** | $ | 7,591,872 |
| **Tier 1 Capital** | | |
| Non-Cumulative Perpetual Preferred Stock | $ | 1,500,000 |
| Regulatory Adjustments and Deductions Made to Tier 1 Capital | | - |
| **Total Additional Tier 1 Capital** | | 1,500,000 |
| **Total Tier 1 Capital** | $ | 9,091,872 |
| **Tier 2 Capital** | | |
| Common Cooperative Equities Not Included in CET1 | $ | 133,424 |
| Tier 2 Capital Elements: | | |
| Allowance for Credit Losses | | 694,167 |
| Regulatory Adjustments and Deductions Made to Tier 2 Capital | | - |
| **Total Tier 2 Capital** | $ | 827,591 |
| **Total Capital** | $ | 9,919,463 |

A reconciliation of total shareholders' equity in our consolidated balance sheet to total regulatory capital is presented below.

**Reconciliation to the December 31, 2017 Consolidated Balance Sheet**

| | | |
|---|---|---|
| Total Shareholders' Equity | $ | 9,060,077 |
| Adjustments to Regulatory Capital: | | |
| Accumulated Other Comprehensive Loss | | 231,968 |
| Regulatory Adjustments and Deductions Made to CET 1 | | (58,028) |
| Tier 2 Allowance and Reserve | | 670,792 |
| **Total Capital** | $ | 9,904,809 [1] |

[1] 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, 2017.

# Regulatory Capital Disclosures

**CoBank, ACB**

*(Unaudited) ($ in Thousands, Except as Noted)*

***Capital Adequacy and Capital Buffers***

The Bank's approach to assessing the adequacy of its capital to support current and future activities is described in "Capital Adequacy and Business Planning" beginning on page 65.

Our risk-adjusted regulatory capital ratios are calculated by dividing the relevant total capital elements (e.g. Total CET1) by risk-weighted assets. The following table presents information on the components of risk-weighted assets included in the calculation of regulatory capital ratios.

**Risk-Weighted Assets**

| Three Months Ended December 31, 2017 | | Average Balance |
|---|---|---|
| **On-Balance Sheet Assets:** | | |
| Exposures to Sovereign Entities | $ | - |
| Exposures to Supranational Entities and Multilateral Development Banks | | 130,926 |
| Exposures to Government-Sponsored Enterprises[(1)] | | 11,739,596 |
| Exposures to Depository Institutions, Foreign Banks, and Credit Unions[(2)] | | 3,091,410 |
| Exposures to Public Sector Entities | | 26,253 |
| Corporate Exposures, including Borrower Loans and Leases | | 38,913,249 |
| Residential Mortgage Exposures | | - |
| Past Due and Nonaccrual Exposures | | 394,662 |
| Securitization Exposures | | 341,781 |
| Equity Investment Exposures | | 16,251 |
| Other Assets | | 675,138 |
| **Off-Balance Sheet:** | | |
| Commitments | | 8,466,438 |
| Over-the-Counter Derivatives | | 156,639 |
| Cleared Transactions | | 394 |
| Letters of Credit | | 1,116,683 |
| Unsettled Transactions | | - |
| **Total Risk-Weighted Assets Before Additions/(Deductions)** | $ | 65,069,420 |
| **Additions:** | | |
| Intra-System Equity Investments | $ | 58,028 |
| **Deductions:** | | |
| Regulatory Adjustments and Deductions Made to CET1 | | (58,028) |
| Regulatory Adjustments and Deductions Made to Additional Tier 1 Capital | | - |
| Regulatory Adjustments and Deductions Made to Tier 2 Capital | | - |
| **Total Risk-Weighted Assets**[(3)] | $ | 65,069,420 |

(1) Includes exposures to Farm Credit System entities.

(2) Also includes exposures to other financial institutions that are risk weighted as exposures to U.S. depository institutions and credit unions.

(3) For purposes of calculating the permanent capital ratio, average risk-weighted assets for the three months ended December 31, 2017 was $64.5 billion.

As shown on page 65 of this annual report, the Bank exceeded all capital requirements as of December 31, 2017 to which it was subject, including applicable capital buffers. Because capital exceeded the buffer requirements, the Bank currently has no limitations on its distributions and discretionary bonus payments. The aggregate amount of eligible retained income was $467.0 million as of December 31, 2017.

*(Unaudited) ($ in Thousands, Except as Noted)*

***Credit Risk***

For discussion related to CoBank's credit risk management and policies see "Credit Risk Management" beginning on page 46 of this annual report. Refer to "Impaired Loans" in Note 1 to the consolidated financial statements in this annual report for qualitative disclosures including the definition of impaired loans and related policies. Refer to "Allowance for Loan Losses and Reserve for Unfunded Commitments" in Note 1 to the consolidated financial statements in this annual report for a description of the methodology used to estimate our allowance for loan losses and our policy for charging-off uncollectible amounts.

The following table summarizes credit exposures related to loans, unfunded loan commitments, investment securities and letters of credit. The contractual amount of a commitment to extend credit represents our maximum exposure to credit loss in the event of default by the borrower, if the borrower were to fully draw against the commitment.

**Major Credit Exposures - Lending and Investments**

| Three Months Ended and As of December 31, 2017 | Average Balance | End of Period |
|---|---|---|
| Loans Outstanding | $ 96,738,172 | $ 99,265,505 |
| Unfunded Loan Commitments | 32,595,367 | 29,001,047 |
| Investment Securities | 26,877,825 | 26,870,378 |
| Letters of Credit | 1,391,572 | 1,708,822 |

The table below shows derivatives by underlying exposure type, segregated between contracts traded in over-the-counter markets from those cleared through a central clearinghouse. Gross positive fair value represents the credit exposure attributed to derivatives before the mitigating effects of counterparty collateral.

**Major Credit Exposures - Derivatives**

| Three Months Ended and As of December 31, 2017 | Average Balance | | End of Period | |
|---|---|---|---|---|
| | Notional Amount | Gross Positive Fair Value | Notional Amount | Gross Positive Fair Value |
| Over-the-Counter Derivatives: | | | | |
| Interest Rate Contracts | $ 18,929,044 | $ 162,985 | $ 21,063,176 | $ 167,755 |
| Foreign Exchange Contracts | 194,210 | 1,507 | 184,335 | 565 |
| Total Over-the-Counter Derivatives | $ 19,123,254 | $ 164,492 | $ 21,247,511 | $ 168,320 |
| Cleared Derivatives: | | | | |
| Interest Rate Contracts | 9,817,595 | 10,291 | 10,413,222 | 12,525 |
| **Total Derivatives** | $ 28,940,849 | $ 174,783 | $ 31,660,733 | $ 180,845 |

The following table illustrates the geographic distribution of our outstanding loans as of December 31, 2017.

**Total Lending Portfolio - Geographic Distribution**

| As of December 31, 2017 | Wholesale Loans[1] | Commercial Loans |
|---|---|---|
| California | 42 % | 8 % |
| Washington | 18 | 1 |
| Texas | 6 [2] | 6 |
| Connecticut | 11 | 1 |
| Kansas | 6 | 5 |
| Oklahoma | 4 | 2 |
| Colorado | 3 | 3 |
| Asia | - | 5 |
| Minnesota | - | 5 |
| Iowa | - | 5 |
| Illinois | - | 4 |
| Florida | - | 4 |
| Latin America | - | 3 |
| New Mexico | 3 | 1 |
| Pennsylvania | 2 [2] | 1 |
| Ohio | - | 3 |
| Georgia | - | 3 |
| North Dakota | - | 3 |
| Nebraska | - | 2 |
| Missouri | - | 2 |
| New York | - | 2 |
| Indiana | - | 2 |
| North Carolina | - | 2 |
| Wisconsin | - | 2 |
| Utah | 2 | 1 |
| Mississippi | 1 [2] | 1 |
| Arkansas | - | 2 |
| Virginia | - | 2 |
| South Dakota | - | 2 |
| South Carolina | - | 2 |
| Massachusetts | - | 1 |
| Europe, Middle East and Africa | - | 1 |
| New Jersey | - | 1 |
| Tennessee | - | 1 |
| Louisiana | - | 1 |
| Michigan | - | 1 |
| Other | 2 [2] | 9 |
| **Total** | 100 % | 100 % |

[1] The distribution of wholesale loans to Associations is based on the state in which the Association is headquartered and may not be representative of their underlying loan portfolio.

[2] Includes participation interests in loans to nonaffiliated Associations.

The following table illustrates the primary business/commodity distribution of our outstanding loans as of December 31, 2017.

**Total Lending Portfolio - Distribution by Primary Business/Commodity**

| As of December 31, 2017 | Share |
|---|---|
| Affiliated Associations | 43 % |
| Farm Supply and Grain Marketing | 9 |
| Electric Distribution | 9 |
| Agricultural Export Finance | 5 |
| Nonaffiliated Associations and Other Entities | 5 |
| Generation and Transmission | 4 |
| Lease Financing (through FCL) | 3 |
| Fruits, Nuts and Vegetables | 3 |
| Forest Products | 3 |
| Fish, Livestock and Poultry | 2 |
| Independent Power Producers | 2 |
| Dairy | 2 |
| Local Exchange Carriers | 2 |
| Water and Wastewater | 1 |
| Regulated Utility | 1 |
| Competitive Local Telephone Exchange Carriers | 1 |
| Sugar and Related Products | 1 |
| Other | 4 |
| **Total** | 100 % |

A summary of the remaining contractual maturity of our loans, unfunded commitments, investment securities, letters of credit and derivatives at December 31, 2017 follows.

($ in Millions)

**Contractual Maturity**

| As of December 31, 2017 | In One Year or Less | One to Five Years | After Five Years | Total |
|---|---|---|---|---|
| Loans Outstanding | $ 60,165 | $ 15,042 | $ 24,059 | $ 99,266 |
| Unfunded Loan Commitments | 14,075 | 8,281 | 6,645 | 29,001 |
| Investment Securities | 2,793 | 9,548 | 14,529 | 26,870 |
| Letters of Credit | 487 | 582 | 640 | 1,709 |
| Derivatives (Notional Amounts) | 6,562 | 14,363 | 10,736 | 31,661 |

Refer to Note 3 to the consolidated financial statements in this annual report for amounts of impaired loans (with or without related allowance for credit loss), loans in nonaccrual status and greater than 90 days past due, loans past due greater than 90 days and still accruing interest, the allowance for credit losses, charge-offs, and changes in components of our allowance for credit losses.

***Counterparty Credit Risk***

The use of derivative instruments exposes us to counterparty credit risk. Generally, when the fair value of a derivative contract is positive, we are exposed to credit risk. Our counterparty credit risk arising from derivative transactions is managed within credit methodologies and limits approved by the CoBank Loan Committee (CLC). Credit risk limits are established based on potential future exposure. Customer derivative transactions are typically secured through our loan agreements. For non-customer derivatives not cleared through a central clearinghouse, we minimize this risk by diversifying our derivative positions among various financial institution counterparties, using master netting agreements, and requiring collateral with zero thresholds and daily posting to support credit exposures with active counterparties. We evaluate the creditworthiness of each counterparty, establishing individual credit exposure limits, and deal exclusively with derivative counterparties that have an investment grade credit rating from a major credit rating agency. Credit exposure limits are determined using a risk rating methodology established by the CLC. Credit ratings are developed and exposure limits are established no less than annually and reflect our assessment of the creditworthiness of each counterparty. The Bank uses an internal model to determine the potential future exposure of over-the-counter derivatives which is used to measure compliance with established exposure limits. In addition, we monitor counterparty credit default swap spreads and other market-related information which may indicate reduced creditworthiness of a counterparty. Credit default swap spreads are taken into account in establishing counterparty limits.

Our 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 collateral exchanged between parties occurs daily with zero posting thresholds for all counterparties. Likewise, the Bank is required to pledge initial margin and make daily settlement payments related to our cleared derivative transactions. As a result of these derivative contracts, we are exposed to liquidity risk when changes in interest rates require us to post collateral to our counterparties, or make settlement payments for changes in the fair value of cleared derivatives. A downgrade in our creditworthiness would not result in additional collateral requirements for the Bank.

The fair value of collateral assets and liabilities related to derivative contracts is their face value, plus accrued interest, as these instruments are cash balances; therefore, fair value approximates face value.

Refer to Note 11 to the consolidated financial statements in this annual report for information related to derivative financial instruments utilized by CoBank including a summary of the fair value of derivative assets and liabilities, collateral held and net unsecured exposure.

***Credit Risk Mitigation***

CoBank uses various strategies to mitigate credit risk in its lending, leasing, investing and derivatives activities. The disclosures in this section relate solely to credit risk mitigation instruments and activities that have been recognized for the purposes of reducing regulatory capital requirements, which include certain guarantees in our lending and investment portfolios, and collateral or settlement payments in our derivatives portfolio.

**Loans**

Our Agricultural Export Finance Division (AEFD) utilizes the U.S. government-sponsored export loan guarantee General Sales Manager (GSM) program for a portion of its export financing. Refer to the Operating Segment Financial Review section on page 43 of this annual report for additional discussion related to our AEFD.

As discussed on pages 48 and 49 of this annual report, our loans to affiliated Associations are collateralized by substantially all of the Association assets. In addition, the earnings, capital and loan loss reserves of the Associations provide additional layers of protection against losses in their respective retail loan portfolios. Lower regulatory capital requirements are commensurate with the lower risk profile associated with our loans to affiliated Associations.

*(Unaudited) ($ in Thousands, Except as Noted)*

### Investments

As described in “Credit Risk Related to Investments and Derivatives” beginning on page 50 of this annual report, credit risk in our investment portfolio is mitigated by investing primarily in securities issued or guaranteed by the U.S. government or a government-sponsored enterprise (U.S. Agency). Credit risk in our investment portfolio primarily exists in investment securities that are not guaranteed by the U.S. government or a U.S. Agency, which include our certificates of deposit, FHA/VA non-wrapped reperformer mortgage-backed securities (MBS), non-agency MBS, corporate bonds and asset-backed securities (ABS). Excluding the $775.0 million of certificates of deposit with commercial banks carrying the highest short-term credit rating, these securities collectively total 2 percent of our total investment portfolio as of December 31, 2017. With the exception of corporate bonds, which are risk-weighted based on the corporate counterparty, these exposures are discussed in the Securitization section below.

The following table summarizes the loan and investment exposures whose capital requirements are reduced as a result of credit risk mitigants.

**Loan and Investment Exposures**

| Three Months Ended December 31, 2017 | Average Exposure Amount | Risk Weighted Exposures |
|---|---|---|
| Guaranteed Loans under the GSM program | $ 1,052,141 | $ - |
| Loans to Farm Credit System entities | 46,862,027 | 9,372,405 |
| Investment Securities Issued or Guaranteed by U.S. Government | 14,818,508 | - |
| Investment Securities Issued or Guaranteed by a U.S. Agency | 11,835,953 | 2,367,191 |
| **Total** | $ 74,568,629 | $ 11,739,596 |

### Derivatives

As described in Note 11 to the consolidated financial statements in this annual report, transactions with dealers in our over-the-counter derivative portfolio as well as those cleared through a clearinghouse are collateralized or otherwise secured through settlement payments. As a result, at December 31, 2017, we held financial collateral totaling $50.9 million that offset derivative exposure for purposes of calculating risk-weighted assets.

## *Securitization*

The Bank participates in securitizations as investors through the purchase of MBS and ABS, which are included in our investment portfolio. As of December 31, 2017, CoBank did not retain any resecuritization exposures. The following disclosures relate only to MBS and ABS not guaranteed by the U.S. government or U.S. Agency. The average balance of these unguaranteed securities was $304.8 million for the three-month period ended December 31, 2017.

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

We monitor the credit and market risk of these exposures by regularly assessing, among other factors, changes in interest rates and credit ratings to evaluate potential negative impacts to cash flows expected to be collected from these investment securities.

For our non-agency MBS and ABS, CoBank has elected to utilize the Gross Up risk-based capital approach. Therefore, certain of our FHA/VA non-wrapped reperformer MBS, non-agency MBS and ABS are risk-weighted on an individual security level utilizing the Gross Up approach as outlined in FCA regulations.

*(Unaudited) ($ in Thousands, Except as Noted)*

Below is a summary of our securitization exposures held during the three months ended December 31, 2017 by exposure type and categorized by risk-weight band.

**Securitization Exposures**

| Three Months Ended December 31, 2017 | | Average Exposure Amount | | Risk Weighted Asset (Under Gross Up Approach) |
|---|---|---|---|---|
| Residential Mortgage-Backed Securities (MBS): | | | | |
| FHA/VA Non-Wrapped Reperformer | $ | 17,476 | $ | 17,476 |
| Non-Agency | | 27,055 | | 43,031 |
| Asset-Backed Securities (ABS) | | 260,288 | | 281,274 |
| **Total** | $ | 304,819 | $ | 341,781 |

**Securitization Risk-Weight Bands**

| Three Months Ended December 31, 2017 | | Average Exposure Amount | | Risk Weighted Asset |
|---|---|---|---|---|
| Gross-Up Risk-Weight Bands: | | | | |
| 100% | $ | 227,458 | $ | 227,458 |
| >100% and <1,250% | | 75,950 | | 96,683 |
| 1,250% | | 1,411 | | 17,640 |
| **Total** | $ | 304,819 | $ | 341,781 |

For the three months ended December 31, 2017, we did not hold any off-balance sheet securitization exposures nor were any securitization exposures deducted from capital.

Refer to “Liquidity and Capital Resources” beginning on page 62 for additional information related to purchases and sales of securitization exposures. Refer to Note 4 to the consolidated financial statements in this annual report for the amortized cost, unrealized gains/(losses) and fair value of MBS and ABS held in our investment portfolio. In addition, Note 12 to the consolidated financial statements in this annual report describes the methods and assumptions, including any changes as applicable, applied in valuing our MBS and ABS.

***Equities***

The Bank does not have significant exposure to equity investments. We are a limited partner in certain Rural Business Investment Companies (RBICs). These RBICs facilitate investments in agriculture-related businesses that create growth and job opportunities in rural America. These investments are not publicly traded. There have been no sales or liquidations of these investments during the three months ended December 31, 2017.

***Interest Rate Risk***

Interest rate risk, also referred to as market risk, is the risk that changes in interest rates may adversely affect our operating results and financial condition. Refer to “Market Risk Management” beginning on page 52 of this annual report for a description of our primary interest rate risks and strategies used to mitigate those risks. The impact of interest rate changes on net interest income and the market value of equity are summarized in the tables found on page 55 of this annual report.

# Board of Directors Disclosure as of December 31, 2017
**CoBank, ACB**

### Directors

At year-end 2017, CoBank was governed by a 27-member Board of Directors including 23 directors elected by customers from six different geographic regions. There was one vacant seat on the Board due to the death of William A. Squires, an elected director, in November 2016. The Board has selected two outside directors (independent of any customer or Farm Credit System affiliation) and two appointed directors (customer affiliation permitted) to complement the expertise of the customer-elected Board members.

Director terms run for four years. Employees of Farm Credit System institutions, including CoBank, cannot serve on CoBank's Board of Directors within one year of employment.

In 2015, shareholders approved bylaw amendments implementing a plan to reduce the size of the Board of Directors. Pursuant to the plan, which began to take effect in 2016, a total of 10 Board seats will be eliminated by 2020, reducing the number of elected directors on the Board from 24 to 14. The Board will also have up to four appointed directors and will continue to have two outside directors with no customer or Farm Credit System affiliations.

### Director Independence

The Board must be composed at all times of at least 75 percent of directors who are deemed to be independent. The Board has adopted standards to assist it in making the annual affirmative determination of each director's independence status. A director will be considered "independent" if he or she meets the 14 criteria for independence set forth by the Board, which were established based upon leading industry practice and, in part, the listing standards of the New York Stock Exchange. For example, the loans from CoBank to an affiliated Association or Title III customer, as defined by the Farm Credit Act, where a CoBank director is also a director must not comprise more than 15 percent of the total loans of CoBank. In addition, the Board has made a determination as to each independent director that no relationship exists which, in the opinion of the Board, would interfere with the exercise of independent judgment in carrying out the director's responsibilities. In making these determinations, the Board reviewed and discussed information provided by the directors and by CoBank with regard to each director's business and personal activities as they may relate to CoBank and CoBank's management. As of December 31, 2017, all directors were considered to be independent.

### Information About Committees of the Board of Directors

The standing Board committees consist of the following: an Audit Committee, a Compensation and Human Resources Committee, an Executive Committee, a Governance Committee and a Risk Committee. The Board has adopted written charters for each of these committees. The full text of each charter is available on our website at www.cobank.com.

All standing Board committees report on their meetings at the regular meeting of the full Board. Minutes of each committee meeting are signed by the committee chair and recording secretary, or another individual acting in their place at the meeting.

In 2017, the Board of Directors held a total of eight meetings and standing committees of the Board of Directors held a total of 31 meetings. The primary responsibilities of each committee are described on the following pages.

## Standing Committees

Audit Committee

The Audit Committee members are appointed by the Board chair in consultation with the Board officers and committee chairs. The Audit Committee is governed by a formal charter and chaired by one of the Board's outside directors. All members of the Audit Committee are independent of management of the Bank and any other System entity. During 2017, the Audit Committee met a total of six times, including regular meetings in executive session with the Chief Risk Officer, the head of the Internal Audit Division, the head of the Asset Review Division, and the Bank's independent auditors. The Audit Committee reviews and approves the quarterly and annual financial statements.

During 2017, William M. Farrow, III served as Chair of the Audit Committee. The Board of Directors determined that Mr. Farrow had the qualifications and experience necessary to serve as the "Audit Committee financial expert," as defined by the rules of the Securities and Exchange Commission and the FCA, and he was so designated. The Board also designated Gary A. Miller as an "Audit Committee financial expert" during 2017.

The primary purpose of the Audit Committee is to assist the Board in fulfilling its oversight responsibilities by carrying out the following responsibilities:

(1) Overseeing management's conduct of the Bank's financial reporting process and systems of internal accounting and financial controls;

(2) Monitoring the independence and performance of the Bank's internal audit and asset review functions, the risk assessment process, and the independent auditors;

(3) Ensuring the Bank's compliance with legal and regulatory requirements;

(4) Providing an avenue of communication among the independent auditors, management and the Board; and

(5) Performing those functions on behalf of, and serving as the Audit Committee for, the Bank's wholly-owned subsidiary, Farm Credit Leasing Services Corporation ("FCL").

Management has the primary responsibility for the consolidated financial statements and the financial reporting process, including the system of internal controls. The Audit Committee oversees the Bank's independent auditors, systems of internal accounting and financial controls, and financial reporting process on behalf of the Board of Directors. In this regard, the Audit Committee helps to ensure independence of the Bank's independent auditors, the integrity of management and the adequacy of disclosure to shareholders. The Audit Committee has unrestricted access to representatives of the Internal Audit Division, independent auditors and financial management.

The Audit Committee preapproves all audit and audit-related services and permitted non-audit services (including the fees and terms thereof) to be performed for the Bank by its independent auditors, as negotiated by management.

The Audit Committee reviewed the audited consolidated financial statements in the Annual Report for the year ended December 31, 2017 with management and the Bank's independent auditors. The independent auditors are responsible for expressing an opinion on the conformity of the Bank's audited consolidated financial statements with accounting principles generally accepted in the United States of America, including a discussion of the quality of the Bank's accounting principles, the reasonableness of significant judgments, the clarity of disclosures in the consolidated financial statements and the adequacy of internal controls. The Audit Committee discussed with the independent auditors the results of the 2017 audit and all other matters required to be discussed by Statements on Auditing Standards. In addition, the Audit Committee received, reviewed and discussed the written disclosures from the independent auditors regarding their independence. Based on the review and discussions described above, the Audit Committee recommended to the Board of Directors that the audited consolidated financial statements be included in the Bank's Annual Report for the year ended December 31, 2017 and for filing with the FCA.

Aggregate fees incurred by the Bank for services rendered by its independent auditors, PricewaterhouseCoopers LLP, for the years ended December 31, 2017 and 2016 were as follows:

| Year Ended December 31, | 2017 | 2016 |
|---|---|---|
| Audit | **$ 1,255,000** | $ 792,500 |
| Audit-related | **20,000** | 217,479 |
| All Other | **2,700** | 2,700 |
| **Total** | **$ 1,277,700** | $ 1,012,679 |

Audit fees were for the annual audit of the consolidated financial statements for 2017 and 2016.

Audit-related fees for 2017 were for assurance and related services associated with certain compliance procedures. 2016 fees are primarily in connection with a preferred stock offering and, to a lesser extent, certain compliance procedures.

All other fees for 2017 and 2016 represent our annual subscription to accounting research tools as well as costs related to continuing education.

Compensation and Human Resources Committee

The Compensation and Human Resources Committee was formerly known as the Compensation Committee, but changed its name pursuant to an amended charter adopted in December 2017. Its members are appointed by the Board chair in consultation with the Board officers and committee chairs. All members of the Compensation and Human Resources Committee are independent of management. The committee is primarily responsible for representing the Board in matters related to human capital, and total reward programs for the Bank, including salary, incentive and benefits programs, and in facilitating the terms of employment, compensation and evaluation of and succession planning for the President and Chief Executive Officer (CEO). The Compensation Committee has responsibility for monitoring succession planning for other senior leaders. The Compensation and Human Resources Committee also reviews the results of the Bank’s affirmative action program and human equity initiatives.

Executive Committee

The Executive Committee members are appointed by the Board chair in consultation with the Board officers and committee chairs. The committee is primarily responsible for developing for Board consideration recommendations surrounding the design and implementation of the Bank’s strategic plan. It acts on behalf of the Board between Board meetings when necessary. The Executive Committee is responsible for reviewing the Bank’s budget and reports of operations, and for reviewing the capital adequacy plan and portfolio strategy. The committee reviews the Bank’s annual business and financial plan and recommends such plan for approval by the Board. The committee also provides advice and counsel to the Board and management on policy matters related to capital and finance, and recommends to the Governance Committee capital bylaws and amendments for approval by the Board.

Governance Committee

The Governance Committee members are appointed by the Board chair in consultation with the Board officers and committee chairs. The committee is primarily responsible for monitoring and recommending for Board consideration corporate governance processes and structures that are consistent with leading practices for boards and board committees. The committee coordinates the annual Board self-evaluation and a periodic director peer evaluation. The committee also oversees the Bank’s director nomination process, which is conducted by an independent Nominating Committee (see page 145), and director election process. In addition, the committee annually assesses the needs of the Board – taking into account the experience and background of current directors – and also recommends the appointment and reappointment of outside and appointed directors to the full Board.

Risk Committee

The Risk Committee members are appointed by the Board chair in consultation with the Board officers and committee chairs. The committee is primarily responsible for overseeing the enterprise risk management practices of the Bank, including management’s ability to assess and manage the Bank’s credit, market, interest rate, liquidity, operational, technological, strategic and reputation, and legal, regulatory and compliance risks. The committee also provides an open avenue of communication between management and the Board in order to effectively manage risks.

**Other Committees**

Nominating Committee

The Nominating Committee for 2017 consisted of 19 customer-owner representatives and two retired CoBank directors, all of whom were elected by the Bank's stockholders. No member of the Board or management served on the Nominating Committee. The Bank uses an independent Nominating Committee which is charged with the responsibility to identify qualified candidates for Board membership and to review director nominations, helping to ensure that the Bank continues to attract a highly qualified and diverse Board. The Nominating Committee seeks candidates who are recognized leaders and who fulfill specific needs for skill set, industry knowledge, and geographic and other forms of diversity on the Board. Customers are encouraged to submit resumes of candidates for elected positions. The Nominating Committee makes a best effort to recommend at least two candidates for each position up for election. Shareholders and interested candidates may gather signatures for petitions to run for the Board following the conclusion of the Nominating Committee's work. A nominee must not have reached age 70 on or prior to the date the term of office is to begin and must meet other eligibility requirements established by Bank bylaws and federal regulations.

# Board of Directors Disclosure as of December 31, 2017
**CoBank, ACB**

The following represents certain information regarding the directors as of December 31, 2017, including business experience during the past five years. The terms of directors are scheduled to expire as of December 31 of the years indicated.

1 – Audit Committee
2 – Compensation and Human Resources Committee
3 – Executive Committee
4 – Governance Committee
5 – Risk Committee
6 – Audit Committee Chair
7 – Compensation and Human Resources Committee Chair
8 – Executive Committee Chair
9 – Governance Committee Chair
10 – Risk Committee Chair

| Name | Term Expires | Principal Occupation and Other Business Affiliations |
|---|---|---|
| **Robert M. Behr** [1]<br>Age: 63<br>Year Service Began: 2013 | 2020 | **Principal Occupation:**<br>Chief Executive Officer: Citrus World, Inc., producing and marketing Florida’s Natural brand citrus juices, Lake Wales, FL (since September 2015);<br>Chief Executive Officer: Citrus World Services, Inc., citrus marketing, Lake Wales, FL;<br>Chief Executive Officer: Florida's Natural Food Service, Inc., citrus marketing, Lake Wales, FL;<br>Chief Executive Officer: Florida's Natural Growers, Inc., citrus marketing, Lake Wales, FL;<br>Chief Executive Officer: Hickory Branch Corporation, a citrus grower, Lake Wales, FL;<br>Chief Executive Officer: World Citrus West, Inc., citrus packaging, Lake Wales, FL;<br>Former Chief Operating Officer: Citrus World, Inc. (December 2009 through August 2015).<br>**Other Business Affiliations:**<br>Owner: Behr-Nolte, a citrus grove, Lakeland, FL;<br>Owner: CPI 3034 LLC, a citrus grove, Winter Haven, FL;<br>Chair: Florida's Natural Growers Foundation, Inc., a nonprofit organization, Lake Wales, FL;<br>Director: Fresh N Natural Foods (PTE LTD), a distributor of Florida's Natural juice products, Republic of Singapore;<br>Owner: MBN Property, a citrus grove, LaBelle, FL;<br>Owner: Resurrection Grove LLC, a citrus grove, Winter Haven, FL;<br>Owner: Summer Breeze, a citrus grove, Gainesville, FL. |
| **Michael S. Brown** [1]<br>Age: 59<br>Year Service Began: 2017 | 2020 | **Principal Occupation:**<br>Former Managing Director, Global Head of Multinational Coverage: J.P. Morgan Chase, a commercial bank, London, England (retired in June 2013). |

# Board of Directors Disclosure as of December 31, 2017
**CoBank, ACB**

| Name | Term Expires | Principal Occupation and Other Business Affiliations |
|---|---|---|
| **Russell G. Brown** [5]<br><br>Age: 59<br>Year Service Began: 2017 | 2020 | **Principal Occupation:**<br>President (Northern Neck Region): Union Bank & Trust, a commercial bank, Warsaw, VA.<br>**Other Business Affiliations:**<br>Owner: Cobham Hall Farm, grain and timber farm, Warsaw, VA;<br>Director: Northern Neck Electric Cooperative, a rural electric distribution cooperative, Warsaw, VA;<br>Officer: Richmond County Industrial Development Authority (IDA), an economic development organization, Warsaw, VA;<br>Director: VA-MD-DE Association of Electric Cooperatives, a trade association, Richmond, VA;<br>Officer: VA-MD-DE Association of Electric Cooperatives Educational Scholarship Foundation, a nonprofit organization, Richmond, VA. |
| **M. Dan Childs** [1]<br><br>Age: 67<br>Year Service Began: 2015 | 2018 | **Principal Occupation:**<br>Owner/Operator: a wheat and stocker cattle farming operation, Johnston County, OK;<br>Senior Agricultural Consultant: Noble Research Institute, a nonprofit institution supporting agriculture, Ardmore, OK.<br>**Other Business Affiliations:**<br>Director: The Farm Credit Council, a national trade association, Washington, D.C.;<br>Director: Farm Credit Council Services, a service provider, Greenwood Village, CO;<br>Director: Oklahoma AgCredit, ACA, an agricultural credit association, Broken Arrow, OK;<br>Vice President/Director: Foundation for Livestock and Grain Marketing, a nonprofit organization, Lakewood, CO;<br>Director: Johnston County Industrial Authority, an economic development association, Tishomingo, OK. |
| **Everett M. Dobrinski** [3, 8]<br>Chair<br><br>Age: 71<br>Year Service Began: 1999 | 2019 | **Principal Occupation:**<br>Owner/Operator: Dobrinski Farm, a cereal grain and oilseed farming operation, Makoti, ND.<br>**Other Business Affiliations:**<br>Director: The Farm Credit Council, a national trade association, Washington, D.C.;<br>Advisory Board Member: Nationwide Insurance Board Advisory Committee, an insurance company, Columbus, OH;<br>Director: North Dakota Coordinating Council for Cooperatives, a trade association, Jamestown, ND. |

# Board of Directors Disclosure as of December 31, 2017
**CoBank, ACB**

| Name | Term Expires | Principal Occupation and Other Business Affiliations |
|---|---|---|
| **William M. Farrow, III** [1, 6]<br>Age: 62<br>Year Service Began: 2007 | 2018 | **Principal Occupation:**<br>Director, President and Chief Executive Officer: Urban Partnership Bank, a commercial bank, Chicago, IL;<br>Owner: Winston and Wolfe LLC, a technology development and advisory company, Chicago, IL.<br>**Other Business Affiliations:**<br>Director: Chicago Board Options Exchange, an options and volatility trading resource, Chicago, IL;<br>Director: Echo Global Logistics, a provider of technology-enabled transportation and supply chain management services, Chicago, IL;<br>Director: Federal Reserve Bank of Chicago, a federal depository bank, Chicago, IL;<br>Director: NorthShore University Health System, a hospital system, Evanston, IL. |
| **Benjamin J. Freund** [3]<br>Age: 62<br>Year Service Began: 2014 | 2021 | **Principal Occupation:**<br>Owner/Officer: Freund's Farm, Inc., a dairy farming operation, East Canaan, CT;<br>Owner/Director: CowPots, LLC, a manufacturer of biodegradable plantable pots, East Canaan, CT.<br>**Other Business Affiliations:**<br>Officer: Canaan Valley Agricultural Cooperative, Inc., a manure management cooperative, East Canaan, CT;<br>Advisory Board Member: Connecticut Farmland Preservation Advisory Board, adviser to Connecticut Commissioner of Agriculture, Hartford, CT;<br>Director: Federal Farm Credit Banks Funding Corporation, the issuer of Systemwide debt, Jersey City, NJ. |
| **Andrew J. Gilbert** [5]<br>Age: 59<br>Year Service Began: 2016 | 2019 | **Principal Occupation:**<br>Former Owner/Operator: Adon Farms Operations, LLC, a dairy farm and grain operation, Potsdam, NY (retired in January 2016);<br>Former Owner/Operator: Adon Farms Real Estate Holdings, LLC, a real estate LLC, Potsdam, NY (retired in January 2016);<br>Former Owner/Operator: Parishville Sand & Gravel, a sand and gravel supplier, Potsdam, NY (retired in January 2016).<br>**Other Business Affiliations:**<br>Advisory Board Member: St. Lawrence County Development Study Advisory Board, a promoter of economic development, Massena, NY. |

# Board of Directors Disclosure as of December 31, 2017
**CoBank, ACB**

| Name | Term Expires | Principal Occupation and Other Business Affiliations |
|---|---|---|
| **Daniel T. Kelley** [2,7]<br>Age: 69<br>Year Service Began: 2004 | 2021 | **Principal Occupation:**<br>Owner/Operator: Kelley Farms, a corn and soybean farming operation, Normal, IL.<br>**Other Business Affiliations:**<br>Director: Global Farmer Network, a nonprofit organization, Des Moines, IA;<br>Chair: Illinois Agricultural Leadership Foundation, a nonprofit organization supporting agricultural leadership development, Macomb, IL;<br>Director: Midwest Grain, LLC, a grain merchandising company, Bloomington, IL;<br>Director: Nationwide Bank, a federal savings bank, Columbus, OH;<br>Director: Nationwide Mutual Insurance Company, an insurance company, Columbus, OH. |
| **David J. Kragnes** [4, 9]<br>Age: 65<br>Year Service Began: 2009 | 2020 | **Principal Occupation:**<br>Owner/Operator: David Kragnes Farm, a corn and bean row crop farming operation, Felton, MN.<br>Former Owner: Kragnes Family Farm, an organic vegetable farming operation, Felton, MN.<br>**Other Business Affiliations:**<br>Director: The Farm Credit Council, a national trade association, Washington, D.C.;<br>Advisory Board Member: Quentin Burdick Center for Cooperatives, a cooperative education center, Fargo, ND. |
| **James R. Magnuson** [1]<br>Age: 64<br>Year Service Began: 2013 | 2018 | **Principal Occupation:**<br>Former General Manager and Chief Executive Officer: Key Cooperative, an agricultural grain marketing and farm supply cooperative, Roland, IA (retired in March 2017).<br>**Other Business Affiliations:**<br>Director: ACDI-VOCA, an international development agency, Washington, D.C. |
| **Jon E. Marthedal** [4]<br>Second Vice Chair<br>Age: 61<br>Year Service Began: 2013 | 2021 | **Principal Occupation:**<br>Owner/Operator: Marthedal Farms, a grape, raisin and blueberry farming operation, Fresno, CA;<br>Owner/Operator: Keystone Blue Farms, LLC, a blueberry farming operation, Fresno, CA;<br>Owner/Officer: Marthedal Enterprises Inc., a provider of farm management and custom agriculture services, Fresno, CA.<br>**Other Business Affiliations:**<br>Director: The Farm Credit Council, a national trade association, Washington, D.C.;<br>President: California Blueberry Association, a state trade organization, Fresno, CA;<br>Director: California Blueberry Commission, a state commission, Fresno, CA;<br>Vice Chair: California Raisin Marketing Board, a state marketing board, Fresno, CA;<br>Vice Chair: Raisin Administrative Committee, a federal marketing order, Fresno, CA;<br>Director: Sun-Maid Growers of California, a raisin processing and marketing cooperative, Kingsburg, CA. |

# Board of Directors Disclosure as of December 31, 2017

**CoBank, ACB**

| Name | Term Expires | Principal Occupation and Other Business Affiliations |
|---|---|---|
| **Gary A. Miller** [1]<br><br>Age: 57<br>Year Service Began: 2006 | 2017 | **Principal Occupation:**<br>President and Chief Executive Officer: GreyStone Power Corporation, an electric distribution cooperative, Douglasville, GA.<br>**Other Business Affiliations:**<br>Treasurer: Douglas County Development Authority, an economic development agency, Douglasville, GA;<br>Alternate Director: Georgia EMC, a statewide trade organization, Tucker, GA;<br>Director: GRESCO Utility Supply, Inc., an electric material supplier, Smarr, GA;<br>Director: Wellstar Health System, a healthcare provider, Marietta, GA. |
| **Catherine Moyer** [2]<br><br>Age: 42<br>Year Service Began: 2010 | 2018 | **Principal Occupation:**<br>Chief Executive Officer and General Manager: The Pioneer Telephone Association, Inc. (d/b/a Pioneer Communications), a telecommunications provider, Ulysses, KS;<br>Chief Executive Officer: High Plains Telecommunications, Inc., a telecommunications provider, Ulysses, KS.<br>**Other Business Affiliations:**<br>Chair: Kansas Lottery Commission, providing oversight of Kansas lottery and games, Topeka, KS;<br>Chair: Kansas Rural Independent Telecommunications Coalition, an advocacy group for rural telecommunications, Topeka, KS;<br>Director: Rural Trust Insurance Company, a provider of property and casualty coverage to small telecommunications providers, Greenbelt, MD;<br>Chair: Telcom Insurance Group, a provider of property and casualty coverage to small telecommunications providers, Greenbelt, MD;<br>Advisory Council Member: Washburn University School of Law Alumni Association Board of Governors, a law school alumni association, Topeka, KS. |
| **Alarik Myrin** [4]<br><br>Age: 71<br>Year Service Began: 2012 | 2018 | **Principal Occupation:**<br>President: Myrin Ranch, Inc., a ranching and farming operation, Altamont, UT;<br>Managing Member: Myrin Livestock Co., LLC, a family cattle ranching operation, Altamont, UT;<br>Managing Member: Myrin Investment Co., LLC., real estate rental management, Altamont, UT;<br>Managing Member: Canyon Meadows Ranch, LLC, retail and wholesale grass fed beef, Altamont, UT.<br>**Other Business Affiliations:**<br>Director: Lake Fork Irrigation Co., a water irrigation company, Altamont, UT;<br>Chair: Uintah Basin Medical Center, a hospital, clinic, rehabilitation center and nursing home facility, Roosevelt, UT;<br>Director: Utah Hospital Association, an association providing services to hospitals and healthcare providers, Salt Lake City, UT;<br>Director: Western Agrihaul, LLC, a trucking operation, Altamont, UT. |

# Board of Directors Disclosure as of December 31, 2017
**CoBank, ACB**

| Name | Term Expires | Principal Occupation and Other Business Affiliations |
|---|---|---|
| **Ronald J. Rahjes** [3]<br><br>Age: 66<br>Year Service Began: 2012 | 2019 | **Principal Occupation:**<br>Officer: Wesley J. Rahjes and Sons, Inc., a diversified family farming corporation producing wheat, corn, soybeans and grain sorghum, Kensington, KS;<br>Owner: R&C Tax Service, a tax preparation services firm, Kensington, KS;<br>Partner: R&D Farms, a farming partnership producing wheat, corn, soybeans and grain sorghum, Kensington, KS.<br>**Other Business Affiliations:**<br>Director: Rural Telephone/Nextech, Inc., a telecommunications company, Lenora, KS. |
| **David L. Reinders** [2]<br><br>Age: 61<br>Year Service Began: 2011 | 2018 | **Principal Occupation:**<br>Former Chief Executive Officer: Ag Producers Co-op, a grain and farm supply cooperative, Sunray, TX (retired in August 2016);<br>Former Consultant: Ag Producers Co-op, a grain and farm supply cooperative, Sunray, TX (retired in December 2016).<br>**Other Business Affiliations:**<br>Director: Texas Agricultural Cooperative Council, a statewide agriculture industry trade association, Austin, TX. |
| **Kevin G. Riel** [2]<br>First Vice Chair<br><br>Age: 52<br>Year Service Began: 2014 | 2021 | **Principal Occupation:**<br>President and Chief Executive Officer: Double 'R' Hop Ranches, Inc., a diversified farming operation primarily growing hops, together with apples, grapes and row crops, Harrah, WA;<br>President and Chief Executive Officer: Tri-Gen Enterprises, Inc., an agricultural marketing company, Harrah, WA;<br>Managing Partner: WLJ Investments, LLC, a land holding and management company, Harrah, WA.<br>**Other Business Affiliations:**<br>Board President/Director: Hop Growers of America, a trade association, Moxee, WA. |
| **Clint E. Roush** [3]<br><br>Age: 70<br>Year Service Began: 2012 | 2018 | **Principal Occupation:**<br>President: Clint Roush Farms, Inc., a wheat, alfalfa and stocker/feeder cattle farming operation, Arapaho, OK.<br>**Other Business Affiliations:**<br>Advisory Board Member: Bill Fitzwater Endowed Cooperative Chair, Oklahoma State University, promoting cooperative education, Stillwater, OK;<br>Director: Custer County Cattlemen's Association, a trade association, Arapaho, OK;<br>Director: Custer County Rural Water District, a water distribution organization, Custer City, OK;<br>Chair: Farmers Cooperative Association of Clinton, OK, an agricultural marketing and supply cooperative, Clinton, OK. |

# Board of Directors Disclosure as of December 31, 2017
**CoBank, ACB**

| Name | Term Expires | Principal Occupation and Other Business Affiliations |
|---|---|---|
| **Stephanie Herseth Sandlin** [5]<br>Age: 47<br>Year Service Began: 2014 | 2017 | **Principal Occupation:**<br>President: Augustana University, an educational institution, Sioux Falls, SD (effective August 2017);<br>Former General Counsel and Vice President for Corporate Development: Raven Industries, Inc., a diversified technology and manufacturing company serving agriculture, aerospace and energy markets, Sioux Falls, SD (through May 2017). |
| **Karen L. Schott** [4]<br>Age: 50<br>Year Service Began: 2016 | 2019 | **Principal Occupation:**<br>Owner/Secretary/Treasurer: Bar Four F Ranch, Inc., a dryland, small grains and lease pasture farming operation, Broadview, MT.<br>**Other Business Affiliations:**<br>Director: Northwest Farm Credit Services, ACA, an agricultural credit association, Spokane, WA. |
| **Kenneth W. Shaw** [4]<br>Age: 67<br>Year Service Began: 2015<br>Also Served: 2012 | 2017 | **Principal Occupation:**<br>Owner/Operator: cow/calf/yearling stocker ranching operation, Mountainair, NM.<br>**Other Business Affiliations:**<br>Director: Central New Mexico Electric Cooperative, Inc., an electric distribution cooperative, Moriarty, NM. |
| **Richard W. Sitman** [3]<br>Age: 64<br>Year Service Began: 1999<br>Also Served: 1995-1996 | 2019 | **Principal Occupation:**<br>Former Owner/Operator: Jos. M. Sitman, Inc., a retail business, Greensburg, LA (retired in July 2013).<br>**Other Business Affiliations:**<br>Chair: DEMCO Energy Services, LLC, an electric service supplier, Baton Rouge, LA;<br>Ex Officio Director: DEMCO Foundation, a nonprofit organization, Baton Rouge, LA;<br>Chair: Dixie Business Center, a business incubator, Denham Springs, LA;<br>Chair: Dixie Electric Membership Corporation, an electric distribution cooperative, Baton Rouge, LA;<br>Director: First Guaranty Bank, a commercial bank, Hammond, LA;<br>Director: Louisiana Council of Farmer Coops, a trade association, Port Allen, LA;<br>Director: Zachary Taylor Parkway Association, an economic development association, Baton Rouge, LA. |

| Name | Term Expires | Principal Occupation and Other Business Affiliations |
|---|---|---|
| **Kevin A. Still** [5, 10]<br><br>Age: 60<br>Year Service Began: 2002 | 2018 | **Principal Occupation:**<br>President and Chief Executive Officer: Co-Alliance, LLP, a partnership of five cooperatives supplying energy, agronomy and animal nutrition, and producing swine and marketing grain, Avon, IN;<br>Chief Executive Officer and Treasurer: Midland Co-op, Inc., IMPACT Co-op, Inc., LaPorte County Farm Bureau Cooperative Association, Frontier Co-op, Inc., and Excel Co-op, Inc., agricultural retail cooperatives, Avon, IN;<br>President: Michiana Agra, LLC, an agricultural retail cooperative, Constantine, MI.<br>**Other Business Affiliations:**<br>Officer: Agronomy Services, LLP, an agricultural retail organization, Fairmont, IN;<br>Vice President/Director: Connexities, LLC, a technology provider, Danville, IN;<br>Chair: Local Harvest Food, a food broker, Avon, IN;<br>President: Northwind Pork, LLC, a pork producing operation, Kewanna, IN;<br>Owner/President: Still Farms, LLC, a grain farm, Galesburg, IL;<br>Advisory Committee Member: Wholestone Farms, a food company, Pipestone, MN. |
| **Edgar A. Terry** [5]<br><br>Age: 58<br>Year Service Began: 2016 | 2019 | **Principal Occupation:**<br>Owner/President: Terry Farms, Inc., a vegetable and strawberry farming operation, Ventura, CA;<br>Owner/Officer: Amigos Fuerza, Inc., a provider of farm labor contracting, Ventura, CA;<br>Owner/Vice President: Rancho Adobe, Inc., farmland real estate, Ventura, CA;<br>Owner/Partner: Central AP, LLP, farmland real estate, Ventura, CA;<br>Owner/Partner: JJE, LLC, farmland real estate, Ventura, CA;<br>Owner/Officer: Moonridge Management, Inc., a provider of back office and HR consulting, Ventura, CA;<br>Owner/President: Willal, Inc., a sales and marketing company, Ventura, CA;<br>Senior Adjunct Professor: California Lutheran University, an educational institution, Thousand Oaks, CA.<br>**Other Business Affiliations:**<br>Advisory Board Chair: Center for Economic Research and Forecasting, an economic forecasting and fundraising advisory board, Thousand Oaks, CA;<br>Director: Farm Credit System Audit Committee, providing financial audit oversight, Jersey City, NJ;<br>Director: Limoneira Company, an agribusiness and real estate development company, Santa Paula, CA;<br>Vice Chair: Ventura County Fairgrounds Foundation, a nonprofit organization, Ventura, CA. |

# Board of Directors Disclosure as of December 31, 2017
**CoBank, ACB**

| Name | Term Expires | Principal Occupation and Other Business Affiliations |
|---|---|---|
| **Scott H. Whittington** [2]<br><br>Age: 65<br>Year Service Began: 2013 | 2020 | **Principal Occupation:**<br>General Manager: Lyon-Coffey Electric Cooperative, Inc., an electric distribution cooperative, Burlington, KS.<br>**Other Business Affiliations:**<br>Director: The Farm Credit Council, a national trade association, Washington, D.C.;<br>Advisory Council Member: Central National Bank, a commercial bank, Burlington, KS;<br>Director: First National Bank of Kansas, a commercial bank, Burlington, KS;<br>Alternate Trustee: Kansas Electric Cooperatives, a statewide trade association for electric cooperatives, Topeka, KS;<br>Director: Kansas Electric Power Cooperative, a generation and transmission cooperative, Topeka, KS;<br>Executive Council Member: Kansas Touchstone Energy Cooperative, an electric distribution cooperative alliance, Burlington, KS. |

# Board of Directors Disclosure as of December 31, 2017
**CoBank, ACB**

**Compensation of Directors**

For 2017, directors were compensated in cash at an annual rate of $58,115, paid in quarterly installments, which was the maximum amount permitted by the FCA for CoBank directors. Directors may elect to defer payment of all or part of their director compensation in accordance with agreements and applicable law. Compensation is for attendance at Board meetings, certain other meetings preapproved by the Board, and special duties as assigned. Directors' compensation is reduced by $2,500 for an unexcused absence at any regular Board meeting. FCA regulations also allow additional compensation to be paid to a director in exceptional circumstances where extraordinary time and effort are involved. In 2017, the Board approved additional compensation in excess of $58,115 to the Board chair and the Audit Committee chair, and to certain other directors in recognition of greater than normal involvement in connection with special assignments and attendance at special Board and committee meetings, including meetings of a special ad hoc committee of the Board. In addition, the Board also approved stipends to the Compensation and Human Resources, Governance and Risk Committee chairs for their service as committee chairs in 2017. Additional information for each director who served during 2017 is provided in the following table. Current CoBank policy regarding reimbursements for travel, subsistence and other related expenses states that for meetings designated by the Board and approved special assignments, Board members shall be reimbursed for reasonable travel and related expenses that are necessary and that support CoBank's business interests. As may be appropriate, CoBank may share in the reimbursement of expenses with other organizations. A copy of CoBank's policy is available to shareholders upon request to the Bank's Office of General Counsel. The aggregate amount of reimbursement for travel, subsistence and other related expenses for all directors as a group was $658,727, $538,903, and $667,174 for the years ended December 31, 2017, 2016, and 2015, respectively.

# Board of Directors Disclosure as of December 31, 2017

**CoBank, ACB**

The following table presents the number of days served at Board meetings and other official CoBank activities, and compensation paid to each director for the year ended December 31, 2017.

| Name of Director | Number of Days Served at Board Meetings | Number of Days Served in Other Official CoBank Activities | Total Compensation Paid During 2017 |
|---|---|---|---|
| Robert M. Behr | 20 | 27 | $ 61,115 |
| Michael S. Brown | 20 | 31 | 60,615 |
| Russell G. Brown | 20 | 19 | 60,115 |
| M. Dan Childs [(1)] | 19 | 25 | 61,115 |
| Everett M. Dobrinski [(1) (2)] | 20 | 68 | 75,550 |
| William M. Farrow III [(3)] | 20 | 26 | 75,550 |
| Benjamin J. Freund | 20 | 18 | 61,615 |
| Andrew J. Gilbert | 20 | 49 | 60,615 |
| Daniel T. Kelley [(4)] | 20 | 28 | 69,615 |
| David J. Kragnes [(1) (5)] | 20 | 29 | 71,115 |
| James R. Magnuson | 20 | 22 | 61,115 |
| Jon E. Marthedal [(1)] | 20 | 35 | 65,615 |
| Gary A. Miller | 20 | 26 | 61,115 |
| Catherine Moyer | 20 | 20 | 60,115 |
| Alarik Myrin | 20 | 23 | 60,615 |
| Ronald J. Rahjes | 20 | 29 | 61,615 |
| David L. Reinders | 20 | 15 | 62,115 |
| Kevin G. Riel | 20 | 44 | 67,115 |
| Clint E. Roush | 20 | 38 | 61,615 |
| Stephanie Herseth Sandlin | 20 | 5 | 58,115 |
| Karen L. Schott | 20 | 21 | 60,615 |
| Kenneth W. Shaw | 19 | 8 | 60,115 |
| Richard W. Sitman | 20 | 27 | 61,615 |
| Kevin A. Still [(6)] | 19 | 21 | 67,615 |
| Edgar A. Terry | 20 | 9 | 60,615 |
| Scott H. Whittington [(1)] | 20 | 33 | 62,115 |
| **Total** | 517 | 696 | $ 1,648,860 |

(1) In 2017, these directors represented CoBank's interests by serving on the boards of various trade groups and other organizations important to the Bank. Days of service related to these activities and compensation received (if any) are not included in this report.

(2) Mr. Dobrinski received an additional 30% in compensation ($17,435), the statutory maximum, for service as the Chair of the Board.

(3) Mr. Farrow received an additional 30% in compensation ($17,435), the statutory maximum, for service as the Chair of the Audit Committee.

(4) Mr. Kelley received $2,500 in additional compensation for service as the Chair of the Compensation and Human Resources Committee.

(5) Mr. Kragnes received $2,500 in additional compensation for service as the Chair of the Governance Committee.

(6) Mr. Still received $2,500 in additional compensation for service as the Chair of the Risk Committee.

# Senior Officers
**CoBank, ACB**

**Thomas E. Halverson,**
**President and Chief Executive Officer**

Mr. Halverson, 53, was appointed president effective March 6, 2017 and has served as chief executive officer since January 1, 2017. Mr. Halverson is responsible for implementing the Bank's strategic and business direction as set by the Board of Directors. He serves as chairman on the Board of Directors of Farm Credit Leasing Services Corporation (FCL). Prior to his current position, Mr. Halverson was CoBank's chief banking officer. Before joining CoBank in July 2013, Mr. Halverson spent more than 15 years with Goldman Sachs, most recently as managing director and chief of staff for Goldman Sachs Bank USA. Prior to that he served in a variety of executive positions at the firm, including head of credit risk management for Goldman Sachs in Asia ex-Japan. Before joining Goldman Sachs, Mr. Halverson served as principal credit officer for country risk at the European Bank for Reconstruction and Development. Mr. Halverson serves on the Board of Directors of the Federal Farm Credit Banks Funding Corporation and on the Executive Council of the National Council of Farmer Cooperatives.

**Timothy M. Curran,**
**Chief Risk Officer**

Mr. Curran, 52, was appointed chief risk officer effective June 1, 2017. Mr. Curran is responsible for the Bank's risk management framework, including significant policies and practices, and leadership on overall risk governance and mitigation in areas including credit, operational, asset/liability and market, and reputational risk. Prior to joining CoBank, Mr. Curran was the head of risk management for the Treasury and Trade Solutions business at Citigroup (Citi). Previously, Mr. Curran served in additional senior roles at Citi which included chief risk officer for Citi Holdings as well as senior global market and credit risk manager for Commodities Trading and the Power, Energy, Chemicals, Mining and Metals industry risk group. Prior to joining Citigroup in 2013, he worked in risk management and other leadership roles for FleetBoston Financial Corp., BankBoston (both now Bank of America) and Cargill. Mr. Curran has more than 28 years of experience in the financial services and commodity markets. Mr. Curran is a Chartered Financial Analyst.

**David P. Burlage,**
**Chief Financial Officer**

Mr. Burlage, 54, was appointed chief financial officer effective November 16, 2009. Mr. Burlage is responsible for directing the Bank's financial affairs and developing its overall financial position. He oversees the treasury, financial planning and analysis, capital planning, accounting, tax and reporting functions of the Bank. Prior to his current position, Mr. Burlage served as senior vice president of the Finance Division. Mr. Burlage began his career as an auditor with Arthur Andersen & Co. Mr. Burlage has over 32 years of financial experience. He serves as chairman of the Board of Governors of the Farm Credit System Association Captive Insurance Company, chairman of the Young Americans Center for Financial Education as well as on the Board of Advisors of University of Colorado Denver Business School. He is a licensed CPA in the State of Ohio and a member of the American Institute of Certified Public Accountants.

**F. William Davis,**
**Chief Credit Officer**

Mr. Davis, 59, was appointed chief credit officer on March 31, 2017. Mr. Davis is responsible for all of CoBank's credit approval and administrative functions, which include loan approval, credit support and analysis, credit guidelines and training, loan compliance and monitoring, collateral audit and special assets. Prior to joining CoBank, Mr. Davis was chief credit officer for Farm Credit Services of America (FCSAmerica) and Frontier Farm Credit, a CoBank affiliated Association that operates under a strategic alliance with FCSAmerica. Previously, Mr. Davis was FCSAmerica's senior vice president of credit and before that director of credit underwriting. Prior to joining FCSAmerica, he held senior credit positions with Farm Credit Services of Western Missouri and the Farm Credit Bank of St. Louis. He began his career as an assistant vice president and branch manager with the Federal Land Bank Association in Missouri.

# Senior Officers (Continued)
**CoBank, ACB**

**Amy H. Gales,**
**Executive Vice President Agribusiness Banking**

Ms. Gales, 59, was appointed head of the Regional Agribusiness Banking Group effective January 1, 2011. She is responsible for delivering credit and other financial services to the Bank’s middle market U.S. agricultural cooperative customers and lending relationships with Associations. Ms. Gales is also in charge of building CoBank’s business relationships with Farm Credit System partners. She serves on the Board of Directors of FCL. Prior to her current position at CoBank, Ms. Gales was responsible for agribusiness lending in CoBank’s central region. Before joining CoBank in 2007, Ms. Gales served in a variety of leadership positions at both Commerce Bank and Wells Fargo. Prior to that, she was chief executive officer of a grain and farm supply cooperative and executive director of an agricultural development center. She serves on the Executive Board of Directors of Food Bank of the Rockies and is the Treasurer.

**M. Mashenka Lundberg,**
**Chief Legal Officer and General Counsel**

Ms. Lundberg, 50, was appointed chief legal officer effective January 1, 2017 and has served as general counsel since February 18, 2014. She is responsible for all aspects of CoBank’s legal function, including providing legal counsel to all areas of CoBank’s business operations. Ms. Lundberg also oversees the Bank’s board relations function and the Legal and Loan Processing Division. Prior to joining CoBank, Ms. Lundberg was a partner with the law firm of Bryan Cave from 2012 to 2014. Prior to that time, Ms. Lundberg was a partner with the law firm of Holme Roberts & Owen and served as the firm’s General Counsel and also on the firm’s Executive Committee. She has extensive experience in the field of corporate law and represented a wide range of corporate clients in a variety of transactions during her career in private practice.

**Andrew D. Jacob,**
**Chief Regulatory, Legislative and Compliance Officer**

Mr. Jacob, 57, was appointed chief regulatory, legislative and compliance officer (CRLCO) effective February 1, 2015. As CRLCO, he is responsible for regulatory matters, government relations, compliance and corporate communications, as well as the Bank’s security program and public-private partnership efforts. Mr. Jacob also serves as CoBank’s ethics, compliance, and standards of conduct officer and is responsible for directing the administration of the director and associate standards of conduct programs under the oversight of the Board of Directors. Before joining CoBank in January 2011, Mr. Jacob spent nearly 25 years with the Farm Credit Administration, where he served in a variety of examination and policy leadership roles. He serves as Chairman of the National Cooperative Business Association CLUSA International. Mr. Jacob is a Chartered Financial Analyst.

**Robert L. O’Toole,**
**Chief Human Resources Officer and Chief of Staff**

Mr. O’Toole, 55, was appointed chief of staff effective January 1, 2017 and has served as chief human resources officer since February 1, 2015. He is responsible for the Bank’s talent acquisition and retention strategies, compensation and payroll, employee benefits, and learning, leadership and organizational development initiatives including human equity and engagement. He also provides support to the president and chief executive officer, primarily with program management and strategic initiatives across the executive team and the Bank. Mr. O’Toole has more than 31 years of experience in business and human resources. Prior to joining CoBank in 2001, he was with ING Group. Mr. O'Toole is certified as a Senior Professional in Human Resources (SPHR) by the Human Resource Certification Institute and a Senior Certified Professional by the Society for Human Resource Management (SHRM-SCP). Mr. O’Toole serves on the Board of Directors and is the Compensation Committee chair for the Denver Young Artists Orchestra.

## Senior Officers (Continued)
**CoBank, ACB**

**John Svisco,**
**Chief Business Services Officer**

Mr. Svisco, 59, was appointed chief business services officer effective July 2, 2013. He has responsibility for the Bank's Digital Business Solutions, Administrative Services, Minerals Management, Records Management and Business Continuity functions. Mr. Svisco, who joined CoBank in 2002, managed loan and lease operations during his first seven years at the Bank as senior vice president of the operations division, and was most recently chief administrative officer. He has extensive experience in operations and finance in the financial services industry, including 20 years with HSBC Bank USA, where his last position was senior vice president of operations services. He serves on the Boards of Directors of AgVantis, Inc. and Mount Saint Vincent Home.

**Robert F. West,**
**Executive Vice President Infrastructure Banking**

Mr. West, 59, was appointed head of the Infrastructure Banking Group effective January 1, 2017. He is responsible for delivering credit and other financial services to the Bank's rural electric, water, communications and community facilities customers. Previously, Mr. West was the head of CoBank's Communications Banking Division. Before joining CoBank in 1996, Mr. West spent six years with Shawnut National Bank where he served as director/team leader for lending to the communications and media industries. Mr. West has more than 33 years of experience in commercial banking and lending covering a broad range of communications, infrastructure and media businesses.

**Ann E. Trakimas,**
**Chief Operating Officer**

Ms. Trakimas, 61, was appointed chief operating officer effective January 3, 2011. Ms. Trakimas is responsible for oversight of the Bank's Operations and Information Technology divisions. She also oversees the Business Transformation Services group which includes the disciplines of data strategy, process excellence, business analysis, project execution and change management. Before joining CoBank, Ms. Trakimas served as a director on the board of the Federal Farm Credit Banks Funding Corporation for six years. There she chaired the Audit Committee and was a member of the System Audit Committee. Prior to that, Ms. Trakimas worked for Goldman Sachs where she held numerous executive positions including heading the firm's Financial Institutions Credit Risk Management and Advisory team. Ms. Trakimas has more than 40 years of experience in the financial services industry. She serves on the Board of Directors and finance committees of the Denver Metro Chamber of Commerce and We Don't Waste, a Denver based non-profit organization focused on food recovery.

**Daniel L. Key**

Mr. Key, 61, served as chief credit officer through March 31, 2017.

# Senior Officers Compensation Discussion and Analysis
**CoBank, ACB**

### Overview

This section describes the compensation programs for CoBank's President and Chief Executive Officer (CEO) and other senior officers, as defined by FCA regulations (collectively, senior officers), as well as those programs for any highly compensated employees as defined by FCA regulations. This section also presents the compensation earned by our CEO, as well as aggregate compensation earned by our other senior officers and any highly compensated employees, for the years ended December 31, 2017, 2016 and 2015. For the 2017 period, information is included for our former CEO, who meets the definition of a "highly compensated employee" due to payments made to the employee under contractual agreements between the employee and CoBank.

The Board of Directors, through its Compensation and Human Resources Committee (Committee), has adopted a total compensation philosophy for the Bank. Our total compensation philosophy is intended to align the interests of our senior officers with those of our shareholders and is more fully described below. We accomplish this by providing incentive compensation that rewards performance in relation to the business and financial plan established by our Board of Directors.

Our compensation programs contain a number of elements that are aligned with "best practices" for executive compensation, including:

- The majority of total compensation for senior officers is delivered through performance-based, variable incentive programs – for 2017 the CEO's target total direct compensation mix was approximately 30 percent base salary and 70 percent performance-based, variable incentives;
- We have an incentive compensation recovery ("clawback") provision for all members of the Bank's Management Executive Committee, including the CEO;
- Award levels for the short-term and long-term incentive plans are "capped";
- The individual maximum payout for the annual short-term incentive plan is 225 percent of target, and the maximum payout is 150 percent of target for the long-term incentive plans;
- The short-term and long-term incentive plans have a minimum return on active patron stock investment that must be achieved before any incentives can be earned;
- As of December 31, 2017, no employees were employed subject to the terms of an employment agreement; and
- The Committee engages an independent executive compensation consultant to conduct an annual assessment of compensation related risks.

We believe these elements balance our risk profile with total compensation while aligning our compensation program with our shareholders' long-term interests and best practices in governance of executive compensation.

As described in the "Financial Condition and Results of Operations" section of Management's Discussion and Analysis on page 34 of this Annual Report, in 2017 CoBank reported record financial performance while fulfilling its mission in a safe and sound manner. As a result of our performance, our short-term incentive plan for 2017 was funded between the target and maximum award levels. In addition, based on strong performance in the 2015 through 2017 period, our long-term incentive plan was also funded between the target and maximum award levels. These and other elements of our senior officers' compensation are explained below.

### Compensation Philosophy and Objectives

The Bank's total compensation philosophy is designed to maintain a compensation program that will:

- Attract, retain and reward employees with the skills required to accomplish the Bank's strategic business objectives;
- Provide accountability and incentives for achievement of those objectives;
- Link compensation to Bank performance and increased shareholder value;
- Properly balance the risk profile of the Bank with both short- and long-term incentives;
- Be designed within a consistent philosophy and framework;
- Create a culture of adherence to core values and strong ethical behavior;
- Be integrated with the Bank's business processes, including business planning, performance management and succession planning; and
- Enhance management of risk and accountability.

# Senior Officers Compensation Discussion and Analysis
**CoBank, ACB**

The total compensation philosophy seeks to achieve the appropriate balance among market-based salaries, benefits and variable incentive compensation designed to incent and reward both the current and long-term achievement of our strategic business objectives, business and financial plans and mission fulfillment. It also seeks to incent prudent risk taking within Board-established parameters with the proper balance and accountabilities between short- and long-term business performances. For senior officers, CoBank strives to deliver a significant portion of total target compensation through performance-based pay, with the actual proportion of total compensation provided through both short- and long-term incentives varying with actual financial performance, the achievement of Board-approved strategic business objectives and each senior officer's individual performance. We believe this philosophy fosters a performance-oriented, results-based culture wherein compensation varies from one year to the next on the basis of actual results achieved. We also find that this variable performance-based compensation approach is properly aligned with an acceptable risk profile and shareholder returns.

**Process for Compensation Decisions**

The Board of Directors has established the Committee to oversee the design, implementation and administration of compensation and benefits programs for CoBank. The Committee meets regularly to execute the responsibilities of its charter. The Committee reviews the performance of the Bank's CEO semi-annually, and the Board of Directors approves the compensation level of the CEO, comprised of salary, benefits and supplemental compensation, including short- and long-term incentive compensation. The CEO is responsible for setting the compensation levels of the Bank's Management Executive Committee, who, in turn, are responsible for the compensation of all other employees. In addition, the Committee reviews the compensation of the members of the Management Executive Committee.

The Committee generally makes a final decision regarding the CEO's incentive compensation in its February meeting to fully take into consideration the prior year's Bank and individual performance. Decisions about salary and performance also occur at other meetings in the year, as considered appropriate. The Committee utilizes an independent advisor to annually compare the CEO's compensation level to a select peer group of financial institutions. This evaluation helps ensure that such compensation is appropriate for the CEO's experience and competencies and is competitive with positions of similar scope and complexity at relevant financial institutions. The comparative peer group is composed of companies with significant corporate and commercial lending activities, and which have other similar characteristics such as asset size, net income or significant customer relationships.

For 2015, 2016 and 2017, the Committee engaged Pay Governance LLC (Consultant) directly to serve as its independent advisor. On an annual basis, the Committee assures the qualifications of the Consultant as an independent and objective advisor. In 2015, 2016 and 2017, Pay Governance did not provide any other services to CoBank that were not approved in advance by the Committee.

**Components of CoBank Total Compensation Program**

Given the cooperative ownership structure of CoBank, no equity or stock-based plans are used to compensate any employee, including senior officers. Senior officers' compensation primarily consists of four components – salary, short-term incentive plan, long-term incentive plan and retirement benefits – as described below. All employees participate in salary, the short-term incentive plan and retirement benefits, while senior officers and specified other senior leaders are also eligible to participate in the long-term incentive plan. All senior officers can elect to defer certain incentive payments through a nonqualified deferred compensation plan. In addition, senior officers are eligible for supplemental retirement benefits, as discussed on page 167.

| **Overview of Senior Officers' Compensation** | | |
|---|---|---|
| **Component** | **CoBank Philosophy** | **Design Characteristics** |
| Salary | • Market-based compensation<br>• Provides a foundation for other components<br>• Competitive relative to positions of similar scope and complexity at a select peer group of financial institutions<br>• Reflects individual performance, competencies and responsibilities | • Traditional salary structure with salary ranges for each position<br>• Structure reviewed annually<br>• Salaries based on market and individual performance |

| Overview of Senior Officers' Compensation (continued) | | |
|---|---|---|
| **Component** | **CoBank Philosophy** | **Design Characteristics** |
| Short-Term Incentive Plan | • Links rewards to achievement of annual goals<br>• Recognizes corporate and individual performance<br>• Aligns the interests of shareholders and senior officers through bankwide financial and strategic business objectives<br>• Balances short-term results with the risk profile of the Bank<br>• Establishes competitive incentive opportunities relative to peers | • Multiple corporate financial and non-financial goals<br>• Awards are capped<br>• Minimum performance for each goal required<br>• Minimum return on active patron stock investment of 11 percent must be achieved in plan year in order for any payout to be made<br>• Individual and corporate performance weighted equally, and a minimum level of individual performance must be achieved<br>• Clawback provision for the Bank's Management Executive Committee, including the CEO |
| Long-Term Incentive Plan | • Provides opportunities for compensation tied to CoBank's sustained performance<br>• Provides balance through emphasis on long-term results, relative to short-term orientation of annual short-term incentive plan<br>• Encourages longer-term retention of plan participants<br>• Promotes the creation of profitable growth in shareholder and customer value, and enhances the sustainability of CoBank to serve its customers while providing proper balance to the risk profile of the Bank<br>• Aligns the interests of shareholders and senior officers through bankwide financial and strategic business objectives<br>• Establishes competitive incentive opportunities relative to peers | • Multiple corporate financial and non-financial goals<br>• Awards are capped<br>• Three-year performance periods<br>• New plan starts each year (plans overlap)<br>• Minimum performance for each goal required<br>• Minimum return on active patron stock investment of 11 percent must be achieved in each year of the plan for a full payout<br>• No individual performance factor although a minimum level of individual performance is considered; corporate performance determines level of payout<br>• Clawback provision for the Bank's Management Executive Committee, including the CEO |
| Retirement Benefits | • Provides for a source of income subsequent to retirement<br>• Encourages longer-term retention of employees<br>• Provides for competitive total compensation opportunities over the employee's career | • Benefits vary based on date of hire<br>• Senior officers hired prior to January 1, 2007 participate in a defined benefit plan and supplemental retirement plan<br>• Senior officers hired on or after January 1, 2007 do not participate in a defined benefit plan but receive additional, non-elective employer contributions to the 401(k) retirement savings plan<br>• Other retirement benefits include a 401(k) retirement savings plan and access to health care benefits. Substantially all participants pay the full premiums associated with postretirement health care benefits<br>• Clawback provision for the Bank's Management Executive Committee, including the CEO |

### Salary

**Overview**

**Salary Considerations**
- Individual performance, competencies and experience
- Maintenance or expansion of responsibilities and scope of position
- Peer group data and internal equity
- Overall CoBank merit increase budget

Salaries represent a foundational component of CoBank's total compensation program, as the value of other components is determined in relation to base salary. Senior officer salaries are market-based and established taking into consideration individual performance, the specific competencies and experience the senior officer brings to CoBank, the responsibilities and scope of the position, peer group data and internal equity. Salaries for senior officers are reviewed annually, and adjusted if necessary.

### Short-Term Incentives

**Overview**

**Short-Term Incentive Plan (STIP)**
- Corporate and individual performance weighted equally
- Corporate financial performance measures are balanced: profitability, loan quality and operating efficiency
- Board of Directors also provides subjective evaluation related to achievement of the Bank's strategic business objectives
- All employees are eligible to participate
- For 2017, CoBank performed at or above maximum award levels on three corporate performance goals, between the threshold and the maximum award level on one corporate performance goal and between the threshold and the target award level on one corporate performance goal

Annual short-term incentive payments are based on a combination of annual corporate and individual performance. The short-term incentive plan, which has the same design for all employees, including the CEO and other senior officers, aligns the interests of shareholders and employees through the establishment of a balanced scorecard of bankwide financial and strategic business objectives. Under the terms of the plan, a minimum return on active patron stock investment must be achieved for the plan year in order for a payout to be approved, ensuring that shareholders are rewarded first. The return minimum was 11 percent for the years ended December 31, 2015, 2016 and 2017.

The actual short-term incentive award is determined as follows:

Salary × Individual Annual Short-Term Incentive Target × Corporate Performance Factor × Individual Performance Factor

Based on corporate and individual performance factors, participants can earn from zero to 225 percent of their individual annual short-term incentive target. Payments are typically made during March, but always following the end of the year to which the award is applicable. Participants are not eligible to receive a short-term payout if they are no longer employed by CoBank at the time of the scheduled payout, unless otherwise provided for as a part of a normal retirement or in an agreement. The key elements of the actual payout are described below.

- *Individual Annual Short-Term Incentive Target* — Annual short-term incentive targets are set for all employees at the beginning of the year. For the 2017 performance period, the target short-term incentive level for the CEO was 75 percent of salary. For the other senior officers, the targets ranged from 40 to 70 percent.

- *Corporate Performance Factor* — Corporate performance is determined at the end of the year based on annual actual business results relative to a balanced scorecard of bank-wide financial and strategic business objectives, as established at the beginning of each year by the Board of Directors, and is the same for all employees, including the CEO and other senior officers. The Board of Directors retains the right to make adjustments to the corporate performance factor, where appropriate, in addition to providing a subjective performance result for the achievement of strategic business objectives.

  CoBank utilizes a balanced scorecard for measuring short-term corporate performance to emphasize overall success in executing our strategy and managing risks. The short-term corporate scorecard establishes certain key performance indicators, of which 80 percent focus on the achievement of specified financial measures related to profitability, loan quality and operating efficiency, and 20 percent focus on the achievement of the strategic business objectives that are established at the beginning of each year by the Board of Directors. The final performance result, or corporate performance factor, is determined by comparing the actual performance of each measure to the targets established at the beginning of the year. Each scorecard performance measure is weighted separately, and the factor is set such that if performance of each measure meets the established target, the result is a performance factor of 100 percent. Beginning with the 2017 plan, performance within a range of 98 to 102 percent of target for the financial measures was recognized at a performance factor of 100 percent. For the 2015 and 2016 plans, the range of performance for financial measures resulting in a performance factor at 100 percent was within a range of 97 to 103 percent of target. The corporate performance factor can vary from zero to 150 percent, depending on performance against the targets. The Committee approves the overall corporate performance factor and funding of the STIP for actual performance relative to target. The 2017 Short-Term Corporate Scorecard is as follows:

| 2017 Short-Term Corporate Scorecard | |
|---|---|
| **Performance Measure** | **Weight** |
| Net Income | 25 % |
| Return on Common Equity | 20 % |
| Strategic Business Objectives | 20 % |
| Loan Quality (Adverse Loans to Total Regulatory Capital) | 20 % |
| Operating Expense Ratio | 15 % |

- *Individual Performance Factor* — At the beginning of each year, all CoBank employees, including the CEO and other senior officers, establish individual goals they seek to achieve that year in support of the business. These individual goals are anchored to the Bank’s business and financial plan, as well as the Bank’s strategic business objectives and also include key behavioral competencies appropriate for that employee. The CEO is responsible for administering the short-term incentive plan and approves the individual performance factors of the other senior officers. The Board of Directors approves the goals and individual performance factor of the CEO. The assessment of an individual’s actual performance with respect to his or her annual goals is reflected as an individual performance factor and ranges from zero to 150 percent.

The actual short-term incentive awards for 2017, 2016 and 2015 for the CEO, other senior officers and any highly compensated employees are presented in the Summary Compensation Table on page 170.

### Long-Term Incentives

**Overview**

**Long-Term Incentive Plan (LTIP)**

- Awards based upon corporate performance for overlapping three-year periods
- Corporate financial performance measures are balanced: profitability, loan quality and capital adequacy
- Board of Directors also provides subjective evaluation related to the achievement of corporate strategic business objectives
- For the 2015 through 2017 performance period, CoBank performed at or above maximum award level on one corporate performance goal and between the target and maximum award levels on four corporate performance goals

CoBank utilizes a long-term incentive compensation plan that provides senior officers and specified other senior leaders with the opportunity for compensation tied to CoBank's sustained success. The long-term incentive plan provides the accountability and balance for the annual outcomes embodied in the short-term plan. Participants in the long-term plan directly influence the longer-term outcomes of actions and risks taken during each performance period, which provides the proper balance between short-term results and long-term value creation. Eligibility for participation is limited to those individuals who clearly have the ability to drive the success of strategies critical to long-term value creation for shareholders. The purpose of this plan is to encourage longer-term retention of plan participants, to promote the creation of profitable growth in shareholder and customer value, and to enhance the sustainability of CoBank to serve its customers while providing proper balance to the risk profile of the Bank. The long-term incentive plan aligns the interests of shareholders and senior officers through the establishment of bankwide financial and strategic business objectives, and reinforces a long-term focus on financial performance, strategic positioning and risk management.

Long-term incentive plan payouts are based on corporate performance in the achievement of key financial metrics and strategic business objectives over a three-year performance period, as defined by CoBank's long-term corporate scorecard. These three-year performance metrics and objectives are established at the beginning of each three-year performance period by the Board of Directors in connection with the annual business and financial plan. A minimum return on active patron stock investment must be achieved in each year of the three-year performance period for a full payout to be approved, ensuring that shareholders are rewarded first. The return minimum is 11 percent for each of the three-year performance periods.

The actual long-term incentive award is determined as follows:

Salary × Individual Long-Term Incentive Target × Corporate Performance Factor

Based on the corporate performance factor, participants can earn from zero to 150 percent of their individual long-term incentive target. Payments are typically made during March of each year following the end of the three-year performance period to which the award is applicable. Participants are eligible to receive a prorated award at the time of the scheduled payout if they are no longer employed at CoBank at the time of payment and their termination meets plan eligibility requirements for reasons related to retirement, death or disability, or if otherwise provided for in an agreement. Participants are not eligible to receive any payment at the time of the scheduled payout if they are no longer employed by CoBank and do not otherwise meet the eligibility requirements for payment. The key elements of the actual payout are described below.

- *Individual Long-Term Incentive Target* — For the 2015 through 2017 performance period, the long-term incentive target for the CEO was prorated based on targets ranging from 65 percent to 130 percent awarded for various positions he held during the plan period. For the remaining senior officers, the targets ranged from 30 to 80 percent during the period.

- *Corporate Performance Factor* — Corporate performance is determined at the end of a designated three-year period based on actual business results relative to a balanced scorecard of bank-wide financial measures established at the beginning of the three-year performance period, and strategic business objectives, as established at the beginning of each year of the three-year performance period by the Board of Directors. The Board of Directors retains the right to make adjustments to the corporate performance factor, where appropriate, in addition to providing a subjective performance result for the achievement of strategic business objectives.

CoBank utilizes a balanced scorecard for measuring long-term corporate performance to emphasize overall success in executing our strategy and managing risks. The long-term corporate scorecard establishes certain key performance indicators, of which 80 percent focus on the achievement of specified financial measures established at the beginning of the three-year performance period related to profitability, loan quality and capital adequacy, and 20 percent focus on the achievement of the strategic business objectives that are established at the beginning of each year of the three-year performance period by the Board of Directors. The final performance result, or corporate performance factor, is determined by comparing the actual performance of each measure to the financial targets established at the beginning of each three-year performance period and an average of strategic business objective results during each year in the three-year performance period. Each scorecard performance measure is weighted separately, and for the 2014-2016 performance period, the factor was set such that if performance of each measure exactly meets the established target, the result is a performance factor of 100 percent. For the 2015-2017 and 2016-2018 plans, performance within a range of 97 to 103 percent of target for the financial measures is recognized at a performance factor of 100 percent, and beginning with the 2017-2019 plan, performance within a range of 98 to 102 percent of target for the financial measures is recognized at a performance factor of 100 percent. The corporate performance factor can vary from zero to a maximum of 150 percent depending on performance against the targets. The Committee approves the corporate performance factor based on actual performance in comparison to target. The Long-Term Corporate Scorecards for the three-year performance periods 2015 through 2017, 2016 through 2018, and 2017 through 2019 are as follows:

**Long-Term Corporate Scorecards:**
**2015 – 2017, 2016 – 2018 and 2017 – 2019 Periods**

| Performance Measure | Weight |
|---|---|
| Net Income | 20 % |
| Total Capital Ratio | 20 % |
| Return on Common Equity | 20 % |
| Strategic Business Objectives | 20 % |
| Loan Quality (Adverse Loans to Total Regulatory Capital) | 20 % |

The actual long-term incentive awards for 2017, 2016 and 2015 for the CEO and other senior officers are presented in the Summary Compensation Table on page 170.

**Employment Agreement**

As of December 31, 2017, no employees were employed subject to the terms of an employment agreement.

From January 1, 2017 through June 30, 2017, the former CEO was employed as a Senior Advisor. In 2017, a consulting agreement that was previously in place for the former CEO was replaced by an agreement, whereby no additional services were expected to be performed by the former CEO following the conclusion of his employment on June 30, 2017. Prior to entering into this new agreement in 2017, Mr. Engel was employed pursuant to the terms of a separate employment agreement.

**Retirement Benefits**

Overview

We have employer-funded qualified defined benefit pension plans, which are noncontributory and cover employees hired prior to January 1, 2007. Depending on the date of hire, benefits are determined either by a formula based on years of service and final average pay, or by the accumulation of a cash balance with interest credits and contribution credits based on years of service and eligible compensation. We also have noncontributory, unfunded, nonqualified supplemental executive retirement plans (SERPs) covering four senior officers employed through December 31, 2017, one senior officer who retired during 2017, and our former CEO as a highly compensated employee through June 30, 2017, as well as specified other senior managers. For 2017, there were no additional executive retirement plans in place. All employees are also eligible to participate in a 401(k) retirement savings plan, which includes employer matching contributions. Employees hired on or after January 1, 2007, receive additional, non-elective employer contributions to the 401(k) retirement savings plan. All retirement-eligible employees, including senior officers, are also currently eligible for other postretirement benefits, which primarily include access to health care benefits. Substantially all participants pay the full premiums associated with the postretirement health care benefits.

Defined Benefit Pension Plans

Senior officers hired prior to January 1, 2007 are participants in the defined benefit pension plans. Pursuant to these plans, the benefits are determined based on years of service and final average pay. Eligible compensation for senior officers, as defined under the final average pay formula, is the highest 60 consecutive-month average, which includes salary and incentive compensation measured over a period of one year or less, and excludes long-term incentive awards, expense reimbursements, taxable fringe benefits, relocation allowance, short- and long-term disability payments, nonqualified deferred compensation distributions, lump sum vacation payouts and all severance payments. Retirement benefits for senior officers are calculated assuming payment in the form of a single life annuity with five years certain and retirement at age 65. However, the actual form and timing of retirement benefit payments are based on participant elections. The plans require five years of service to become vested. All senior officers participating in the defined benefit pension plans have been employed for more than five years and, as such, are fully vested in the plans. The benefit formula is the sum of 1.5 percent of eligible compensation up to Social Security covered compensation plus 1.75 percent of eligible compensation in excess of Social Security covered compensation, multiplied by the years of eligible benefit service. Social Security covered compensation is the 35 year average of the Social Security taxable wage bases up to the participant’s Social Security retirement age.

Federal laws limit the amount of compensation we may consider when determining benefits payable under the qualified defined benefit pension plans. We maintain SERPs that pay the excess pension benefits that would have been payable under our qualified defined benefit pension plans.

Nonqualified Deferred Compensation Plan

We have a nonqualified deferred compensation plan that allows senior officers and other eligible senior managers to defer all or a portion of their incentive compensation. Additionally, the Bank makes contributions to this plan on behalf of participants whose benefits under the 401(k) retirement savings plan are limited due to federal tax laws. Contributions are made at the same percentages as available under the 401(k) retirement savings plan. The compensation that is deferred is invested in any number of investment options selected by the participants. These investment options are either identical or substantially similar to those available to all participants in the Bank’s 401(k) retirement savings plan. The participant is subject to all risks and returns of amounts invested. The election to defer is irrevocable and the deferred amounts cannot be paid except in accordance with specified elections as permitted by law. At that time, the participant will receive payment of the amounts credited to his or her account under the plan in a manner that has been specified by the participant. If a participant dies before the entire amount has been distributed, the undistributed portion will be paid to the participant’s beneficiary.

**Compensation Risk Management**

The Committee considers potential risks when reviewing and approving compensation programs. The Board of Directors approves the total compensation philosophy and programs to ensure there is a proper balance and alignment between the overall acceptable risk profile of the Bank and the manner in which prudent risk taking is reflected in the design of the underlying program. We have designed our compensation programs, including our incentive compensation plans, with specific features to address potential risks while rewarding employees for achieving short-term and long-term financial and strategic objectives through prudent business judgment and appropriate risk taking. The objective is to motivate employees to take prudent risk within Board-approved parameters while ensuring employees are also accountable for the long-term outcomes of their actions. The following elements have been incorporated in our compensation programs available for our senior officers:

- *A Balanced Mix of Compensation Components* – The target compensation mix for our senior officers is composed of salary, short-term incentive, long-term incentive and retirement benefits, representing a mix that is weighted toward long-term performance and service with CoBank.

- *No Production Based Incentive Plans* – The STIP and LTIP are the only incentive plans within CoBank and are funded based upon the Bank's financial and business results. There are no additional "production" or "sales" based incentives tied to number of customers, number of loans, number of products, loan volume or any other metric that solely measures top-line results.

- *Multiple Performance Factors* – Our incentive compensation plans include balanced scorecards of organization-wide financial performance and integration with individual performance assessments through our performance management system.
  - Incentive plans include a Board-determined subjective evaluation of our achievement of strategic business objectives
  - The short-term incentive is dependent on multiple performance metrics, including a subjective measure of performance against strategic business objectives and an assessment of individual performance
  - The long-term incentives are cash-based, with three-year performance metrics to complement our annual short-term incentives
  - Board of Directors retains the right to adjust performance factors
  - Targets and ranges of performance for each metric are approved by the Board of Directors prior to the beginning of the performance period

- *Multiple Year Performance Measurement* – Our long-term incentives include a three-year performance measurement period that requires sustained corporate performance complemented by a required minimum level of shareholder return in order for the plan to be fully funded.

- *Caps on Incentive Payments* – Our incentive compensation plan payments are subject to caps that limit the maximum award that may be paid.

- *Threshold Performance Requirements for Each Metric* – Our incentive compensation plan payments are contingent upon achieving minimum performance levels for each financial performance goal.

- *Threshold Individual Performance Requirements* – Our incentive compensation plans require a minimum individual performance level before a payment may be made for any given performance year.

- *Compensation and Human Resources Committee Discretion* – The Committee subjectively evaluates the Bank's achievement of strategic business objectives and approves all incentive plan funding following a review of the Bank's performance against plan performance criteria established and approved prior to the beginning of each year of an incentive plan performance period.

- S*hareholder Return* – A minimum return on active patron stock investment must be achieved for incentive compensation payments to be approved.

Effective January 1, 2013, the Board of Directors approved an incentive compensation recovery ("clawback") policy to encourage the highest ethical standards, to further ensure incentive plans do not encourage excessive risk-taking and to ensure the alignment of compensation with accurate financial data. The policy provides that in the event of a restatement of the financial statements, the Bank may seek recovery from members of the Bank's Management Executive Committee of incentive compensation and nonqualified retirement benefits that would not otherwise have been paid if the correct financial information had been used to determine the amount payable. The Board of Directors may only seek recovery or reduction of compensation under this policy within the three-year period following the date the Bank filed the incorrect report.

Furthermore, in December of 2017, the Board of Directors approved an expansion of circumstances under which the "clawback" policy could be enforced to include ethical misconduct, theft, misappropriation, violation of Company policy, or materially imprudent judgment that caused financial or reputational harm to the Company, including where the covered executive knowingly failed to take corrective action with regard to other employees under his or her direct control who engaged in such behavior.

Additionally, the Compensation and Human Resources Committee annually considers an assessment of compensation-related risks for all of our employees. The assessment includes a review of multiple facets of our compensation program including governance practices, program documentation, incentive plan design, processes, employment practices, benefits program, and cultural considerations. Reviews of various aspects of our programs are also conducted by independent auditors, whose reports are provided to our Board of Directors. Based on this assessment, the Committee concluded that our compensation plans do not create risks that are reasonably likely to have a material adverse effect on CoBank. In making this conclusion, the Committee reviewed the key design elements of our compensation programs in relation to industry "best practices" as presented by the Consultant, as well as the design features and administrative processes that mitigate any potential risks, such as through our internal controls and oversight by management and the Board of Directors.

### Summary Compensation Table

The following table summarizes compensation earned by our CEO and aggregate compensation of other senior officers and our former CEO as a highly compensated employee for the years ended December 31, 2017, 2016 and 2015. Our current Board policy regarding reimbursements for travel, subsistence and other related expenses states that all employees, including senior officers, shall be reimbursed for actual reasonable travel and related expenses that are necessary and that support our business interests. A copy of our policy is available to shareholders of CoBank and of our affiliated Farm Credit Associations upon request.

**Summary Compensation Table**[1] ($ in Thousands)

| Name of Individual or Number in Group[2] | Year | Salary (Annual) | Short-Term Incentive Compensation[3] (Annual) | Long-Term Incentive Compensation[3] (Annual) | Change in Pension Value[4] | Deferred/ Perquisites[5] | Other[6] | Total |
|---|---|---|---|---|---|---|---|---|
| **CEO:** | | | | | | | | |
| Thomas E. Halverson | 2017 | **$ 725** | **$ 1,096** | **$ 759** | **$ -** | **$ 180** | **$ 100** | **$ 2,860** |
| Robert B. Engel | 2016 | 925 | 1,405 | 1,901 | 604 | 215 | 500 | 5,550 |
| Robert B. Engel | 2015 | 895 | 1,299 | 1,901 | 695 | 169 | 333 | 5,292 |
| **Aggregate Number of Senior Officers and the Highly Compensated Employee (excluding the CEO):** | | | | | | | | |
| 12 | 2017 | **$ 4,051** | **$ 3,940** | **$ 3,684** | **$ 5,649** | **$ 1,039** | **$ 4,687** | **$ 23,050** |
| 10 | 2016 | 3,879 | 4,297 | 3,077 | 4,589 | 794 | 4,460 | 21,096 |
| 10 | 2015 | 3,681 | 4,019 | 2,806 | 1,874 | 682 | 50 | 13,112 |

(1) Disclosure of the total compensation paid during 2017 to any designated senior officer is available to shareholders of CoBank and of our affiliated Farm Credit Associations upon request. Compensation amounts do not include earnings or losses on nonqualified deferred compensation, as such earnings or losses are not considered above-market or preferential.

(2) The senior officers are those officers defined by FCA regulation §619.9310.

(3) Incentive compensation amounts represent amounts earned in the reported fiscal year, which are paid in March of the subsequent year to persons who continue to be employed by CoBank or unless otherwise provided for as part of normal retirement or in an employment agreement. The short-term incentive compensation amounts are calculated based on relevant performance factors for the reported fiscal year, while the long-term incentive compensation amounts are calculated based on the relevant performance factors for the three-year performance period ended in the reported fiscal year.

(4) The Change in Pension Value increased in 2017 primarily due to a change in the discount rate and the form of pension benefit payment elected by the former CEO who left the Bank during the year.

(5) Represents company contributions to a qualified retirement savings plan and nonqualified deferred compensation plan, as well as payment of tax return preparation and financial planning expenses, relocation, certain travel-related costs, wellness benefits, life insurance benefits, long-term disability benefits, and associated income tax impact.

(6) For 2017, $100 represents amount paid to the CEO for a Board-approved recognition bonus. Also for 2017, $4,687 includes $4,225 for amounts payable to the former CEO (who left the Bank on June 30, 2017) in exchange for valuable consideration to the Bank, pursuant to the terms of an agreement (which replaced a consulting agreement that was previously in place); $312 for amounts payable to two senior officers who joined the Bank in 2017; and $150 for a Board-approved project bonus to one senior officer. For 2016, $500 represents amount paid to the then CEO for retention pursuant to a contractual agreement between the then CEO and CoBank. Also for 2016, $4,460 includes $2,811 for amounts payable to a senior officer (who left the Bank in 2016) for separation pay, incentive compensation and certain other benefits pursuant to the terms of an employment agreement, which included a release and provisions for non-solicitation and non-competition; $1,549 for amounts payable to a senior officer (who left the Bank in 2016) for separation pay, incentive compensation and certain other benefits pursuant to a separation agreement which included a release and provisions for non-solicitation and non-competition; $25 for the balance due on a sign-on payment to a senior officer who joined the Bank in 2014; and $75 for a Board-approved project bonus to a senior officer. For 2015, $333 represents amounts paid to the then CEO for achievement of certain additional performance objectives as established and measured by the Board of Directors. Also for 2015, $50 represents a sign-on payment to a senior officer who joined the Bank in 2014.

### Pension Benefits

The following table presents certain pension benefit information by plan as of December 31, 2017 for the senior officer group and our former CEO as a highly compensated employee. The CEO is not eligible to participate in the defined benefit pension plan.

**Pension Benefits Table** ($ in Thousands)

| Number in Group[1] | Plan Name | Number of Years of Credited Service[2] | Actuarial Present Value of Accumulated Benefits | Payments During Last Fiscal Year |
|---|---|---|---|---|
| **Aggregate Number of Senior Officers and the Highly Compensated Employee:** | | | | |
| 6 | CoBank, ACB Retirement Plan | 18.33 | $ 4,839 | $ 920 |
| 6 | Supplemental Executive Retirement Plan | 18.33 | 13,110 | 265 |
| 1 | Executive Retirement Plan | 17.08 | 3,962 | 111 |
| **Total** | | | $ 21,911 | $ 1,296 |

[1] The senior officers included in the pension benefits disclosure are those defined by FCA regulations §619.9310 and §620.6.

[2] For the Retirement Plan and the Supplemental Executive Retirement Plan, represents an average for the aggregate senior officer group. For the Executive Retirement Plan, represents the former CEO who left the Bank during the year.

# Report on Compensation
**CoBank, ACB**

Members of the Compensation and Human Resources Committee of the Board of Directors are appointed by the Board chair in consultation with the Board officers and committee chairs. All members of the Compensation and Human Resources Committee (Committee) qualify as independent directors as defined by Board policy.

The Committee approves the overall compensation philosophy at the Bank utilizing an independent, Committee-appointed, executive compensation consultant, which includes establishing the compensation philosophy which guides program design including pay mix comprised of base pay, short- and long-term incentive compensation plans and employee benefits. In so doing, the Committee has developed and implemented compensation policies and programs that support the Bank's core values and links compensation to overall Bank and individual performance, ensuring a proper balance with the risk profile of the Bank, thereby contributing to the value of the shareholders' investment in the Bank.

The Committee is responsible for establishing the performance standards for the President and Chief Executive Officer and the compensation structure for other Bank employees. The Committee reviews the Board's performance evaluation of the President and Chief Executive Officer, approves an overall performance rating, and recommends for full Board approval all aspects of compensation (base salary, performance-based compensation including all incentives, benefits, and perquisites) for the President and Chief Executive Officer, consistent with the business and financial objectives of the Bank, the results achieved by the executive, Board directed performance objectives, and competitive compensation practices. The Committee carefully evaluates incentive-based compensation programs and payments thereunder to ensure they are reasonable and appropriate to the services performed by senior officers. The Committee monitors the terms and provisions of the incentive-based compensation programs for senior officers and assesses the balance of financial rewards to senior officers against the risks to the institution. The Committee carefully evaluates whether senior officer compensation, incentive, and benefit programs are designed to support the Bank's long-term business strategy and mission as well as promote safe and sound business practices. The Committee reviews the institution's projected long-term obligations for compensation and retirement benefits. The Committee operates under a written charter, adopted by the Committee and the Board of Directors, which more fully describes the Committee's responsibilities.

The Committee has reviewed and discussed the Senior Officers Compensation Discussion and Analysis with management. Based on this review and discussion, the Committee recommended to the Board of Directors, and the Board approved, that the Senior Officers Compensation Discussion and Analysis be included in the Annual Report for the year ended December 31, 2017.

Members of the 2018 Compensation and Human Resources Committee:

Daniel T. Kelley, Chair
Catherine Moyer
David L. Reinders
Scott H. Whittington

March 1, 2018

# Code of Ethics
**CoBank, ACB**

CoBank sets high standards for honesty, ethics, integrity, impartiality and conduct. Each year, every associate certifies compliance with the letter, intent and spirit of our Associate Responsibilities and Conduct Policy, which establishes the ethical standards of our organization, and each senior officer is required to disclose additional information. Additionally, our president and chief executive officer, chief operating officer, chief risk officer, chief credit officer, general counsel, chief financial officer and other senior financial professionals certify compliance with the letter, intent and spirit of our Code of Ethics. Our Code of Ethics supplements our Associate Responsibilities and Conduct Policy and establishes additional responsibilities specifically related to the preparation and distribution of our financial statements and related disclosures. Details about our Code of Ethics are available at www.cobank.com. At your request, we will provide you with a copy of our Code of Ethics, free of charge. Please contact:

Corporate Communications Division
P. O. Box 5110
Denver, CO 80217
(303) 740-4061

The Bank also maintains a whistleblower hotline and a special website through which complaints about business ethics or standards of conduct, financial reporting irregularities, internal controls or violations of law can be reported anonymously by directors, officers, employees, customer-owners and external parties. The whistleblower hotline can be reached by calling 1-888-525-5391 and the online reporting site is found at www.reportlineweb.com/cobank.

# Young, Beginning, and Small Farmers

**CoBank, ACB**

Under the Farm Credit Act, CoBank does not have authority to lend directly to young, beginning, and small farmers. Rather, we recognize that Associations serve young, beginning, and small farmers, which we support through wholesale funding, partnering on Association programs as they deem appropriate, and completing reporting required by regulations. We believe the future of agriculture and rural America is well served when loan programs are developed by Associations to aid ambitious and capable young, beginning, and small farmers. Therefore, we have adopted a written policy that encourages the board of directors at each of our affiliated Associations to establish a program to provide sound and constructive credit and other services to young, beginning, and small farmers and ranchers and producers or harvesters of aquatic products (YBS farmers and ranchers). Each affiliated Association provides us annually with a report measuring achievement with respect to these programs for YBS farmers and ranchers. A summary of the combined reports for our affiliated Associations and certain participations CoBank purchased from Associations follows.

**YBS Farmers and Ranchers** ($ in Thousands)

| | Loan Numbers | | Loan Volume | |
|---|---|---|---|---|
| | Number | Percent of Portfolio | Dollars | Percent of Portfolio |
| **Loans and Commitments Outstanding at December 31, 2017:** | | | | |
| Young | 22,760 | 16.03 % | $ 6,588,842 | 8.67 % |
| Beginning | 31,112 | 21.91 | 8,931,540 | 11.75 |
| Small | 51,139 | 36.01 | 6,633,789 | 8.73 |
| **Gross New Loans and Commitments Made During 2017:** | | | | |
| Young | 6,832 | 16.22 % | $ 1,882,634 | 9.53 % |
| Beginning | 8,329 | 19.77 | 2,326,051 | 11.77 |
| Small | 13,956 | 33.13 | 1,312,107 | 6.64 |

**Small Farmers and Ranchers**

**Number / Volume of Loans Outstanding by Loan Size at December 31, 2017**

| Number / Volume | $0 – $50,000 | $50,001 – $100,000 | $100,001 – $250,000 | $250,001 and greater |
|---|---|---|---|---|
| Total Number of Loans to Small Farmers and Ranchers | 22,224 | 10,088 | 12,113 | 6,714 |
| Total Loan Volume to Small Farmers and Ranchers ($ in Thousands) | $ 412,877 | $ 759,637 | $ 1,952,843 | $ 3,508,432 |

Key definitions are as follows:

*Young Farmer or Rancher* – A farmer, rancher or producer or harvester of aquatic products who is 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.

The Young, Beginning, and Small farmer and rancher categories are not mutually exclusive, therefore, certain farmers and ranchers may be classified in more than one category in the tables above.

Beyond providing appropriate wholesale lending for Association YBS farmers and ranchers programs and submitting reports to our regulator, CoBank has partnered with Associations on successful financing programs designed to attract quality farm operations, meeting the intended purpose of providing vital capital to start-up farming operations and promoting the flow of capital into rural areas. CoBank also has its own programs to serve the credit needs of agribusiness cooperatives and rural infrastructure providers of all sizes as well as rural communities using our mission-related investments authorities. CoBank has also reached out to non-traditional forms of agricultural production, such as local foods, community supported agriculture, and urban agriculture, to better understand their financing needs and provide support within the legal constraints of CoBank lending authorities.

# Unincorporated Business Entities

**CoBank, ACB**

CoBank holds investments in various unincorporated business entities (UBEs), as defined by FCA regulation. We hold these investments for two primary purposes: to acquire and manage unusual or complex collateral associated with loan workouts and to make mission-related investments.

Our UBEs are displayed in the table below.

**Unincorporated Business Entities**

| Name | Entity Type | Level of Ownership | Scope of Activities |
|---|---|---|---|
| CoBank - Farm Credit Holdings, LLC | Limited Liability Company | 100 % | Holds acquired property |
| Farm Credit FCB Holdings, LLC | Limited Liability Company | 100 | Holds acquired property |
| FarmStart, LLP | Limited Liability Partnership | 45 | Provides needed funding to operations with farm resources, farm-related expertise and good business plans, but limited access to capital in the Northeast. |
| Midwest Growth Partners, LLLP | Limited Liability Limited Partnership | 49 | Invests in entities with operations located in rural areas in the upper Midwest that are seeking to either launch a new business, grow an existing business or recapitalize an existing business. |
| Ponderosa Holdings, LLC | Limited Liability Company | 12 | Holds acquired property |
| Growing Rural America Investments, LLLP | Limited Liability Limited Partnership | 100 | Holds allowable FCS investments. Currently holds the Bank's investment in FarmStart, LLP. |

CERTIFICATION

I, Thomas E. Halverson, President and Chief Executive Officer of CoBank, ACB (CoBank or the Bank), a federally chartered instrumentality under the Farm Credit Act of 1971, as amended, certify that:

(1) I have reviewed this annual report of CoBank;

(2) Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

(3) Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations, and cash flows of CoBank as of, and for, the periods presented in this report;

(4) CoBank's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures and internal control over financial reporting for CoBank 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, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   b. designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

   c. evaluated the effectiveness of the Bank's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

   d. disclosed in this report any change in the Bank's internal control over financial reporting that occurred during the Bank's most recent fiscal quarter (the Bank's fourth fiscal quarter in the case of this annual report) that has materially affected, or is reasonably likely to materially affect, the Bank's internal control over financial reporting; and

(5) CoBank'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 audit committee of the Bank's Board of Directors (or persons performing the equivalent functions):

   a. all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the 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.

Tom Halverson

Thomas E. Halverson
*President and Chief Executive Officer*

Dated: March 1, 2018

CERTIFICATION

I, David P. Burlage, Chief Financial Officer of CoBank, ACB (CoBank or the Bank), a federally chartered instrumentality under the Farm Credit Act of 1971, as amended, certify that:

(1) I have reviewed this annual report of CoBank;

(2) Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;

(3) Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations, and cash flows of CoBank as of, and for, the periods presented in this report;

(4) CoBank's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures and internal control over financial reporting for CoBank 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, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

b. designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under our supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;

c. evaluated the effectiveness of the Bank's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and

d. disclosed in this report any change in the Bank's internal control over financial reporting that occurred during the Bank's most recent fiscal quarter (the Bank's fourth fiscal quarter in the case of this annual report) that has materially affected, or is reasonably likely to materially affect, the Bank's internal control over financial reporting; and

(5) CoBank'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 audit committee of the Bank's Board of Directors (or persons performing the equivalent functions):

a. all significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonably likely to adversely affect the 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.

David P. Burlage
*Chief Financial Officer*

Dated: March 1, 2018

Customer Privacy

*Your financial privacy and the security of your other non-public information are important to us. We, therefore, hold your financial and other non-public information in strictest confidence. Federal regulations allow disclosure of such information by us only in certain situations. Examples of these situations include law enforcement or legal proceedings or when such information is requested by a Farm Credit System institution with which you do business. In addition, as required by Federal laws targeting terrorism funding and money laundering activities, we collect information and take actions necessary to verify your identity.*

*CoBank's 2018 Quarterly and Annual Reports to Shareholders are available free of charge on request by calling or visiting one of our banking center locations and through our website at www.cobank.com on approximately May 9, 2018, August 9, 2018, November 9, 2018, and March 7, 2019 (Annual Report).*

# OFFICE LOCATIONS

## COBANK NATIONAL OFFICE

6340 S. Fiddlers Green Circle
Greenwood Village, CO 80111
(303) 740-4000
(800) 542-8072

## FARM CREDIT LEASING SERVICES CORPORATION

600 Highway 169 South, Suite 300
Minneapolis, MN 55426
(952) 417-7800
(800) 444-2929

## WASHINGTON, D.C. OFFICE

50 F Street, N.W., Suite 900
Washington, DC 20001
(202) 650-5860

## U.S. REGIONAL OFFICES

### AMES BANKING CENTER

2515 University Boulevard
Suite 104
Ames, IA 50010
(515) 292-8828

### ATLANTA BANKING CENTER*

2300 Windy Ridge Parkway
Suite 370S
Atlanta, GA 30339
(770) 618-3200
(800) 255-7429
FCL: (770) 618-3226

### AUSTIN BANKING CENTER

4801 Plaza on the Lake Drive
Austin, TX 78746
(855) 738-6606

### ENFIELD BANKING CENTER*

240B South Road
Enfield, CT 06082-4451
(860) 814-4043
(800) 876-3227
FCL: (860) 814-4049

### FARGO BANKING CENTER

4143 26th Avenue South
Suite 101
Fargo, ND 58104
(701) 277-5007
(866) 280-2892

### FLORIDA FARM CREDIT LEASING OFFICE**

3594 Maribella Drive
New Smyrna Beach, FL 32168
(678) 592-5394

### LOUISVILLE BANKING CENTER*

1601 UPS Drive
Suite 102
Louisville, KY 40223
(502) 423-5650
(800) 262-6599
FCL: (800) 942-3309

### LUBBOCK BANKING CENTER*

5715 West 50th
Lubbock, TX 79414
(806) 788-3700
FCL: (806) 788-3705

### MINNEAPOLIS BANKING CENTER*

600 Highway 169 South
Suite 300
Minneapolis, MN 55426
(952) 417-7900
(800) 282-4150
FCL: (800) 444-2929

### OHIO FARM CREDIT LEASING OFFICE**

1225 Irmscher Boulevard
Celina, OH 45822
(855) 838-9961 ext. 23969

### OMAHA BANKING CENTER*

13810 FNB Parkway
Suite 301
Omaha, NE 68154
(402) 492-2000
(800) 346-5717

### SACRAMENTO BANKING CENTER*

3755 Atherton Road
Rocklin, CA 95765
(916) 380-3524
(800) 457-0942
FCL: (800) 289-7080

### SPOKANE BANKING CENTER

2001 South Flint Road
Suite 102
Spokane, WA 99224
(509) 363-8700
(800) 378-5577

### STERLING BANKING CENTER

229 South 3rd Street
Sterling, CO 80751
(970) 521-2774

### ST. LOUIS BANKING CENTER*

635 Maryville Centre Drive
Suite 130
St. Louis, MO 63141
(314) 835-4200
(800) 806-4144
FCL: (800) 853-5480

### WICHITA BANKING CENTER*

245 North Waco
Suite 130
Wichita, KS 67202
(316) 290-2000
(800) 322-3654
FCL: (800) 322-6558

* Farm Credit Leasing office within this CoBank location

** Farm Credit Leasing office only

## INTERNATIONAL REPRESENTATIVE OFFICE

10 Hoe Chiang Road
#05-01 Keppel Towers
Singapore 089315
(65) 6534-5261

DESIGN: Watermark (www.watermark.agency)


COBANK
COOPERATIVE. CONNECTED. COMMITTED.

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