COBANK

STEADFAST COMMITMENT

ANNUAL REPORT 2023

FINANCIAL HIGHLIGHTS

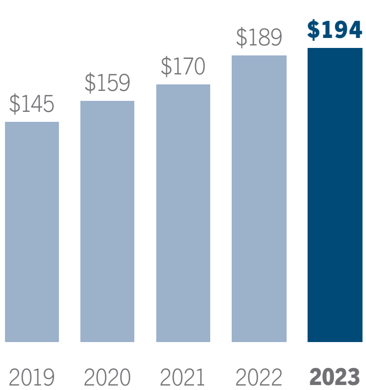
FOR THE YEAR ($ in millions)	**2023**	2022	2021	2020	2019
Net Interest Income	**$ 1,847**	$ 1,884	$ 1,726	$ 1,567	$ 1,399
Provision for Credit Losses	**$ 76**	$ 111	$ 18	$ 21	$ 57
Net Income	**$ 1,507**	$ 1,449	$ 1,314	$ 1,263	$ 1,091
Patronage Distributions	**$ 965**	$ 995	$ 885	$ 728	$ 644

AT YEAR-END ($ in millions)	**2023**	2022	2021	2020	2019
Agribusiness	**$ 37,785**	$ 40,098	$ 38,094	$ 36,103	$ 33,168
Farm Credit Banking	**$ 77,658**	$ 71,529	$ 65,632	$ 60,516	$ 54,459
Rural Infrastructure	**$ 32,572**	$ 28,462	$ 24,803	$ 24,237	$ 21,227
Total Loans	**$ 148,015**	$ 140,089	$ 128,529	$ 120,856	$ 108,854
Allowance for Credit Losses	**$ 814**	$ 825	$ 757	$ 732	$ 747
Total Assets	**$194,359**	$ 188,843	$ 170,306	$ 158,586	$ 145,004
Total Shareholders' Equity	**$ 11,193**	$ 10,225	$ 12,234	$ 11,910	$ 10,567

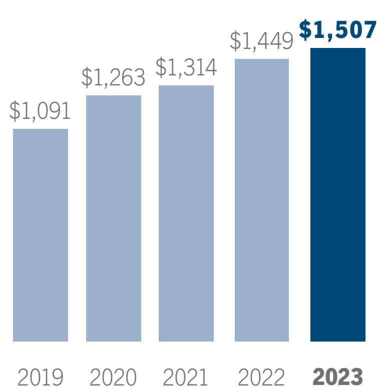
FINANCIAL RATIOS	**2023**	2022	2021	2020	2019
Return on Average Common Equity	**15.78 %**	14.59 %	11.78 %	11.86 %	11.63 %
Return on Average Assets	**0.80 %**	0.80 %	0.82 %	0.84 %	0.79 %
Return on Average Active Patron Investment	**25.57 %**	26.07 %	23.17 %	20.58 %	19.48 %
Net Interest Margin	**0.99 %**	1.06 %	1.10 %	1.07 %	1.02 %
Total Capital Ratio	**14.11 %**	14.25 %	15.63 %	15.22 %	15.86 %
Tier 1 Leverage Ratio	**6.79 %**	6.80 %	7.47 %	7.30 %	7.51 %

KEY METRICS

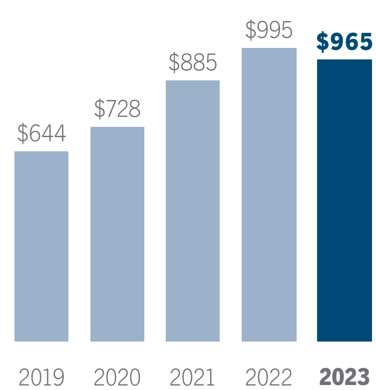
TOTAL ASSETS ($ IN BILLIONS)



NET INCOME ($ IN MILLIONS)



PATRONAGE DISTRIBUTIONS ($ IN MILLIONS)



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

LETTER TO SHAREHOLDERS

TO OUR CUSTOMERS AND OTHER STAKEHOLDERS

On behalf of our entire board of directors and executive team, we are pleased to report another year of outstanding business performance at CoBank in 2023.

Despite substantial uncertainty and volatility in the macro economy, CoBank recorded one of the best years in its history from a financial standpoint. Average loan volume reached all-time highs, and net income exceeded $1.5 billion for the first time. Credit quality in our loan portfolio remained strong. Patronage distributions for the year will total $965 million—well above target for all classes of customer-owners.

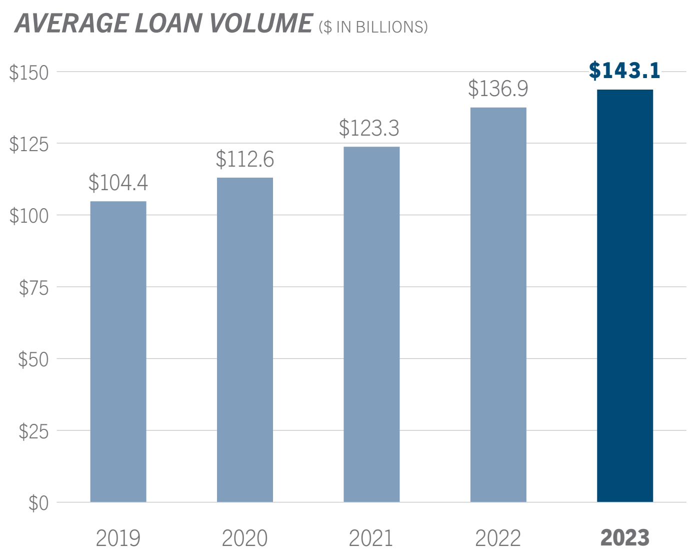
CoBank achieved these results against a backdrop of significant turmoil and disruption in the broader financial services industry. Throughout 2023, banks in the United States struggled with the impacts of higher interest rates and monetary tightening by the Federal Reserve. A series of prominent bank failures in the first half of the year cast a shadow over the industry, driving down stock valuations for many publicly traded financial institutions. Over $650 billion in deposits left banks during the year in search of higher yields. Unrealized losses in investment portfolios continued to weigh on the balance sheets of banks and overall confidence in the sector.

CoBank remained generally insulated from these challenges due to the innate strength of our business model and the benefits we derive from membership in the Farm Credit System. As a non-depository institution, we are immune from the problem of depositor flight that has challenged so many commercial and community banks throughout the Federal Reserve's tightening cycle. Our base of customers is inherently stable due to the essential nature of the products and services they provide—food, water, power and communications. Our cooperative ownership structure enables our board and executive team to manage the business for the long term rather than focusing on short-term growth in earnings per share. Finally, we have built an outstanding work force of dedicated employees who are sincerely passionate about the mission of the bank and the role it plays supporting America's rural economy.

We are proud of the performance of the bank in 2023 and the strong results that are detailed throughout this annual report. We hope our customers also derive satisfaction from the enduring value being generated by CoBank—a bank they themselves own—and by the steadfast commitment that we have to serving them with excellence as a financial partner.

KEVIN A. STILL
Board Chair

THOMAS HALVERSON
President & CEO



FINANCIAL PERFORMANCE

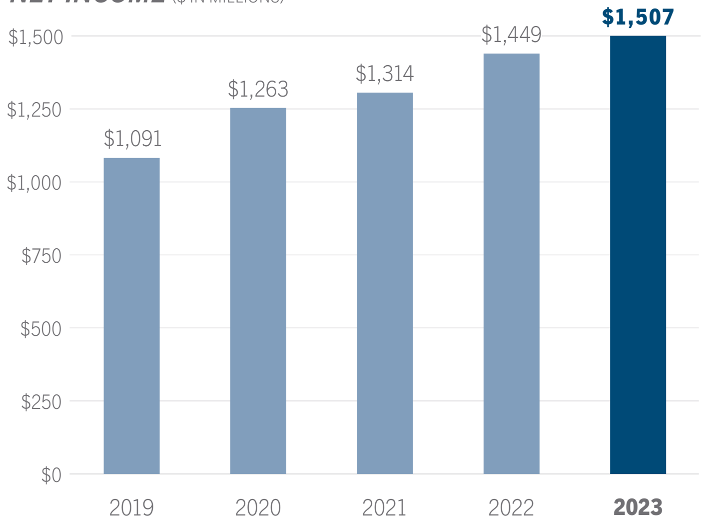
For the full-year 2023, CoBank's average loan and lease volume increased by approximately 5%, to $143.1 billion, despite varying demand across the industry sectors we finance. Lending in our Agribusiness operating segment decreased 8% during the year due primarily to the impacts of lower agricultural commodity prices, which reduced seasonal financing requirements at the hundreds of farmer-owned grain and farm supply cooperatives we serve across the country. However, that decline was more than offset by a 17% increase in Rural Infrastructure loan volume, driven by higher lending to rural electric cooperatives and rural communications service providers. Infrastructure customers continue to invest heavily in renewable energy and broadband projects, and CoBank has benefited from its standing as a trusted lender to these sectors. Loan volume in our Farm Credit Banking operating segment also increased 7% in 2023 due to higher wholesale financing needs among our 16 affiliated Farm Credit associations.

As shown on the nearby chart, CoBank's average loan volume has grown by 37% since 2019. We believe that is a reflection of the unique opportunity set facing the sectors we finance as well as CoBank's strong marketplace reputation as a reliable provider of commercial credit to rural industries.

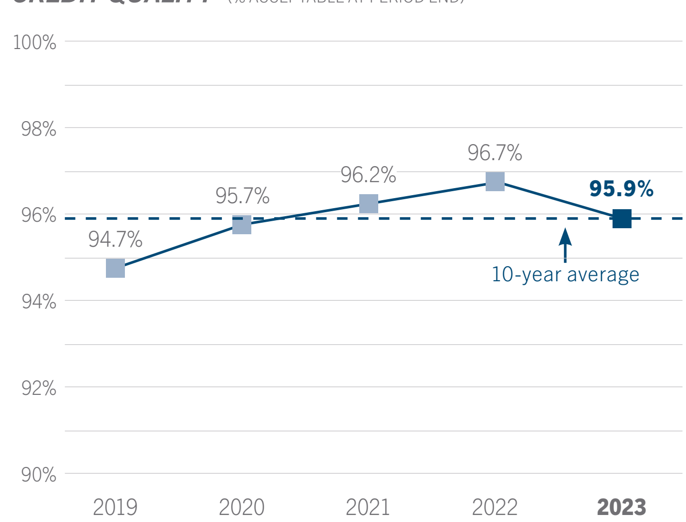
Net income for CoBank rose approximately 4% in 2023 to $1.507 billion, from $1.449 billion in 2022. That occurred despite a 2% decline in net interest income, the largest component of operating revenue, which was driven by the shift in loan mix described above including the decrease in higher-margin seasonal agribusiness loan volume. However, the decline in net interest income was more than offset by strong increases in fee income as well as a lower provision for credit losses during the year.

Credit quality in CoBank's loan portfolio remained strong throughout 2023. At year end, 95.9% of our commercial loans were classified as Acceptable (the highest category of loan quality), exactly in line with our trailing 10-year average for this measure of credit quality. Nonaccrual loans at December 31, 2023 improved to $117 million or 0.08% of total loans, compared to $145 million or 0.10% of total loans at the end of 2022. The bank's provision for credit losses was $76 million for 2023 compared to $111 million in 2022. CoBank's allowance for credit losses, which protects the bank's capital base against losses inherent in our loan portfolio, totaled $814 million as of December 31, 2023, or 1.2% of nonguaranteed loans when loans to Farm Credit associations are excluded.

NET INCOME ($ IN MILLIONS)



CREDIT QUALITY* (% ACCEPTABLE AT PERIOD END)



* Commercial loan portfolio.

PATRONAGE DISTRIBUTIONS

For 2023, patronage distributions will total $965 million—$831 million in cash plus an additional $134 million in equity. This year's patronage payout is the second-highest in the history of the bank and includes $106 million in all-cash special patronage approved by our board in December 2023.

The adjacent table details 2023 patronage distributions by customer or loan type under our various capital plans and patronage programs. Agribusiness, communications and project finance borrowers earned 110 basis points of patronage for the year, while rural electric and water customers earned 92 basis points. Affiliated Farm Credit associations received 52 basis points of all-cash patronage under their capital plan.

Starting in 2024, many of our customer-owners will benefit from enhancements to our capital plans approved by our board at the end of last year. Agribusiness, communications and project finance customers will see their patronage target increase from 95 basis points of qualifying loan volume to 100 basis points, as will loans purchased from Farm Credit institutions. Meanwhile, rural electric and water borrowers will receive an increased portion of their patronage distribution in cash (65% vs. 60% previously). Equity targets across all patronage pools will remain unchanged.

2023 PATRONAGE DISTRIBUTIONS BY CUSTOMER OR LOAN TYPE ($ in millions)

	Program Patronage	Special Patronage	Total Patronage	BPS*
Agribusiness, Communications and Project Finance	$ 281	$ 25	$ 306	110.0
Electric and Water	$ 115	$ 15	$ 130	92.0
Farm Credit Affiliated Associations	$ 301	$ 47	$ 348	52.0
Loans Purchased from Farm Credit Institutions	$ 144	$ 17	$ 161	110.0
Non-affiliated Farm Credit and Other Financing Institutions	$ 18	$ 2	$ 20	33.5

* Basis points of qualifying loan volume.

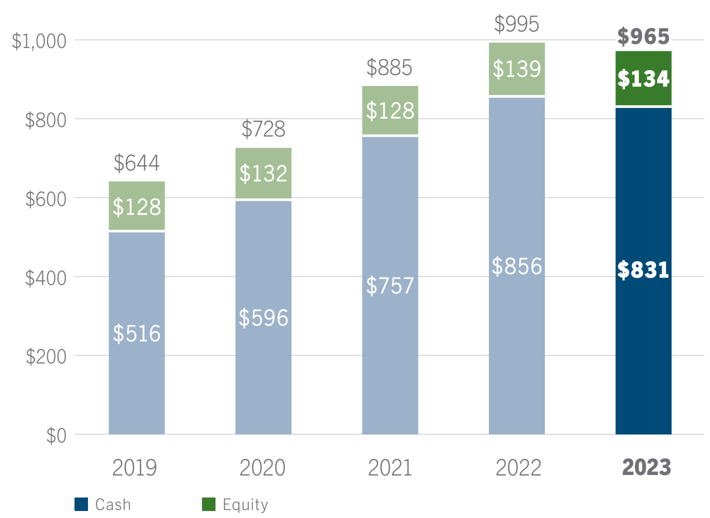
CAPITAL PLAN CHANGES

	Equity Requirement	2023 Patronage Target (BPS)	2023 Cash/ Equity Split	2024 Patronage Target (BPS)	2024 Cash/ Equity Split
Agribusiness, Communications and Project Finance	7.00%	95	75% / 25%	100*	75% / 25%
Electric and Water	7.00%	80	60% / 40%	80	65% /35%*
Farm Credit Affiliated Associations	3.00%	45	100% / 0%	45	100% / 0%
Loans Purchased from Farm Credit Institutions	7.00%	95	75% / 25%	100*	75% / 25%
Non-affiliated Farm Credit and Other Financing Institutions	3.25%	30	20% / 80%	30	20% / 80%

* Changes from 2023

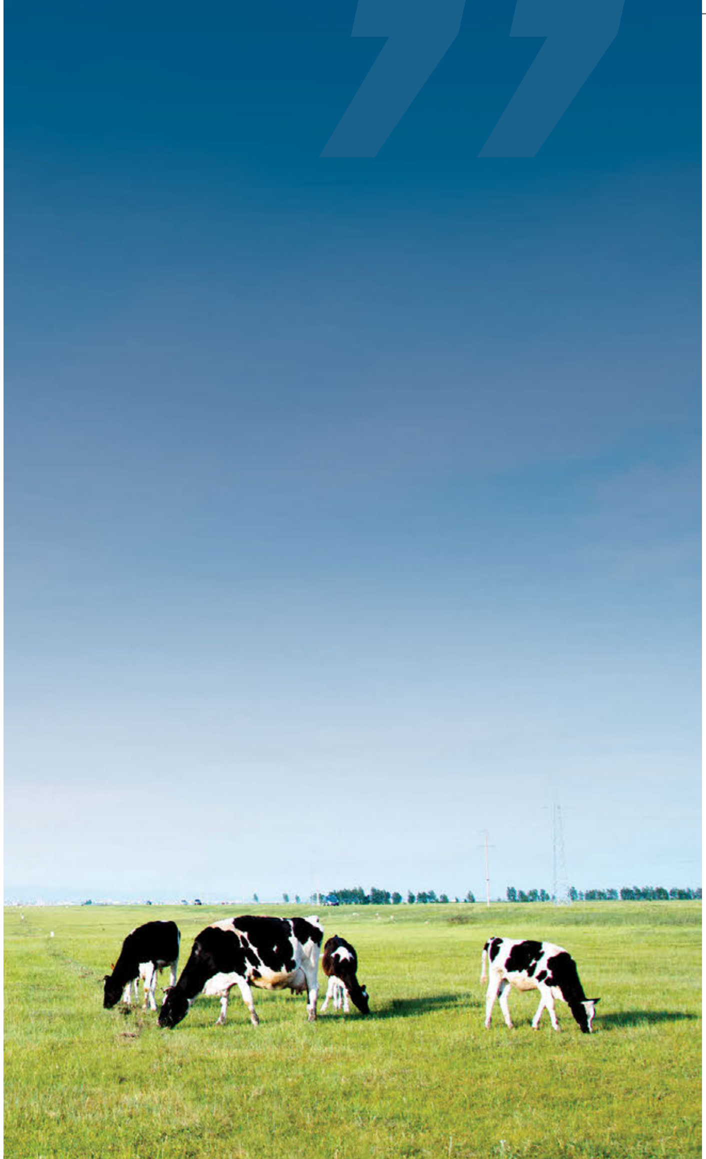
Our board and executive team are committed to delivering tangible economic value to our customer-owners through patronage and to growing that value over time. Over the past five years, the bank has distributed approximately $3.6 billion in cash patronage, along with an additional $660 million in bank equity. This is one of the most powerful ways the bank delivers value to its shareholders as a customer-owned financial cooperative.

PATRONAGE DISTRIBUTIONS ($ IN MILLIONS)



OVER THE PAST FIVE YEARS, COBANK HAS DISTRIBUTED APPROXIMATELY $3.6 BILLION IN CASH PATRONAGE, ALONG WITH AN ADDITIONAL $660 MILLION IN BANK EQUITY.

> *THROUGHOUT 2023, COBANK'S CAPITAL AND LIQUIDITY LEVELS REMAINED WELL IN EXCESS OF REGULATORY MINIMUMS.*

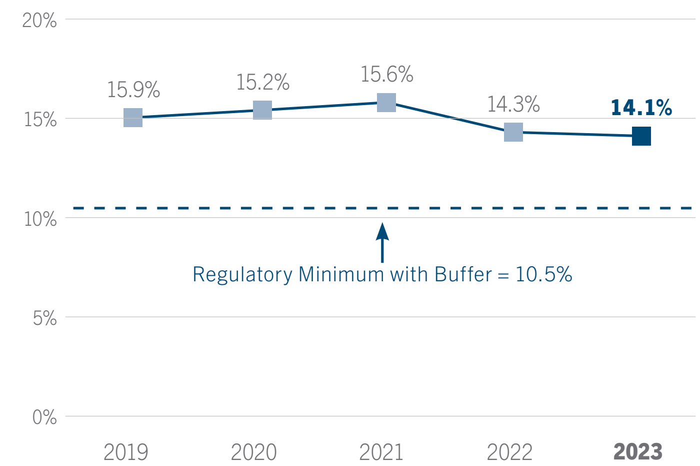


CAPITAL AND LIQUIDITY

Throughout 2023, CoBank's capital and liquidity levels remained well in excess of regulatory minimums. At year-end 2023, the bank's total capital ratio was 14.1%, compared with the 8.0% minimum (10.5% inclusive of the capital conservation buffer) established by the Farm Credit Administration, the bank's independent regulator. As of December 31, 2023, we held a total of $44.0 billion in investments and cash, and our days liquidity was 199 days, more than double the regulatory requirement.

Customer-owners will notice that total shareholders' equity for CoBank increased to $11.2 billion as of year-end 2023, from $10.2 billion at the end of 2022. The increase was primarily the result of earnings and changes in the valuation of the fixed-rate liquidity investments that are recorded as

TOTAL CAPITAL RATIO



Accumulated Other Comprehensive Loss on our balance sheet. As shown in the nearby table, the value of these investments has fluctuated widely over the past two years as a result of changes in interest rates. However, these fluctuations have not impacted earnings or regulatory capital ratios. Ultimately, our intention is not to sell these liquidity investments; therefore, we do not expect to realize actual losses in connection with these securities.

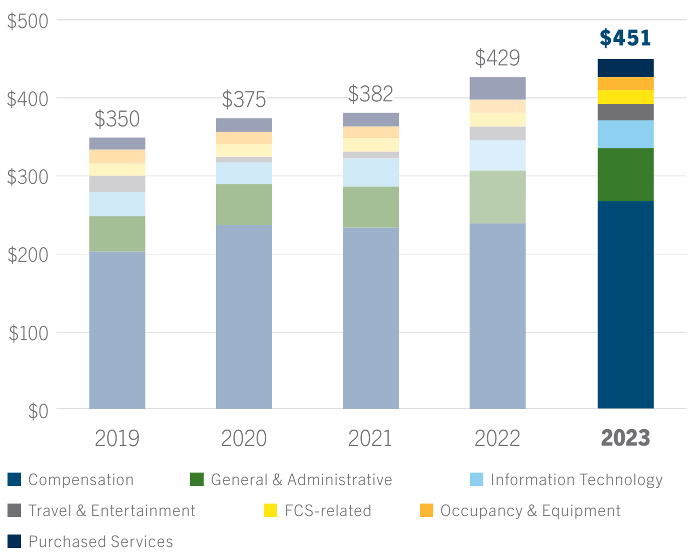
CONTROLLABLE OPERATING EXPENSES

Controllable operating expenses for the bank rose by 5% in 2023 to $451 million. (This number excludes non-discretionary spend on insurance fund premiums to the Farm Credit System Insurance Corporation, which totaled $144 million for the year.) As in prior years, the single largest component of controllable operating expense (about 60%) was compensation and benefits for our employees, upon whom we depend to serve our customers, manage risk and perform essential operations across the enterprise. We also continued to invest in technology platforms that are increasingly central to product delivery and the customer experience.

Despite the increase in operating expenses, our controllable operating expense ratio remained in-line with historical averages at 21.8% and well below the 25% baseline established by our board. We continue to benefit from the innate efficiency of CoBank's business model, including our membership in the Farm Credit System and the System's favorable access to funding as a Government Sponsored Enterprise.

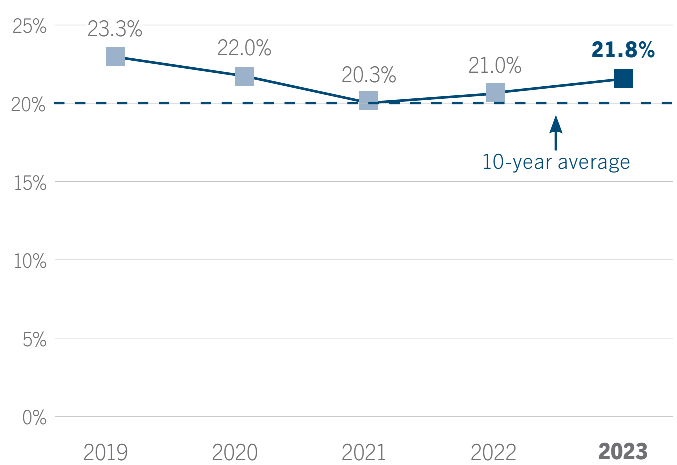
SHAREHOLDERS' EQUITY ($ in millions)	2019	2020	2021	2022	**2023**
Preferred Stock	$ 1,500	$ 1,500	$ 1,902	$ 1,633	**$ 1,625**
Common Stock	$ 3,622	$ 3,918	$ 4,013	$ 4,000	**$ 4,076**
Retained Earnings	$ 5,351	$ 5,804	$ 6,164	$ 6,519	**$ 7,016**
Accumulated Other Comprehensive (Loss) Income	$ 94	$ 688	$ 155	$ (1,927)	**$(1,524)**
Total Shareholders' Equity	$ 10,567	$ 11,910	$ 12,234	$ 10,225	**$ 11,193**

OPERATING EXPENSES* ($ IN MILLIONS)



* Excludes insurance fund premiums

CONTROLLABLE OPERATING EXPENSE RATIO* (%)



* Operating expenses (excluding insurance fund premiums) / net interest income + fee income.

WE HAVE REORGANIZED OUR ENTIRE BUSINESS PLAN USING THE ARCHITECTURE OF THE FLYWHEEL.

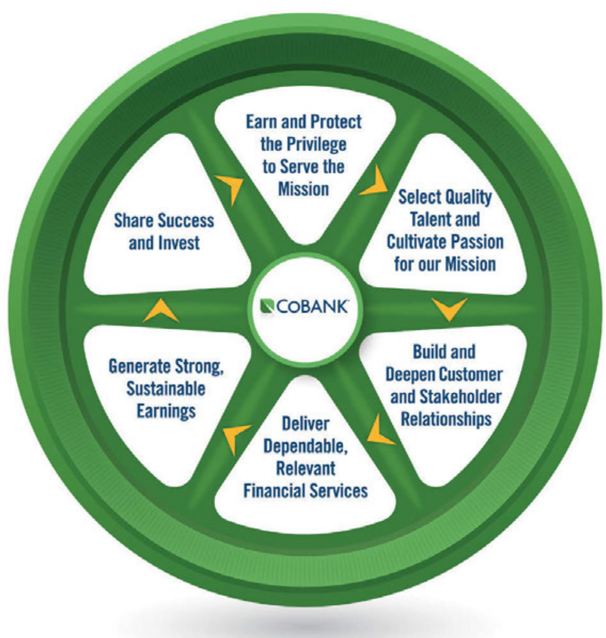
THE COBANK FLYWHEEL: GENERATING BUSINESS MOMENTUM

One significant accomplishment in 2023 that is not explicitly reflected in our financial results was a strategic planning effort that our executive team conducted with Jim Collins, one of the world's leading researchers and writers about excellence in business. The author of *Good to Great* and many other best-selling business books, Jim pioneered the "flywheel principle" as a way to explain why high-performing companies are able to achieve marketplace leadership and outperform their competitors on a sustained basis. Through disciplined and rigorous thought, these companies achieve a precise understanding of how value is created in their businesses, and how each stage of value creation logically and inevitably drives the next.

With Jim's assistance, we created a "CoBank flywheel" that is illustrated below and that will be the centerpiece of our business planning and management processes going forward. At the top is our Congressionally chartered mission of service to rural America—a privilege that we must earn the right to serve on a continuous basis. Through our focus on mission we attract and retain the right people, who build relationships of trust with our customers and deliver the products and services that our customers need. That in turn generates strong, sustainable earnings, which we share with customer-owners through patronage and which fund investments in our business and support for our communities. It's a virtuous cycle of compounding momentum that has propelled us over many years and that will continue to drive our performance going forward.

Our board has enthusiastically embraced the flywheel concept, as have our employees. (We believe the flywheel metaphor is particularly fitting for CoBank because it harkens

THE COBANK FLYWHEEL

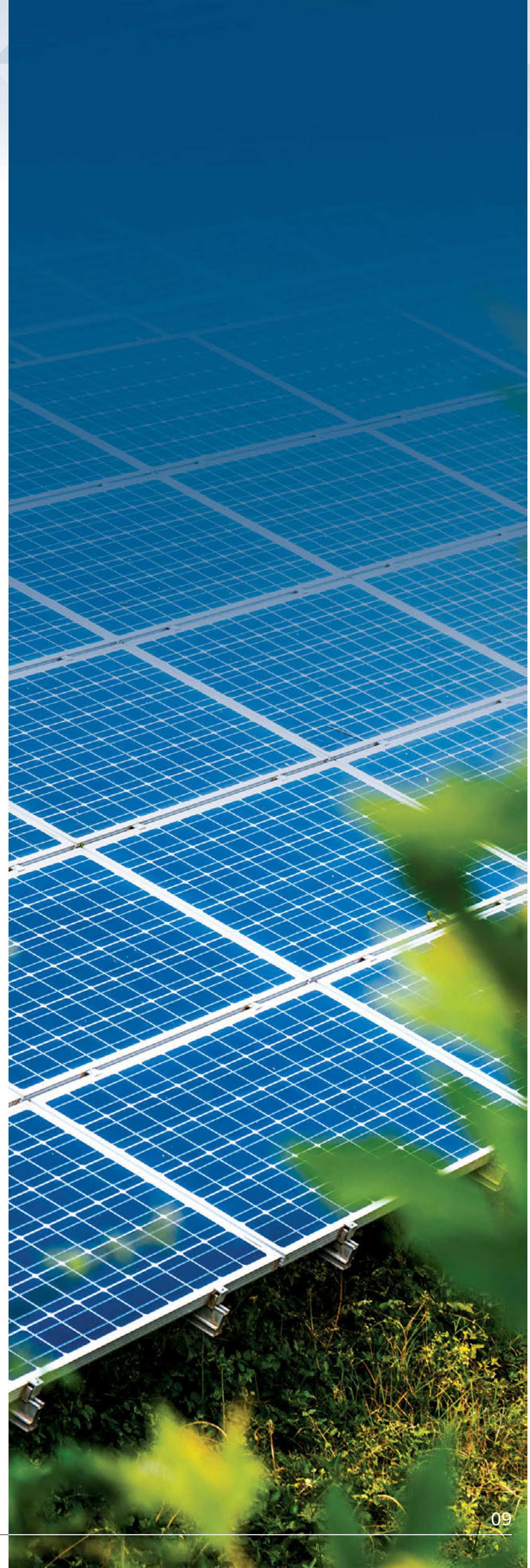


back to early 20th-Century American farms, which used flywheel machines as a source of power in the days before electricity was commonplace in rural communities.) We have reorganized our entire business plan using the architecture of the flywheel, and our customers may hear about it in their interactions with our bankers and other associates.

OTHER KEY INITIATIVES

As usual, by the time this annual report is published we will be well into 2024, and our board and management team will be intently focused on the year ahead and the opportunities and challenges facing CoBank and its customers. While space does not allow us to list every important initiative currently underway at CoBank, we would like to call out the following as key areas of focus for the year ahead:

- **Asset-liability management:** Effectively managing interest rate risk is an essential competency for any bank, CoBank included. The bank failures that shook the financial services industry in 2023 all had unique attributes, but asset-liability mismatches were a common theme. CoBank has historically adopted a conservative and prudent approach to asset-liability management strategies, which has served us well throughout the period of rising interest rates and liquidity stresses in the capital markets. This is a testament to the experience and discipline of our Finance and Risk teams and the rigor of our asset-liability management practices, including the oversight of our Market Risk and Asset-Liability committees. We will continue this approach going forward.
- **Sustainability and corporate social responsibility:** CoBank's sustainability and corporate social responsibility programs continue to serve as important pillars of mission fulfillment for the bank and as powerful differentiators for us in the marketplace. Under the leadership of our chief sustainability officer, we have developed and communicated a formal Sustainability strategy that will guide our actions in this area going forward. Customers in particular have expressed appreciation for the borrower-centric approach we are taking with respect to environmental goals and our clear pledge to support and stand by them as they progress along their own timelines. In addition, we have completed the development of a market-ready Sustainability Linked Loan product that customers can use to finance sustainable business initiatives. Meanwhile, the bank has budgeted more than $12.5 million for contributions to charitable organizations around the country in 2024 through Sharing Success and a wide variety of other giving programs. Much more information about these various initiatives is included in CoBank's 2023 Sustainability Report, and we urge all of our customers and other stakeholders to review that report in detail.



- **Digital transformation:** Like all financial services providers, we are undergoing a transition in our business through which technology platforms are becoming increasingly central to product delivery. In addition to great people, we recognize that we need great processes and great platforms to remain competitive. In 2023, we accelerated our adoption of scaled agile methodology and lean portfolio management, and reorganized our information technology, data and project management functions to increase the efficiency and effectiveness of technology investment and implementation. In 2024, we will continue deploying new technologies that are necessary to offer our customers and employees a market-competitive experience.
- **Artificial Intelligence:** One of the most dominant themes in the business environment throughout 2023 was the exponential growth in interest around artificial intelligence and how it promises to revolutionize work across a wide array of professions and industries. That includes banking. In the world of commercial lending, AI has the potential to fundamentally change how banks perform many core functions, including underwriting, credit administration, asset-liability management, enterprise risk management, etc. Capitalizing on this potential will require banks to upgrade the quality of their data, deploy new technologies, and reskill their work forces. AI also brings with it new forms of risk that must be understood and managed. At CoBank, we are acutely focused on the AI phenomenon and its use cases in our unique environment, and we have already deployed AI in a number of distinct areas. A key objective for 2024 will be to establish an enterprise-wide governance model for AI as adoption continues to expand across the business.
- **Governance:** Under our bylaws, CoBank undertakes a formal assessment of its governance at least every five years in order to strengthen governance. In 2024, we will launch this process once again using a board-appointed restructuring committee. We expect the committee will include an equal number of CoBank board members and non-board customer representatives drawn from the various industries we finance. The committee will be empowered to consider all aspects of CoBank governance, including board size, regions, composition, experience requirements, term limits, etc. Recommendations of the committee will be presented to the full board, and we will keep our shareholders informed of any governance changes that emerge from this effort.

OUR COMMITMENT

As of the publication date of this report, it is difficult to know with certainty how the broader U.S. financial services sector will perform in 2024. While the Federal Reserve has signaled it is at or near the end of the tightening cycle, many challenges remain for banks—including elevated costs, relentless competition for deposits, and the prospect of more onerous regulatory requirements for many institutions. A strong economy will drive business investment and demand for credit, yet banks may remain in a defensive posture. For commercial borrowers, it will be essential to partner with institutions that are committed to meeting their needs dependably, regardless of conditions in the marketplace.

CoBank, of course, is committed to being such a partner. Our board and executive team remain fully dedicated to the mission of the bank and the Farm Credit System, as are the more than 1,200 team members at CoBank who are fully invested in the success of our customers and of America's rural communities.

As always, we remain grateful for the enormous trust our customers place in CoBank as their financial partner. We thank you for your support and look forward to reporting back about our progress against these mission service and commercial goals.

KEVIN A. STILL
Board Chair

THOMAS HALVERSON
President & CEO

"OUR BOARD AND EXECUTIVE TEAM REMAIN FULLY DEDICATED TO THE MISSION OF THE BANK AND THE FARM CREDIT SYSTEM."

2024 BOARD OF DIRECTORS / STEADFAST COMMITMENT

KEVIN A. STILL
Chair
Occupation: Agribusiness Cooperative Management
Hometown: Carmel, IN

EDGAR A. TERRY
1st Vice Chair
Occupation: Farming
Hometown: Ventura, CA

BRANDON J. WITTMAN
2nd Vice Chair
Occupation: Electric Cooperative Management
Hometown: Billings, MT

DUANE R. ANDERSON
Director
Occupation: Agribusiness Management
Hometown: Seneca, KS

MATTHEW W. BEATON
Director
Occupation: Farming
Hometown: East Sandwich, MA

ROBERT M. BEHR
Director
Occupation: Retired, Agribusiness Cooperative Management
Hometown: New Smyrna Beach, FL

MICHAEL S. BROWN
Director
Occupation: Retired, Commercial Banking
Hometown: San Diego, CA

RUSSELL G. BROWN
Director
Occupation: Retired, Community Banking
Hometown: Warsaw, VA

SUSAN K. DOVERSPIKE
Director
Occupation: Farming & Ranching
Hometown: Burns, OR

WILLIAM M. FARROW, III
Director
Occupation: Retired, Commercial Banking
Hometown: Evanston, IL

DAVID J. KRAGNES
Director
Occupation: Retired, Farming
Hometown: Felton, MN

MICHAEL W. MARLEY
Director
Occupation: Farming
Hometown: Roswell, NM

JON E. MARTHEDAL
Director
Occupation: Farming
Hometown: Fresno, CA

ROBERT (MAC) N. McLENNAN
Director
Occupation: Electric Cooperative Management
Hometown: Grand Forks, ND

GARY A. MILLER
Director
Occupation: Electric Cooperative Management
Hometown: Douglasville, GA

CATHERINE MOYER
Director
Occupation: Rural Communications Management
Hometown: Ulysses, KS

SCHEHERAZADE S. REHMAN
Director
Occupation: Professor, International Business & Finance
Hometown: Washington, D.C.

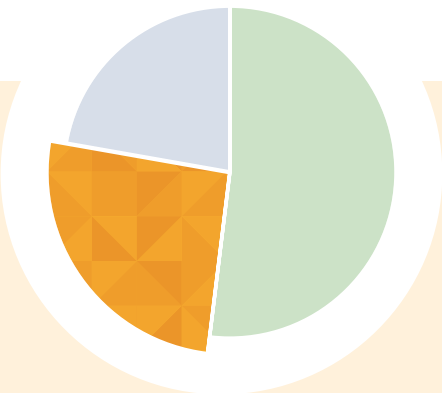
SUREENA S. BAINS THIARA
Director
Occupation: Farming, Crop Insurance Service
Hometown: Yuba City, CA

AGRIBUSINESS PORTFOLIO

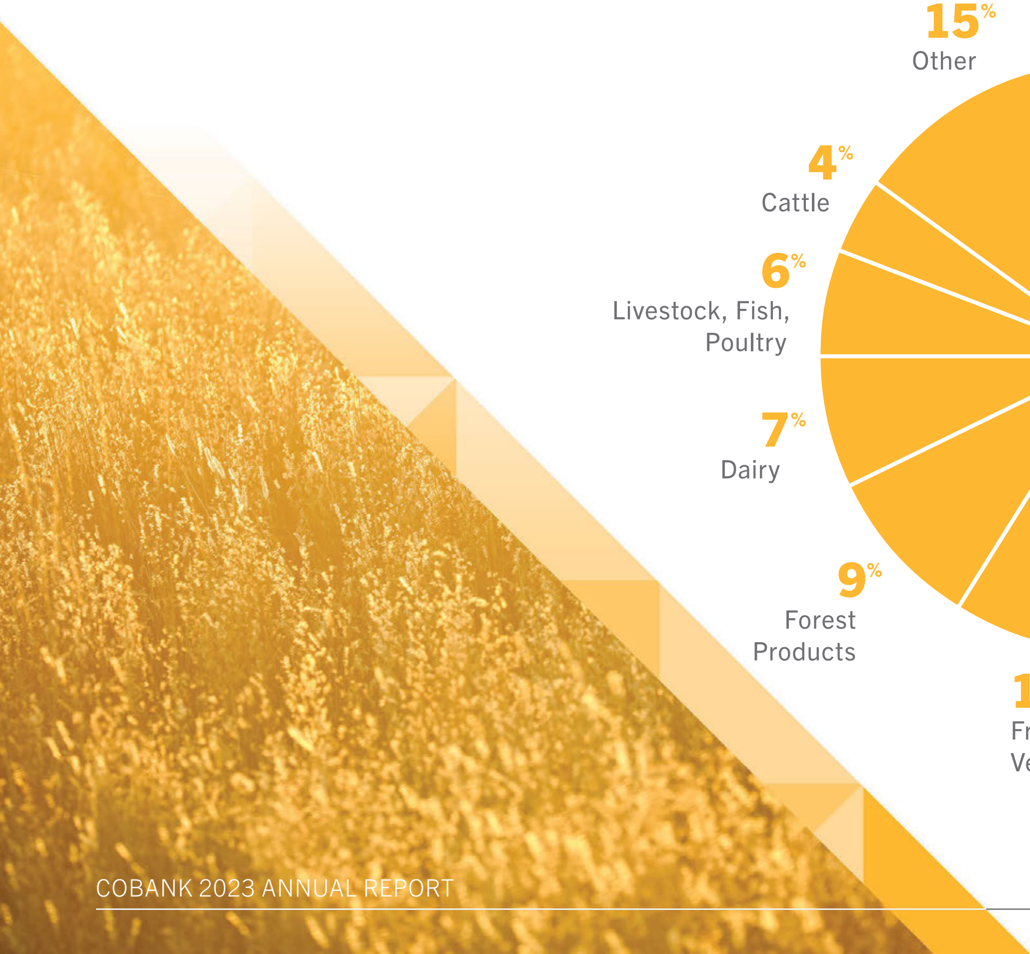
CoBank's Agribusiness operating segment includes lending to regional and corporate agribusiness customers, export finance customers and leasing customers. It serves cooperatives and other customers involved in a wide variety of industries, including grain handling and marketing, farm supply, food processing,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

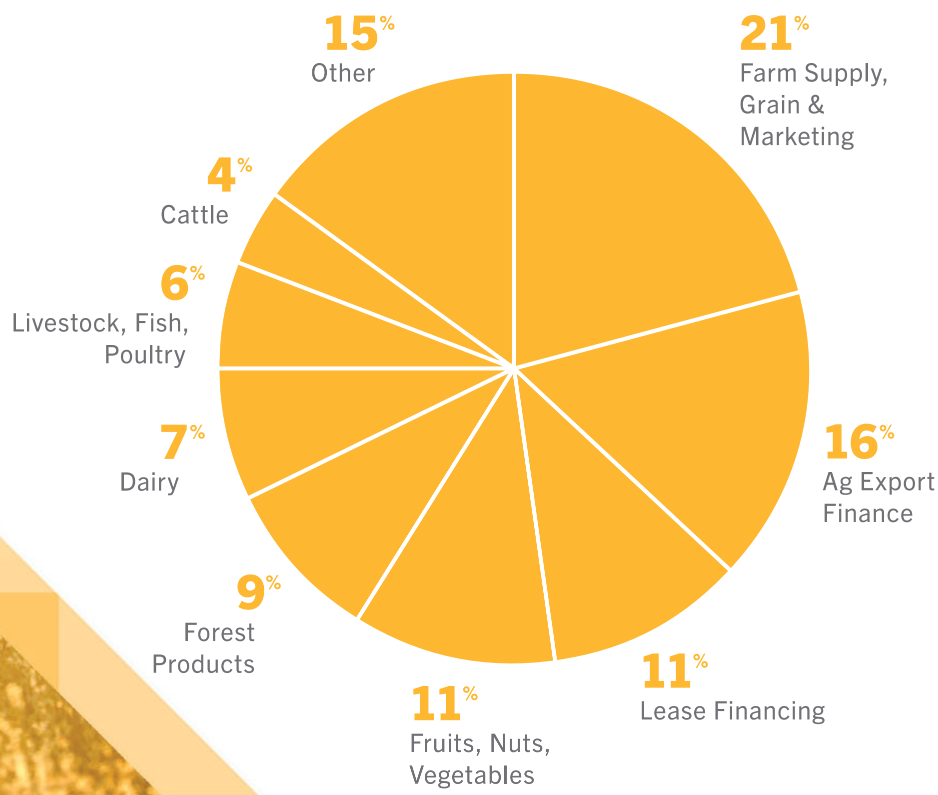
$37.8 BILLION
LOAN VOLUME AT YEAR-END

26%
OF TOTAL LOAN PORTFOLIO



FOR THE YEAR ($ in millions)	**2023**	2022	2021	2020	2019
Period-end Loans	**$ 37,785**	$ 40,098	$ 38,094	$ 36,103	$ 33,168
Average Loans	**$ 40,044**	$ 43,323	$ 37,656	$ 33,292	$ 32,119
Net Income	**$ 731**	$ 774	$ 677	$ 608	$ 537



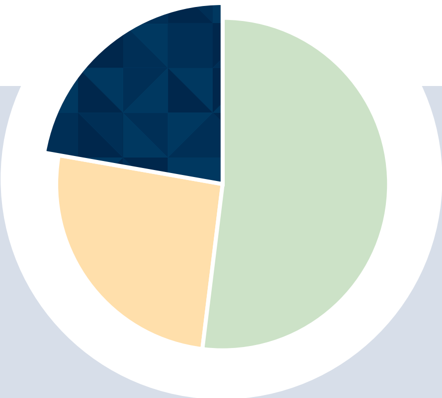


RURAL INFRASTRUCTURE PORTFOLIO

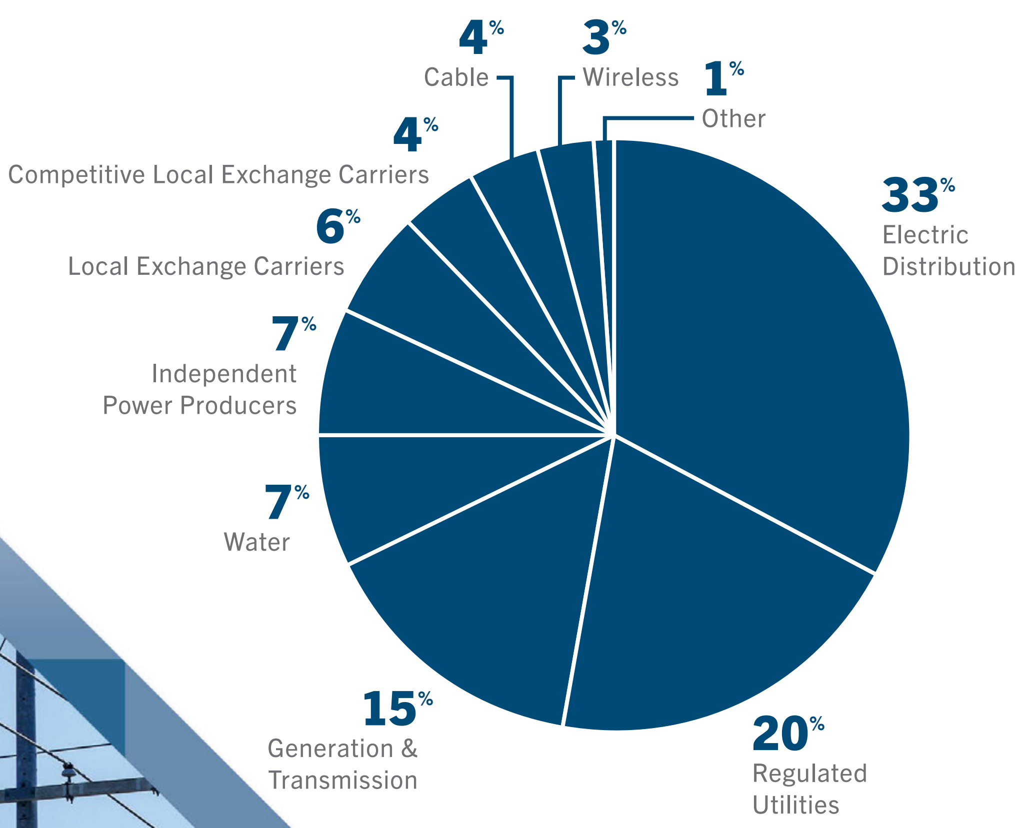
CoBank's Rural Infrastructure operating segment includes lending to rural infrastructure borrowers across the United States. It serves rural utilities and other customers across a wide variety of industries, including electric generation, transmission and distribution cooperatives; midstream energy and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

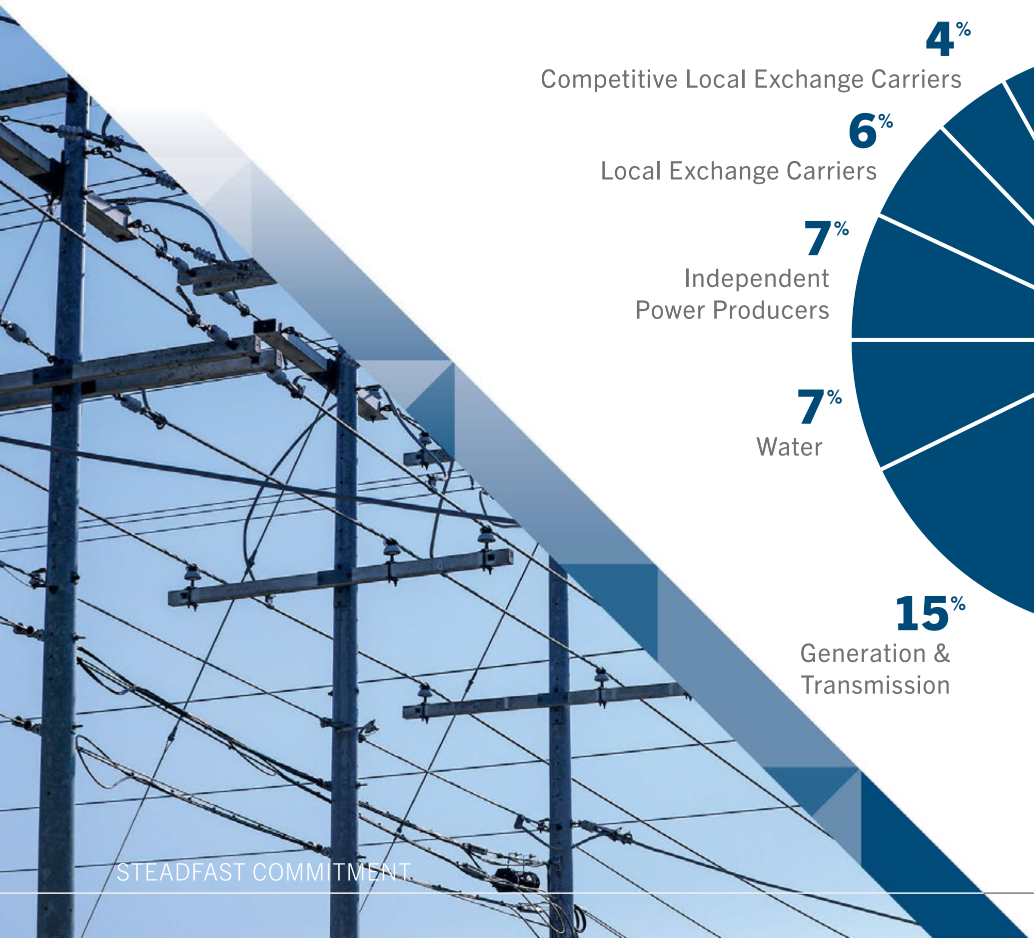
$32.6 BILLION
LOAN VOLUME AT YEAR-END

22%
OF TOTAL LOAN PORTFOLIO

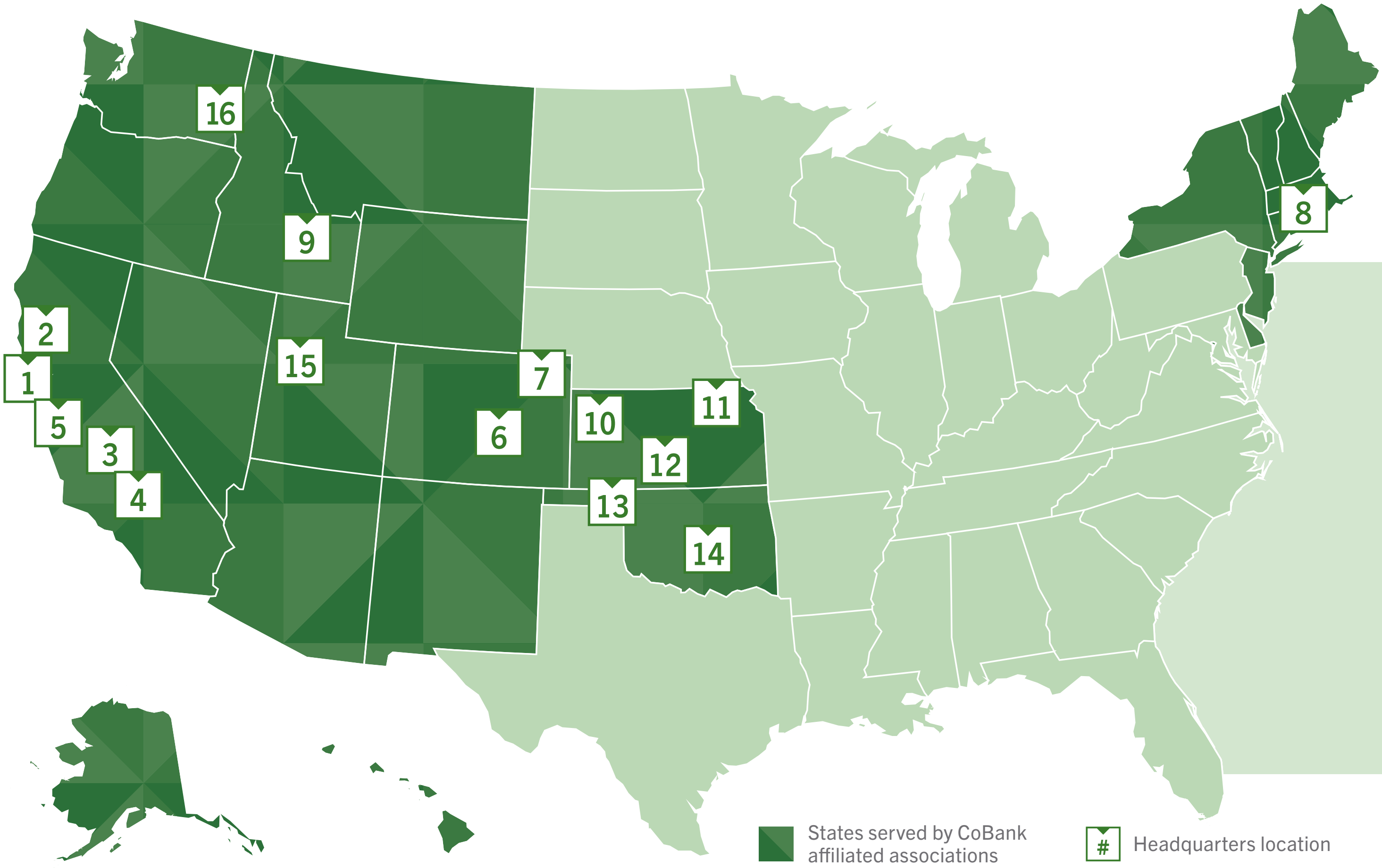


FOR THE YEAR ($ in millions)	**2023**	2022	2021	2020	2019
Period-end Loans	**$ 32,572**	$ 28,462	$ 24,803	$ 24,237	$ 21,227
Average Loans	**$ 30,215**	$ 25,734	$ 24,379	$ 22,919	$ 20,919
Net Income	**$ 495**	$ 424	$ 392	$ 398	$ 331





FARM CREDIT BANKING GROUP
AFFILIATED FARM CREDIT ASSOCIATIONS



CALIFORNIA

1 American AgCredit
SANTA ROSA

2 Farm Credit Services of Colusa-Glenn
COLUSA

3 Fresno Madera Farm Credit
FRESNO

4 Golden State Farm Credit
KINGSBURG

5 Yosemite Farm Credit
TURLOCK

COLORADO

6 Farm Credit of Southern Colorado
COLORADO SPRINGS

7 Premier Farm Credit
STERLING

CONNECTICUT

8 Farm Credit East
ENFIELD

IDAHO

9 Idaho AgCredit
BLACKFOOT

KANSAS

10 Farm Credit of Western Kansas
COLBY

11 Frontier Farm Credit
MANHATTAN

12 High Plains Farm Credit
LARNED

OKLAHOMA

13 Farm Credit of Western Oklahoma
WOODWARD

14 Oklahoma AgCredit
EDMOND

UTAH

15 Western AgCredit
SOUTH JORDAN

WASHINGTON

16 AgWest Farm Credit
SPOKANE

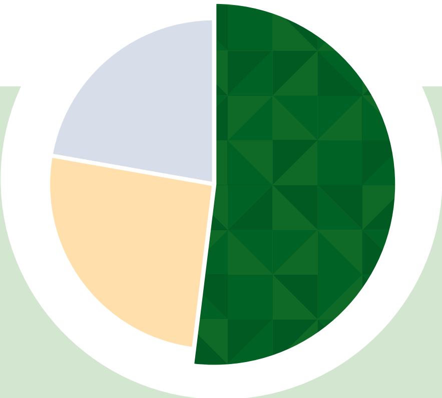
FARM CREDIT BANKING PORTFOLIO

In addition to providing loans to cooperatives and other commercial customers in all 50 states, CoBank serves as a funding bank for 16 affiliated Farm Credit associations across the country. Those associations provide loans and financial services to more than 77,000 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.

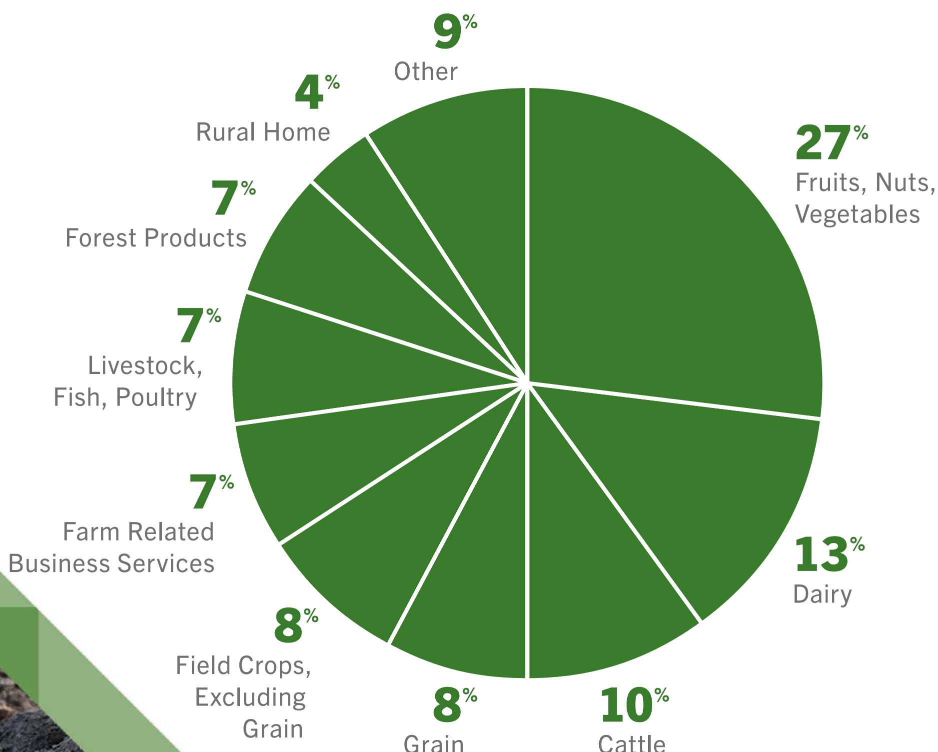
CoBank provides these association customers with wholesale financing as well as other value-added products and services. Our relationships with these associations provide the bank with added lending capacity by serving as participation partners on large credit transactions. CoBank also derives additional value from purchasing participations in their loans.

$77.7 BILLION
LOAN VOLUME AT YEAR-END

52%
OF TOTAL LOAN PORTFOLIO



FOR THE YEAR ($ in millions)	2023	2022	2021	2020	2019
Period-end Loans	**$ 77,658**	$ 71,529	$ 65,632	$ 60,516	$ 54,459
Average Loans	**$ 72,816**	$ 67,855	$ 61,304	$ 56,423	$ 51,313
Net Income	**$ 281**	$ 251	$ 245	$ 257	$ 223



FARM CREDIT BANKING GROUP

Pictured from left to right:

- **Chris Eckman**
  VP Farm Credit Banking Group
  CoBank
- **Mark Littlefield**
  President and CEO
  AgWest
- **John Phelan**
  CCO
  AgWest
- **Tom Nakano**
  CFO
  AgWest

AGWEST FARM CREDIT

Spokane, Washington

AgWest Farm Credit is a champion for agriculture. Although the newly merged association was formed just a year ago, collectively, it has over a century of experience under its belt as an agricultural lender across the western United States—ensuring its customers, employees and communities thrive.

AgWest was formed on January 1, 2023 through a merger of Farm Credit West and Northwest Farm Credit Services. Its 22,000 customers consist of ranchers, farmers and agribusinesses, ranging from large operations to young, beginning and small producers. Some of its customers are well-established, multigenerational entities, while others are startup operations hoping to find their footing in the marketplace.

"Despite this tremendous change with the merger, our purpose remains consistent," said Mark Littlefield, president and CEO of AgWest. "Our association would simply not exist without agriculture. As long as we continue to focus on and serve our customers, we will be successful."

As one of CoBank's 16 affiliated associations, AgWest receives wholesale funding from CoBank that supports the loans it makes to farmers and ranchers across its seven-state service territory. The two institutions work cohesively to ensure agriculture has dependable access to credit through cycles in the economy and commodity markets.

"We rely on CoBank to support our customers with larger borrowing needs and we also lend to the bank's customers. It's a symbiotic relationship. There have been lots of changes as the Farm Credit System navigates through mergers and transitions, and change can be challenging. CoBank has not only improved our relationship along the way, but has embraced the shift alongside us," Littlefield said.

As it moves into its second year, AgWest is excited to continue evolving its business model—especially embracing new and advanced technology strategies to better serve its members.

"We are committed to maximizing and evolving our customer relationships. It's important to stay highly engaged and focused—we are their steward," Littlefield said.

AgWest is particularly excited about its New Producer Grant program, which provides start-up funds to agricultural producers in its service territory as they embark on new business ventures. In collaboration with CoBank, AgWest awarded 30 producers $15,000 each in 2023 for their startups, allowing new and innovative ideas to become a reality.

"These new producers have the vision, but not the funds. We are excited to support them during their journey and appreciate CoBank's partnership. The bank has been on the ground level, taking on the other half of the funding for these grants, while recognizing how important the program is to agriculture and the future of our industry," Littlefield said.

As a newly formed entity itself, AgWest is excited to continue expanding and growing—sharing its purpose with customers and industry partners for the betterment of agriculture and rural America.

HIGH PLAINS FARM CREDIT

Larned, Kansas

There are more cows than people in Kansas, so you better know how to finance both, High Plains Farm Credit Association's president and CEO, Kevin Swayne likes to joke. Nestled in the heartland of America, surrounded by golden fields of wheat, feed yards and cow-calf operations, High Plains is immersed in its members' way-of-life—it's their livelihood, too.

High Plains is one of the leading agricultural lenders in the state, providing financial services to 4,100 farmers, ranchers and agribusinesses in its service territory. The association's mission is to support its rural agricultural communities with reliable and consistent credit and financial services, today and into the future.

"When you only have one mission, you just want to do it right," Swayne said. "Through good times and hardships, everyone needs a dependable lender—but we are also a relationship lender, which is a big part of our longevity and shared success with our customers."

Recent drought conditions have led to a lower cattle population and market volatility, specifically higher cattle prices, which increases the need for credit. High Plains customers and feed yards were feeling the crunch and turned to the association for more capital.

"Our customers don't need to worry about their lending needs—they need to focus on the day-to-day operation of their business," Swayne said. "As their need for capital grows, that's where we turn to CoBank. As a member of the Farm Credit System, they understand the current demands in agriculture and don't question it—they just get it done."

High Plains is one of 16 Farm Credit associations affiliated with CoBank. It relies on the bank for wholesale funding as well as a variety of other financial products.

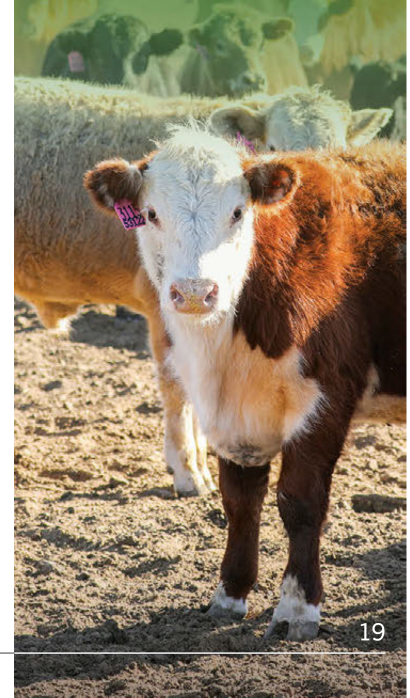
Amongst the growing need for credit and financial services, High Plains has experienced consistent growth over the last six years, expanding its portfolio from $1 billion to $1.8 billion. It has six different branches throughout Kansas and has increased its number of employees from 51 to 82 since 2017.

High Plains is excited for the future as it continues to expand and appreciates its partnership with CoBank. Through collaborative ventures like the Farm Credit Capital Group, which helps other associations within the CoBank district buy and sell loan participations, as well as joint contributions to local charities and organizations, CoBank and High Plains have formed a complementary relationship.

"If your customer is successful, you are going to be successful," Swayne said. "We take a vested interest in our customers and the rural communities we serve. I know CoBank has that same mission."

Pictured from left to right:

- **Roger Vanlandingham**
  CCO
  High Plains
- **Travis Ball**
  VP of FCBG
  CoBank
- **Rob DeWeese**
  Chief Lending Officer
  High Plains
- **KC Preisner**
  Regional VP
  High Plains
- **Kevin Swayne**
  President and CEO
  High Plains
- **John Booze**
  CFO
  High Plains
- **Travis Holdeman**
  Chief Risk Officer
  High Plains
- **Chase Ostmeyer**
  Regional VP
  High Plains
- **Nick Jablonski**
  VP Capital Markets
  High Plains
- **Ray Wagester**
  Lead Relationship Manager
  CoBank
- **Tobias Carson**
  Sr. Relationship Manager
  CoBank



REGIONAL AGRIBUSINESS

Pictured from left to right:

- **Abraham Gilbert**
  Sugar Warehouse Supervisor
  St. Mary Sugar Cooperative
- **Andrew Haberern**
  Lead Relationship Manager
  CoBank
- **Trini Foti**
  CFO
  St. Mary Sugar Cooperative
- **David Thibodeaux**
  Consultant to *St. Mary Sugar Cooperative*
- **Micah Guidry**
  General Manager
  St. Mary Sugar Cooperative
- **Will Legendre**
  Plant Manager
  St. Mary Sugar Cooperative

ST. MARY SUGAR COOPERATIVE

Jeanerette, Louisiana

Processing sugar cane crop can be painstaking, but the results are always sweet. Each year for approximately 100 days, Louisiana-based St. Mary Sugar Cooperative and its members work around the clock—oftentimes through rain, sleet and even hurricanes—to process the crop before the ground freezes. But with a new expansion on the horizon, the co-op is hopeful to increase efficiency—buying back valuable time.

St. Mary was founded in 1946 and is one of only two remaining sugar cooperatives in the state. Each fall, it receives truckloads of sugar cane from its 104 members and then processes it into black molasses or sugar by grinding, pressing and boiling the cane. Once it is boiled and then crystallized, the sugar is ready—but the process isn't over. The leftover bagasse, which is the pulpy, woody fiber left after the extraction, is used to fire the steam boilers and generates power for the plant.

"We utilize all parts of the sugar cane—it's a great way to reduce waste and increase efficiency," said Micah Guidry, St. Mary's general manager. "The crop is versatile but it's also tricky—if you don't process it within 24 hours, the sugar content goes down. And Louisiana is the most northern region where sugar cane is produced, meaning we have a shorter growing season. In order to keep expanding and meeting the needs of our members, we needed to add an additional boiler."

Currently, St. Mary has seven boilers, three of which are originals from its founding nearly 80 years ago. With an eye to the future, the co-op is adding an eighth boiler, financed by its longtime partner, CoBank. The $20 million project will not only improve efficiency of the plant, but will accelerate the co-op's grinding time and capabilities.

"Processing sugar cane is a 24/7 endeavor and we are oftentimes at the mercy of mother nature. By adding this new boiler, we can grind more cane, increasing our output and hopefully saving a few days of labor," Guidry said. "We are grateful to CoBank for facilitating the loan—we have been with the bank for several decades, and they have been an incredible resource as we've implemented changes for the betterment of our members, staff and board."

St. Mary has experienced steady growth over the years—in 1947, it produced approximately 11 million pounds of sugar compared with 2022, where it produced an impressive 357 million pounds. With the new boiler in place, which is slated to be ready by the 2024 harvest season, the co-op plans to process even more tons of sugar—and on less of a time crunch.

Pictured from left to right:

- **Glenn Kaping**
  Sr. VP and CFO
  First District Association
- **Josh Barka**
  Board Chairman
  First District Association
- **Bob Huffman**
  President and CEO
  First District Association
- **Mike Minnihan**
  Lead Relationship Manager
  CoBank

FIRST DISTRICT ASSOCIATION

Litchfield, Minnesota

FIRST DISTRICT ASSOCIATION

Minnesota-based First District Association is a century-old dairy cooperative and ingredient supplier, using milk from its 650 farmer-members to produce an array of cheese, powder and liquid dairy products for domestic and global customers.

Traditionally, the co-op has been financially conservative, paying off debt as quickly as possible. But in 2019, FDA stepped outside of its comfort zone, embarking on the largest expansion in its history and investing in new processing facilities that increased its capacity to a staggering 7.5 million pounds of milk per day.

FDA is a grassroots organization. Its members have been very involved and open-minded throughout its history, recognizing change is necessary—reinvesting back into the co-op is imperative to stay modern and also relevant in the industry.

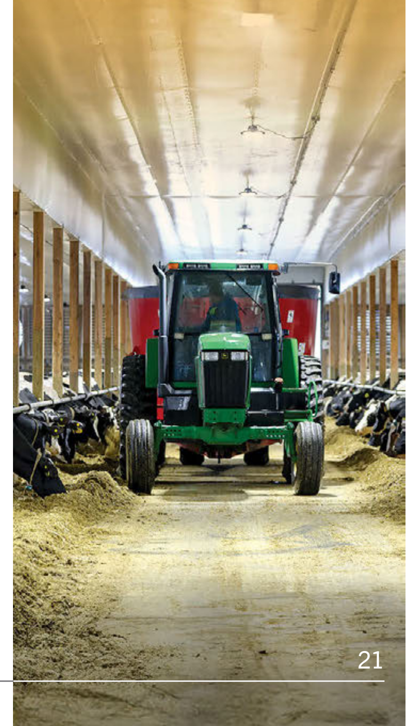
"Making this type of investment and pursuing such a large expansion was not a decision FDA made lightly. We are family-farmer driven. Our members are who we are to our core. And that's why we took the plunge—our board and management had an eye to the future—it was for our members," said Bob Huffman, FDA's president and CEO. "As we look forward, we are excited for the opportunities ahead, ensuring our next generations of dairy farmers will grow alongside us for the next century."

The association required $180 million in new financing for the expansion project, and CoBank, along with seven other Farm Credit Associations, stepped in to facilitate its needs.

"We have been a CoBank customer for decades, but a lot of those years we were also debt-free," said Glenn Kaping, senior vice president and CFO. "As we took this big step, we really valued CoBank's knowledge—as a cooperative bank, they truly understand our perspective, and you also can't beat their level of engagement. The bank's executive management traveled to our new facility not once, but twice since its completion. That is so meaningful to FDA and our members."

Despite the global pandemic causing supply chain issues, construction remained on schedule, and by 2021, FDA opened three new facilities—including a cheese plant and cooler, an 11,000+ square foot expansion onto its lactose plant and a new milk receiving facility. These new additions will now allow FDA to process 2 million more pounds of its customer-owners' milk per day—boosting its capacity from 5 million to 7.5 million.

"We are extremely proud of this expansion project. Thanks to the financial assistance of CoBank and the Farm Credit System, we were able to hit $1 billion in revenue last year, which puts us in the position to be strong and sound for our membership now and well into the future," Huffman said.



CORPORATE FINANCE

Pictured from left to right:

- **Kevin Crofoot**
  Manager, Capital Markets and FX
  Greif
- **Ole Rosgaard**
  President and CEO
  Greif
- **Michael Tousignant**
  Managing Director
  CoBank
- **Larry Hilsheimer**
  EVP and CFO
  Greif
- **Tony Krabill**
  VP and Treasurer
  Greif
- **Rob Prickett**
  Lead Relationship Manager
  CoBank

GREIF
Delaware, Ohio

Greif's vision is to be the best performing customer service company in the world. This may seem like a lofty goal for an industrial packaging company, but from its humble beginnings in 1877, it has grown its global footprint across 41 countries to provide packaging to safely deliver essential supplies.

Greif manufactures various bulk packaging products—including fiber, steel and plastic drums, tubes and cores, coated recycled paperboard, water bottles and more. The manufacturer was founded nearly 150 years ago in Cleveland, Ohio to assemble wooden drums. Since its establishment, Greif has not only grown in scale but has remained steadfast, yet innovative, in its business approach.

"The service profit chain is a big part of our business model. There are lots of links in a chain, but the only way it works is if it stays together," said Ole Rosgaard, president and CEO of Greif. "We firmly believe that you win business through customer service. Every positive internal experience of our 13,000 employees will almost always create a successful external experience."

Trials, tribulations and great success all go hand-in-hand with such a long tenure in business. During COVID-19, Greif realized just how essential its products were for consumers—its steel drums deliver pharmaceuticals, chemicals and petroleum. It accommodates packaging for an array of markets, including food and beverage, agriculture, construction, retail and other crucial supplies.

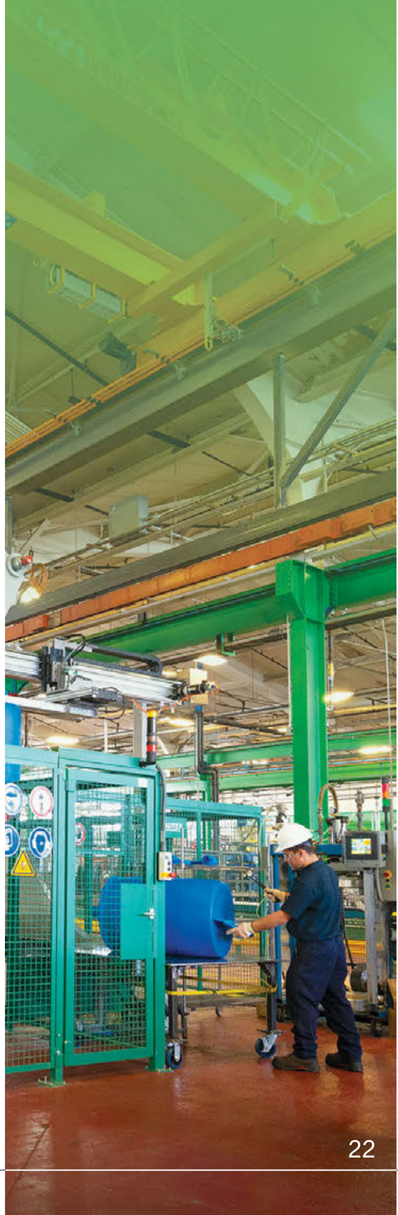
However, after consistent and steady demand through the pandemic, Greif experienced a decrease in volume in 2023 due to an overall industrial manufacturing slowdown.

"Our research shows that consumers are spending money on experiences rather than material items, and we are feeling the effect of that right now," said Larry Hilsheimer, Greif's executive vice president and CFO. "No matter the circumstances, CoBank always remains calm and is willing to stand by us through our accomplishments and setbacks to help find solutions."

Greif has been a CoBank customer for over 20 years and has expanded the relationship with recent investment needs. In 2019, CoBank provided a $400 million Farm Credit term loan to partially finance the acquisition of Caraustar Industries. Greif then requested an additional $225 million loan in 2020 to refinance pending maturities. Again, in 2023, Greif added an additional $300 million loan to its liquidity position after acquiring Lee Container.

With these new expansions, Greif is looking forward to the next 150 years—and is especially excited to achieve its sustainability targets by 2030.

"Having a dependable financial lender is crucial for our future growth. Some of our transactions are unusual, but CoBank gets really creative and always provides an answer to difficult questions. We are grateful that CoBank is a link in our chain," said Rosgaard.



BUTTERBALL

Garner, North Carolina

Butterball is a truly iconic American brand, part of dinner table traditions for families since 1954. Today, after nearly 70 years in business, the revered company still has a sole focus on turkey, ensuring its products are consistent, healthy and responsibly produced.

Butterball is headquartered in Garner, North Carolina with locations across the country and a customer base around the globe. It exports to over 30 countries, striving to develop diverse and high-quality products to meet the various needs of different cultures.

For domestic consumers, Butterball produces an array of turkey products, including ground turkey, sausage links and bacon, burgers, deli meat, roasts, breasts, tenderloins—and of course, whole turkeys.

"Butterball is very brand and consumer-focused. We are constantly assessing and evaluating how and where we can improve," said Jay Jandrain, president and CEO of Butterball.

As with most essential companies, Butterball remained operational during COVID-19, but also experienced unprecedented challenges. "Since the pandemic, the economy has accelerated, and while we are experiencing inflation, we are continuously looking for ways to accommodate our customers with a premium product at a competitive price," Jandrain said. "It's imperative our products stay affordable. Through it all, we are committed to our customers. And in turn, we've also relied more heavily on our own partnerships as we navigate through it."

Butterball has had a longtime relationship with AgCarolina Farm Credit and became a CoBank customer in 2006. In 2021, Butterball re-balanced its banking business within the Farm Credit System—shifting its credit management and leadership from a commercial lender to CoBank—and now receives more than 50% of its funding from Farm Credit.

"Our relationships with CoBank and AgCarolina have been incredible. Especially through the difficulties of the pandemic, they have remained steadfast—they truly understand our business—and not only that, the business of our partners and growers. Without our turkey growers, Butterball does not exist. CoBank came into our relationship with a long-term view, understanding that times might be a little difficult now, but they are here through it," Jandrain said.

Despite recent industry challenges, Butterball has remained steady and profitable, utilizing a new long-term credit facility led by CoBank, including a revolving loan and term debt options.

"Now more than ever, Butterball is excited for the future. CoBank is one of our biggest champions—it's not just transactional, it's a relationship. We couldn't be more grateful for that, so we can focus on what matters—producing great-tasting turkey that brings people together," Jandrain said.

Pictured from left to right:

- **Ashton Watkins**
  VP Corporate Lending
  AgCarolina Farm Credit
- **Jim Matzat**
  VP Lead Relationship Manager
  CoBank
- **Steven J. O'Shea**
  VP of Capital Markets Group
  AgFirst Farm Credit Bank
- **Barry Gum**
  CFO
  Butterball
- **Ben Carpenter**
  Relationship Manager
  CoBank
- **David Albright**
  Senior Credit Officer
  CoBank
- **Jay Jandrain**
  CEO
  Butterball
- **James Whitley**
  Capital Markets Loan Officer
  AgCarolina Farm Credit

FARM CREDIT LEASING

Pictured from left to right:

- **Aaron Jensen**
  FCL Regional VP
  CoBank
- **Harry DeWit**
  CEO
  Blue Sky Farms
- **Josh McDonald**
  CFO
  Blue Sky Farms
- **Brent Young**
  FCL Relationship Manager
  CoBank
- **Bryce Jordan**
  Relationship Manager
  Capital Farm Credit

BLUE SKY FARMS

Friona, Texas

Now-seasoned Texas dairy farmer Harry DeWit is living the American dream. DeWit emigrated from Holland over 30 years ago with the vision to own a dairy operation. In 1992, his family leased a property with 2,500 cows—laying the groundwork for Blue Sky Farms, while also setting in motion new opportunities, meaningful partnerships and innovation.

Blue Sky is a multi-site dairy and farming business nestled in the panhandle of Texas. It produces an impressive 175,000 gallons of milk per day, while also raising its own heifers and growing crops to feed them.

Blue Sky is very active within its local communities, which are located in small, rural areas. It also provides career opportunities to 330 employees and has formed important relationships with 23 additional shareholders to expand its business model.

"Our employees not only work for us, but are given the opportunity to grow alongside us. We are an active group of people who truly see a big blue sky and bright future for agriculture," DeWit said.

Blue Sky is a forward-thinking operation, using innovation to promote animal care and provide high-quality milk for consumers.

Not only does the farm recycle its bedding and water, it utilizes energy-saving methods for its milking parlor, including LED lighting and controllers to automatically maintain temperature. The farm is also working on its nutrient management plan to maximize the crop lifecycle for a full-circle system—cows eat the feed, which is converted into milk, then the nutrients in the manure are used to fertilize the soil, producing a new set of crops.

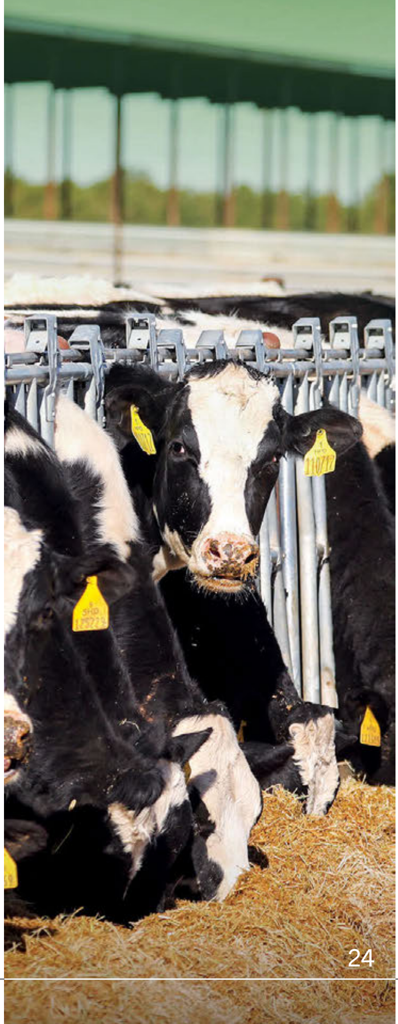
"You don't have to be traditional to be successful," DeWit said. "Little ideas can equal big wins and we are constantly thinking outside-of-the-box to improve."

In order to maintain its innovative approach and expansion plans, the dairy needs well-placed investments and up-to-date equipment. Blue Sky forged its relationship with CoBank over a decade ago, and throughout the years and steady growth, it has utilized the bank's Farm Credit Leasing subsidiary to finance various equipment needs, including fleet farm tractors and loaders.

"We've recently ramped up our leasing needs and CoBank has captured savings we can't get anywhere else. That, coupled with its competitive rates, makes it very valuable—especially with our newest expansion plan that is underway," DeWit said.

As part of this expansion, the farm entered into a new deal with Hilmar Cheese Company in 2022, where it will be one of five dairies to collaborate with the plant. This integration will double the size of the farm's milk production and grow its footprint into Kansas by 2025.

"With well-placed partnerships, the sky is the limit," DeWit said.



ELECTRIC DISTRIBUTION

TRICO ELECTRIC COOPERATIVE

Marana, Arizona

Meeting the individual and collective needs of a diverse membership is a challenge, but Trico Electric Cooperative is committed to providing cost-effective and sustainable energy solutions for its varying member-owners.

Trico serves over 46,000 economically and geographically diverse members in the surrounding areas of Tucson, Arizona. Part of its service territory is dense, with 35 electric meters per mile—while others have less than one meter per mile. A portion of its territory is located in a desert, but it also provides electricity to snowy areas like Mount Lemmon Ski Resort.

"We believe that connection brings us together as a community, and we are working to bring a wide range of power solutions to our members," said Brian Heithoff, CEO and general manager of Trico. "A strong component of our membership is interested in more sustainable energy, while others are struggling to pay their energy bills. We are here to support our members and their unique needs, no matter what."

By 2032, Trico has set a goal to reduce its carbon emissions by 50% and is making strides to incorporate more renewables into its portfolio, focusing on battery, solar and natural gas solutions.

To push this initiative forward, Trico opened Chirreon Solar and Battery Storage facility in 2022, which has the capacity to produce more than 30,000 megawatt-hours of energy per year—powering the equivalent of 3,000 residential homes.

The following year, the co-op added an additional battery energy storage system to its existing Avion Solar facility, which also has the energy output of over 30,000 megawatts per year.

CoBank played an integral role in financing both projects, providing a $10 million line of credit to the co-op. Trico also utilized leasing opportunities through CoBank's Farm Credit Leasing for both the solar and battery facilities.

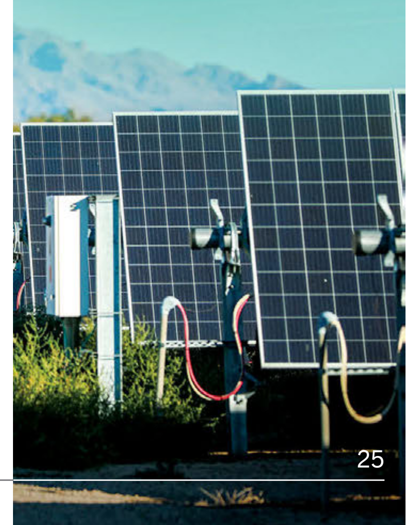
"We are excited to continue our investment into cleaner energy and we could not complete these projects without trusted financial partners like CoBank," Heithoff said. "They have such an impressive responsiveness to meet our needs—jumping on a plane to facilitate a face-to-face discussion and solutions. That goes a long way."

Trico puts community first, and with its new commitment to renewable energy, still recognizes the financial limitations of some of its members. The co-op is working on an opt-in model for battery and solar to accommodate its members' diverse needs.

"Trico has a growth mindset. We want to grow our number of members and kilowatt-hour sales and see our employees grow. We also want to grow alongside our community—providing grants, donations and scholarships. Together, we are more powerful," Heithoff said.

Pictured from left to right:

- **Makenzie Volleman**
  Relationship Manager
  CoBank
- **Laree St. Onge**
  VP of Member Services and Energy Solutions
  Trico
- **James Freeman**
  CFO
  Trico
- **Landon Reneau**
  Lead Relationship Manager
  CoBank
- **Torey Bell**
  VP of Engineering
  Trico
- **Eric Hawkins**
  COO and General Counsel
  Trico
- **Brian Heithoff**
  CEO and General Manager
  Trico
- **Charlie Gourdin**
  VP of Utility Services
  Trico
- **Matt Fredericksen**
  VP of Electric Operations
  Trico
- **April Park**
  VP of Human Resources and Safety
  Trico
- **Justin Banales**
  VP of System Operations
  Trico



WATER & COMMUNITY FACILITIES

Pictured from left to right:

- **Christa Hoffner**
  Controller
  Ross County Water
- **Kevin Chester**
  Project Manager
  Ross County Water
- **Julia McCusker**
  Sector VP—Water
  CoBank
- **Justin Langolf**
  General Manager
  Ross County Water
- **Heath Morton**
  Distribution Superintendent
  Ross County Water
- **Kristy Alderman**
  Office Manager
  Ross County Water

ROSS COUNTY WATER COMPANY

Chillicothe, Ohio

When Ross County Water Company made the decision to replace its water meters, it needed a quick funding solution to complete the project in its entirety over the shortest period possible. Timing can be everything—and by leveraging its partnership with CoBank, the utility was able to create a plan to upgrade its system, saving valuable time and money.

Ross County is a not-for-profit water system located in southern Ohio, providing residential and commercial services to nearly 15,000 customers. Ross County's customer base is 95% residential, and since its establishment nearly 54 years ago, it has experienced steady growth from new home construction moving into its rural service territory.

The company is committed to serving its community, ensuring customers have access to safe and reliable water. In order to maintain water quality and cost efficiency, water meters must be replaced every decade—and in 2022, Ross County was due for an upgrade.

"Our meters were aging and a large number were not producing radio signals—which meant our team needed to conduct manual reads—and we needed to rectify that as quickly as possible. The best solution was to replace all of our water meters at once," said Justin Langolf, Ross County's general manager.

Ross County was already working with CoBank regarding a separate $5 million capital project, which was underway to upgrade its water distribution system.

"In our discussions, our relationship manager informed us that CoBank leases equipment, including water meters, in addition to providing loans. We couldn't believe the time savings leasing could offer, and we were definitely interested. It was important we replace all the meters rather than over a period of time, and the leasing option with CoBank was exactly what we needed," Langolf said.

Within three weeks of the leasing acquisition, Ross County was approved for a $3.6 million capital lease through CoBank's Farm Credit Leasing subsidiary. Despite supply chain issues during the pandemic slowing down delivery times, Ross County installed the meters in just one year.

"Our board has said numerous times that partnering with CoBank has been one of the best decisions they have made. If we didn't utilize CoBank's leasing capability, we might still be waiting for funding, and that would have left us in an extremely difficult position," Langolf said.

As a result of the new meter and capital improvement projects, water efficiency is up 10%—which saves the company and its customers hundreds of thousands of dollars every year.

"Eventually, the new meters will pay for themselves. We are so grateful for our relationship with CoBank and we look forward to future opportunities with the bank as our lender and trusted partner," Langolf said.

POWER, ENERGY & UTILITIES

Pictured from left to right:

- **Adam Kruzich**
  CFO
  ERMCO
- **Ken Krebs**
  Relationship Manager
  CoBank
- **Tim Mills**
  President and CEO
  ERMCO

ELECTRIC RESEARCH AND MANUFACTURING COOPERATIVE

Dyersburg, Tennessee

ERMCO DISTRIBUTION TRANSFORMERS

After more than 50 years in business, Electric Research and Manufacturing Cooperative was faced with a challenge, which ultimately led the cooperative to embark on a large expansion project, ensuring its utility-owners were set for additional success.

Headquartered in Dyersburg, Tennessee, ERMCO is one of the largest producers of oil-filled distribution transformers in the United States. Transformers are imperative to electricity distribution, transferring electrical energy from one circuit to another. The company is exclusively owned by Arkansas Electric Cooperatives, Inc. and is a critical supplier of these transformers for rural America.

With the supply chain challenges spurred by the global pandemic, combined with unprecedented natural disasters, ERMCO was working to keep pace with customer demand and needed a solution to enable a larger production footprint.

"The supply and demand were out of balance and we knew we had to evolve our model, but it was a delicate balancing act. We were locked into contracts with long-time customers that we were challenged to fulfill with our existing capacity," said Tim Mills, president and CEO of ERMCO.

ERMCO made the difficult decision to adjust orders and contract renewals to obtain a long-term solution—and in 2022, it acquired Spire Power Solutions, beginning an expansion that added production capacity in Canada, Mexico, Georgia and Tennessee.

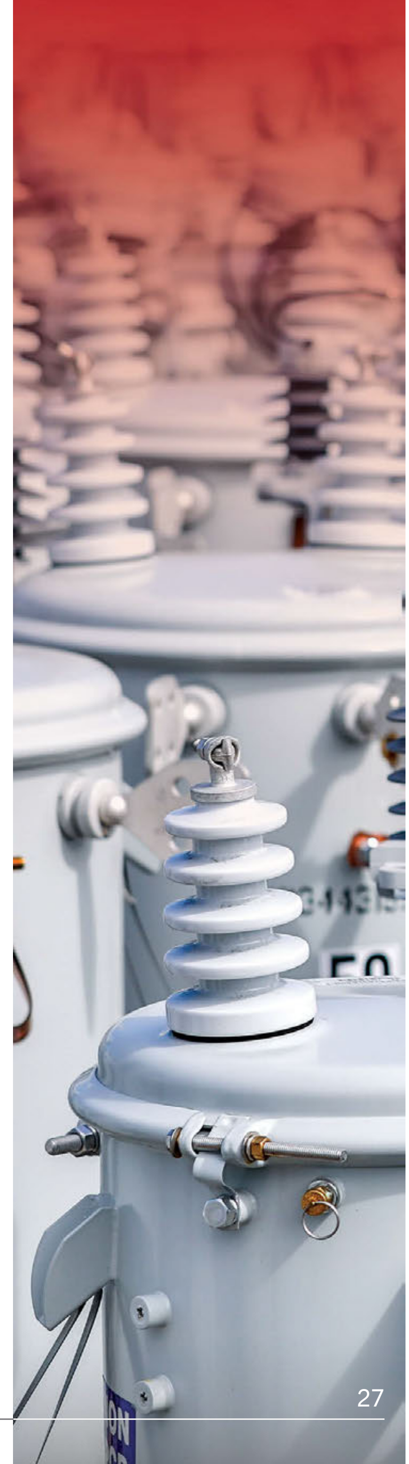
The expansion required a strategic loan to finance the acquisition. CoBank, along with Farm Credit System and other financial institutions, provided $500 million for the expansion project—and within a year, ERMCO realized an 85,000-unit growth in production.

"Securing funding for this was an initial challenge—most commercial banks don't know how to assess our needs," said CFO Adam Kruzich. "We wanted to add CoBank into the mix because as a co-op, they understand our business model. But it goes beyond that—they were willing to fund more than other larger banks."

In the coming years, ERMCO is committed to providing transformer technology for America and is embracing opportunities to responsibly address environmental changes. It is also reinvesting back into the community, and is involved with local schools, specifically funding STEM programs.

ERMCO is continuously striving to improve its processes for the betterment of its utility-owners, employees and community members. And the future is bright—in 2023, it hit a milestone, building its 8 millionth transformer with plans to finish its 9 millionth unit in 2024.

"A successful future doesn't happen by chance—it's largely due to wise and well-placed investments. We are thankful that CoBank understands our business so our customers can continue to rely on ERMCO," Mills said.



COMMUNICATIONS

Pictured from left to right:

- **Mike Harder**
  Credit Supervisor
  CoBank
- **Glenn Zerbe**
  CEO and President
  Nuvera
- **Curt Kawlewski**
  CFO and Treasurer
  Nuvera
- **Lennie Blakeslee**
  Sector VP
  CoBank
- **Barb Bornhoft**
  COO and VP
  Nuvera

NUVERA COMMUNICATIONS

New Ulm, Minnesota

Nuvera Communications provides fast and reliable fiber broadband services to its customers in southern rural Minnesota—creating connectivity in a rapidly and continually evolving technological environment.

Nuvera was established in 1905 by farmers to provide local phone services. Almost 120 years after its inception, Nuvera is still going strong, serving rural communities by creating modern day connections through its new fiber broadband network that no doubt would have astounded its original subscribers.

In 2021, Nuvera announced a transformational $200 million investment to build a new fiber network for the 15 communities it currently serves—with plans to also expand into new small town and rural communities as a regional service provider.

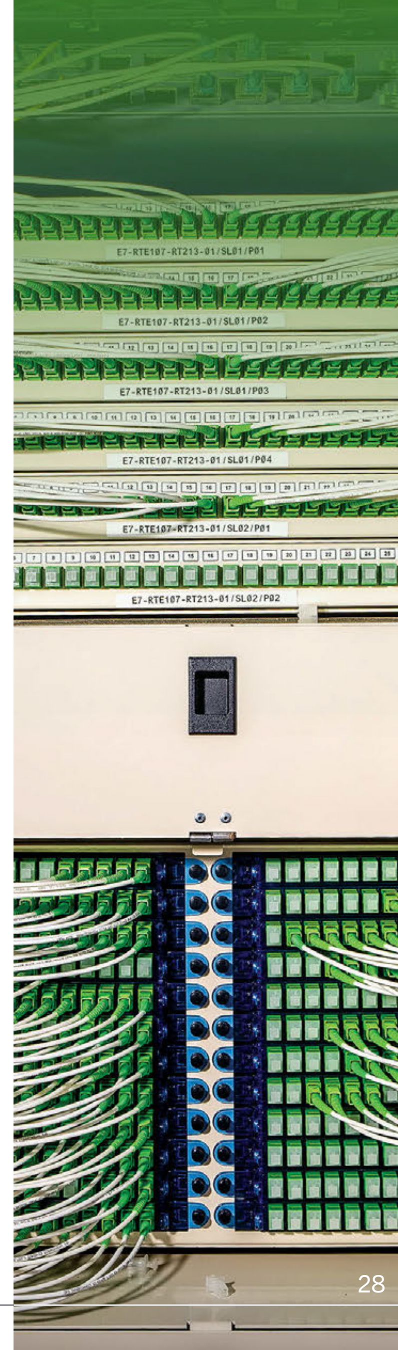
"Two converging situations occurred since 2020 to propel us into this investment. First, there has been a major shift in technology—we're rapidly entering into a new era where consumers are becoming more and more dependent on the internet. And second, the global pandemic shifted everyday needs dramatically," said Glenn Zerbe, president and CEO of Nuvera. "The significance of internet connectivity has taken a big leap forward. Now more than ever, access to a reliable network has a major impact on the quality of life and economic vitality within rural communities."

To facilitate the transformation to a new fiber network, Nuvera turned to its long-time financial partner, CoBank, to secure $130 million total debt financing. The multi-million-dollar investment plan enabled Nuvera to rapidly expand its fiber network's reach from 11% of customers to 53%—and is well on its way to reach 83% over the next several years.

"This investment will create a superior and reliable fiber network," Zerbe said. "It's vital to continue advancing broadband networks and technology into rural parts of the state, and we couldn't have facilitated this plan without our partnership with CoBank. We both care deeply about rural America. Our values and missions align, and now the positive ripple effect of that alignment is creating a meaningful impact on the communities we serve with our new fiber network."

As demand for fiber continues to grow, Nuvera is optimistic about the future, with promising plans to expand its footprint into more rural areas of the state that do not currently have fiber. The communications company understands this is just the beginning, as technology advancements will continue to create opportunities for Nuvera to connect customers.

"We like to say we are at the end of the beginning of this endeavor—it's taken a lot of work to get this far, but we are seeing the benefits, not only for our company, but also for our communities. Nuvera's new fiber network is a foundational investment that connects people to life—with the endurance to serve consumers for decades to come—empowering families, businesses and communities as we embrace this new technological age," Zerbe said.



Pictured from left to right:

- **Nigel Pretty**
  Sr. Relationship Manager
  CoBank
- **Brooks Friedeman**
  Managing Director, Head of Capital Markets
  Clearway
- **Craig Cornelius**
  CEO
  Clearway
- **Steve Ryder**
  EVP and CFO
  Clearway
- **Justin Merkowitz**
  Managing Director, Head of Project Finance
  CoBank

CLEARWAY ENERGY GROUP

San Francisco, California

It's all in the name—Clearway is truly clearing the way for renewable energy. As a leading developer, owner and operator of clean energy projects across the United States, the company is committed to providing affordable and reliable renewable energy options for the customers and communities it serves.

Clearway was formed in 2018 through a transaction between two leading energy companies—NRG Energy and Global Infrastructure Partners—with a mission to accelerate the transition to a clean energy future. Today, it has more than 9,000 megawatts of clean energy assets in operation and 30,000 megawatts in the pipeline—with a main focus on wind and solar projects, as well as battery storage facilities.

"We're excited not only by our growth, but by overcoming challenges that accompany the renewable energy business—whether it's new markets or accommodating new policies," said Steve Ryder, CFO of Clearway. "We take a prominent role in policy advocacy and external affairs, working on projects and solutions to accelerate the transition from coal plants and fossil fuels to more sustainable energy options."

Clearway is approaching completion of Victory Pass and Arica—two large co-located solar-plus-storage projects in California. In addition to supporting up to 1,000 construction jobs, the two projects will generate a combined 463 megawatts of clean energy capacity and 186 megawatts of battery storage, enough to power roughly 132,000 homes annually.

"These projects are built over a large desert area, and most notably, across the Bureau of Land Management public lands. The construction is boosting the local economies, significantly lowering energy bills for families in these rural areas going forward. With the support of the Bureau of Land Management, we expect these projects will improve the livelihood of communities across the country," Ryder said.

CoBank served as a joint lead arranger for the $1 billion debt financing of the Victory Pass and Arica projects. Subsequently, CoBank also served as a significant lender in Clearway's Cedar Creek Wind financing in Idaho, as well as the battery storage retrofit of its Rosamond Central project in California. In total, CoBank has committed more than $285 million to these projects over the last two years.

"CoBank provides differentiating value by understanding our financial needs. They are not only reliable, but always on board to help facilitate our acquisitions, while embracing the complexities of our industry," Ryder said. "Clearway has a proven track record of executing projects and pushing them across the finish line—CoBank is an important piece of that puzzle by propelling our projects forward. It's a collaborative and enduring relationship that we are proud of."

VALUE PROPOSITION

CoBank is a financially strong, ***DEPENDABLE***, socially responsible, cooperative bank that provides relevant 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 through efficient operating platforms, 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.

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COBANK 2023 FINANCIAL REPORT

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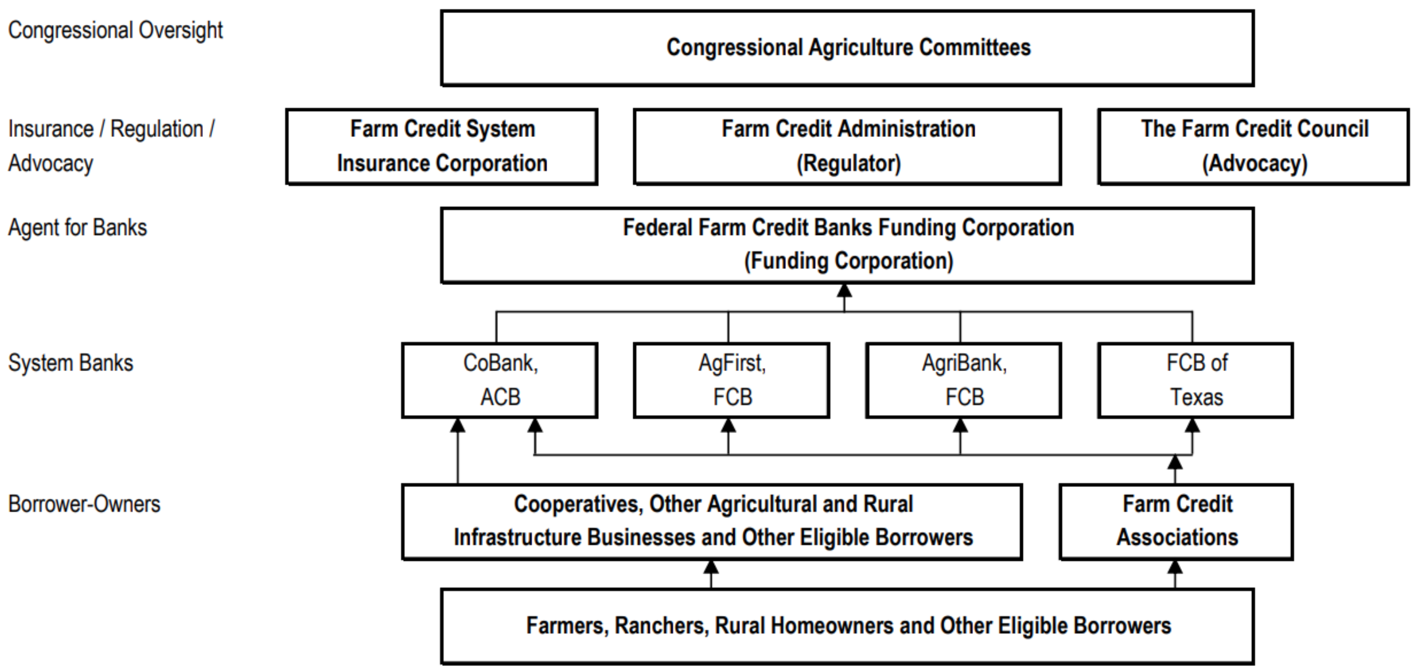
Company Introduction

CoBank, ACB (CoBank or the Bank) is one of the four banks in 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 by supporting rural communities and agriculture in their vital role of providing food, 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 Funding Corporation. Such securities are the joint and several obligations solely of the four System banks and are not obligations of Farm Credit Associations.

We are cooperatively owned by our eligible 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 including Farm Credit Banks 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, Farm Credit Banking 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," whereas other System banks and their affiliated Associations are referred to as a "district." Additional information about our affiliated Associations is contained in Note 17 to the accompanying consolidated financial statements.

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. References to documents, information or websites outside this Annual Report to Shareholders shall not be deemed to be incorporated by reference into this annual report.

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" on page 68.

Financial Condition and Results of Operations

Overview

CoBank's loans outstanding grew 6 percent to $148.0 billion as of December 31, 2023, compared to $140.1 billion as of December 31, 2022. Our average loan volume was $143.1 billion during 2023, an increase of 5 percent compared to $136.9 billion during 2022. The increases in both year-end and average loan volume resulted from growth in lending in our Farm Credit Banking and Rural Infrastructure operating segments, partially offset by decreases in our Agribusiness operating segment.

Our net income increased 4 percent to $1.507 billion for the year ended December 31, 2023 compared to $1.449 billion for the year ended December 31, 2022. The increase resulted from higher noninterest income and a lower provision for credit losses partially offset by lower net interest income, an increase in operating expenses and higher income taxes.

Our investment securities, federal funds sold and other overnight funds decreased 6 percent to $43.0 billion as of December 31, 2023, compared to $45.5 billion at December 31, 2022. The decrease was primarily due to a lower level of outstanding federal funds sold and other overnight funds at December 31, 2023 compared to the prior year-end. Average investment securities, federal funds sold and other overnight funds increased 5 percent to $42.7 billion during 2023, compared to $40.7 billion during 2022. The increase in our average investments, federal funds sold and other overnight funds was required to maintain our liquidity reserve associated with the higher loan volume we experienced and to take advantage of favorable investment spread opportunities in the marketplace.

Our overall loan quality measures remain strong at December 31, 2023 notwithstanding the increase in Special Mention loans to 2.34 percent of total loans at December 31, 2023 compared to 2.03 percent at December 31, 2022, which resulted from deterioration in credit quality within certain sectors of our Rural Infrastructure operating segment. Adversely classified loans were 0.74 percent of total loans at December 31, 2023 compared to 0.73 percent at December 31, 2022. Nonaccrual loans decreased to $117 million at December 31, 2023 from $145 million at December 31, 2022. Nonaccrual loans were 0.08 percent of total loans at December 31, 2023 and 0.10 percent of total loans at December 31, 2022.

Our capital and liquidity positions remain strong and well in excess of regulatory minimums as of December 31, 2023. Shareholders' equity increased to $11.2 billion as of December 31, 2023, compared to $10.2 billion at December 31, 2022. Our total capital ratio was 14.11 percent as of December 31, 2023, compared to the regulatory minimum requirement of 8.00 percent (10.50 percent inclusive of the capital conservation buffer). As of December 31, 2023, we held a total of $44.0 billion in investments, federal funds sold and other overnight funds, and cash and cash equivalents primarily as a liquidity reserve, and our days liquidity was 199 days, more than double the regulatory days of liquidity requirement.

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

Five-Year Summary of Selected CoBank Consolidated Financial Data ($ in Millions)					
As of and for the Year Ended	**2023**	**2022**	**2021**	**2020**	**2019**
Consolidated Statement of Income Data					
Net Interest Income	**$ 1,847**	$ 1,884	$ 1,726	$ 1,567	$ 1,399
Provision for Credit Losses	**76**	111	18	21	57
Noninterest Income	**459**	366	199	282	221
Operating Expenses	**595**	580	491	435	404
Provision for Income Taxes	**128**	110	102	130	68
Net Income	**$ 1,507**	$ 1,449	$ 1,314	$ 1,263	$ 1,091
Net Income Distributed					
Patronage Distributions:					
Common Stock	**$ 134**	$ 139	$ 128	$ 132	$ 128
Cash	**725**	707	632	490	476
Special Cash	**106**	149	125	106	40
Total Patronage Distributions	**965**	995	885	728	644
Preferred Stock Dividends	**94**	93	83	84	87
Total Net Income Distributed	**$ 1,059**	$ 1,088	$ 968	$ 812	$ 731
Consolidated Balance Sheet Data					
Total Loans	**$ 148,015**	$ 140,089	$ 128,529	$ 120,856	$ 108,854
Less: Allowance for Loan Losses	**730**	682	651	635	655
Net Loans	**147,285**	139,407	127,878	120,221	108,199
Investment Securities, Federal Funds Sold and Other Overnight Funds	**42,958**	45,498	37,342	33,660	34,236
Cash and Cash Equivalents	**1,013**	896	3,197	2,335	949
Other Assets	**3,103**	3,042	1,889	2,370	1,620
Total Assets	**$ 194,359**	$ 188,843	$ 170,306	$ 158,586	$ 145,004
Debt Obligations with Maturities ≤ 1Year	**$ 76,744**	$ 82,608	$ 69,990	$ 63,619	$ 60,399
Debt Obligations with Maturities > 1Year	**102,077**	92,015	84,960	79,765	71,831
Reserve for Unfunded Commitments	**84**	143	106	97	92
Other Liabilities	**4,261**	3,852	3,016	3,195	2,115
Total Liabilities	**183,166**	178,618	158,072	146,676	134,437
Preferred Stock	**1,625**	1,633	1,902	1,500	1,500
Common Stock	**4,076**	4,000	4,013	3,918	3,622
Unallocated Retained Earnings	**7,016**	6,519	6,164	5,804	5,351
Accumulated Other Comprehensive (Loss) Income	**(1,524)**	(1,927)	155	688	94
Total Shareholders' Equity	**11,193**	10,225	12,234	11,910	10,567
Total Liabilities and Shareholders' Equity	**$ 194,359**	$ 188,843	$ 170,306	$ 158,586	$ 145,004
Key Financial Ratios					
For the Respective Year Ended:					
Return on Average Common Shareholders' Equity	**15.78 %**	14.59 %	11.78 %	11.86 %	11.63 %
Return on Average Total Shareholders' Equity	**14.24**	13.17	10.98	11.04	10.77
Return on Average Assets	**0.80**	0.80	0.82	0.84	0.79
Net Interest Margin	**0.99**	1.06	1.10	1.07	1.02
Net Charge-offs (Recoveries) / Average Loans	**0.01**	0.03	(0.01)	0.03	0.01
Patronage Distributions / Total Average Common Stock Owned by Active Borrowers	**25.57**	26.07	23.17	20.58	19.48
As of the Respective Year-end:					
Debt / Total Shareholders' Equity (: 1)	**16.36**	17.47	12.92	12.32	12.72
Total Shareholders' Equity / Total Assets	**5.76 %**	5.41 %	7.18 %	7.51 %	7.29 %
Allowance for Credit Losses[(1)] / Total Loans	**0.55**	0.59	0.59	0.61	0.69
Common Equity Tier 1 Capital Ratio	**11.58**	11.62	12.74	12.33	12.70
Tier 1 Capital Ratio	**13.27**	13.39	14.70	14.25	14.83
Total Capital Ratio	**14.11**	14.25	15.63	15.22	15.86
Tier 1 Leverage Ratio	**6.79**	6.80	7.47	7.30	7.51
Permanent Capital Ratio	**13.37**	13.51	14.81	14.36	14.95
Unallocated Retained Earnings (URE) and URE Equivalents Leverage Ratio	**3.23**	3.13	3.36	3.23	3.24

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

Net Interest Income

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

Net Interest Income and Net Interest Margin

Year Ended December 31,	2023			2022			2021		
($ 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	**$ 143,075**	**5.08 %**	**$ 7,266**	$ 136,912	2.86 %	$ 3,909	$ 123,339	1.97 %	$ 2,431
Investment Securities	**34,957**	**3.64**	**1,274**	33,619	2.02	680	32,695	1.34	437
Federal Funds Sold and Other Overnight Funds	**7,783**	**5.05**	**393**	7,055	2.25	159	845	0.12	1
Total Interest-earning Assets	**$ 185,815**	**4.81**	**$ 8,933**	$ 177,586	2.67	$ 4,748	$ 156,879	1.83	$ 2,869
Interest-bearing Liabilities									
Bonds and Notes	**$ 158,981**	**4.02 %**	**$ 6,397**	$ 150,568	1.73 %	$ 2,603	$ 134,050	0.83 %	$ 1,107
Discount Notes	**12,021**	**4.64**	**558**	13,182	1.59	209	9,536	0.12	11
Other Notes Payable	**2,831**	**4.63**	**131**	2,022	2.57	52	1,357	1.84	25
Total Interest-bearing Liabilities	**$ 173,833**	**4.08**	**$ 7,086**	$ 165,772	1.73	$ 2,864	$ 144,943	0.79	$ 1,143
Interest Rate Spread		**0.73**			0.94			1.04	
Impact of Equity Financing	**$ 10,582**	**0.26**		$ 10,999	0.12		$ 11,970	0.06	
Net Interest Margin and Net Interest Income		**0.99 %**	**$ 1,847**		1.06 %	$ 1,884		1.10 %	$ 1,726

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)]

	2023			2022		
($ 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	**$ 313**	**$ 3,044**	**$ 3,357**	$ 328	$ 1,150	$ 1,478
Investment Securities	**49**	**545**	**594**	16	227	243
Federal Funds Sold and Other Overnight Funds	**37**	**197**	**234**	74	84	158
Total Interest Income	**399**	**3,786**	**4,185**	418	1,461	1,879
Total Interest Expense	**328**	**3,894**	**4,222**	262	1,459	1,721
Changes in Net Interest Income	**$ 71**	**$ (108)**	**$ (37)**	$ 156	$ 2	$ 158

(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 decreased $37 million, or 2 percent, to $1.847 billion in 2023, compared to $1.884 billion in 2022. The decrease in net interest income was primarily in our Agribusiness operating segment resulting from a decline in seasonal financing at many of our grain and farm supply cooperative customers due to lower commodity prices and lower levels of grain inventory. Lower earnings on balance sheet positioning and lower spreads in certain lending portfolios also contributed to decreased net interest income in 2023. Partially offsetting the decreases were increases in net interest income in our Rural Infrastructure and Farm Credit Banking operating segments driven by higher loan volume. Average loan volume increased $6.2 billion, or 5 percent, to $143.1 billion in 2023 reflecting growth in lending in Farm Credit Banking and Rural Infrastructure, partially offset by a decrease in our Agribusiness operating segment. Average investment securities, federal funds sold and other overnight funds increased to $42.7 billion in 2023 from $40.7 billion in 2022.

Net interest margin decreased to 0.99 percent in 2023 from 1.06 percent in 2022, and interest rate spread decreased to 0.73 percent in 2023 from 0.94 percent in 2022. The decrease in net interest margin was primarily driven by increased funding costs, changes in asset mix including increased lending to affiliated Associations and higher levels of investment securities, lower spreads in certain lending portfolios within our Agribusiness and Rural Infrastructure operating segments and decreased earnings on balance sheet positioning.

Net interest income increased $158 million, or 9 percent, to $1.884 billion in 2022, compared to $1.726 billion in 2021. The increase in net interest income was primarily driven by higher average loan volume. Net interest income increased most significantly in our Agribusiness operating segment due to sharply higher commodity prices, which drove higher financing requirements at many of our grain and farm supply cooperative customers as well as increased lending to customers that use commodities as inputs to their businesses. Average loan volume increased $13.6 billion, or 11 percent, to $136.9 billion in 2022 reflecting growth in lending across all three of our operating segments. Average investment securities, federal funds sold and other overnight funds increased to $40.7 billion in 2022 from $33.5 billion in 2021.

Net interest margin decreased to 1.06 percent in 2022 from 1.10 percent in 2021, and interest rate spread decreased to 0.94 percent in 2022 from 1.04 percent in 2021. The decrease in net interest margin was driven by lower spreads in certain lending portfolios within our Agribusiness and Rural Infrastructure operating segments and changes in asset mix including increased lending to affiliated Associations and agricultural export finance customers and higher levels of investment securities, all of which have lower spreads commensurate with lower risk.

Provision for Credit Losses and Allowance for Credit Losses

The provision for credit losses reflects our estimate of current expected credit losses in our loan and 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 (ACL) on loans. We base our ACL on loans on the factors discussed in “Critical Accounting Estimates – Allowance for Credit Losses on Loans” on page 76. The table on page 42 summarizes the activity in our ACL on loans, by operating segment, for the past five years.

We recorded a $76 million provision for credit losses in 2023, which included a $59 million provision in our Rural Infrastructure operating segment and a $17 million provision in our Agribusiness operating segment. The 2023 provision for credit losses primarily relates to higher reserves resulting from credit quality deterioration within certain sectors of our Rural Infrastructure operating segment and macroeconomic forecasts impacting modeled credit losses in many of our lending portfolios. The $76 million provision for credit losses in 2023 included a credit loss reversal on our investment securities of $3 million in our Rural Infrastructure operating segment, which resulted from an improvement in modeled credit losses for these securities. As discussed in Note 2 to the accompanying consolidated financial statements, CoBank adopted the Current Expected Credit Losses (CECL) accounting standard on January 1, 2023. CECL is a significant change and may introduce a higher level of volatility in credit loss provisions going forward, given the use of third-party macroeconomic forecasts as an input to determine this estimate.

We recorded a $111 million provision for credit losses in 2022, which included a $71 million provision in our Agribusiness operating segment and a $40 million provision in our Rural Infrastructure operating segment. The 2022 provision for credit losses in our Agribusiness operating segment primarily related to increased lending activity and to a lesser extent higher specific reserves for a small number of customers. The 2022 provision for credit losses in our Rural Infrastructure operating segment primarily related to a reserve for a power infrastructure customer that was subsequently charged off and to a lesser extent deterioration in credit quality in certain portfolios.

Special Mention loans increased to 2.34 percent of total loans at December 31, 2023 compared to 2.03 percent at December 31, 2022 primarily due to deterioration in credit quality within certain sectors of our Rural Infrastructure operating segment. Adversely classified loans were 0.74 percent of total loans at December 31, 2023, compared to 0.73 percent at December 31, 2022 and 0.72 percent at December 31, 2021.

Total nonaccrual loans decreased by $28 million to $117 million, or 0.08 percent of total loans, at December 31, 2023 from $145 million, or 0.10 percent of total loans, at December 31, 2022, primarily due to payoffs of loans to several large food and agribusiness customers partially offset by a limited number of rural energy and agribusiness customers transferred to nonaccrual status during 2023. Total nonaccrual loans increased by $22 million to $145 million at December 31, 2022 from $123 million, or 0.10 percent of total loans, at December 31, 2021 due to a small number of loans in our Agribusiness operating segment, which were transferred to nonaccrual status, partially offset by the charge-offs and sales of a limited number of loans in our Rural Infrastructure operating segment. We recorded gross charge-offs of $21 million in 2023 compared to $45 million and $6 million in 2022 and 2021, respectively. The charge-offs in 2023 related primarily to a small number of agribusiness, rural energy and communication customers. The charge-offs in 2022 related primarily to a power infrastructure customer and an agribusiness customer, both of which experienced financial difficulty, and to a lesser extent a small number of other customers in our Agribusiness and Rural Infrastructure operating segments. The charge-offs in 2021 primarily related to a small number of customers in our Agribusiness and Rural Infrastructure operating segments. Gross recoveries were $6 million in 2023 compared to $2 million and $13 million in 2022 and 2021, respectively.

Our ACL on loans was $814 million at December 31, 2023, compared to $825 million and $757 million as of December 31, 2022 and 2021, respectively. As discussed in Note 2 to the accompanying consolidated financial statements, CoBank adopted the CECL accounting standard on January 1, 2023, which resulted in a $75 million decrease in our ACL on loans. The ACL on loans represented 0.55 percent of total loans as of the end of 2023, compared to 0.59 percent of total loans as of the end of 2022 and 2021. At December 31, 2023, our ACL on loans represented 1.18 percent of non-guaranteed loans excluding wholesale loans to Associations, compared to 1.24 percent and 1.22 percent at December 31, 2022 and 2021, respectively.

Refer to "Enterprise Risk Profile – Credit Risk Management" beginning on page 48 for further information on nonperforming loans, charge-offs, loan quality trends and the factors considered in determining the levels of our provision for credit losses and ACL.

Noninterest Income

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

Noninterest Income ($ in Millions)			
Year Ended December 31,	**2023**	**2022**	**2021**
Net Fee Income	**$ 219**	$ 158	$ 153
Patronage Income	**176**	151	129
Prepayment Income	**1**	9	79
Gains (Losses) on Early Extinguishments of Debt	**—**	1	(126)
(Losses) Gains on Sales of Investment Securities	**(7)**	2	(36)
Gains on Interest Rate Swaps and Other Derivatives	**20**	21	16
Other, Net	**50**	24	(16)
Total Noninterest Income	**$ 459**	$ 366	$ 199

Noninterest income is primarily composed of fee income, patronage income, loan prepayment income, gains and losses on derivatives, sales of investments and early extinguishments of debt and other miscellaneous gains and losses.

Total noninterest income increased in 2023 to $459 million, or 25 percent, from $366 million in 2022. The increase in noninterest income resulted primarily from increases in net fee income, patronage income and other noninterest income associated with the favorable resolution of a contractual business dispute. Partially offsetting these amounts were increased losses on sales of investment securities and decreased prepayment income.

Our net fee income, which includes arrangement fees and unused commitment fees, among others, increased to $219 million in 2023 compared to $158 million in 2022 primarily due to a higher level of transaction-related lending fees in our Agribusiness and Rural Infrastructure operating segments.

Patronage income, which represents patronage received from loans we sold to other System institutions, increased to $176 million in 2023 compared to $151 million in 2022. This increase reflects greater levels of loans sold to affiliated Associations and other System institutions as well as higher levels of patronage received from certain of these System institutions.

Prepayment income decreased to $1 million in 2023 from $9 million in 2022 due to a lower level of customer refinancing activity and prepayment fees driven by the higher interest rate environment. Gains on early extinguishments of Systemwide Debt Securities were less than $1 million in 2023 and $1 million in 2022. During 2023, we extinguished $8.3 billion of Systemwide Debt Securities compared to $4.0 billion in 2022. It is our general practice to extinguish debt to offset the current and prospective impact of prepayments in our loan and investment portfolios.

During 2023, we sold investment securities for total proceeds of $548 million resulting in losses totaling $7 million. The investment sales in 2023 were primarily to replace certain lower yielding investments with higher yielding investments to increase our net interest income. During 2022, we sold investment securities for total proceeds of $513 million resulting in gains totaling $2 million. The investment sales in 2022 were primarily to take advantage of favorable market conditions and for administrative reasons. The sale of investment securities is discussed in "Liquidity and Capital Resources" beginning on page 69.

Gains on interest rate swaps and other derivatives were $20 million in 2023 compared to $21 million in 2022 and reflects customer derivative transaction activity and related income.

Other noninterest income increased to $50 million in 2023 compared to $24 million in 2022 primarily due to income associated with the favorable resolution of a contractual business dispute partially offset by lower gains on investments in Rural Business Investment Companies (RBICs) compared to 2022. The 2022 period also included income from the redemption of allocated equities from the Federal Farm Credit Banks Funding Corporation (Funding Corporation).

Total noninterest income increased in 2022 to $366 million, or 84 percent, from $199 million in 2021. The increase in noninterest income resulted primarily from lower losses on early extinguishments of debt, net of prepayment income, higher patronage income, and a gain on sales of investment securities as compared to a loss in 2021. Noninterest income in 2021 also included an expense relating to litigation that was settled in January 2022. See Note 14 to the accompanying consolidated financial statements.

Operating Expenses

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

Analysis of Operating Expenses ($ in Millions)

Year Ended December 31,	2023	2022	2021
Employee Compensation	**$ 268**	$ 238	$ 233
Insurance Fund Premium	**144**	151	109
Information Services	**68**	69	54
General and Administrative	**36**	37	35
Occupancy and Equipment	**17**	17	16
Farm Credit System Related	**18**	18	16
Purchased Services	**23**	31	19
Travel and Entertainment	**21**	19	9
Total Operating Expenses	**$ 595**	$ 580	$ 491
Total Operating Expenses / (Net Interest Income + Net Fee Income)	**28.8 %**	28.4 %	26.1 %
Operating Expenses, Excluding Insurance Fund Premium / (Net Interest Income + Net Fee Income)	**21.8**	21.0	20.3

Total operating expenses increased 3 percent in 2023 to $595 million, compared to $580 million for 2022. The higher level of operating expenses was primarily driven by an increase in employee compensation, partially offset by decreases in Farm Credit Insurance Fund (Insurance Fund) premium expense and purchased services.

Employee compensation expense, which includes salaries, incentive compensation and employee benefits, increased to $268 million in 2023 from $238 million in 2022. The increase was due to an increase in the number of employees, as well as merit and other pay increases. As of December 31, 2023, we had 1,199 employees, compared to 1,140 and 1,077 employees at December 31, 2022 and 2021, respectively.

Insurance Fund premium expenses decreased to $144 million in 2023, compared to $151 million in 2022. The decrease was due to lower Insurance Fund premium rates, partially offset by an increase in insured debt obligations. Premium rates are set by the Farm Credit System Insurance Corporation (Insurance Corporation) and were 18 basis points of average outstanding adjusted insured debt obligations in 2023 compared to 20 basis points in 2022. Premium rates also include 10 basis points assessed to nonaccrual loans and impaired investments in both periods. In February 2024, the Insurance Corporation announced a premium rate of 10 basis points of average outstanding adjusted insured debt obligations for 2024. The Insurance Corporation will review premium rates again in July 2024. 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.

Information services expense, which includes the cost of hardware, software, network infrastructure and related support services, was relatively flat year over year at $68 million in 2023, compared to $69 million in 2022.

General and administrative expenses were $36 million in 2023, compared to $37 million in 2022. General and administrative expenses primarily include charitable contributions, directors' expenses, associate training and temporary labor expenses and other miscellaneous expenses. The decrease in general and administrative expenses was driven by the timing of a number of charitable contributions made in the fourth quarter of 2022 and a related reduction in charitable contributions in 2023. As a general practice, the Bank seeks to commit 1 percent of budgeted net income to charitable giving over time; however, the actual level of charitable contributions expense can fluctuate year to year. The decrease in 2023 was partially offset by higher insurance expenses and other administrative costs.

Occupancy and equipment expenses were $17 million in both 2023 and 2022. Occupancy and equipment expenses include rent, maintenance and repairs related to our corporate headquarters and other banking center offices.

Farm Credit System related expenses were $18 million in both 2023 and 2022. 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 and the level of bank assets.

Purchased services expenses decreased to $23 million in 2023, compared to $31 million in 2022. Purchased services expenses primarily include professional and consulting fees, which decreased due to certain strategic spend during 2022 for process automation and improvements to our operating platforms. This decrease was partially offset by higher legal expenses and asset quality costs in 2023.

Travel and entertainment expenses increased to $21 million in 2023, compared to $19 million in 2022. The increase was primarily driven by higher corporate, travel and customer meeting expenses.

Total operating expenses as a percent of net interest income plus net fee income were 28.8 percent in 2023 compared to 28.4 percent in 2022 and 26.1 percent in 2021. Excluding the impact of Insurance Fund premium expense, operating expenses as a percent of net interest income plus net fee income were 21.8 percent in 2023, compared to 21.0 percent in 2022 and 20.3 percent in 2021.

Total operating expenses increased 18 percent in 2022 to $580 million, compared to $491 million for 2021. The higher level of operating expenses was driven by an increase in Insurance Fund premium expenses and, to a lesser extent, increased expenses related to information services, purchased services, employee compensation, and travel and entertainment.

Provision for Income Taxes

Our provision for income taxes increased to $128 million in 2023 from $110 million in 2022, and the effective tax rate was 7.8 percent for 2023 compared to 7.1 percent in 2022. The increase in the provision for income taxes resulted from a shift in the mix of income within the taxable portion of our business, which included lower levels of patronage-based seasonal agribusiness lending and an increase in fee income. A lower level of special patronage for 2023 also contributed to the increase in the income tax provision in 2023.

Our provision for income taxes increased to $110 million in 2022 from $102 million in 2021, and the effective tax rate decreased slightly to 7.1 percent for 2022 compared to 7.2 percent in 2021. The increase in income tax expense was primarily due to an increase in earnings attributable to taxable business activities in 2022.

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 include wholesale lending to Farm Credit Associations and loan participation purchases from other System entities.

Operating Segment Financial Review

We conduct lending operations through three operating segments: Agribusiness, Farm Credit Banking 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 attributed to the operating segments.

In addition to the operating segments described below, our capital markets division supports our lending divisions and manages syndications and loan sales with 79 financial institutions, including System institutions. As of December 31, 2023, the total amount of syndicated or sold loan commitments was approximately $113.2 billion to System entities and other financial institutions to help meet customers' credit needs and to effectively diversify risk and manage capital.

We also offer non-credit products and services including cash management, online banking, mobile banking and commercial credit card solutions. Revenues generated from non-credit products and services and by capital markets, as well as all related operating expenses, are attributed to the operating segments.

Net income by operating segment is summarized in the table below and is more fully disclosed in Note 13 to the accompanying consolidated financial statements. The following tables also provide period-end and average loan amounts by operating segment.

Net Income by Operating Segment ($ in Millions)

Year Ended December 31,	2023	2022	2021	2020	2019
Agribusiness	**$ 731**	$ 774	$ 677	$ 608	$ 537
Farm Credit Banking	**281**	251	245	257	223
Rural Infrastructure	**495**	424	392	398	331
Total Net Income	**$ 1,507**	$ 1,449	$ 1,314	$ 1,263	$ 1,091

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

December 31,	2023	2022	2021	2020	2019
Agribusiness	**$ 37,785**	$ 40,098	$ 38,094	$ 36,103	$ 33,168
Farm Credit Banking	**77,658**	71,529	65,632	60,516	54,459
Rural Infrastructure	**32,572**	28,462	24,803	24,237	21,227
Total Loans	**$ 148,015**	$ 140,089	$ 128,529	$ 120,856	$ 108,854

Average Loan Portfolio by Operating Segment ($ in Millions)

Year Ended December 31,	2023	2022	2021	2020	2019
Agribusiness	**$ 40,044**	$ 43,323	$ 37,656	$ 33,292	$ 32,119
Farm Credit Banking	**72,816**	67,855	61,304	56,423	51,313
Rural Infrastructure	**30,215**	25,734	24,379	22,919	20,919
Total Average Loans	**$ 143,075**	$ 136,912	$ 123,339	$ 112,634	$ 104,351

The following table presents activity in the ACL on loans by operating segment.

Analysis of the ACL on Loans ($ in Millions)					
	2023	**2022**	**2021**	**2020**	**2019**
Beginning of Year	**$ 825**	$ 757	$ 732	$ 747	$ 703
Change in Accounting Principle[1]:					
Agribusiness	**(135)**	—	—	—	—
Farm Credit Banking	**—**	—	—	—	—
Rural Infrastructure	**60**	—	—	—	—
Total Change in Accounting Principle	**(75)**	—	—	—	—
Charge-offs:					
Agribusiness	**(11)**	(21)	(3)	(7)	(9)
Farm Credit Banking	**—**	—	—	—	—
Rural Infrastructure	**(10)**	(24)	(3)	(32)	(7)
Total Charge-offs	**(21)**	(45)	(6)	(39)	(16)
Recoveries:					
Agribusiness	**6**	2	4	2	2
Farm Credit Banking	**—**	—	—	—	—
Rural Infrastructure	**—**	—	9	1	1
Total Recoveries	**6**	2	13	3	3
Net (Charge-offs) Recoveries	**(15)**	(43)	7	(36)	(13)
Provision (Reversal) for Credit Losses on Loans Charged (Credited) to Earnings[2]:					
Agribusiness	**17**	71	16	26	53
Farm Credit Banking	**—**	—	—	—	—
Rural Infrastructure	**62**	40	2	(5)	4
Total Provision for Credit Losses on Loans Charged to Earnings	**79**	111	18	21	57
End of Year	**$ 814**	$ 825	$ 757	$ 732	$ 747
Components:					
Allowance for Loan Losses	**$ 730**	$ 682	$ 651	$ 635	$ 655
Reserve for Unfunded Commitments	**84**	143	106	97	92
Total ACL on Loans	**$ 814**	$ 825	$ 757	$ 732	$ 747
ACL/Total Loans	**0.55 %**	0.59 %	0.59 %	0.61 %	0.69 %
ACL/Non-guaranteed Loans (Excluding Loans to Associations)	**1.18**	1.24	1.22	1.24	1.40
ACL/Nonaccrual and Nonperforming Loans	**651**	497	604	620	296
ACL/Nonaccrual Loans	**696**	568	617	624	310
Net Charge-offs (Recoveries) / Average Loans	**0.01**	0.03	(0.01)	0.03	0.01

[1] Effective January 1, 2023, we adopted the CECL accounting standard pursuant to ASU Financial Instruments - Credit Losses (Topic 326).

[2] Excludes credit loss reversal of $3 million on investment securities for 2023.

ACL on Loans by Operating Segment ($ in Millions)					
December 31,	**2023**	**2022**	**2021**	**2020**	**2019**
Agribusiness	**$ 516**	$ 639	$ 587	$ 570	$ 549
Farm Credit Banking	**—**	—	—	—	—
Rural Infrastructure	**298**	186	170	162	198
Total ACL on Loans	**$ 814**	$ 825	$ 757	$ 732	$ 747

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, leasing 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 loans from other System entities that they originate under their lending authorities and participate in syndicated agribusiness loans with other financial institutions.

A large portion of Agribusiness loan volume is seasonal financing provided to grain and farm supply cooperatives. 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.

While market conditions are generally favorable in many sectors of the agricultural industry we serve, our Agribusiness customers face challenges resulting from ongoing volatile commodity prices, labor shortages, inflation, higher interest rates, weather-related events, evolving domestic and global market demand, increasing regulation and currency fluctuations. These challenges, along with the need to attract high-quality leadership, manage risk, and remain competitive, have led many 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. 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. Expanding the export of U.S. agricultural products is an important component of supporting the U.S. economy and the balance of trade with foreign trading partners. 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, 2023, the AEFD had $7.0 billion in loans outstanding, 24 percent of which were guaranteed by the U.S. government under the GSM program, compared to $8.6 billion in loans outstanding as of December 31, 2022, 27 percent of which were guaranteed under the GSM program. The decrease in AEFD loans outstanding resulted from more selective lending in this business, which generally carries lower spreads than other parts of our loan portfolio. The mix of volume in AEFD continues to shift toward a higher level of non-guaranteed volume reflecting a decline in the competitiveness of the GSM program. We further mitigate our exposure for certain AEFD lending transactions by purchasing credit enhancement from non-government third parties.

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, 2023 and 2022, FCL had $4.3 billion and $3.8 billion, respectively, in leases outstanding.

2023 Performance

Agribusiness loans outstanding decreased to $37.8 billion at December 31, 2023, compared to $40.1 billion at December 31, 2022. Average loan volume decreased 8 percent to $40.0 billion in 2023 from $43.3 billion in 2022. The decreases in outstanding and average loan volume primarily resulted from a decline in seasonal financing at many of our grain and farm supply cooperative customers due to lower commodity prices and lower levels of grain inventory. Commodity prices for wheat, corn and soybeans decreased in 2023, compared to 2022 when commodity prices were significantly elevated due to supply shortages, drought and other weather-related events, as well as the war in Ukraine. This decrease in loan volume was partially offset by growth in lending to large food and agribusiness customers during 2023.

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,	2023		2022		2021		2020		2019	
Commodity:	High	Low	High	Low	High	Low	High	Low	High	Low
Corn	**$ 7.07**	**$ 4.39**	$ 8.13	$ 5.64	$ 7.70	$ 4.92	$ 4.84	$ 3.12	$ 4.55	$ 3.40
Soybeans	**14.37**	**11.53**	17.69	13.01	16.70	11.57	13.11	8.22	9.40	7.91
Wheat	**8.37**	**5.56**	12.94	7.29	8.29	5.92	6.41	4.76	5.58	4.18

Our Agribusiness operating segment generated $731 million in net income for 2023, a $43 million decrease from $774 million in net income for 2022. The decrease was primarily due to lower net interest income somewhat offset by a decrease in the provision for credit losses and higher noninterest income.

Net interest income in our Agribusiness operating segment decreased $142 million to $912 million in 2023 as compared to $1.054 billion in 2022. This decrease was primarily due to lower average loan volume driven by lower commodity prices and lower levels of grain inventory, as described above, and, to a lesser extent, lower earnings on balance sheet positioning and lower spreads in certain lending portfolios.

Agribusiness recorded a $17 million provision for credit losses in 2023, compared to a $71 million provision for credit losses in 2022. The 2023 provision for credit losses in our Agribusiness operating segment primarily relates to higher reserves resulting from deterioration in credit quality and macroeconomic forecasts impacting modeled credit losses. The 2022 provision for credit losses primarily related to increased lending activity and to a lesser extent higher specific reserves for a small number of customers.

Overall Agribusiness credit quality remains strong. However, we believe deterioration could result from market factors impacting our customers, including an ongoing volatile agricultural commodity price environment, labor shortages, inflation, higher interest rates, downward pressure on farm income, weather-related events and uncertainties associated with trade and changing government policies. In addition, concentrations within our loan portfolio can cause the level of our loan quality, nonaccrual loans, charge-offs and provisions for credit losses or credit loss reversals to vary significantly from period to period. Agribusiness nonaccrual loans decreased to $90 million at December 31, 2023 as compared to $137 million at December 31, 2022 primarily due to payoffs of loans to several large food and agribusiness customers somewhat offset by a limited number of grain and farm supply, food and agribusiness customers transferred to nonaccrual status during 2023. Gross charge-offs were $11 million in 2023 compared to $21 million for 2022. The 2023 and 2022 charge-offs were related to a small number of agribusiness and leasing customers. Gross recoveries were $6 million in 2023 compared to $2 million in 2022.

Agribusiness noninterest income increased by $42 million to $255 million in 2023 from $213 million in 2022. The increase in noninterest income for the period was primarily due to higher net fee income as a result of a higher level of transaction-related lending fees, increased patronage income and other income associated with the favorable resolution of a contractual business dispute.

Agribusiness operating expenses decreased by $4 million to $358 million in 2023 from $362 million in 2022, primarily due to a decline in Insurance Fund premium expense, partially offset by increased employee compensation.

Agribusiness income tax expense was $61 million in 2023, as compared to $60 million in 2022.

Farm Credit Banking

Overview

The Farm Credit Banking 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. As of December 31, 2023, we had 16 affiliated Associations operating in 23 states serving the Northwest, West, Southwest, Rocky Mountains, Mid-Plains, and Northeast regions of the United States. A number of affiliated Associations have merged in recent years as Associations look for ways to continue to fulfill their mission in a safe and sound manner, while more efficiently providing value-added products and services to their member-owners.

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 partner to serve the capital needs of rural America by providing credit and other value-added financial 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.

2023 Performance

As of December 31, 2023, loans in the Farm Credit Banking operating segment increased to $77.7 billion, compared to $71.5 billion at December 31, 2022. Average loan volume increased 7 percent to $72.8 billion in 2023, compared to $67.9 billion in 2022. The increase resulted from greater overall lending by our affiliated Associations to agricultural producers and processors and our affiliated Associations funding a higher level of syndicated loans and participations. At December 31, 2023 and 2022, these loans included $71.8 billion and $65.7 billion, respectively, in wholesale loans to our affiliated Associations and $5.8 billion and $5.7 billion, respectively, of participations in wholesale loans made by other System banks to certain of their affiliated Associations. Such participations included $4.4 billion as of December 31, 2023 and 2022, in wholesale loans made by the Farm Credit Bank of Texas (FCBT). The balance of participations of $1.4 billion and $1.3 billion as of December 31, 2023 and 2022, respectively, represent wholesale loans made by AgFirst Farm Credit Bank. The Farm Credit Banking operating segment also included loans made to a limited number of other financing institutions totaling $0.1 billion at December 31, 2023 and 2022.

Farm Credit Banking operating segment net income increased to $281 million in 2023, compared to $251 million for 2022. The increase resulted primarily from higher net interest income partially offset by lower noninterest income and slightly higher operating expenses.

Net interest income in our Farm Credit Banking operating segment increased to $336 million in 2023 as compared to $291 million in 2022 primarily due to growth in average loan volume.

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 Farm Credit Banking operating segment are commensurate with the lower risk profile and lower regulatory capital requirements. Notwithstanding the Special Mention credit quality classification of an affiliated Association wholesale loan as discussed in the "Credit Quality of Loans" section, loan quality in Farm Credit Banking remains strong. No provisions for credit losses or ACL have been recorded related to any of our wholesale loans to Associations.

Farm Credit Banking noninterest expense was $4 million in 2023 as compared to noninterest income of $9 million in 2022. The decrease primarily resulted from a loss on the sale of investment securities during 2023 to replace lower yielding investments with higher yielding investments and was more than offset by higher net interest income. Noninterest income during 2022 primarily included prepayment income, net of losses on early extinguishments of debt. Losses on early extinguishments of debt are generally incurred to offset the current and prospective impact of prepayments of loans and investments.

Farm Credit Banking operating expenses in 2023 increased to $51 million from $49 million in 2022 primarily due to higher employee compensation and Insurance Fund premium expenses.

Farm Credit Banking 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 industries as well as to community facilities in rural America. Primary products and services provided include term loans, bonds, revolving lines of credit, letters of credit, project finance, 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 credit and financial services to meet rural infrastructure needs, including 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, participates in USDA loan guarantees and refinances USDA loans. These activities target rural water and waste systems, irrigation districts, 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. In 2022, the U.S. Congress passed the Inflation Reduction Act, which is designed to provide funding to climate-positive infrastructure projects across the industries we serve. In 2021, the U.S. Congress passed the Infrastructure Investment and Jobs Act, which over the long-term will inject trillions of dollars of infrastructure spending. While we have experienced some growth in our lending to the renewable energy sector in 2023 as a result of these government programs, the Inflation Reduction Act and Infrastructure Investment and Jobs Act could further increase loan demand across a broad range of infrastructure industries we serve, including the rural power, energy, utilities and broadband sectors, as these programs further develop and allocate funds to various projects in future periods.

Power and energy industry customers include rural electric generation and transmission cooperatives, midstream energy and gas pipeline providers, electric distribution cooperatives, renewable energy providers, independent power producers, regulated utilities and investor-owned utilities. While demand for electricity has been relatively low over the past decade and has declined more recently in the commercial and industrial sectors, loan demand continues to grow as our customers make infrastructure enhancements and technology driven investments to meet long-term system requirements, improve system reliability, develop renewable energy and maintain compliance with environmental and regulatory mandates. Growth in renewable energy projects and environmental mandates also contributes to loan demand from project finance customers. In addition, many electric distribution cooperatives are investing in broadband infrastructure to enable smart grid technologies and to provide their local communities with reliable high-speed internet.

Communications industry customers include companies providing local wireline and wireless broadband services, long-haul and middle-mile fiber transport, and data center and cloud-based products to rural communities. Our customers also include regional and national communications providers with networks that are globally interconnected, who are essential to bringing services to rural America through their partnerships and contractual relationships with our rural customers. Loan demand is driven by capital spending by wireline and wireless broadband infrastructure providers to meet the growing demand for high-speed data. Demand also results from merger and acquisition activity, including strategic acquisitions seeking scale, and from private equity and infrastructure funds establishing a greater presence in this competitive but growing industry. Broadband providers have experienced higher demand and a significant increase in internet usage.

Water industry customers include rural water and waste 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. Demand for water has also shifted from commercial to residential use, altering needs for many water authorities. 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. We also make equity investments in certain Rural Business Investment Companies (RBICs). Our investments in RBICs focus on small and middle market companies that create jobs and promote commerce in rural America.

2023 Performance

Rural Infrastructure loans outstanding increased to $32.6 billion at December 31, 2023 compared to $28.5 billion at December 31, 2022. Average loan volume increased 17 percent to $30.2 billion in 2023 compared to $25.7 billion in 2022. The increase in loan volume was primarily related to rural power, electric distribution and communication customers.

Rural Infrastructure net income increased to $495 million for 2023 from $424 million for 2022. The increase was primarily driven by increases in net interest income and noninterest income somewhat offset by an increase in the provision for credit losses and higher operating expenses.

Net interest income increased to $599 million in 2023 from $539 million in 2022. This increase was primarily due to higher average loan volume partially offset by lower earnings on balance sheet positioning.

Rural Infrastructure recorded a provision for credit losses of $59 million in 2023 compared to a provision of $40 million in 2022. The 2023 provision for credit losses primarily related to higher reserves resulting from deterioration in credit quality in our rural energy and communication portfolios, macroeconomic forecasts impacting modeled credit losses and increased lending activity. The Rural Infrastructure provision for credit losses in 2023 includes a credit loss reversal on our investment securities of $3 million, which resulted from an improvement in modeled credit losses for these securities. The 2022 provision for credit losses primarily related to a reserve for a power infrastructure customer that was subsequently charged off and to a lesser extent deterioration in credit quality in certain portfolios.

Nonaccrual loans in Rural Infrastructure increased to $27 million at December 31, 2023 as compared to $8 million at December 31, 2022 primarily due to a limited number of rural energy loans that were transferred to nonaccrual status during 2023. 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. Gross charge-offs were $10 million in 2023 as compared to $24 million in 2022. The 2023 and 2022 charge-offs were related to a small number of rural energy and communication customers. Gross recoveries were less than $1 million in 2023 and 2022.

Rural Infrastructure noninterest income increased to $208 million in 2023 from $144 million in 2022 driven by higher net fee income due to a higher level of transaction-related fees and other income associated with the favorable resolution of a contractual business dispute.

Rural Infrastructure operating expenses increased to $186 million in 2023 from $169 million in 2022 primarily due to an increase in employee compensation and Insurance Fund premium expenses.

Rural Infrastructure income tax expense increased to $67 million in 2023 as compared to $50 million in 2022. The increase was primarily due to an increase in earnings in 2023 resulting from higher net interest income and noninterest income.

Enterprise Risk Profile

Managing and optimizing risk to our earnings, capital and enterprise value are essential components of successfully operating the Bank. Our primary risk exposures are credit, market, liquidity, operational, strategic, 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 potential for losses arising from changes in the value of CoBank's assets and liabilities resulting from movements in interest rates, basis risk, equity positioning, differences between the timing of contractual maturities, re-pricing characteristics, credit spreads, 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 of loss resulting from inadequate or failed internal processes, systems, human factors or from external events. It can include risk of human errors or misconduct, fraud, inadequate data, systems and technology or process failures including external cyber risks impacting our technology platforms, business data and operational processes 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 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 provides independent oversight and support in the establishment of a risk management framework across the organization. The Risk Management Group is led by the Chief Risk Officer (CRO) and includes the Credit Management, Enterprise Risk Management, Compliance & Financial Crimes, Business Continuity, and Enterprise Security Divisions. The Risk Management Group works to identify, measure, monitor, control and report the Bank's primary risk exposures against limits and tolerance levels established by 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, treasury and investing, cash management, custody, settlement, 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 financial or contractual obligations. Credit risk may be further impacted by changes in collateral values, changes in the prevailing economic environment, fraud, changes in the value of investment securities, changes in the creditworthiness of investment obligors and decreases in the value of underlying collateral securing investment securities.

We actively manage credit risk through a 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 ACL 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 Division 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 approvals or administrative matters and approves exceptions if conditions warrant.

The Credit Management Division is led by the CCO, who reports to the CRO. The Credit Management Division oversees the establishment of concentration and portfolio limits and manages the credit approval process within those limits pursuant to Board policies. The Credit Management Division reviews and approves transactions in accordance with certain delegated approval authorities to ensure conformity with the Bank's established lending policies and guidelines. It also recommends and approves limits with respect to investment obligors and derivative counterparties and manages significant high-risk or stressed loans.

The Risk Management Group oversees the development of the portfolio strategy, the analysis of the ACL and other risk-based modeling and metrics. In addition, the Risk Management Group provides quarterly reporting on the Bank's risk appetite and exposures and an annual risk assessment. Both reports include monitoring and assessment of credit risk.

Although they do not report to the CRO, 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 (CFO), CRO, Chief Banking Officer (CBO), CCO, Treasurer, Executive Vice President of Farm Credit Banking, Executive Vice President of Rural Infrastructure Banking, and Senior Vice President of Capital Markets, 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, CBO and the CCO. It oversees the methodologies for setting country risk grade and establishing maximum country limits, as well as the approval of individual country risk ratings 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 the Bank's 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' YBS 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 Farm Credit Banking operating segment, the earnings, capital and credit 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 in Note 17.

Management assigns a risk rating to each borrower based on two primary measurements: the 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 determined by the financial characteristics of the borrower and reflects the probability of default driven by several considerations, 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, PD, LGD, and type of exposure 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, PD, LGD 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 leases, 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. An important diversification and risk management tool is our similar entity authority which allows us to purchase participations in loans to borrowers which include businesses that are not directly eligible for a System loan but have operations that are functionally similar to a directly eligible borrower. This authority allows us to reduce geographic, industry, and individual borrower concentrations in our loan portfolio.

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. Global trade flows and government policies on trade can impact the pricing of commodities, costs of input products and supply chains of Agribusiness customers.

Volatility in the prices and supplies of agricultural commodities and associated inputs required to produce the 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, labor shortages, inflation, global production and supply levels, financial investment in the commodity futures markets by non-agricultural interests, changing export markets and the effect of trade policies, government support programs, and currency exchange rates. Market prices for food products and changing consumer demands also have a significant effect on a number of customers within our Agribusiness operating segment.

Extreme weather conditions can substantially impact harvest volume 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 affected. 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. 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. The increasing focus on climate change by investors, regulators and legislators may also impact borrowers in the Agribusiness operating segment in a manner that may require changes to their existing business models and operations.

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 and demand for commodities or products used or sold by our borrowers or their access to markets. Such events may also impact country risk, cross border risk or repayment ability of foreign counterparties in our agricultural export finance lending portfolio. Country risk is the risk that economic, social, and political conditions and events in a foreign country will affect the current or projected financial condition or resilience of a correspondent customer bank. Cross border risk encompasses convertibility and transfer risks. Convertibility risk exists when the ultimate source of repayment is unable to convert its local currency into the currency of payment due to government restrictions or actions. Similarly, transfer risk is the possibility that an asset cannot be serviced in the currency of payment because of a government action limiting the transferability of foreign currency.

U.S. agriculture has historically received financial support from the U.S. government through direct payments, crop insurance and other benefits. The Agricultural Improvement Act of 2018 (the Farm Bill) was signed into law in December 2018 and amends and extends major programs for crop insurance, food and nutrition, land conservation, trade promotion, rural development, research, forestry, horticulture, and other miscellaneous programs administered by the USDA for five years. During November 2023, Congress passed a resolution to extend the Farm Bill until September 30, 2024. Delay in reauthorizing the Farm Bill may significantly impact the agriculture sector. 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. In addition, government policies, regulatory focus and investor advocacy related to climate change, may have an impact on agribusiness producers and processors.

Farm Credit Banking

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 Farm Credit Banking operating segment is enhanced by our strong collateral position and the earnings, capital and credit 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, industrial and residential demand for services and negatively affect customers in our Rural Infrastructure operating segment.

Fluctuating weather conditions, energy efficiency initiatives, changing regulatory constructs, the relative cost and price volatility of various fuel sources, the advent of distributed generation sources and other technological disruptors, the growth and integration of renewable power sources and protracted low growth 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. Climate change focus of investors, regulators and legislators may also impact borrowers in the Rural Infrastructure operating segment in a manner that may require changes to their existing business models and operations. For example, it may place constraints on generation technologies that produce carbon and favor renewable energy technologies. In addition, climate change legislation passed by the state of California will create additional regulatory and compliance burdens.

The communications industry is impacted by intense competition, evolving technology, and changing customer demands. Regulatory and legislative changes may also impact the competitive position of our communications borrowers. These factors may place downward pressure on cash flows, asset valuations and access to capital, which could adversely impact the quality of our loan portfolio. In addition, decreased cash flows and the resultant impact on asset valuations, 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 our loans, classified by management pursuant to our regulator's Uniform Loan Classification System, as a percent of total loans.

Loan Quality Ratios

	December 31, 2023			December 31, 2022[4]		
	Wholesale Loans[1]	Commercial Loans[2]	Total Bank	Wholesale Loans[1]	Commercial Loans[2]	Total Bank
Acceptable	**97.80 %**	**95.94 %**	**96.92 %**	97.76 %	96.70 %	97.24 %
Special Mention	**2.20**	**2.51**	**2.34**	2.24	1.81	2.03
Substandard	**—**	**1.55**	**0.74**	—	1.49	0.73
Doubtful	**—**	**—**	**—**	—	— [3]	— [3]
Loss	**—**	**—**	**—**	—	—	—
Total	**100.00 %**	**100.00 %**	**100.00 %**	100.00 %	100.00 %	100.00 %

[1] Represents loans in our Farm Credit Banking operating segment.

[2] Represents loans in our Agribusiness and Rural Infrastructure operating segments.

[3] Represents less than 0.01 percent of commercial loans and total bank loans and accrued interest.

[4] Prior to the Bank's adoption of CECL on January 1, 2023, loan quality ratios included accrued interest.

Our overall loan quality measures remain strong at December 31, 2023 notwithstanding the increase in Special Mention loans to 2.34 percent of total loans at December 31, 2023 compared to 2.03 percent at December 31, 2022, which resulted from deterioration in credit quality within certain sectors of our Rural Infrastructure operating segment. Special Mention loans increased in 2023 primarily due to deterioration in credit quality within certain sectors in our Rural Infrastructure operating segment. The level of adversely classified loans ("Substandard", "Doubtful" and "Loss") as a percent of total loans was 0.74 percent at December 31, 2023, compared to 0.73 percent at December 31, 2022.

Summary of High-Risk Assets ($ in Millions)

December 31,	2023	2022	2021	2020	2019
Nonaccrual Loans	**$ 117**	$ 145	$ 123	$ 117	$ 241
Accruing Loans 90 Days or More Past Due	**8**	15	3	1	6
Accruing Restructured Loans	**—**	6	—	—	6
Total Nonaccrual and Nonperforming Loans	**125**	166	126	118	253
Other Property Owned	**—**	—	—	—	—
Total High-Risk Assets	**$ 125**	$ 166	$ 126	$ 118	$ 253

Total nonaccrual loans decreased to $117 million at December 31, 2023 compared to $145 million at December 31, 2022. The decrease was primarily due to payoffs of loans to several large food and agribusiness customers, partially offset by a limited number of rural energy and agribusiness customers transferred to nonaccrual status during 2023. 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 loans and leases. Nonaccrual loans as a percent of our total loan portfolio were 0.08 percent and 0.10 percent as of December 31, 2023 and 2022, respectively. Over the past 10 years, nonaccrual loans have averaged 0.17 percent of the total loan portfolio.

Accruing loans 90 days or more past due decreased to $8 million at December 31, 2023 from $15 million at December 31, 2022 driven by an improvement in collections from leasing customers.

At December 31, 2023, Special Mention loans included a $1.7 billion wholesale loan to one of our affiliated Associations. Pursuant to our regulatory requirements, we classify our wholesale loans using the same Uniform Loan Classification System used for 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 Special Mention classification primarily reflects internal control and other operational weaknesses at this Association, as a result of the collateralization and other mitigants described on page 45, we do not anticipate any losses related to this wholesale loan. As of December 31, 2023, CoBank has not made any provision for credit loss or recorded any ACL related to any of our wholesale loans to Associations.

Gross charge-offs were $21 million in 2023 compared to $45 million in 2022. The charge-offs in 2023 related primarily to a small number of agribusiness, rural energy and communication customers. The charge-offs in 2022 related primarily to a power infrastructure customer and an agribusiness customer, both of which experienced financial difficulty, and to a lesser extent a small number of other customers in our Agribusiness and Rural Infrastructure operating segments. Charge-offs have historically resulted from a relatively small number of customers, and as a result, can fluctuate significantly period to period.

Our ACL on loans totaled $814 million at December 31, 2023 and represented 0.55 percent and 0.59 percent of total outstanding loans at December 31, 2023 and 2022, respectively. Our ACL on loans represented 1.18 percent and 1.24 percent of non-guaranteed loans outstanding, excluding wholesale loans to Associations at December 31, 2023 and 2022, respectively.

As part of our overall assessment of risk in the loan portfolio and the ACL on loans as of December 31, 2023, we have considered a wide variety of factors, including the macroeconomic environment and disruptions related to global unrest; volatile commodity prices and supplies; labor shortages; weather-related events; trade uncertainty; global economic uncertainty; the impact of changes in tariffs; the wars in Ukraine and the Middle East; 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 credit losses within our loan portfolio.

See "Critical Accounting Estimates – Allowance for Credit Losses on Loans" on page 76 for a more complete description of our process to determine the adequacy of our ACL on loans.

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 2023, 48 percent of our $38.3 billion investment portfolio consisted of securities that carry a full faith and credit guarantee of the U.S. government. Such securities include mortgage-backed securities (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 securities backed by guaranteed portions of Small Business Administration loans. Approximately 51 percent of our investment portfolio consisted of securities issued by a U.S. Agency, including MBS and/or U.S. Agency debt issued by the Federal National Mortgage Association (Fannie Mae), the Federal Home Loan Mortgage Corporation (Freddie Mac) and the Federal Home Loan Banks (FHLB).

Credit risk in our investment portfolio primarily exists in the remaining 1 percent of our investment securities that are not guaranteed by the U.S. government or a U.S. Agency, which currently include asset-backed securities (ABS) backed by pools of prime auto loans and corporate bonds of midstream energy and communication companies. The midstream energy and communication corporate bonds are purchased under lending authorities and not held for liquidity purposes. Our ABS and midstream energy and communication corporate bonds collectively total $541 million of our total investment portfolio as of December 31, 2023. Credit risk in our investment portfolio also arises in a portion of our short-term investments, which include our overnight bank deposits and federal funds sold which are transacted with highly-rated commercial bank counterparties.

We recorded a $6 million ACL on our available-for-sale investment securities upon adoption of the CECL accounting standard as of January 1, 2023 and a subsequent credit reversal on those securities of $3 million during 2023. The ACL on investments relates to our corporate bonds of midstream energy and communication companies and the credit loss reversal on these securities is included in the provision for credit losses in our consolidated statement of income. The credit reversal resulted from an improvement in modeled credit losses for these securities.

No other-than-temporary impairment losses on our investment securities were recorded in 2022 and 2021. With the adoption of the CECL accounting standard, other-than-temporary impairment accounting no longer applies for 2023 and future years.

The credit quality of our investment portfolio as of December 31, 2023 is more fully discussed in "Liquidity and Capital Resources" beginning on page 69.

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.

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 derivative execution facilities. The U.S. Commodity Futures Trading Commission (CFTC) has exempted certain qualifying derivatives entered into by end-users and financial cooperatives from these requirements. The exemptions do not cover all derivatives executed by CoBank and are generally limited to derivatives entered into in connection with loans and derivatives for customer-owners. CoBank has also voluntarily chosen to clear some derivative 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). 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 derivatives, 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 derivative mitigates 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, 2023 and 2022, the notional amount of our cleared derivatives was $51.8 billion and $58.7 billion, respectively.

For derivatives with counterparties, other than customers, 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 minimize credit exposures. 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 considered when counterparty limits are established.

The net fair value of our derivatives with our dealer counterparties was a net asset at December 31, 2023 and 2022, and was offset by the collateral we received from our dealer counterparties. At December 31, 2021, the net fair value of our derivatives with our dealer counterparties was a net liability and was offset by collateral we posted to our dealer counterparties. The amount of losses related to derivatives we are exposed to in the event of nonperformance by dealer counterparties to our derivative positions is mitigated by collateral held by us.

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 rate scenarios are then used to further evaluate potential counterparty credit risk and to establish, measure and monitor counterparty limits or customer exposure (including loans). Employees who are independent of the derivative portfolio management team monitor the derivative exposures against approved limits. Exceptions to approved limits are reported to management. Changes to the counterparty limits must be approved by the appropriate delegated approval authority.

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 due to changes in market factors, including interest rates.

Customer derivative transactions are typically secured through our loan agreements. The notional amount of our derivatives, excluding related dealer offsets, and related exposure to customer counterparties were $14.4 billion and $73 million, respectively, at December 31, 2023 compared to $13.5 billion and $69 million, respectively, at December 31, 2022.

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 and credit spreads. This risk primarily arises from our equity positioning strategy and differences in the timing between the contractual maturities, repricing characteristics, and prepayments of our interest-earning assets and the liabilities funding these assets. Market 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.

We provide wholesale loans to our affiliated Associations to fund their lending and general corporate activities. The funding received by most of our affiliated Associations matches the terms and embedded options of those Associations' retail loans. This funding approach shifts the majority of the interest rate risk associated with retail loans from these Associations to the Bank where interest rate risk is managed centrally. Certain of our affiliated Associations, totaling 23 percent of our interest-earning assets, make use of a different funding approach with us and manage their own interest rate risk for their retail loans and investments as part of the Association's asset/liability management processes.

Our asset/liability management objective is to manage the mix of the Banks' interest-earning assets and interest-bearing liabilities consistent with strategies set by ALCO. A key objective is to 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.

Underwriting risk is another type of market risk that may result from underwritten and committed lending transitions when the distribution and sale of loan inventory is executed at prices below par or expected levels due to changes in interest rates or credit spreads. This underwriting risk is mitigated primarily through the Bank's expertise in the core industry sectors we serve, sound market-based transaction structure and pricing with experienced and dedicated investors, and a defined governance framework including limits.

There is market risk related to our equity investments in RBICs and mission related investments held within our Rural Infrastructure operating segment described on page 46. This risk is mitigated by an investment committee approval process, exposure and concentration limits, diversification and other monitoring activities.

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.

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.

We manage exposure to changes in the level and direction of interest rates 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 59 for additional information related to derivatives.

Prepayment/Extension Risk

Prepayment risk in our loan portfolio exists in loans and investment securities (e.g., securitizations) that are considered fully prepayable. Approximately 29 percent of fixed-rate loans are fully prepayable. Prepayment risk in this portfolio results when intermediate and longer-term 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. Fixed-rate callable debt can be called in lower-rate environments, thus allowing liabilities to reprice at a lower rate. Approximately 78 percent of our fully prepayable loan portfolio is funded with callable debt, which lowers prepayment risk.

The remaining 71 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.

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 can adversely affect investment portfolio income in a falling interest rate environment because investments can be 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 measured on the type and average life of securities. Purchases of MBS are subject to a price risk eligibility test based on a stressed interest rate environment. The test is designed to manage our exposure to extension risk at the time of investment purchase. Any purchases of MBS that fail this test must be approved by ALCO. 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. In order to mitigate prepayment risk in our investment portfolio, we have weighted our investment portfolio more towards commercial mortgage-backed securities (CMBS) which have prepayment protections embedded within the securities.

We also fund a portion of our fixed-rate prepayable investment portfolio with term fixed-rate callable debt that provides a partial hedge against prepayment risk in certain falling interest rate environments. The rate we pay on these liabilities effectively reprices downward with a drop in short-term and intermediate-term interest rates. We also use options to hedge our prepayment risk.

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.

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 based on the type and average life of securities purchased. In the same way PAC bands provide some protection 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. We manage exposure to cap risk 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.

Floor risk exists within our floating-rate loans and investments. 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 extended periods of very low or negative interest rates, and adversely impacts our financial condition, cash flows and results of operations. We purchase 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.

Measurement and Monitoring of Market Risk

The Enterprise Risk Management Division is responsible for the independent measurement, monitoring and reporting of market risk. We utilize several 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, 2023. 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, 2023 ($ 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	$ 62,179	$ 5,328	$ 5	$ 2	$ —	$ 67,514
Administered-rate Loans	14,621	—	—	—	—	14,621
Fixed-rate Loans:						
Fixed-rate Loans[(1)]	1,329	5,802	6,003	16,763	16,105	46,002
Fixed-rate Loans, Prepayable[(2)]	229	1,207	1,600	8,571	8,154	19,761
Nonaccrual Loans	—	—	—	—	117	117
Total Loans	78,358	12,337	7,608	25,336	24,376	148,015
Investment Securities	14,200	1,684	2,073	14,206	6,180	38,343
Federal Funds Sold and Other Overnight Funds	4,615	—	—	—	—	4,615
Total Interest-earning Assets[(3)]	$ 97,173	$ 14,021	$ 9,681	$ 39,542	$ 30,556	$ 190,973
Interest-bearing Liabilities:						
Callable Bonds and Notes	$ 16,849	$ 4,934	$ 3,041	$ 7,411	$ 6,653	$ 38,888
Noncallable Bonds and Notes	58,243	15,400	13,456	33,558	15,818	136,475
Bonds, Medium Term Notes and Discount Notes	75,092	20,334	16,497	40,969	22,471	175,363
Effect of Interest Rate Swaps and Other Derivatives	22,991	(7,808)	(7,442)	(9,149)	1,408	—
Cash Investment Services Payable and Other Interest-bearing Liabilities	2,630	3	—	—	825	3,458
Total Interest-bearing Liabilities	$ 100,713	$ 12,529	$ 9,055	$ 31,820	$ 24,704	$ 178,821
Interest Rate Sensitivity Gap (Total Interest-earning Assets less Total Interest-bearing Liabilities)	$ (3,540)	$ 1,492	$ 626	$ 7,722	$ 5,852	$ 12,152
Cumulative Gap	$ (3,540)	$ (2,048)	$ (1,422)	$ 6,300	$ 12,152	
Cumulative Gap/Total Interest-earning Assets	(1.85) %	(1.07) %	(0.74) %	3.30 %	6.36 %	

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

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

(3) Does not include $1.0 billion in cash and cash equivalents as of December 31, 2023.

Our cumulative one-year gap position between interest-earning assets and interest-bearing liabilities was slightly negative at December 31, 2023. In general, we are neutrally positioned when viewing the gap table above with the net interest income at risk sensitivity table on page 58, which indicates parallel changes in interest rates are not projected to have a material impact on net interest income over the next 12 months as measured at December 31, 2023.

We continually monitor interest rates and have the ability to reposition our balance sheet as a result of anticipated interest rate changes. If we expect 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 market value 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 methods, 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 2.5 months at December 31, 2023 and 2.9 months at December 31, 2022.

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 typically estimates the effect of immediate and sustained parallel positive (up) and negative (down) shifts in the yield curve (called "shocks") of 100, 200 and 300 basis points, where possible. Pursuant to regulation and our Board policy, when the three-month Treasury rate is below 4 percent, as it was for the year ended December 31, 2021, we perform a shock equal to one-half the three-month Treasury rate, which resulted in downward shocks of 3 basis points at December 31, 2021. When analyzing net interest income at risk, we also estimate the effect of gradual upward and downward changes in market rates (called "ramps") over a one-year period of 100, 200 and 300 basis points, where possible.

The following table summarizes 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 - Year Ended December 31,			Market Value of Equity at Risk as of December 31,		
	2023	**2022**	**2021**	**2023**	**2022**	**2021**
Scenario:						
– 300 bp shock	**n/a**	n/a	n/a	**n/a**	n/a	n/a
– 200 bp shock	**1.4 %**	1.5 %	n/a	**10.1 %**	12.6 %	n/a
– 100 bp shock	**0.4**	0.6	n/a	**5.0**	6.0	n/a
– 3 bp shock	**n/a**	n/a	— %	**n/a**	n/a	0.2 %
+100 bp shock	**0.7**	—	(0.4)	**(4.6)**	(5.6)	(5.0)
+ 200 bp shock	**1.5**	0.2	(0.3)	**(8.8)**	(10.8)	(9.5)
+ 300 bp shock	**2.1**	0.4	0.9	**(12.8)**	(15.7)	(13.5)
– 300 bp ramp	**n/a**	n/a	n/a	**n/a**	n/a	n/a
– 200 bp ramp	**1.8**	1.1	n/a	**n/a**	n/a	n/a
– 100 bp ramp	**0.8**	0.6	n/a	**n/a**	n/a	n/a
+ 100 bp ramp	**(0.3)**	(0.3)	(1.3)	**n/a**	n/a	n/a
+ 200 bp ramp	**(0.6)**	(0.4)	(2.3)	**n/a**	n/a	n/a
+ 300 bp ramp	**(1.0)**	(0.5)	(3.1)	**n/a**	n/a	n/a

Our net interest income over the next 12 months is not materially impacted by parallel changes in interest rates as measured at December 31, 2023. Our equity positioning strategy is designed to reduce volatility of net interest income.

Our market value of equity as measured at December 31, 2023 is negatively impacted in increasing interest rate scenarios. Our use of equity to fund intermediate term assets results in a decline in our market value of equity when interest rates increase. Our Board limits the amount of adverse change to net interest income and market value of equity under a down regulatory shock and an up 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, 2023, 2022 and 2021, 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, bonds and notes, and derivatives. This "current position" is the starting point for all analysis. The current position data is then combined with assumptions and 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 utilize market implied forward interest rates and 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 derivative transactions through a central clearinghouse or 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. We also hedge cap and floor risk embedded within our floating-rate investments and loans by entering into derivative transactions. 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. 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. The notional amounts of derivatives, weighted average interest rates to be received and paid, and fair values at December 31, 2023, are shown in the following table. We also discuss derivatives in Note 10 to the accompanying consolidated financial statements.

Derivatives at December 31, 2023 ($ in Millions)

Derivative Product	Notional Amount	Weighted Average Receive Rate	Weighted Average Pay Rate	Fair Value
Receive Fixed Swaps	$ 33,801	3.79 %	5.36 %	$ (88)
Receive Fixed Amortizing Swaps	7,705	2.53	5.24	(296)
Pay Fixed Swaps	24,359	6.43	4.48	139
Pay Fixed Amortizing Swaps	7,710	5.03	2.40	149
Interest Rate Options	3,252	—	—	75
Foreign Currency Spots and Forwards	47	—	—	—
Total	$ 76,874	4.66 %	4.75 %	$ (21)

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

Notional Amounts of Derivatives by Strategy ($ in Millions)

December 31,	2023	2022	2021
Liquidity Management	**$ 26,750**	$ 25,942	$ 12,777
Equity Positioning	**3,274**	1,286	2,675
Options Risk Management[1]	**2,296**	2,866	3,466
Basis Risk Management	**15,800**	24,800	14,400
Customer Transactions[2]	**28,713**	27,013	26,166
Foreign Currency Risk Management[3]	**41**	138	164
Total	**$ 76,874**	$ 82,045	$ 59,648

[1] Excludes $956 million, $959 million and $1.1 billion of interest rate options at December 31, 2023, 2022 and 2021, respectively, which are classified as customer transactions.

[2] Includes the notional values of the customer transactions and related dealer offsets.

[3] Excludes $6 million, $7 million and $14 million of foreign currency spot and forward contracts at December 31, 2023, 2022 and 2021, 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 Secured Overnight Financing Rate (SOFR) 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 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 or pay 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.

Basis Risk Management

We use short-term interest rate swaps indexed to SOFR to manage basis risk exposure in certain of our floating-rate administered loans.

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 transactions 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 maturing debt obligations 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, 2023, our days of liquidity was 199 days, compared to 183 days at December 31, 2022. During 2023, we averaged 186 days of liquidity compared to an average of 178 days in 2022.

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 regulatory standard.

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 51 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, 2023 ($ in Millions)

		Book Value	Par Value
1	Day	$ 2,626	$ 2,626
2-7	Days	448	448
8-30	Days	8,016	8,024
31-90	Days	13,575	13,623
91-180	Days	13,901	13,959
181-365	Days	38,178	38,269
1-5	Years	77,552	77,636
Over 5	Years	24,525	24,560
Total		$ 178,821	$ 179,145

See Notes 5 and 14 to the accompanying consolidated financial statements for information regarding interest rates and maturities of Systemwide Debt Securities, and contingencies.

As more fully discussed in Note 5 to the accompanying consolidated financial statements, at December 31, 2023 and 2022, respectively, we held $825 million of funding pursuant to a bond guarantee program offered by the Rural Utilities Service (RUS) agency of the United States Department of Agriculture. The funding is provided by the Federal Financing Bank and guaranteed by the RUS. As of December 31, 2023, we had $250 million, $375 million and $200 million outstanding on our Series D, Series E and Series F funding from RUS, respectively. The Series D, Series E and Series F facilities were fully drawn at December 31, 2023. In October 2023, we closed on an additional $450 million of Series G funding with RUS, which is undrawn and allows us to access funding through July 2028.

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, 2023, commitments to extend credit and commercial letters of credit were $49.7 billion and $129 million respectively. In addition, we provide standby letters of credit, which guarantee payment or performance of an obligation. As of December 31, 2023, the maximum amount of future payments that could potentially be required under standby letters of credit was $2.0 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 9 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 and other needs, including through a sponsored repurchase agreement facility we have with a commercial bank providing us access to the Fixed Income Clearing Corporation as a collateral provider. We are required by FCA regulations to exclude from our liquidity reserve any investment whose market value is less than 80 percent of book value. As of December 31, 2023 and 2022, $534 million and $571 million, respectively, of securities were not included in our liquidity reserve.

We have identified certain portions of our loan portfolio that we believe could be sold or participated 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 $1.8 billion, $1.6 billion and $1.6 billion in 2023, 2022 and 2021, 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 will remain in full force and effect until terminated by either the Insurance Corporation or the Federal Financing Bank. 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 data security failures 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.

Business continuity and disaster recovery planning are important mitigants to potential operational risks. Critical business and supporting units 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.

The Enterprise Risk Management Division is responsible for coordinating the completion of the quarterly and annual risk assessment and reports results to senior management and the Board of Directors. 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 head of Internal Audit reports quarterly 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 is responsible for aggregating and monitoring enterprise-wide risk. This Division is also responsible for the maintenance and development of the model risk management and third-party risk management programs. As with other risks, business segments and support units have direct and primary responsibility and accountability for identifying, controlling and monitoring these risks.

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

Cybersecurity Risk Management

Cybersecurity risk is the risk of harm, theft, loss or disruption arising from the misuse or abuse of technology by unauthorized or malicious individuals and organizations that impact the integrity, availability or confidentiality of the systems or data of the Bank, our critical vendors or third-parties. Cybersecurity risk is an increasingly important, complex and continuously evolving risk which the Bank actively manages and monitors.

The Bank has a comprehensive cybersecurity program, approved by management and the Board of Directors, which includes policies and procedures designed to prevent, detect, mitigate and respond to cyber-attacks and threats. The Bank's cybersecurity program also considers threats associated with critical vendors and third-party service providers. The Bank's cybersecurity program incorporates industry standards, framework and best practices of the International Organization for Standardization (ISO), National Institute of Standards and Technology (NIST), Federal Financial Institutions Examination Council (FFIEC) and Center for Internet Security (CIS). Cybersecurity risk is also included in the overall risk management framework and oversight processes of the Bank.

The Bank's cybersecurity organization structure is a centralized function which oversees cybersecurity risk across all business units and is led by the Corporate Security Officer, who reports to the Chief Risk Officer. A Security Steering Committee, chaired by the Chief Risk Officer and made up of leaders across the Bank, meets regularly and provides guidance and input to the Corporate Security Officer in support of the Bank's cybersecurity programs. The Chief Risk Officer reports to the Risk Committee of the Board of Directors on information related to cybersecurity risk on a quarterly basis. Additionally, the Corporate Security Officer reports to the Joint Audit and Risk Committees of the Board of Directors on the Bank's enterprise security and cybersecurity programs on an annual basis.

The Bank also has a formal process for cybersecurity incident response designed to evaluate and communicate cybersecurity incidents in a timely manner to senior management, regulators, key stakeholders, customers, law enforcement and other authorities, as applicable. Our incident response procedures in conjunction with business continuity processes are designed to maintain the availability of critical business functions of the Bank in the event of a cybersecurity incident.

On October 5, 2023, the FCA approved a final rule on cyber risk management that requires each System institution to develop and implement a comprehensive, written cyber risk management program. Each institution's cyber risk plan must require the institution to take the actions to assess internal and external risk factors, identify potential system and software vulnerabilities, establish a risk management program for the risks identified, develop a cyber risk training program, set policies for managing third-party relationships, maintain robust internal controls and establish institution board reporting requirements. The final rule will become effective on January 1, 2025.

Due to the evolving nature of cybersecurity threats, it has been and will continue to be difficult to prevent, detect, mitigate, and remediate cybersecurity events. While the Bank has not experienced any material cybersecurity threats or incidents, there can be no guarantee that it will not be the subject of future successful threats or incidents. See "Other Risk Factors - We Are Subject to Cybersecurity Risks That Could Negatively Affect Our Ability to Conduct and Manage Our Business" herein.

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 of 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 study the composition of the Board and consider other factors to strengthen governance. In 2020, a Board restructuring committee comprised of Board members and customer representatives was convened to examine key aspects of governance at CoBank and did not recommend material changes to the Board's current governance structure and processes. The next restructuring committee is expected to convene in 2024 in order to complete its work in 2025.

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 access to members of the Board of Directors and management through 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 and other expertise 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. The Bank's Reputation Risk Committee assesses reputation risk in lending activities on an ongoing basis and meets as needed to assess reputational risks and any necessary adjustments to Bank practices. 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 186, each year all employees certify their compliance with our Associate Responsibilities and Conduct Policy. Senior officers and other senior professionals who are involved with the preparation and distribution of our financial statements and related disclosures also annually certify compliance with the Bank's code of ethics.

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 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, which is established under the Risk Management Group that reports to the CRO. Our Risk Management Group also has an Office of Foreign Assets Control (OFAC) and Anti-Money Laundering (AML) compliance function that includes an AML and anti-fraud program, which utilizes a risk-based approach to monitor transactional activity. In addition, we have a security function within the Risk Management Group that manages the access, security, privacy and confidentiality of the Bank's systems and data. Through our Government Affairs Division we proactively monitor emerging legislation that may impact our business or the business of the industries we serve. CoBank's Legal and Regulatory Group, which reports to the Chief Legal Officer and General Counsel, monitors and comments on emerging regulatory requirements, and advises on legal and regulatory requirements as needed. The Legal and Regulatory Group also addresses potential litigation risk that may arise from ongoing business activities. Our Internal Audit and Asset Review divisions also review the adequacy and effectiveness of the Bank's 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

In addition to the other information in this Annual Report, including "Management's Discussion and Analysis – Enterprise Risk Profile" and "Management's Discussion and Analysis – Business Outlook", the following factors should be carefully considered in evaluating CoBank. Such factors could affect results and cause results to differ materially from those expressed in any forward-looking statements made by, or on behalf of, CoBank. These risk factors discussed below could adversely affect CoBank's results of operations, financial condition, liquidity and cash flow, as well as cause reputational damage.

Inflation and Higher Interest Rates Could Negatively Impact our Results of Operations and Financial Condition

Our financial results and cash flows depend to a great extent on the difference between the interest rates earned on interest-earning assets such as loans and investment securities, and the interest rates paid on interest-bearing liabilities such as borrowings. These rates are highly sensitive to many factors that are beyond our control, including general economic conditions and the policies of various governmental and regulatory agencies (in particular, the Federal Reserve). Changes in monetary policy, including changes in interest rates, will influence the origination of loans, the prepayment speed of loans, the purchase of investments and the rates received on loans and investment securities and paid on our borrowings. For example, the United States and other countries experienced significantly elevated levels of inflation resulting in central banks implementing a series of interest rate increases over the last couple of years. As a result of such interest rate increases, we experienced an increase in unrealized losses on our investment securities. Further, the level of unrealized losses is subject to future fluctuations in interest rates. The impact of these developments may be magnified if we do not effectively manage the relative sensitivity of our interest-bearing assets and liabilities to changes in market interest rates. Fluctuations in these areas may adversely affect us and our customers.

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

Farm Credit System banks and Associations are not authorized to accept 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, 2023, we were primarily liable for $175.4 billion of Systemwide Debt Securities. Additionally, each System bank is contingently liable for Systemwide Debt Securities of the other System banks. At December 31, 2023, the total aggregate principal amount of the outstanding Systemwide Debt Securities was $415.5 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 $7.5 billion as of December 31, 2023, 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 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 will remain in full force and effect until terminated by either the Insurance Corporation or the Federal Financing Bank. 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 and loan participation purchases from other System institutions, 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 are likely to continue. The Bank and the System are under the jurisdiction of the U.S. Senate Committee on Agriculture, Nutrition and Forestry, and the House of Representatives Committee on Agriculture and thus have not been the subject of this specific congressional scrutiny. CoBank cannot predict whether or when legislative or regulatory initiatives may commence that, if successful, could negatively affect the status of the System as a GSE. Any changes in the System's status as a GSE or the general perception by investors of GSEs could have a significant adverse impact on the System's ability to issue debt at favorable rates and terms, which could negatively impact CoBank's funding costs.

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.

On August 1, 2023, Fitch Ratings Inc. (Fitch) downgraded the long-term sovereign credit rating on the United States to AA+ from AAA. Subsequently, on August 2, 2023, Fitch Ratings downgraded the long-term issuer default rating for the System to AA+ from AAA. Fitch also downgraded the individual long-term issuer default ratings of the System Banks, including CoBank, to A+. The downgrade of the System and the System Banks' ratings reflect the downgrade of the U.S. sovereign rating.

S&P Global Ratings (S&P) and Moody's Investors Service (Moody's) currently maintain the long-term sovereign credit rating of the United States of AA+ and Aaa, respectively, which continues to drive their AA+ and Aaa long-term debt rating of the System. S&P currently maintains an individual credit rating for CoBank of AA- and Moody's does not provide an individual credit rating for CoBank.

Any future ratings 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. Furthermore, the System issues combined financial statements and assurance of adequate disclosure controls and procedures around internal control over financial reporting. Failure by a System institution to provide required information for financial reporting, or to have adequate disclosure controls or procedures over financial reporting may delay the timely publication of the System's financial statements or cause an error in the accuracy or completeness of the financial statements. Failure to timely issue the System's combined financial statements could disrupt the System's ability to access debt capital markets. 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. In volatile market conditions, it could be difficult to sell 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 a small portion 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 CoBank or our 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, CoBank 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, 2023, we held $295 million in cash as collateral from our counterparties. Additionally, initial margin and settlement payments totaling $205 million and $23 million, respectively, were held by our CCP for our cleared derivatives as of December 31, 2023.

Remaining Transition from LIBOR Could Result in Disputes and Litigation with Counterparties, Investors and Borrowers

CoBank recognized the discontinuance of LIBOR presented significant risks and challenges that could have impacted our business and our customers. LIBOR rate settings (including with respect to overnight, one-month, three-month, six-month, and twelve-month tenors of USD dollar LIBOR) were discontinued or declared non-representative immediately after June 30, 2023. We executed LIBOR transition plans in accordance with Farm Credit Administration's guidance to address the risks associated with the discontinuance of LIBOR and have completed our conversion to SOFR.

As of December 31, 2023, we had no remaining LIBOR exposure related to our loans, investment securities, Systemwide Debt Securities and derivative transactions. We hold preferred stock of $300 million and $375 million with fixed dividend rates currently that convert to LIBOR-indexed variable rates in 2025 and 2026, respectively. Given LIBOR is no longer being quoted, these instruments will convert to variable rates pursuant to the fallback language in the preferred stock agreements. At this time, we do not expect the remaining LIBOR transition to have a material impact on us, our borrowers, investors, customers, and counterparties. However, disputes and litigation with counterparties, investors and borrowers relating to the LIBOR transition may be possible in the future.

Pandemics, Epidemics, Disease Outbreaks and Other Public Health Crises, such as the COVID-19 Pandemic, Could Materially Adversely Impact Our Business, Financial Condition, Liquidity and Results of Operations

Pandemics, epidemics, disease outbreaks and other public health crises, such as the COVID-19 pandemic, have disrupted the global economy and may, in the future, disrupt the economy and our business. The COVID-19 pandemic and preventative measures taken to contain or mitigate its spread negatively affected business activity and financial transactions and caused supply chain disruptions (including for agricultural products), labor difficulties and shortages, and commodity inflation. The economic conditions resulting from similar health crises in the future could adversely impact our business, results of operations and financial condition, including deterioration in the credit quality of our loan portfolio, which could result in an increase in nonperforming assets and the allowance for credit losses, reduce regulatory capital and liquidity ratios and impact other regulatory requirements. Any new public health crisis, including a resurgence of the COVID-19 pandemic, that result in unfavorable economic conditions could materially and adversely impact our business, financial condition, liquidity, and results of operations.

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 expansion of the digital economy, technological advances and the introduction of disruptive technologies 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.

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. 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.

CoBank has a master participation agreement in place with Farmer Mac under which each party may purchase from the other participation interests in eligible loans. We periodically engage in sales of non-patronage, electric distribution loans to Farmer Mac and we remain the servicer of these loans.

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 for CoBank and the System.

We Are Subject to Cybersecurity Risks that Could Negatively Affect Our Ability to Conduct and Manage Our Business

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 and will likely continue to be the target of cyber-attacks aimed at committing fraud. Companies across many industries, including financial institutions, have reported being victims of cyber-attacks, resulting in, among other things, compromise of customer or other confidential data, theft of funds or resources and disruption of services. 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. CoBank has 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 of our customers, used to access our services, may become the target of cyber-attacks, which could result in material losses. Our risk and exposure to cyber-attacks remain high due to the evolving nature and increased frequency of such attacks on businesses and individuals. In particular, nation-state and state-sponsored actors deploy significant resources and employ sophisticated methods to plan and carry out attacks. Risk of these attacks may escalate during periods of elevated geopolitical tensions such as those raised by the wars in Ukraine and the Middle East. We also rely on third-party service providers to conduct various aspects of our business operations and face similar risks relating to them. While we conduct security reviews on these third parties, these vendors may also become targets of cyber-attacks resulting in material losses to CoBank. Additionally, the cost and operational consequences of implementing, maintaining and enhancing system protection measures are significant and they could materially increase to address ever-changing intensely complex and sophisticated cyber risks.

Failures of Critical Vendors and Other Third-Party Service Providers Could Disrupt our Ability to Conduct and Manage our Business

CoBank relies on vendors and other third-party service providers to perform certain critical services. A failure in, or an interruption to, one or more of those services provided could negatively affect our business operations and services provided to our customers. If one or more of these key external parties were not able to perform their functions for a period of time at an acceptable service level, our business operations could be constrained, disrupted, or otherwise negatively affected.

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

CoBank's collaborative partnerships with other System entities are 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 collective mission to serve rural America. In addition, we continue to collaborate with our affiliated Associations on business model solutions that further strengthen the ability to fulfill our mission. Notwithstanding the importance of these relationships and collaborations, CoBank is exposed to reputation risk, regulatory risk, and inter-related financial risks arising from other System entities. 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 current environment and tight labor markets have further created challenges and heightened risks around employee talent acquisition and retention. In addition, CoBank associates and the broader workforce are demanding higher compensation and benefits to offset inflation, remote-working arrangements, and workforce flexibility, among other things. 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.

An Unfavorable Change in our Reputation from Environmental, Social and Governance (ESG) Activities Could Adversely Affect our Business and Financial Results

The growing impact of ESG trends in the financial services industry globally, including policies directed toward measuring the carbon impact from lending activities and efforts focused on reducing the impact of climate change, such as the legislation recently passed by the State of California, exposes our business to increasing public scrutiny. The public holds diverse and often conflicting views on ESG topics. As a large financial institution, we have multiple stakeholders, including our customers, our Associations, our investors, our employees, our regulator, and the communities in which we operate. These stakeholders will often have differing priorities and expectations regarding ESG issues. If we take action in conflict with one or another of those stakeholders' expectations, we could experience an increase in customer complaints, a loss of business or reputational harm. Furthermore, adverse incidents with respect to ESG activities caused by negative public opinion could adversely affect our ability to meet our customers' lending needs, obtain financing, impede our ability to hire and retain qualified personnel, hinder our business prospects, impact our relationships with other System institutions, or expose us to greater regulatory scrutiny or adverse regulatory or legislative changes.

We Are Exposed to the Risk of Climate Change

Climate change poses both short- and long-term risks globally, including to the agricultural and financial sectors. Climate change arises from physical risk (acute or chronic risks to the physical effects of climate change) and transition risk (risks related to societal risks, including regulatory, legal, or market changes). Overall, climate change risks may result in increased compliance costs, lower profitability for us, our customers and our Associations, as well as many of their borrowers. Additionally, climate change impacts could negatively affect the credit quality of our and our Associations' loan portfolios. Physical risk such as adverse weather conditions, particularly during the planting and growing season, can significantly affect agricultural production, with the timing and quantity of rainfall being two of the most important factors in agricultural production. Insufficient levels of rain prevent farmers from planting new crops and may cause growing crops to die or result in lower yields. Excessive rain or flooding can prevent planting from occurring at optimal times, and may cause crop loss through increased disease or mold growth. Temperatures outside normal ranges can also cause decreased yields, failure or quality issues for crops. Additionally, livestock and dairy production can be negatively impacted by weather extremes as well, due to impact on feed and other input costs or reduced production. Transition risk such as a change in regulation or public perception around the use of fossil fuels in the generation of electricity may impact many of our rural power customers.

We Depend on the Accuracy and Completeness of Customer and Counterparty Information

We rely on information (including financial information) furnished by or on behalf of customers, including our Associations, and counterparties. We may also rely on representations of those customers and counterparties as to the accuracy and completeness of that information. If the financial or other information provided to us is incorrect, we could suffer credit losses or other consequences.

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 Note 5 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. On August 1, 2023, Fitch downgraded the long-term sovereign credit rating on the United States to AA+ from AAA. Subsequently, on August 2, 2023, Fitch downgraded the long-term issuer default rating for the System to AA+ from AAA. Fitch also downgraded the individual long-term issuer default ratings of the System Banks, including CoBank, to A+. The downgrade of the System and the System Banks' ratings reflect the downgrade of the U.S. sovereign rating. As of December 31, 2023, Systemwide Debt Securities were rated AA+ by S&P and Aaa by Moody's. S&P currently maintains a credit rating for CoBank of AA- and Moody's does not provide an individual credit rating for CoBank.

Notwithstanding these actions, to date we have continued to access competitively priced funding necessary to support our lending and business operations. However, such actions and any future downgrades from ratings agencies could negatively impact the access to debt capital markets, funding flexibility, funding costs and earnings for CoBank and other System institutions.

Included in our bonds and notes at December 31, 2023 and December 31, 2022 was $825 million of funding pursuant to a bond guarantee program offered by the RUS agency of the United States Department of Agriculture. The funding is provided by the Federal Financing Bank and guaranteed by RUS. As part of the bond guarantee agreement with RUS, we are required to pledge collateral in an amount equal to at least 110 percent of the principal balance of all RUS bonds outstanding. As of December 31, 2023, we had $250 million, $375 million and $200 million outstanding on our Series D, Series E and Series F funding from RUS, respectively. The Series D, Series E and Series F facilities were fully drawn at December 31, 2023. In October 2023, we closed on an additional $450 million of Series G funding with RUS, which is undrawn and allows us to access funding through July 2028.

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 objective 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. Refer to Note 4 to the accompanying consolidated financial statements for additional information regarding our investment securities.

Our investment securities increased to $38.3 billion at December 31, 2023 compared to $33.1 billion at December 31, 2022. The following table summarizes our investment securities and related unrealized gains/losses by asset class.

Investment Securities	December 31, 2023			December 31, 2022		
($ in Millions)	Amortized Cost	Fair Value	Net Unrealized Losses	Amortized Cost	Fair Value	Net Unrealized Losses
Certificates of Deposit	$ —	$ —	$ —	$ 850	$ 850	$ –
U.S. Treasury Debt	**14,831**	**14,361**	**(470)**	14,779	14,052	(727)
U.S. Agency Debt	**2,442**	**2,382**	**(60)**	1,733	1,627	(106)
Residential Mortgage-Backed:						
Ginnie Mae	**1,050**	**898**	**(152)**	1,014	837	(177)
U.S. Agency	**3,195**	**3,104**	**(91)**	1,417	1,319	(98)
Commercial Mortgage-Backed:						
U.S. Agency	**17,878**	**17,057**	**(821)**	14,567	13,587	(980)
Corporate Bonds[(1)]	**499**	**482**	**(17)**	534	501	(33)
Asset-Backed and Other	**62**	**59**	**(3)**	328	324	(4)
Total	**$ 39,957**	**$ 38,343**	**$ (1,614)**	$ 35,222	$ 33,097	$ (2,125)

(1) Amortized cost and fair value include ACL on investments of $3 million at December 31, 2023.

At each reporting period, we evaluate our investment securities for credit losses based on current and future market 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 related to securities not guaranteed by the U.S. government or U.S. Agencies, in which case that portion of the loss is recorded as an ACL with an offsetting amount in earnings.

Approximately 99 percent of our investment securities carry an explicit or implicit government guarantee. Credit risk in our investment portfolio primarily exists in the remaining 1 percent of our investment securities that are not guaranteed by the U.S. government or a U.S. Agency, which currently include ABS and corporate bonds of midstream energy and communication companies. Our ABS and midstream energy corporate and communication bonds collectively total $541 million as of December 31, 2023. Credit risk in our investment portfolio also arises from counterparties to short-term investments, which include our overnight bank deposits and federal funds sold, which are transacted with highly-rated commercial banks. We held overnight bank deposits and federal funds sold instruments totaling $2.6 billion and $2.8 billion at December 31, 2023 and 2022, respectively. The remainder of our short-term investments include reverse repurchase agreements with the Federal Reserve totaling $2.0 billion and $9.6 billion at December 31, 2023 and 2022, respectively, and have minimal credit risk.

As of December 31, 2023, our ACL on investment securities was $3 million and related to our corporate bonds of midstream energy and communication companies. We recorded a credit loss reversal on our investment securities of $3 million during the year ended December 31, 2023 that is included in the provision for credit losses in our consolidated statement of income and resulted from an improvement in modeled credit losses for these securities. We recorded unrealized gains on our investment securities of $511 million in 2023 and unrealized losses of $2.2 billion in 2022. The unrealized losses and gains recorded in both periods primarily related to the impact of market interest rate changes on the valuations of fixed-rate securities.

In 2023, we sold 8 U.S. Treasury debt securities for total proceeds of $548 million. We sold these securities to replace lower yielding investments with higher yielding investments. The resulting losses from these investment sales totaled $7 million, which was more than offset by higher net interest income.

In 2022, we sold a U.S. Treasury debt security for total proceeds of $495 million and two corporate bonds for total proceeds of $18 million to take advantage of favorable market conditions. We also sold a U.S. agency mortgage-backed security in 2022 for total proceeds of less than $1 million for administrative reasons. The resulting gains from these investment sales totaled $2 million.

In 2021, we sold 18 U.S. Treasury debt securities for total proceeds of $3.2 billion, eight U.S. Agency debentures for total proceeds of $618 million and one commercial mortgage-backed security for total proceeds of $94 million resulting in losses of $36 million. We sold these securities to rebalance the investment portfolio to take advantage of market opportunities to sell lower yielding investments and replace them with higher yielding investments and to efficiently manage our tax obligations.

Derivatives

We use derivatives for the purposes described beginning on page 48. Derivatives are recorded at fair value as assets or liabilities in the accompanying consolidated balance sheets. Derivative assets totaled $812 million at December 31, 2023 compared to $1.0 billion at December 31, 2022. Derivative liabilities totaled $833 million at December 31, 2023 compared to $1.1 billion at December 31, 2022.

Changes in the fair value of our 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 designated as hedging instruments are recorded in interest income and interest expense in the accompanying consolidated statements of income and totaled net losses of $5 million and $9 million for 2023 and 2022, respectively. Net changes in the fair value of derivatives not designated as hedging instruments are recorded in noninterest income in the accompanying consolidated statements of income and totaled net gains of $20 million and $21 million for 2023 and 2022, respectively. Changes in the fair value of derivatives recorded as other comprehensive (loss) income totaled losses of $64 million in 2023 and gains of $100 million in 2022.

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 preferred and common stock, retained earnings and accumulated other comprehensive income (loss), and totaled $11.2 billion, $10.2 billion and $12.2 billion at December 31, 2023, 2022 and 2021, respectively. The $1.0 billion increase in shareholders’ equity in 2023 primarily resulted from current period earnings, a decrease in accumulated other comprehensive loss and the cumulative effect of adopting the CECL accounting standard, somewhat offset by retirements of common stock and patronage distributions. Included in our shareholders' equity is $1.5 billion and $1.9 billion of accumulated other comprehensive loss at December 31, 2023 and 2022, respectively, which is primarily related to unrealized losses on our investment securities. While the unrealized losses on investment securities result in a reduction of shareholders’ equity, they do not impact current period earnings or regulatory capital ratios. The level of these unrealized losses is subject to future fluctuations in interest rates.

On December 2, 2021, we issued $425 million of Series J non-cumulative perpetual preferred stock. We used the net proceeds from the Series J preferred stock issuance to increase our regulatory capital pursuant to FCA regulations and for general corporate purposes, including the redemption of our Series G non-cumulative perpetual preferred stock as described below. Dividends on the Series J preferred stock, if declared by the Board of Directors in its sole discretion, are non-cumulative and are payable quarterly in arrears at a fixed annual rate of 4.25 percent from the date of issuance up to, but excluding January 1, 2027. Thereafter, dividends will accrue at the five-year U.S. Treasury rate as of the most recent reset dividend determination date plus a spread of 3.049 percent per annum and will be paid quarterly. The preferred stock is redeemable at par value, in whole or in part, at the Bank's option quarterly beginning on January 1, 2027.

On January 1, 2022, we redeemed all of our outstanding Series G non-cumulative perpetual preferred stock totaling $200 million. The dividend rate for our Series G preferred stock was 6.125 percent through the date of redemption.

On August 16, 2022, we issued $400 million of Series K non-cumulative perpetual preferred stock. We used the net proceeds from the Series K preferred stock issuance to increase our regulatory capital pursuant to FCA regulations and for general corporate purposes, including the redemption of our Series F non-cumulative perpetual preferred stock as described below. Dividends on the Series K preferred stock, if declared by the Board of Directors in its sole discretion, are non-cumulative and are payable quarterly in arrears at a fixed annual rate of 6.45 percent from the date of issuance up to, but excluding October 1, 2027. Thereafter, dividends will accrue at the five-year U.S. Treasury rate as of the most recent reset dividend determination date plus a spread of 3.487 percent per annum and will be paid quarterly. The preferred stock is redeemable at par value, in whole or in part, at the Bank's option quarterly beginning on or after October 1, 2027.

On October 1, 2022, we redeemed all of our Series F non-cumulative perpetual preferred stock totaling $400 million. The dividend rate for our Series F preferred stock was 6.25 percent through the date of the redemption.

During 2023 and 2022, we retired $8 million and $69 million, respectively, of our outstanding Series E non-cumulative perpetual preferred stock in a series of open market purchase transactions. The retired Series E preferred stock was purchased at a discount from par value resulting in modest gains on retirement recorded in unallocated retained earnings.

Under the FCA's regulatory capital requirements, common equity tier 1 (CET1) capital, which includes common stock and retained earnings, is the largest component of the Bank's capital structure. All of our outstanding preferred stock is included in tier 1 capital and permanent capital for regulatory capital purposes, subject to certain limitations. All of our outstanding preferred stock ranks equally, both as to dividends and upon liquidation, and senior to all of our outstanding common stock. In addition, our ACL is included in tier 2 regulatory capital, subject to certain limitations. See "Capital Regulations" below for detailed discussion related to the FCA's capital adequacy regulations which require us to maintain certain minimum capital requirements.

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.

Capital Regulations

The FCA's 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 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 capital regulations establish a capital cushion (capital conservation buffer) of 2.5 percent above the risk-based CET1, tier 1 and total capital requirements. In addition, the capital regulations establish 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.

As shown in the following table, our capital and leverage ratios exceeded regulatory minimums at December 31, 2023, 2022, 2021, 2020 and 2019. 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.

Regulatory Capital Requirements and Ratios

As of December 31,		2023		2022		2021		2020		2019		
	Regulatory Minimums	Actual	Actual Buffer	Actual	Actual Buffer	Actual	Actual Buffer	Actual	Actual Buffer	Actual	Actual Buffer	Required Buffer
Common Equity Tier 1 Capital Ratio	4.5 %	**11.58 %**	**7.08 %**	11.62 %	7.12 %	12.74 %	8.24 %	12.33 %	7.83 %	12.70 %	8.20 %	2.5 %
Tier 1 Capital Ratio	6.0	**13.27**	**7.27**	13.39	7.39	14.70	8.70	14.25	8.25	14.83	8.83	2.5
Total Capital Ratio	8.0	**14.11**	**6.11**	14.25	6.25	15.63	7.63	15.22	7.22	15.86	7.86	2.5
Tier 1 Leverage Ratio(1)	4.0	**6.79**	**2.79**	6.80	2.80	7.47	3.47	7.30	3.30	7.51	3.51	1.0
Permanent Capital Ratio	7.0	**13.37**	**n/a**	13.51	n/a	14.81	n/a	14.36	n/a	14.95	n/a	n/a
Unallocated Retained Earnings (URE) and URE Equivalents Leverage Ratio	1.5	**3.23**	**n/a**	3.13	n/a	3.36	n/a	3.23	n/a	3.24	n/a	n/a

(1) At least 1.5 percent must be URE and URE equivalents.

See page 147 for more information on required regulatory capital disclosures, including the components of the ratios displayed above.

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 assessment and profile; capital composition; loan volume and earnings 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 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.

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, assuming we meet regulatory requirements, 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 and 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 in CoBank calculated as a percent of their average outstanding loan balance, which was 3 percent as of December 31, 2023. 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. 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/or common stock, as shown in the following table. Eligible shareholders will receive patronage distributions from CoBank for 2023 in the first quarter of 2024.

Patronage Distributions	**Year Ended December 31,**		
($ in Millions)	**2023**	**2022**	**2021**
Common Stock	**$ 134**	$ 139	$ 128
Cash	**725**	707	632
Special Cash	**106**	149	125
Total Patronage Distributions	**$ 965**	$ 995	$ 885
Patronage Distributions/Total Average Common Stock Owned by Active Borrowers	**25.57 %**	26.07 %	23.17 %

The Bank's Board of Directors approved special cash patronage distributions of $106 million, $149 million and $125 million to eligible customer-owners for 2023, 2022 and 2021, respectively. The distributions reflect the Bank's strong financial performance and robust capital levels. The special cash patronage distribution approved for 2023 will be paid in March 2024 while the special cash patronage distributions approved for 2022 and 2021 were paid in March 2023 and March 2022, respectively. The special cash patronage distributions were incremental to patronage program payments the Bank had initially targeted to make to customer-owners under its various patronage programs.

Our capital plans govern the level of capital investment required by customer-owners. The Bank's Board of Directors approved a number of changes to the Bank's capital plans during 2023, 2022 and 2021. In June 2021, the Board approved a change in the loan base period used for determining target equity levels for our affiliated Associations from a one-year average to a five-year trailing average. This change reduced the required amount of common stock investment of our affiliated Associations in CoBank and resulted in common stock retirements of $114 million to our affiliated Associations that were paid in March 2022.

In June 2022, CoBank stockholders approved board-recommended amendments to the Bank's capitalization bylaws lowering target equity ranges for customer-owners. Under the approved amendments, the target equity range for cooperatives and other patronage-eligible commercial borrowers decreased to 4-10 percent from the previous range of 7-13 percent. For direct loans with Farm Credit System institutions, the target equity range decreased to 2-5 percent from the previous range of 4-6 percent. The target equity levels for customer-owners are set within the ranges established in the bylaws and are included in the capital plans approved by the Board of Directors.

In August 2022, the Bank's Board of Directors amended the capital plans for customer-owners to decrease the target equity levels. The target equity level for cooperatives and other patronage-eligible commercial borrowers was decreased from 8 percent to 7 percent. For direct loans with affiliated Associations, the target equity level was decreased from 4 percent to 3 percent and the loan base period was changed from a five-year trailing average to a one-year average. For non-affiliated Farm Credit System institutions, the target equity level was decreased from 4 percent to 3.25 percent. The new target equity levels were effective starting in 2022. In December 2022, the Board approved stock retirements which included the impact of these lower target equity levels as well as normal retirements. These stock retirements totaled $191 million and were made in March 2023.

Management and the Board regularly evaluate the Bank's capital plans and patronage programs based on financial performance, capital requirements, asset growth, emerging risks and other items. Any future changes to patronage and capital distributions would be subject to FCA regulations and Board approval.

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

Capital Plans and Patronage Programs

Customer or Loan Type	2023 Equity Requirement(1)	Target Patronage(2) 2023 Plan	2022 Plan	2021 Plan	2020 Plan	2019 Plan	Cash / Equity Split(3)
Agribusiness, Communications and Project Finance	**7.00 %**	**95 bps**	95 bps	95 bps	95 bps	95 bps	**75 / 25 %**
Rural Electric and Water	**7.00**	**80**	80	80	80	80	**60 / 40**
Loans Purchased from Farm Credit Institutions	**7.00**	**95**	95	95	95	95	**75 / 25**
Affiliated Associations	**3.00**	**45**	45	45	36	40	**100 / 0**
Nonaffiliated Farm Credit and Other Financing Institutions	**3.25**	**30**	30	30	26	30	**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 entities, and nonaffiliated 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 the level of patronage the Bank initially targets to make under its patronage programs, and 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 targeted equity requirement for the agribusiness, communications and project finance capital plan is 7 percent of the 10-year trailing average loan volume for the 2023 and 2022 plan years and 8 percent of the 10-year trailing average loan volume for the 2021, 2020 and 2019 plan years. 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. The targeted patronage rate was 95 basis points for all plan years presented above, with 75 percent paid in cash and the remaining 25 percent paid in common stock.

The targeted equity requirement for the rural electric and water capital plan is 7 percent of the 10-year trailing average loan volume for the 2023 and 2022 plan years and 8 percent of the 10-year trailing average loan volume for the 2021, 2020 and 2019 plan years. 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. The targeted patronage rate was 80 basis points for all plan years presented above, with 60 percent paid in cash and the remaining 40 percent paid in common stock.

The key tenets of the capital plan for loan participations purchased from Farm Credit institutions are identical to the agribusiness, communications and project finance capital plan described above.

The targeted equity requirement for the affiliated Association capital plan is 3 percent of the one-year average loan volume for the 2023 and 2022 plan years, 4 percent of the five-year trailing average loan volume for the 2021 plan year and 4 percent of the one-year average loan volume for the 2020 and 2019 plan years. The targeted patronage rate for the affiliated Association capital plan was 45 basis points for the 2023, 2022 and 2021 plan years, with all patronage being paid in cash. For the 2020 and 2019 plan years, the targeted patronage rate was 36 and 40 basis points, respectively, with all patronage being paid in cash.

The targeted equity requirement for the nonaffiliated Farm Credit and other financing institutions capital plan is 3.25 percent of the 10-year trailing average loan volume for the 2023 and 2022 plan years and 4 percent of the 10-year trailing average loan volume for the 2021, 2020 and 2019 plan years. Additionally, when these borrowers' 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. The targeted patronage rate for the nonaffiliated Farm Credit and other financing institutions capital plan was 30 basis points for the 2023, 2022, 2021 and 2019 plan years. For the 2020 plan year, the targeted patronage rate was 26 basis points. For all plan years presented, the cash portion of patronage was 20 percent with the remaining 80 percent paid in common stock.

In December 2023, the Board approved changes to the 2024 capital plans for agribusiness, communications and project finance customers and loans purchased from Farm Credit institutions to increase their targeted patronage rate from 95 basis points to 100 basis points. The Board also approved changes to the 2024 capital plan for rural electric and water customers to increase the cash portion of their target patronage to 65 percent from 60 percent.

In December 2023, the Board of Directors approved stock retirements of $45 million, which will be executed in March 2024.

Human Capital

At CoBank, our success as a business ultimately depends on our people. We are chartered to deliver dependable credit and financial services to vital industries across rural America. Fulfilling this mission requires us to attract and retain high quality, skilled professionals who are deeply committed to the Bank, our business, and customer base. We have developed a human capital plan and strategies designed specifically to address this dependency on talent and it includes a comprehensive set of programs covering talent acquisition, learning and development, talent strategy and planning, performance management, pay and rewards, and the continual transformation of the work environment in order to create an inclusive workplace where a diverse workforce will thrive.

CoBank has actively embraced a strategy of building an inclusive and equitable work environment and work culture that allows all associates to maximize their engagement and realize their full potential. The dimensions of diversity – race, gender, age, ethnicity, veteran status, sexual orientation, and physical or mental ability – remain vital to our efforts to expand and strengthen our workforce and customer base. Additionally, we have holistically incorporated secondary and occupational dimensions of diversity such as thinking styles, working styles, geographic location, level and tenure in our roadmap. We are also incorporating Equity into our talent processes and decisions. This holistic approach enables us to live our core values of Diversity, Equity and Inclusion. This requires that we create a work environment and a culture where each person is respected, valued, heard and included, generating a feeling of belongingness that inspires all associates to perform at their best.

As of December 31, 2023, we had 1,199 associates employed at our headquarters near Denver, Colorado and in our regional banking centers across the country. Our associates work in a variety of conventional banking and financial services disciplines with the remainder working in management, corporate support, and operational functions. Our workforce was approximately 53 percent male, 47 percent female and 22 percent minorities (defined as ethnically or racially diverse) based on employee self-reporting.

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 ACL on loans 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 beginning on page 80.

Allowance for Credit Losses on Loans

Our allowance for loan losses is an adjustment to the value of our total outstanding loan and lease portfolio for expected credit losses over the remaining contractual life of these financial assets. 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 changes in the prices and supplies of agricultural commodities. 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 our ACL on loans.

Our ACL on loans reflects management's estimate of current expected credit losses related to outstanding balances and unfunded commitments in our loan and lease portfolio. The ACL on loans is maintained at a level consistent with this assessment, considering such factors as loss experience, portfolio quality, portfolio concentrations, macroeconomic forecasts, agricultural production conditions, modeling imprecision, our mission, and economic and environmental factors specific to our business segments.

The ACL on loans is based on our regular evaluation of our loan and lease portfolio. We establish the ACL on loans via a process that begins with estimates of expected credit losses for pools of assets with common risk characteristics within the collectively evaluated portfolio. Our methodology also 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.

In addition to the quantitative calculation of expected credit losses, management considers the imprecision in our process and methodology, emerging risks and other subjective factors not reflected in the model, which may lead to a management adjustment to the modeled ACL on loans results.

Determining the appropriateness of the ACL on loans is complex and requires judgment by management about the effect of matters that are inherently uncertain. Subsequent evaluations of loan and lease portfolios, considering macroeconomic conditions, forecasts and other factors prevailing at the time, may result in significant changes in the allowance in future periods.

One of the most significant management judgments involved in estimating the ACL on loans relates to the selection and use of macroeconomic forecasts required to calculate expected credit losses over the reasonable and supportable forecast period within our credit loss methodology. These economic forecasts are provided by an independent third-party and incorporate various macroeconomic variables. We have determined a subset of these macroeconomic variables that most directly affect the modeled credit losses in our loan portfolios and related ACL, which include: BBB corporate spreads, unemployment rates, equity prices, corn prices, gas prices, oil prices and power grid prices. Some of these macroeconomic variables apply to all portfolio segments and others are specific to a particular loan portfolio.

Our Market Risk Committee, which includes senior leaders from the Treasury, Controller, Risk Management, Knowledge Exchange and Lending groups, approves the macroeconomic forecasts, and any relevant probability weighting, used in the determination of the ACL on loans and ensures alignment of these macroeconomic forecasts with the forecasts used for business planning, asset liability management and other purposes across the Bank. Our ACL Committee approves the overall ACL estimate for loans and leases prior to recording in the financial statements. The Audit and Risk Committees of the Board of Directors review the ACL on a quarterly basis, and the Board of Directors approves the year-end ACL. The ACL estimation process is also governed by model risk management and is periodically reviewed and validated in accordance with our policies.

Our determination of the ACL for commercial loans is sensitive to the assigned risk ratings and probabilities of default, assumptions surrounding loss given default, macroeconomic forecasts and the overall level of exposure within our loan portfolio. Management evaluates and updates its assumptions around probabilities of default and loss given default on a periodic basis or more frequently as needed. Management evaluates and updates the macroeconomic forecasts used in its credit loss model quarterly. Changes in these assumptions underlying this critical accounting estimate could increase or decrease our provision for credit 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 key management assumptions on our provision for credit losses and the related ACL on loans, 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 credit losses and related ACL on loans would have increased or decreased by $39 million and $21 million at December 31, 2023, respectively. Separately, we changed the macroeconomic forecast used by management in the estimate of our ACL on loans, which included a probability weighting of the base forecast and optimistic forecast, to an alternate and fully pessimistic forecast to determine the range of impact. Under this alternate and fully pessimistic forecast, the provision for credit losses and ACL on loans would have increased by $37 million at December 31, 2023.

Refer also to Notes 1 and 2 to the consolidated financial statements for further information on our accounting policies for the ACL and our adoption of the CECL accounting standard on January 1, 2023, which reduced our ACL related to loans, leases and unfunded commitments by $75 million on the date of adoption.

Valuation of Financial Instruments with No Ready Markets

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 evaluate our investment securities for potential credit losses and record an ACL, if required.

As discussed in Note 11 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 management estimates about market data.

The fair value of our interest rate swaps and other derivatives 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 ABS and other 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.

The degree of management judgment involved in determining the fair value 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. 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. Changes in assumptions could affect these estimates.

Credit risk in our portfolio of investment securities is primarily limited to the 1 percent of securities that do not carry an explicit or implied government guarantee. In instances where the fair value of non-guaranteed investment securities is less than the carrying value, we estimate the component of unrealized losses attributable to credit losses and record an ACL.

All models used for financial instruments valuation estimates included in the financial statements or for independent risk monitoring purposes are periodically reviewed and validated in accordance with our policies.

At December 31, 2023, approximately 23 percent of total assets, or $43.9 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 a small portion of our ABS and other investments. At December 31, 2023, less than 1 percent of total liabilities, or $1.1 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.

Refer also to Notes 1, 2, and 11 to the consolidated financial statements for further information on our accounting policies for fair value measurements and our adoption of the CECL accounting standard on January 1, 2023, which resulted in a $3 million ACL related to our available-for-sale investment securities as of December 31, 2023.

Business Outlook

As we enter 2024, the global economy is expected to experience continued volatility and potential weakening due to geopolitical tensions, the 2024 U.S. elections, shifts in trade policies and other factors. Europe is facing weak growth this year and Asia, in particular China, is expecting more moderate and decelerating growth compared to the prior decade. The wars in Ukraine and the Middle East will also continue to impact global trade, food supply and economic conditions including heightened transportation costs for goods due to shipping constraints in certain impacted regions. The U.S. economy enters 2024 in a much better place than a year ago. Inflation has decreased significantly, labor markets remain stable and consumer spending continues to be strong. While some risks of a recession in 2024 remain due to elevated interest rates, yield curve inversion and other factors, the Federal Reserve has paused its increase of interest rates and signaled the possibility of decreasing interest rates in 2024, potentially further stimulating the economy. Equity markets experienced strong gains in the fourth quarter of 2023 to near record highs in anticipation of the easing of monetary policy in 2024. Amidst this economic backdrop, Congress continues to struggle with the passage of numerous appropriation bills to prevent a federal shutdown of the U.S. government in 2024 and further stabilize the fiscal budget and debt dynamics going forward. The current U.S. Farm Bill, which was temporarily extended through September 30, 2024, will also require a more permanent solution. The presidential election in late 2024 also creates additional uncertainty with respect to government policies and rulemaking, including U.S. tax laws and the federal corporate income tax rate, all of which will impact the U.S. and rural economy.

Market conditions in many sectors of the agricultural and rural infrastructure industries we serve remain generally favorable and stable. The rural economy in the United States continues to grow and benefit from higher levels of consumer spending and the wave of investment in rural industries driven by energy transition, environmental sustainability and technological advancement. While farm income was down in 2023 due to lower commodity prices for wheat, corn and soybeans and higher input costs, there is upside for 2024. Global grain and oilseed stock inventories are tight by historic measures, weather patterns are expected to improve and the U.S. dollar is expected to decline, all of which should return global demand to its long-term growth trend. Additionally, fertilizer prices have come down from record highs, although other costs of production remain elevated. Profitability for the U.S. livestock, animal and protein sector should improve modestly in 2024, as lower feed costs and steady domestic demand offset weak global export conditions. Global dairy prices have rebounded and current milk and feed futures point to average profitability for milk producers and growth in sales in 2024. Both ethanol producers and soybean growers are benefiting from the rising demand for biofuels. The rural power and energy industries are impacted by ongoing global geopolitical developments and discord that has created volatility and uncertainty in fuel supplies and prices. And, while fuel prices declined last quarter, further geopolitical conflict and disruption could cause significant increases in fuel prices in 2024. The communications industry will continue to be a bright spot for the economy in 2024, including in underserved rural markets, due to the ongoing digitization for businesses and consumers and the deployment of unprecedented amounts of public and private capital. Margins and profits for communications operators, however, could see challenges due to higher interest rates and costs of capital, as well as increased material and labor costs. Overall, the long-term outlook in these rural infrastructure sectors remains favorable due to the ongoing need to upgrade and maintain the energy grid and communications infrastructure in the United States and from increased spending resulting from the passage of the Infrastructure Investment and Jobs Act and, to a lesser extent, the Inflation Reduction Act. Other political actions may impact the agriculture sector and the rural economy in 2024, including a delay in reauthorizing or extending the U.S. Farm Bill beyond September 30, 2024.

Although challenges across our industry sectors could reduce credit quality and impact the level of loan demand, CoBank believes it remains well positioned to assist our customers and to continue to serve rural America.

Under the guidance of our Board of Directors and our experienced executive management team, we remain focused on achieving continued success through execution of our business strategies. This includes, among other objectives, creating mutually beneficial partnerships with other System institutions, maintaining effective access to the agency debt capital markets, opportunistically accessing the preferred stock capital markets, educating policy makers and other key stakeholders about the critical mission of CoBank and the System, prudently optimizing current lending authorities and maintaining compliance with laws and regulations. We continue to collaborate with our affiliated Associations on business model enhancements that further strengthen the ability to fulfill our collective mission. We will also 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 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 and adversely from our expectations expressed in any forward-looking statements. Forward-looking statements are typically identified by words such as "believe," "expect," "anticipate," "intend," "estimate," "plan," "project," "target," "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:

- Inflation, recession, 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;
- The wars in Ukraine and the Middle East and their impacts on global trade for grain, fertilizer and other commodities, transportation availability and costs, economic conditions and global food supply;
- Government trade policies in the United States and other countries, including tariffs and other restrictions that impact markets for agricultural and other products;
- A decrease in the credit outlook or ratings of U.S. government debt and agency debt, including our securities and Systemwide Debt Securities;
- Changes in the economic environment that negatively impact the agricultural, power, communications, water and leasing industries;
- Changes in the U.S. government's support of the System, the agricultural industry, agricultural exports, rural infrastructure and rural economies, including passage of a new Farm Bill;
- The growing impact of the environmental, social and governance (ESG) trend in the financial services industry globally, including policies directed toward measuring the carbon impact from lending activities and efforts focused on reducing the impact of climate change such as the legislation recently passed in California;
- 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;
- Catastrophic events such as wildfires, floods and other natural disasters, political unrest or other similar occurrences, which may have a direct or indirect impact on certain of our borrowers;
- Changes in levels of global crop production, exports, imports, usage and inventories;
- Credit performance of the loan portfolio;
- Performance of the underlying collateral of our loans;
- Loan portfolio growth and seasonal factors;
- Weakening domestic and global economic conditions;
- Volatility in energy prices including oil, natural gas and other fuel;
- Geopolitical uncertainties, conflicts and government policy developments in the United States and throughout the world that may impact the industries we lend to, or, economic, fiscal or monetary conditions;
- Legislative or regulatory actions that affect our relationships with our employees;
- Actions taken by the U.S. Congress relative to other government-sponsored enterprises;
- Actions taken by the U.S. government to manage U.S. immigration or fiscal policies;
- Actions taken by the U.S. Congress to fund infrastructure improvements;
- Changes to tax laws;
- Our ability to attract and retain high quality employees;
- 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;
- Disruptive technologies impacting the banking and financial services industries or implemented by our competitors which negatively impact our ability to compete in the marketplace;
- Regulatory actions or changes in investor confidence due to the recent disruptions in the financial services and commercial banking sectors;
- Widespread health emergencies, such as pandemics, and the disruptions they cause to businesses and the economy;
- Changes in assumptions underlying the valuations of financial instruments;
- Changes in 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;

- Legal proceedings, judgments, settlements and related matters;
- Environmental-related conditions or laws impacting our lending activities;
- Nonperformance by counterparties under our derivative and vendor contracts;
- Success of business model solutions focused on strengthening our ability to fulfill the System's collective mission; 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 and Shareholders 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 "Bank") as of December 31, 2023, 2022, and 2021, and the related consolidated statements of income, of comprehensive income, of changes in shareholders' equity and of cash flows, for the years then ended, including the related notes (collectively referred to as the "consolidated financial statements"). We also have audited the Bank's internal control over financial reporting as of December 31, 2023, 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 Bank as of December 31, 2023, 2022, and 2021, and the results of its operations and its cash flows for the years then ended in conformity with accounting principles generally accepted in the United States of America. Also in our opinion, the Bank maintained, in all material respects, effective internal control over financial reporting as of December 31, 2023, based on criteria established in *Internal Control - Integrated Framework* (2013) issued by the COSO.

Change in Accounting Principle

As discussed in Note 2 to the consolidated financial statements, the Bank changed the manner in which it accounts for the allowance for credit losses in 2023.

Basis for Opinions

The Bank'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 143 of the 2023 Annual Report to Shareholders. Our responsibility is to express opinions on the Bank's consolidated financial statements and on the Bank's internal control over financial reporting based on our audits. We are a public accounting firm registered with the Public Bank Accounting Oversight Board (United States) (PCAOB) and are required to be independent with respect to the Bank in accordance with the relevant ethical requirements relating to our audit, which include standards of the American Institute of Certified Public Accountants (AICPA) Code of Professional Conduct and the Farm Credit Administration's independence rules set forth in 12 CFR Part 621, *Accounting and Reporting Requirements*, Subpart E, *Auditor Independence*.

We conducted our audits in accordance with the auditing standards of the PCAOB and in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audits to obtain reasonable assurance about whether the 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 Bank'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 Bank'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 Bank; (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 Bank are being made only in accordance with authorizations of management and directors of the Bank; 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 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.

Critical Audit Matter

The critical audit matter communicated below is a matter arising from the current period audit of the consolidated financial statements that was communicated or required to be communicated to the audit committee and that (i) relates to accounts or disclosures that are material to the consolidated financial statements and (ii) involved our especially challenging, subjective, or complex judgments. The communication of critical audit matters does not alter in any way our opinion on the consolidated financial statements, taken as a whole, and we are not, by communicating the critical audit matter below, providing a separate opinion on the critical audit matter or on the accounts or disclosures to which it relates.

Allowance for Credit Losses (ACL) – Pool Allowance for Loans

As described in Notes 1 and 3 to the consolidated financial statements, the allowance for credit losses was $814 million, of which a majority is related to the pool allowance for loans as of December 31, 2023. The ACL on loans represents management's estimate of current expected credit losses and takes into consideration relevant information about past events, current conditions, and reasonable and supportable macroeconomic forecasts of future conditions. Management's process and methodology to determine the ACL separates loans into two broad categories: those that are evaluated on an individual basis and those that are not. The pool allowance is measured based on the estimated expected credit losses for pools of assets with similar risk characteristics. As disclosed by management, management assigns a risk rating to each borrower based on two primary measurements: the probability of default (PD) rating and loss given default (LGD) rating. The PD rating is determined by the financial characteristics of the borrower and reflects the probability of default driven by several considerations, 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. Management evaluates and updates its assumptions around probabilities of default and loss given default on a periodic basis or more frequently as needed. The pool allowance is determined based on a quantitative calculation of the expected life-of-loan loss percentage for each loan pool by considering the probability of default and the loss given default. In addition, management considers the imprecision inherent in the process and methodology, emerging risk assessments and other subjective factors not reflected in the model, which may lead to a management adjustment to the modeled ACL on loans results.

The principal considerations for our determination that performing procedures relating to the pooled allowance of the ACL for loans is a critical audit matter are (i) the significant judgment by management in developing the estimate of the pool allowance of the ACL for loans; (ii) a high degree of auditor judgment, subjectivity, and effort in performing procedures and evaluating audit evidence related to management's probability of default and loss given default significant assumptions, as well as certain management adjustments to the pool allowance of the modeled ACL results for loans; and (iii) the audit effort involved the use of professionals with specialized skill and knowledge.

Addressing the matter involved performing procedures and evaluating audit evidence in connection with forming our overall opinion on the consolidated financial statements. These procedures included testing the effectiveness of controls relating to management's ACL estimation process, including controls over the probability of default and loss given default significant assumptions, as well as management adjustments to the pool allowance of the modeled ACL results for loans. These procedures also included, among others (i) testing management's process for developing the estimate of the pool allowance of the ACL for loans; (ii) evaluating the appropriateness of the methodology and model; (iii) testing the completeness and accuracy of certain data used in the estimate; and (iv) evaluating the reasonableness of the significant assumptions used by management related to probability of default and loss given default and certain management adjustments to the pool allowance of the modeled ACL results for loans. Professionals with specialized skill and knowledge were used to assist in evaluating (i) the appropriateness of the methodology and model and (ii) the reasonableness of the probability of default and loss given default assumptions, as well as certain management adjustments to the pool allowance of the modeled ACL results for loans.

PricewaterhouseCoopers LLP

Denver, Colorado
February 29, 2024

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

Consolidated Balance Sheets

CoBank, ACB

($ in Millions)

As of December 31,	2023	2022	2021
Assets			
Total Loans	**$ 148,015**	$ 140,089	$ 128,529
Less: Allowance for Loan Losses	**730**	682	651
Net Loans	**147,285**	139,407	127,878
Cash and Cash Equivalents	**1,013**	896	3,197
Federal Funds Sold and Other Overnight Funds	**4,615**	12,401	5,500
Investment Securities (net of allowance of $3 million at December 31, 2023)	**38,343**	33,097	31,842
Accrued Interest Receivable	**1,038**	749	379
Interest Rate Swaps and Other Derivatives	**812**	1,000	487
Other Assets	**1,253**	1,293	1,023
Total Assets	**$ 194,359**	$ 188,843	$ 170,306
Liabilities			
Bonds and Notes	**$ 178,821**	$ 174,623	$ 154,950
Accrued Interest Payable	**1,396**	843	285
Interest Rate Swaps and Other Derivatives	**833**	1,079	372
Reserve for Unfunded Commitments	**84**	143	106
Patronage Payable	**831**	856	743
Other Liabilities	**1,201**	1,074	1,616
Total Liabilities	**183,166**	178,618	158,072
Shareholders' Equity			
Preferred Stock	**1,625**	1,633	1,902
Common Stock	**4,076**	4,000	4,013
Unallocated Retained Earnings	**7,016**	6,519	6,164
Accumulated Other Comprehensive (Loss) Income	**(1,524)**	(1,927)	155
Total Shareholders' Equity	**11,193**	10,225	12,234
Total Liabilities and Shareholders' Equity	**$ 194,359**	$ 188,843	$ 170,306

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

Consolidated Statements of Income

CoBank, ACB

($ in Millions)

Year Ended December 31,	2023	2022	2021
Interest Income			
Loans	**$ 7,266**	$ 3,909	$ 2,431
Investment Securities	**1,274**	680	437
Federal Funds Sold and Other Overnight Funds	**393**	159	1
Total Interest Income	**8,933**	4,748	2,869
Interest Expense	**7,086**	2,864	1,143
Net Interest Income	**1,847**	1,884	1,726
Provision for Credit Losses	**76**	111	18
Net Interest Income After Provision for Credit Losses	**1,771**	1,773	1,708
Noninterest Income			
Net Fee Income	**219**	158	153
Patronage Income	**176**	151	129
Prepayment Income	**1**	9	79
Gains (Losses) on Early Extinguishments of Debt	**—**	1	(126)
(Losses) Gains on Sales of Investment Securities	**(7)**	2	(36)
Gains on Interest Rate Swaps and Other Derivatives	**20**	21	16
Other, Net	**50**	24	(16)
Total Noninterest Income	**459**	366	199
Operating Expenses			
Employee Compensation	**268**	238	233
Insurance Fund Premium	**144**	151	109
Information Services	**68**	69	54
General and Administrative	**36**	37	35
Occupancy and Equipment	**17**	17	16
Farm Credit System Related	**18**	18	16
Purchased Services	**23**	31	19
Travel and Entertainment	**21**	19	9
Total Operating Expenses	**595**	580	491
Income Before Income Taxes	**1,635**	1,559	1,416
Provision for Income Taxes	**128**	110	102
Net Income	**$ 1,507**	$ 1,449	$ 1,314

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

Consolidated Statements of Comprehensive Income (Loss)

CoBank, ACB

($ in Millions)

Year Ended December 31,	2023	2022	2021
Net Income	**$ 1,507**	$ 1,449	$ 1,314
Other Comprehensive Income (Loss), Net of Tax:			
Net Change in Unrealized Gains (Losses) on Investment Securities	**462**	(2,160)	(567)
Net Change in Unrealized (Losses) Gains on Interest Rate Swaps and Other Derivatives	**(64)**	100	7
Net Pension Adjustment	**5**	(22)	27
Other Comprehensive Income (Loss)	**403**	(2,082)	(533)
Comprehensive Income (Loss)	**$ 1,910**	$ (633)	$ 781

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

Consolidated Statements of Changes in Shareholders' Equity

CoBank, ACB

($ in Millions)

	Preferred Stock	Common Stock	Unallocated Retained Earnings	Accumulated Other Comprehensive Income (Loss)	Total Shareholders' Equity
Balance at December 31, 2020	$ 1,500	$ 3,918	$ 5,804	$ 688	$ 11,910
Comprehensive Income			1,314	(533)	781
Preferred Stock:					
Dividends			(83)		(83)
Issuance	425		(5)		420
Redemptions	(23)		5		(18)
Common Stock:					
Retirements		(33)			(33)
Patronage Distribution:					
Cash			(632)		(632)
Special Cash			(111)		(111)
Common Stock		128	(128)		–
Balance at December 31, 2021	$ 1,902	$ 4,013	$ 6,164	$ 155	$ 12,234
Comprehensive Loss			1,449	(2,082)	(633)
Preferred Stock:					
Dividends			(93)		(93)
Issuance	400		(4)		396
Redemptions	(669)		13		(656)
Common Stock:					
Issuances		5			5
Retirements		(157)			(157)
Patronage Distribution:					
Cash			(722)		(722)
Special Cash			(149)		(149)
Common Stock		139	(139)		–
Balance at December 31, 2022	$ 1,633	$ 4,000	$ 6,519	$ (1,927)	$ 10,225
Cumulative Effect of Change in Accounting Principle [1]			**46**	**5**	**51**
Balance at January 1, as adjusted	**$ 1,633**	**$ 4,000**	**$ 6,565**	**$ (1,922)**	**$ 10,276**
Comprehensive Income			**1,507**	**398**	**1,905**
Preferred Stock:					
Dividends			**(94)**		**(94)**
Redemptions	**(8)**		**3**		**(5)**
Common Stock:					
Issuances		**133**			**133**
Retirements		**(191)**			**(191)**
Patronage Distribution:					
Cash			**(725)**		**(725)**
Special Cash			**(106)**		**(106)**
Common Stock		**134**	**(134)**		–
Balance at December 31, 2023	**$ 1,625**	**$ 4,076**	**$ 7,016**	**$ (1,524)**	**$ 11,193**

[1] Effective January 1, 2023, we adopted the CECL accounting standard pursuant to ASU "Financial Instruments - Credit Losses (Topic 326)".

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

Consolidated Statements of Cash Flows

CoBank, ACB

($ in Millions)

Year Ended December 31,	2023	2022	2021
Cash Flows Provided by Operating Activities			
Net Income	**$ 1,507**	$ 1,449	$ 1,314
Adjustments to Reconcile Net Income to Net Cash Provided by Operating Activities:			
Provision for Credit Losses	**76**	111	18
Deferred Income Taxes	**19**	26	43
Depreciation and Amortization/Accretion, Net	**21**	46	62
Net (Gains) Losses on Early Extinguishments of Debt	**—**	(1)	126
Net Losses (Gains) on Sales of Investment Securities	**7**	(2)	36
(Increase) Decrease in Accrued Interest Receivable	**(288)**	(370)	25
Increase in Other Assets	**(128)**	(196)	(223)
Increase (Decrease) in Accrued Interest Payable	**553**	558	(44)
Increase in Other Liabilities	**70**	7	191
Net (Gains) Losses on Interest Rate Swaps and Other Derivatives	**—**	(1)	11
Proceeds (Payments) from Termination of Interest Rate Swaps and Other Derivatives	**4**	(35)	12
Payments on Operating Lease Liabilities	**(10)**	(10)	(10)
Other, Net	**(2)**	(4)	(2)
Net Cash Provided by Operating Activities	**1,829**	1,578	1,559
Cash Flows Used in Investing Activities			
Net Increase in Loans	**(8,022)**	(11,604)	(7,675)
Investment Securities:			
Purchases	**(11,732)**	(13,525)	(16,418)
Proceeds from Maturities and Prepayments	**6,604**	8,774	12,583
Proceeds from Sales	**548**	513	3,954
Net Decrease (Increase) in Federal Funds Sold and Other Overnight Funds	**7,786**	(6,901)	(4,665)
Other, Net	**103**	79	94
Net Cash Used in Investing Activities	**(4,713)**	(22,664)	(12,127)
Cash Flows Provided by Financing Activities			
Bonds and Notes Proceeds	**131,972**	145,278	107,881
Bonds and Notes Retired	**(127,922)**	(126,366)	(96,648)
Proceeds (Payments) on Early Extinguishments of Debt	**—**	1	(126)
Net (Decrease) Increase in Notes Payable and Other Interest-bearing Liabilities	**(71)**	820	556
Preferred Stock Issued, Net	**—**	396	420
Preferred Stock Retired	**(6)**	(657)	(18)
Preferred Stock Dividends Paid	**(97)**	(88)	(82)
Common Stock Issued	**134**	5	—
Common Stock Retired	**(191)**	(157)	(33)
Cash Patronage Distribution Paid	**(707)**	(632)	(490)
Special Cash Patronage Distribution Paid	**(149)**	(125)	(106)
Cash Collateral (Paid) Received (to) from Derivative Counterparties, Net	**(264)**	639	188
Variation Margin Received (Paid) on Cleared Derivatives, Net	**302**	(329)	(112)
Net Cash Provided by Financing Activities	**3,001**	18,785	11,430
Net Increase (Decrease) in Cash and Cash Equivalents	**117**	(2,301)	862
Cash and Cash Equivalents at Beginning of Year	**896**	3,197	2,335
Cash and Cash Equivalents at End of Year	**$ 1,013**	$ 896	$ 3,197

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

Supplemental Consolidated Cash Flow Information

CoBank, ACB

($ in Millions)

Year Ended December 31,	2023	2022	2021
Schedule of Noncash Investing and Financing Activities			
Net Change in Accrued Securities Purchases	**$ —**	$ 350	$ 184
Net Change in Receivables from Investment Securities	**(110)**	250	(2)
Net Change in Unrealized Losses on Investment Securities, Before Taxes	**513**	(2,399)	(635)
Patronage in Common Stock	**134**	139	128
Cash Patronage Payable	**725**	722	631
Special Cash Patronage Payable	**106**	149	111
Supplemental Noncash Fair Value Changes Related to Hedging Activities			
(Increase) Decrease Interest Rate Swaps and Other Derivative Assets	**$ (188)**	$ (513)	$ 391
Decrease in Bonds and Notes Related to Hedging Activities	**(436)**	(623)	(251)
(Decrease) Increase in Interest Rate Swaps and Other Derivative Liabilities	**(246)**	708	(239)
Supplemental Noncash Information Related to Leases			
Right-of-Use Assets Obtained in Exchange for Operating Lease Liabilities	**$ 8**	$ 9	$ 8
Supplemental Disclosure of Cash Flow Information			
Interest Paid	**$ 6,590**	$ 1,993	$ 1,195
Income Taxes Paid	**45**	62	65

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

Notes to Consolidated Financial Statements

CoBank, ACB
($ in Millions, Except Per Share Amounts and as Noted)

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 in 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 provide a broad range of loans and other financial services through three operating segments: Agribusiness, Farm Credit Banking and Rural Infrastructure. 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 including Farm Credit Banks 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 System 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 System 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.

Summary of Significant Accounting Policies

Basis of Presentation and Principles of Consolidation

The consolidated financial statements include the accounts of CoBank and its wholly-owned subsidiaries, CoBank, Farm Credit Bank (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." Additional information about our affiliated Associations is contained in Note 17.

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.

Loans

Loans are measured at amortized cost to the extent they are held for the collection of principal and interest and are reported at their principal amount outstanding, net of any unamortized discounts, premiums, deferred fees and costs. We accrue interest income based upon the daily principal amount outstanding. For loans purchased at a discount or premium, we accrete or amortize the unearned amount to interest 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. Most of our fixed-rate loans provide borrowers with the option to prepay their loans for a fee. When such loans are refinanced, loan prepayment fees are recognized upon extinguishment of the original loan and issuance of a new loan. For a refinancing determined to be a modification of the original loan, we defer and amortize loan prepayment fees over the life of the modified loan. This determination is primarily based on the change in cash flows resulting from the refinancing and certain other contractual criteria.

Except as otherwise noted, leases in which we are the lessor are included with loans in the consolidated financial statements and related notes. We record these leases as either direct financing or operating leases. Under direct financing leases in which we are the lessor, 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 in which we are the lessor, 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 engage in lending transactions which may include underwriting, credit arrangement, syndication or other fees. In addition, 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. We earn and recognize fees, which are reflected in net fee income in the accompanying consolidated statements of income, upon satisfying certain retention, timing and yield criteria.

Loans that we intend to sell for credit or other reasons are classified as held-for-sale and measured at lower of cost or fair value. Loans held-for-sale are excluded from the allowance for credit losses (ACL) on loans. Any further decreases or increases in fair value up to the loan cost basis are recognized in noninterest income. Increases in fair value above the loan cost basis are not recognized until the loans are sold.

Nonaccrual Loans and Other Nonperforming Assets

Nonaccrual loans and other nonperforming assets are loans or assets for which it is probable that not all principal and interest will be collected according to their contractual terms. These include loans that are in nonaccrual status, accruing loans 90 days or more past due and still accruing interest and other property owned by the Bank.

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 past due until it is contractually modified 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 charged off in full.

We do not accrue interest income on nonaccrual 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.

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

Allowance for Credit Losses on Loans

Beginning on January 1, 2023, with the adoption of current expected credit losses (CECL) accounting standard, the ACL on loans represents management's estimate of current expected credit losses over the remaining contractual life of loans and leases measured at amortized cost and certain off-balance sheet credit exposures. The ACL takes into consideration relevant information about past events, current conditions and reasonable and supportable macroeconomic forecasts of future conditions. The contractual term includes expected extensions, renewals and modifications unless the extension or renewal options are unconditionally cancellable.

The ACL on loans is comprised of the allowance for loan losses and the reserve for unfunded commitments.

Loans and leases are evaluated for credit losses based on their amortized cost. We have adopted the practical expedient in CECL to exclude accrued interest from the ACL measurement when it is reversed or charged off in a timely manner. We consider our nonaccrual and charge-off policies to be timely for all of our loans and leases. We employ a disciplined process and methodology to determine our ACL under CECL that separates our loans and leases into two broad categories: those that are evaluated on an individual basis and those that are not. Loans and leases that are individually evaluated for credit losses include those that are nonaccrual or past due 90 days or more and still accruing interest. For loans and leases that are not individually assessed for credit losses, we estimate expected credit losses of financial assets on a collective (pool) basis for pools of loans that share similar risk characteristics.

Our ACL for individually evaluated loans and leases is based on the fair value of the related collateral of the loan or lease if it is collateral dependent, or the present value of expected future cash flows discounted at the effective interest rate of the loan or lease. In limited cases, we estimate the ACL for individually evaluated loans and leases based on observable market prices.

Our ACL for collectively evaluated loans and leases (the pool allowance) is measured based on the estimated expected credit losses for pools of assets with similar risk characteristics. The pool allowance is determined based on a quantitative calculation of the expected life of loan loss percentage for each loan pool by considering the probability of default, loss given default, and exposure at default for individual borrowers/obligations, concentrations of credit risk and other relevant factors to estimate expected credit losses. The pool allowance component of the ACL also considers factors for each loan pool to adjust for differences between the historical period used to calculate historical credit defaults and loss severity rates and expected conditions over the remaining lives of the loans.

Management considers multiple economic scenarios over a reasonable and supportable forecast period of two years to estimate credit losses under CECL. Subsequent to the forecast period, our CECL credit loss model reverts to our long-term historical loss experience on a linear basis to calculate the estimate of credit losses for the remaining contractual life of the loan portfolio. The economic forecasts used in our CECL credit loss model are provided by an independent third-party and incorporate macroeconomic variables, some of which apply to all portfolio segments and others that are portfolio specific. The most significant economic variables utilized in our CECL credit loss model include: BBB corporate spreads, unemployment rates, equity prices, corn prices, gas prices, oil prices and power grid prices. When necessary, probability weighting of multiple economic forecasts is performed and used in the CECL credit loss model and determination of the ACL on loans.

In addition to the quantitative calculation of the pool allowance, management considers the imprecision inherent in our process and methodology, emerging risks and other subjective factors not reflected in the model, which may lead to a management adjustment to the modeled ACL on loans result.

The reserve for unfunded commitments represents an additional reserve for binding commitments to extend credit and for commercial letters of credit and is reported as a liability on the Bank's consolidated balance sheet.

Prior to the adoption of CECL, our ACL on loans for December 31, 2022, 2021 and prior periods represented management's estimate of probable and estimable incurred losses inherent in our loans and leases as well as a reserve for unfunded commitments.

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 cash reserve balances on a short-term basis, generally overnight. Other overnight funds include deposits with commercial banks and reverse repurchase agreements with the Federal Reserve. In each of these transactions, funds are returned to the Bank the following business day and earn interest overnight. Such investments are reported at fair value, which is generally their face 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 excluding credit losses, in the accumulated other comprehensive income (loss) component of shareholders' equity on the consolidated balance sheets. We report realized gains and losses on sales of investments in noninterest income in our consolidated statements of income. We use the specific identification method for determining cost in computing realized gains and losses on sales of investment securities.

Prior to January 1, 2023, we evaluated available-for-sale investments in unrealized loss positions to determine if such losses were other-than-temporary. If losses were deemed to be other-than-temporary, we recorded a direct write-down of the investment for the portion related to credit losses in earnings and the portion related to all other factors in accumulated other comprehensive income (loss).

Allowance for Credit Losses on Investments

Beginning on January 1, 2023, available-for-sale investment securities with unrealized losses are also evaluated for an ACL. As part of the assessment, management evaluates whether it intends to sell the security or it is more likely than not to be required to sell the security, prior to recovery of the amortized cost basis. Management excludes those investment securities with no risk of credit loss from the ACL evaluation because they carry a full faith and credit guarantee of the U.S. government or are issued by U.S. agencies with an implicit guarantee from the U.S. government. For non-guaranteed investment securities, an analysis is performed at the individual security level to determine whether any portion of the unrealized loss is a credit loss. Credit losses are recorded as an ACL on investment securities with the offsetting amount in earnings. Interest rate, liquidity and other non-credit-related components of unrealized losses and gains on available-for-sale investment securities are recorded in accumulated other comprehensive income (loss).

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 period earnings. We record maintenance and repairs to operating expenses when incurred and capitalize improvements.

Leased Property

We have operating leases for our corporate headquarters, banking center offices, certain equipment and vehicles. We determine if an arrangement is a lease and the related lease classification at inception. Right-of-use (ROU) assets and lease liabilities are recognized based on the present value of the future minimum lease payments over the lease term at commencement date. If available, we use the implicit rate in the lease in determining the present value of future payments. We use our incremental borrowing rate based on the information available at commencement date when the implicit rate in the lease is not available. ROU assets and lease liabilities are included in other assets and other liabilities, respectively, in our consolidated balance sheets. Operating lease rentals are expensed on a straight-line basis over the life of the lease beginning on the date we take possession of the property. We determine the lease term by assuming the exercise of renewal and termination options that are reasonably certain. Our leases have remaining minimum lease terms of less than one year to eight years, some of which include options to extend the leases for up to an additional 15 years. Rent expense for leases is reflected in occupancy and equipment expense in the accompanying consolidated statements of income. Additionally, the depreciable life of leased assets and leasehold improvements is limited by the expected lease term.

We recorded a right-of-use asset and lease liability for our leased property of $52 million and $56 million, respectively, at December 31, 2023. As of December 31, 2023, rental payments associated with our leased property total approximately $56 million over the remaining term of 7 years.

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 2023, net mineral income passed directly to these Associations totaled $11 million compared to $14 million in 2022 and $9 million in 2021. As a result of the agreement to pass the net earnings from mineral rights to certain Associations, these mineral rights have no carrying value on the consolidated balance sheets.

Other Investments

We apply the equity method of accounting to certain equity investments classified within other assets on the consolidated balance sheets in which we do not control the investee, but have limited influence over the operating and financial policies of the investee. This primarily includes our investments in which we are a limited partner in Rural Business Investment Companies (RBICs) and unincorporated business entities (UBEs), as well as our investments in the FCS Building Association and Farm Credit System Association Captive Insurance Corporation. We also hold an equity investment as a result of the bankruptcy of a former customer which is accounted for at cost less any impairment as there is no readily determinable fair value.

Derivatives 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 sheets at fair value, with changes in fair value recognized in current period earnings as part of noninterest income. For discontinued fair value hedges, the basis adjustment of the hedged item is amortized to net interest income over the remaining life of the original hedging relationship. For discontinued cash flow hedges, we amortize the component of accumulated other comprehensive income (loss) to net interest income over the original term of the hedge contract. For cash flow hedges in which the forecasted transaction is not probable of occurring, we immediately reclassify amounts in accumulated other comprehensive income (loss) to current period earnings. For additional information, refer to Note 10.

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, 2023, CoBank was primarily liable for $175.4 billion of Systemwide Debt Securities, which was recorded as a liability on our consolidated balance sheets.

Systemwide Debt Securities are measured and reported at amortized cost at their principal amount outstanding, net of any unamortized discounts, premiums and issue costs. For Systemwide Debt Securities issued at a discount or premium, we accrete or amortize the unearned amount to interest expense using the interest method. Issue costs are amortized to interest expense over the contractual term of the Systemwide Debt Securities. For additional information, refer to Note 5.

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 11.

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 7. 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 eligible 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 carrying amounts of existing assets and liabilities in the financial statements 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.

Note 2 – Recently Issued or Adopted Accounting Pronouncements

Accounting Pronouncements Adopted During 2023

Current Expected Credit Losses

In June 2016, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU), "Financial Instruments – Credit Losses (Topic 326): Measurement of Credit Losses on Financial Instruments." The ASU introduced a new model for recognizing credit losses on financial instruments based on an estimate of current expected credit losses. The new model applied 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 accumulated other comprehensive income (loss); and (4) beneficial interests in securitized financial assets. The ASU also required certain new loan and ACL disclosures, including loan vintage information. CoBank adopted this ASU on January 1, 2023 following the modified retrospective approach with a cumulative effective adjustment to shareholders' equity as of the date of adoption.

The following table presents the impact to the ACL, retained earnings and accumulated other comprehensive (loss) income upon adoption of the ASU on January 1, 2023.

	December 31, 2022	CECL Adoption Impact	January 1, 2023
Allowance for Loan Losses			
Agribusiness	$ 517	$ (67)	$ 450
Farm Credit Banking	-	-	-
Rural Infrastructure	165	58	223
Total Allowance for Loan Losses	$ 682	$ (9)	$ 673
Reserve for Unfunded Commitments			
Agribusiness	$ 122	$ (68)	$ 54
Farm Credit Banking	-	-	-
Rural Infrastructure	21	2	23
Total Reserve for Unfunded Commitments	$ 143	$ (66)	$ 77
ACL on Loans	$ 825	$ (75)	$ 750
ACL on Investments	$ -	$ 6	$ 6
Unallocated Retained Earnings[1]	$ 6,519	$ 46	$ 6,565
Accumulated Other Comprehensive (Loss) Income[1]	(1,927)	5	(1,922)
Cumulative Effect of Change In Accounting Principle[1]		$ 51	

[1] Amounts are net of taxes.

Upon adoption of the ASU, we recorded a $75 million decrease in our ACL for loans, leases and unfunded commitments comprised of a $9 million reduction in the allowance for loan losses and a $66 million decrease in the reserve for unfunded commitments. The decrease in our ACL under CECL is primarily due to the measurement of credit losses under CECL over the contractual life of a loan compared to requirements under previous GAAP which were based on management's estimate of the loss emergence period for a loan. As a result of this measurement change, a large portion of our agribusiness loan volume, including seasonal lending to grain and farm supply cooperatives as well as other short-term loans, have a lower ACL under CECL. In contrast, and partially offsetting this reduction, our long-term rural infrastructure loans to many of our communications, energy and water customers have a higher CECL ACL. Refer to Note 3 for further disclosure of the ACL on loans.

We also recorded a $6 million ACL on our available-for-sale investment securities upon adoption of the ASU. The substantial majority of our investment portfolio of available-for-sale securities has no risk of credit loss because they carry a full faith and credit guarantee of the U.S. government or are issued by U.S. agencies with an implicit guarantee from the U.S. government. The entire amount of the ACL on our investment portfolio of available-for-sale securities related to corporate bonds that are not guaranteed by the U.S. government or U.S. agencies. Refer to Note 4 for further disclosure of the ACL on investments.

Troubled Debt Restructurings and Vintage Disclosures

In March 2022, the FASB issued ASU, "Financial Instruments – Credit Losses (Topic 326): Troubled Debt Restructurings and Vintage Disclosure." The amendments in this ASU eliminate the accounting guidance for troubled debt restructurings (TDRs) by creditors in Subtopic 310-40, Receivables – Troubled Debt Restructurings by Creditors, while enhancing disclosure requirements for certain loan refinancings, modifications and restructurings by creditors when a borrower is experiencing financial difficulty. The amendments in this ASU also require that an entity disclose current-period gross charge-offs by year of origination for financing receivables and net investments in leases within the scope of Subtopic 326-20, Financial Instruments—Credit Losses—Measured at Amortized Cost. CoBank adopted this ASU on January 1, 2023. Refer to Note 3 for further disclosure of loan modifications.

Reference Rate Reform

In March 2020, the FASB issued ASU, "Reference Rate Reform (Topic 848): Facilitation of the Effects of Reference Rate Reform on Financial Reporting." The ASU provides optional expedients and exceptions for applying GAAP to contracts, hedging relationships, and other transactions affected by reference rate reform. The ASU simplified the accounting evaluation of contract modifications that replace a reference rate affected by reference rate reform and contemporaneous modifications of other contract terms related to the replacement of the reference rate. With respect to hedge accounting, the ASU allowed amendment of formal designation and documentation of hedging relationships in certain circumstances as a result of reference rate reform and provided additional expedients for different types of hedges, if certain criteria were met. We applied the optional expedients available under the ASU to certain of our loans, debt and interest rate swaps and other derivatives. In December 2022, the FASB issued ASU 2022-06, "Reference Rate Reform (Topic 848): Deferral of the Sunset Date of Topic 848". This ASU deferred the sunset date of the guidance in Topic 848 on reference rate reform to December 31, 2024. This ASU was effective upon issuance. CoBank adopted ASU 2022-06 upon issuance and in 2023 applied the accounting relief to certain of our interest rate swaps and other derivatives previously indexed to LIBOR.

Recently Issued Accounting Pronouncements

Segment Reporting

In November 2023, the FASB issued ASU, "Segment Reporting (Topic 280): Improvements to Reportable Segment Disclosures." This ASU requires incremental disclosure about a public entity's reportable segments but does not change the definition of a segment or the guidance for determining reportable segments. The amendments in this ASU require annual and interim disclosure of significant segment expenses that are regularly provided to the chief operating decision maker (CODM) and included within each reported measure of a segment's profit or loss. The ASU also allows companies to disclose multiple measures of segment profit or loss if those measures are used by the CODM to assess performance and allocate resources. The ASU further requires disclosure of the title and position of the CODM and an explanation of how the CODM uses the reported measures of segment profit or loss. The amendments in this ASU also require an entity to include all annual disclosures about a reportable segment's profit or loss and assets currently required by Topic 280 in interim periods. The amendments in this ASU are effective for public business entities for fiscal years beginning after December 15, 2023, and interim periods within fiscal years beginning after December 15, 2024. The adoption of this guidance is not expected to have a material impact on our consolidated financial position, results of operations or cash flows.

Income Taxes

In December 2023, the FASB issued ASU, "Income Taxes (Topic 740): Improvements to Income Tax Disclosures." The amendments in this ASU require more transparency about income tax information through improvements to income tax disclosures primarily related to the rate reconciliation and income taxes paid information. The enhanced rate reconciliation will require tabular reporting by amount and percentage for specifically defined reconciling items as well as additional information for reconciling items that meet a quantitative threshold of greater than 5 percent of the amount computed by multiplying pre-tax income by the applicable statutory income tax rate. Income taxes paid will require disaggregated disclosure by federal, state and foreign jurisdictions for amounts exceeding a quantitative threshold of greater than 5 percent of total income taxes paid. The ASU will also eliminate the requirement to disclose an estimate of the range of the reasonably possible change in the unrecognized tax benefits balances in the next 12 months. The amendments in this ASU are effective for public business entities for annual periods beginning after December 15, 2024 and should be applied on a prospective basis, although retrospective application is permitted. The adoption of this guidance is not expected to have a material impact 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.

As of December 31,	2023		2022		2021	
	Amount	%	Amount	%	Amount	%
Agribusiness	**$ 37,785**	**26 %**	$ 40,098	29 %	$ 38,094	30 %
Farm Credit Banking	**77,658**	**52**	71,529	51	65,632	51
Rural Infrastructure	**32,572**	**22**	28,462	20	24,803	19
Total	**$ 148,015**	**100 %**	$ 140,089	100 %	$ 128,529	100 %
Loans Purchased	**$ 24,676**		$ 22,189		$ 20,438	
Loans Sold	**38,276**		31,687		26,602	

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 $7.0 billion in agricultural export finance loans outstanding as of December 31, 2023, 24 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, 2023, 2022 and 2021, total loans outstanding (excluding wholesale loans to Associations) did not exceed 10 percent for any specific industry.

Wholesale loans to our affiliated Associations represented 47 percent of total loans outstanding at December 31, 2023, 2022 and 2021. As of December 31, 2023, 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 4 percent of our total loans outstanding at December 31, 2023, 2022 and 2021.

Unamortized loan premiums and discounts, and unamortized deferred loan fees and costs totaled $239 million, $210 million and $99 million as of December 31, 2023, 2022 and 2021, respectively.

Allowance for Credit Losses on Loans

The following tables present changes in the components of our ACL on loans and details of ending balances. The ACL on loans includes the allowance for loan losses and the reserve for unfunded commitments. Effective January 1, 2023, we adopted the CECL accounting guidance as described in Note 2. The components of our ACL on loans are presented by operating segment.

	Agribusiness	Farm Credit Banking[(1)]	Rural Infrastructure	Total
Allowance for Loan Losses				
Beginning Balance at December 31, 2022	$ 517	$ -	$ 165	$ 682
Change in Accounting Principle[(2)]	(67)	-	58	(9)
Charge-offs	(11)	-	(10)	(21)
Recoveries	6	-	-	6
Provision for Credit Losses[(3)]	17	-	62	79
Transfers to Reserve for Unfunded Commitments[(4)]	(3)	-	(4)	(7)
Ending Balance at December 31, 2023	$ 459	$ -	$ 271	$ 730
Reserve for Unfunded Commitments				
Beginning Balance at December 31, 2022	$ 122	$ -	$ 21	$ 143
Change in Accounting Principle[(2)]	(68)	-	2	(66)
Transfers from Allowance for Loan Losses[(4)]	3	-	4	7
Ending Balance at December 31, 2023	$ 57	$ -	$ 27	$ 84
Allowance for Credit Losses on Loans	$ 516	$ -	$ 298	$ 814

(1) As a result of a 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 ACL on loans is recorded in our Farm Credit Banking operating segment.

(2) Effective January 1, 2023, we adopted the CECL accounting standard pursuant to ASU "Financial Instruments - Credit Losses (Topic 326)".

(3) Excludes credit loss reversal of $3 million on investment securities for the year ended December 31, 2023.

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

	Agribusiness	Farm Credit Banking[1]	Rural Infrastructure	Total
Allowance for Loan Losses				
Beginning Balance at December 31, 2021	$ 499	$ -	$ 152	$ 651
Charge-offs	(21)	-	(24)	(45)
Recoveries	2	-	-	2
Provision for Credit Losses	71	-	40	111
Transfers to Reserve for Unfunded Commitments[2]	(34)	-	(3)	(37)
Ending Balance at December 31, 2022	$ 517	$ -	$ 165	$ 682
Reserve for Unfunded Commitments				
Beginning Balance at December 31, 2021	$ 88	$ -	$ 18	$ 106
Transfers from Allowance for Loan Losses[2]	34	-	3	37
Ending Balance at December 31, 2022	$ 122	$ -	$ 21	$ 143
Allowance for Credit Losses on Loans	$ 639	$ -	$ 186	$ 825
Allowance for Loan Losses				
Beginning Balance at December 31, 2020	$ 489	$ -	$ 146	$ 635
Charge-offs	(3)	-	(3)	(6)
Recoveries	4	-	9	13
Provision for Credit Losses	16	-	2	18
Transfers to Reserve for Unfunded Commitments[2]	(7)	-	(2)	(9)
Ending Balance at December 31, 2021	$ 499	$ -	$ 152	$ 651
Reserve for Unfunded Commitments				
Beginning Balance at December 31, 2020	$ 81	$ -	$ 16	$ 97
Transfers from Allowance for Loan Losses[2]	7	-	2	9
Ending Balance at December 31, 2021	$ 88	$ -	$ 18	$ 106
Allowance for Credit Losses on Loans	$ 587	$ -	$ 170	$ 757

(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 ACL on loans is recorded in our Farm Credit Banking operating segment.

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

Our ACL on loans was $814 million at December 31, 2023 and $825 million at December 31, 2022. The decrease in the ACL on loans related to a $75 million reduction due to the adoption of the CECL accounting standard and loan charge-offs of $21 million. The allowance also reflected additions consisting of an overall provision for credit losses on loans of $79 million and loan recoveries of $6 million. The 2023 provision for credit losses on loans relates to higher reserves resulting from credit quality deterioration within certain sectors of our Rural Infrastructure operating segment and macroeconomic forecasts impacting modeled credit losses in many of our lending portfolios.

The information in the tables under the Vintage by Credit Quality Indicator, Aging Analysis and Nonaccrual Loans and Other Nonperforming Assets captions is presented by operating segment, with guaranteed and non-guaranteed loans in our Agribusiness segment separately identified. Accrued interest receivable on loans has been excluded from the Credit Quality and Aging Analysis tables for December 31, 2023, pursuant to our CECL accounting policy election, described in Note 2.

Vintage by Credit Quality Indicator

The following table presents our loans, classified by management pursuant to our regulator's Uniform Loan Classification System. As required under CECL, loan vintage information, including term loans, revolving loans and revolving loans converted to term loans, is also presented within the credit quality information for the year ended December 31, 2023 only.

As of December 31, 2023	Term Loans by Origination Year									
	2023	2022	2021	2020	2019	Prior	Total Term Loans	Revolving Loans	Revolving Loans Converted to Term Loans	Total Loans
Agribusiness Non-Guaranteed										
Acceptable	$ 4,160	$ 4,371	$ 3,071	$ 2,530	$ 1,324	$ 3,187	$ 18,643	$ 15,275	$ 166	$ 34,084
Special Mention	61	150	169	134	46	192	752	264	3	1,019
Substandard	29	141	96	122	54	153	595	413	-	1,008
Doubtful	-	-	-	-	-	-	-	-	-	-
Loss	-	-	-	-	-	-	-	-	-	-
Total	$ 4,250	$ 4,662	$ 3,336	$ 2,786	$ 1,424	$ 3,532	$ 19,990	$ 15,952	$ 169	$ 36,111
Gross Charge-offs(1)	$ -	$ 5	$ -	$ -	$ -	$ 3	$ 8	$ -	$ 3	$ 11
Agribusiness Guaranteed										
Acceptable	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,674	$ -	$ 1,674
Special Mention	-	-	-	-	-	-	-	-	-	-
Substandard	-	-	-	-	-	-	-	-	-	-
Doubtful	-	-	-	-	-	-	-	-	-	-
Loss	-	-	-	-	-	-	-	-	-	-
Total	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 1,674	$ -	$ 1,674
Gross Charge-offs(1)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Farm Credit Banking										
Acceptable	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 75,951	$ -	$ 75,951
Special Mention	-	-	-	-	-	-	-	1,707	-	1,707
Substandard	-	-	-	-	-	-	-	-	-	-
Doubtful	-	-	-	-	-	-	-	-	-	-
Loss	-	-	-	-	-	-	-	-	-	-
Total	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ 77,658	$ -	$ 77,658
Gross Charge-offs(1)	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Rural Infrastructure										
Acceptable	$ 5,359	$ 5,231	$ 3,217	$ 3,090	$ 1,909	$ 9,908	$ 28,714	$ 3,028	$ -	$ 31,742
Special Mention	26	193	81	164	21	241	726	18	-	744
Substandard	12	22	-	21	-	28	83	3	-	86
Doubtful	-	-	-	-	-	-	-	-	-	-
Loss	-	-	-	-	-	-	-	-	-	-
Total	$ 5,397	$ 5,446	$ 3,298	$ 3,275	$ 1,930	$ 10,177	$ 29,523	$ 3,049	$ -	$ 32,572
Gross Charge-offs(1)	$ 4	$ -	$ -	$ 5	$ -	$ 1	$ 10	$ -	$ -	$ 10
Total										
Acceptable	$ 9,519	$ 9,602	$ 6,288	$ 5,620	$ 3,233	$ 13,095	$ 47,357	$ 95,928	$ 166	$ 143,451
Special Mention	87	343	250	298	67	433	1,478	1,989	3	3,470
Substandard	41	163	96	143	54	181	678	416	-	1,094
Doubtful	-	-	-	-	-	-	-	-	-	-
Loss	-	-	-	-	-	-	-	-	-	-
Total	$ 9,647	$ 10,108	$ 6,634	$ 6,061	$ 3,354	$ 13,709	$ 49,513	$ 98,333	$ 169	$ 148,015
Gross Charge-offs(1)	$ 4	$ 5	$ -	$ 5	$ -	$ 4	$ 18	$ -	$ 3	$ 21

(1) For the year ended December 31, 2023.

Prior to our adoption of CECL, we presented our loan credit quality by segment, excluding vintage, at amortized cost with accrued interest. The following table presents our loans and accrued interest classified, by management, pursuant to our regulator's Uniform Loan Classification System.

December 31, 2022	Agribusiness Non-Guaranteed	Agribusiness Guaranteed	Farm Credit Banking	Rural Infrastructure	Total
Acceptable	$ 36,114	$ 2,260	$ 70,171	$ 28,261	$ 136,806
Special Mention	1,014	-	1,607	231	2,852
Substandard	935	-	-	93	1,028
Doubtful	1	-	-	-	1
Loss	-	-	-	-	-
Total	$ 38,064	$ 2,260	$ 71,778	$ 28,585	$ 140,687
December 31, 2021					
Acceptable	$ 34,823	$ 1,186	$ 64,189	$ 24,661	$ 124,859
Special Mention	1,382	-	1,528	101	3,011
Substandard	806	-	-	115	921
Doubtful	2	-	-	-	2
Loss	-	-	-	-	-
Total	$ 37,013	$ 1,186	$ 65,717	$ 24,877	$ 128,793

Aging Analysis

The following table presents an aging of past due loans. Effective January 1, 2023 with the adoption of CECL, the aging analysis of past due loans by portfolio segment presented at December 31, 2023 excludes accrued interest pursuant to our CECL accounting policy election, described in Note 2.

December 31, 2023	Agribusiness Non-Guaranteed	Agribusiness Guaranteed	Farm Credit Banking	Rural Infrastructure	Total
30-89 Days Past Due	**$ 36**	**$ -**	**$ -**	**$ -**	**$ 36**
90 Days Past Due	**39**	**-**	**-**	**-**	**39**
Total Past Due	**$ 75**	**$ -**	**$ -**	**$ -**	**$ 75**
Current	**36,036**	**1,674**	**77,658**	**32,572**	**147,940**
Total	**$ 36,111**	**$ 1,674**	**$ 77,658**	**$ 32,572**	**$ 148,015**
Accruing Loans 90 Days or More Past Due	**$ 8**	**$ -**	**$ -**	**$ -**	**$ 8**
December 31, 2022					
30-89 Days Past Due	$ 85	$ -	$ -	$ 34	$ 119
90 Days Past Due	77	-	-	-	77
Total Past Due	$ 162	$ -	$ -	$ 34	$ 196
Current	37,902	2,260	71,778	28,551	140,491
Total	$ 38,064	$ 2,260	$ 71,778	$ 28,585	$ 140,687
Accruing Loans 90 Days or More Past Due	$ 15	$ -	$ -	$ -	$ 15
December 31, 2021					
30-89 Days Past Due	$ 57	$ -	$ -	$ 1	$ 58
90 Days Past Due	20	-	-	20	40
Total Past Due	$ 77	$ -	$ -	$ 21	$ 98
Current	36,936	1,186	65,717	24,856	128,695
Total	$ 37,013	$ 1,186	$ 65,717	$ 24,877	$ 128,793
Accruing Loans 90 Days or More Past Due	$ 3	$ -	$ -	$ -	$ 3

Nonaccrual Loans and Other Nonperforming Assets

The following table reflects nonaccrual loans and other nonperforming assets and related credit quality statistics. Nonaccrual loans do not accrue interest income once placed in nonaccrual status. Loans past due 90 days or more and still accruing interest are adequately secured and in the process of collection. Accruing restructured loans, which previously included troubled debt restructurings, are no longer required to be accounted and reported for after the adoption of CECL on January 1, 2023 and are replaced with the new ASC 326 loan modifications disclosures in the "Loan Modifications Granted to Borrowers Experiencing Financial Difficulty" section below.

December 31, 2023	Agribusiness Non-Guaranteed	Agribusiness Guaranteed[1]	Farm Credit Banking[1]	Rural Infrastructure	Total
Nonaccrual Loans	**$ 90**	**$ -**	**$ -**	**$ 27**	**$ 117**
Accruing Loans 90 Days or More Past Due	**8**	**-**	**-**	**-**	**8**
Other Property Owed	**-**	**-**	**-**	**-**	**-**
Total Nonaccrual Loans and Other Nonperforming Assets	**$ 98**	**$ -**	**$ -**	**$ 27**	**$ 125**
December 31, 2022					
Nonaccrual Loans[2]	$ 137	$ -	$ -	$ 8	$ 145
Accruing Loans 90 Days or More Past Due	15	-	-	-	15
Accruing Restructured Loans	6	-	-	-	6
Other Property Owed	-	-	-	-	-
Total Nonaccrual Loans and Other Nonperforming Assets	$ 158	$ -	$ -	$ 8	$ 166
December 31, 2021					
Nonaccrual Loans[2]	$ 74	$ -	$ -	$ 49	$ 123
Accruing Loans 90 Days or More Past Due	3	-	-	-	3
Accruing Restructured Loans	-	-	-	-	-
Other Property Owed	-	-	-	-	-
Total Nonaccrual Loans and Other Nonperforming Assets	$ 77	-	-	$ 49	$ 126

(1) There were no nonaccrual loans and other nonperforming assets in our Agribusiness Guaranteed or Farm Credit Banking portfolios for any of the periods presented.

(2) Included in nonaccrual loans at December 31, 2022 and 2021 are $11 million and $12 million, respectively, of loans that qualify as troubled debt restructurings.

The following tables present information on nonaccrual loans and other nonperforming assets with and without a related allowance for loan losses.

December 31, 2023	Agribusiness Non-Guaranteed	Agribusiness Guaranteed[1]	Farm Credit Banking[1]	Rural Infrastructure	Total
Nonperforming Assets With No Related Allowance for Loan Losses					
Carrying Amount	$ 22	$ -	$ -	$ -	$ 22
Unpaid Principal	26	-	-	-	26
Average Balance	30	-	-	2	32
Interest Income Recognized	11	-	-	-	11
Nonperforming Assets With Related Allowance for Loan Losses					
Carrying Amount	76	-	-	27	103
Unpaid Principal	87	-	-	33	120
Allowance for Loan Losses	25	-	-	8	33
Average Balance	102	-	-	18	120
Interest Income Recognized	-	-	-	-	-
Total Nonperforming Assets					
Carrying Amount	98	-	-	27	125
Unpaid Principal	113	-	-	33	146
Allowance for Loan Losses	25	-	-	8	33
Average Balance	132	-	-	20	152
Interest Income Recognized	11	-	-	-	11
December 31, 2022					
Nonperforming Assets With No Related Allowance for Loan Losses					
Carrying Amount	$ 43	$ -	$ -	$ -	$ 43
Unpaid Principal	58	-	-	-	58
Average Balance	55	-	-	6	61
Interest Income Recognized	4	-	-	-	4
Nonperforming Assets With Related Allowance for Loan Losses					
Carrying Amount	115	-	-	8	123
Unpaid Principal	119	-	-	9	128
Allowance for Loan Losses	27	-	-	2	29
Average Balance	73	-	-	35	108
Interest Income Recognized	-	-	-	-	-
Total Nonperforming Assets					
Carrying Amount	158	-	-	8	166
Unpaid Principal	177	-	-	9	186
Allowance for Loan Losses	27	-	-	2	29
Average Balance	128	-	-	41	169
Interest Income Recognized	4	-	-	-	4

[1] There were no nonperforming assets in our Agribusiness Guaranteed or Farm Credit Banking portfolios for any of the periods presented.

December 31, 2021	Agribusiness Non-Guaranteed	Agribusiness Guaranteed[1]	Farm Credit Banking[1]	Rural Infrastructure	Total
Nonperforming Assets With No Related Allowance for Loan Losses					
Carrying Amount	$ 36	$ -	$ -	$ -	$ 36
Unpaid Principal	58	-	-	-	58
Average Balance	44	-	-	8	52
Interest Income Recognized	18	-	-	-	18
Nonperforming Assets With Related Allowance for Loan Losses					
Carrying Amount	41	-	-	49	90
Unpaid Principal	44	-	-	49	93
Allowance for Loan Losses	20	-	-	11	31
Average Balance	52	-	-	35	87
Interest Income Recognized	-	-	-	-	-
Total Nonperforming Assets					
Carrying Amount	77	-	-	49	126
Unpaid Principal	102	-	-	49	151
Allowance for Loan Losses	20	-	-	11	31
Average Balance	96	-	-	43	139
Interest Income Recognized	18	-	-	-	18

(1) There were no nonperforming assets in our Agribusiness Guaranteed or Farm Credit Banking portfolios for the period presented.

Commitments on Nonperforming Assets

There were $7 million, $16 million and $4 million in commitments available to be drawn by borrowers whose loans were classified as nonperforming assets at December 31, 2023, 2022 and 2021, respectively.

Loan Modifications Granted to Borrowers Experiencing Financial Difficulty

Loan modifications may be granted to our borrowers who are experiencing financial difficulty. Our loan modifications are handled on a case-by-case basis and are negotiated to achieve mutually agreeable terms that maximize loan collectability and meet the borrower's financial needs. Modifications can be in the form of one or a combination of principal forgiveness, interest rate reduction, other-than-insignificant payment delay or term extension. Covenant waivers and modifications of contingent acceleration clauses are not considered term extensions.

The following table presents the amount and percentage of loan modifications granted to borrowers experiencing financial difficulty, disaggregated by operating segment and type of modification granted.

	Agribusiness Non-Guaranteed		Agribusiness Guaranteed		Farm Credit Banking		Rural Infrastructure		
	Modification Amount	Percent Total Class of Financing Receivable	Modification Amount	Percent Total Class of Financing Receivable	Modification Amount	Percent Total Class of Financing Receivable	Modification Amount	Percent Total Class of Financing Receivable	Total Modification Amount
December 31, 2023									
Term Extension	$ 111	0.3%	$ -	-%	$ -	-%	$ 13	-%[1]	$ 124
Payment Extension	26	0.1%	-	-%	-	-%	25	0.1%	51
Interest Rate Reduction	7	-%[1]	-	-%	-	-%	-	-%	7
Interest Rate Reduction and Term Extension	114	0.3%	-	-%	-	-%	-	-%	114
Total	$ 258	0.7%	$ -	-%	$ -	-%	$ 38	0.1%	$ 296

(1) Represents less than 0.10 percent of total loans by operating segment.

Accrued interest receivable related to loan modifications granted to borrowers experiencing financial difficulty as of December 31, 2023 was $3 million.

The following table presents the financial effect of the modifications made to borrowers experiencing financial difficulty during the year ended December 31, 2023.

	Financial Effect of Modifications Granted
Agribusiness Non-Guaranteed	
Term Extension	Extended weighted average maturity by 7 months
Payment Extension	Extended weighted average payment terms by 9 months
Interest Rate Reduction	Reduced weighted average interest rate by 37 bps
Interest Rate Reduction and Term Extension	Extended weighted average maturity by 10 months and reduced weighted average interest rate by 47 bps
Agribusiness Guaranteed	None
Farm Credit Banking	None
Rural Infrastructure	
Term Extension	Extended weighted average maturity by 7 months
Payment Extension	Extended weighted average payment terms by 16 months

There were no modified loans that had a payment default during the year ended December 31, 2023 that were reported as loan modifications granted to borrowers experiencing financial difficulty in the above tables within the last 12 months.

The following table presents the payment status of modified loans at December 31, 2023.

	Payment Status of Loans Modified				
	Agribusiness Non-Guaranteed	Agribusiness Guaranteed	Farm Credit Banking	Rural Infrastructure	Total
December 31, 2023					
30-89 Days Past Due	$ -	$ -	$ -	$ -	$ -
90 Days Past Due	-	-	-	-	-
Total Past Due	$ -	$ -	$ -	$ -	$ -
Current	258	-	-	38	296
Total	$ 258	$ -	$ -	$ 38	$ 296

There were $206 million of additional commitments to lend to borrowers experiencing financial difficulty as of December 31, 2023 whose loans have been modified during the year ended December 31, 2023.

Troubled Debt Restructurings

Prior to the adoption of ASC 326 on January 1, 2023, TDRs were formerly loans in which we granted a concession because the borrower experienced financial difficulty. Concessions included payment deferrals, term extensions, interest rate reductions, and/or forgiveness of principal or interest. TDRs were classified as nonaccrual loans or accruing restructured loans. Included in nonaccrual loans at December 31, 2022 and December 31, 2021 was $11 million and $12 million of loans that qualified as TDRs, respectively.

Leases Outstanding

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

December 31,	2023	2022	2021
Net Investment in Direct Financing Leases:			
Minimum Lease Payments to be Received, Net of Participation Interests	**$ 2,789**	$ 2,427	$ 2,356
Estimated Residual Values of Leased Property - Unguaranteed	**1,298**	1,292	1,300
Estimated Residual Values of Leased Property - Guaranteed	**457**	171	376
Initial Direct Costs	**15**	14	20
Less: Unearned Finance Income	**(582)**	(455)	(545)
Net Investment in Direct Financing Leases	**$ 3,977**	$ 3,449	$ 3,507
Property on Operating Leases:			
Vehicles and Other Equipment	**$ 593**	$ 601	$ 627
Initial Direct Costs	**2**	2	2
Total	**595**	603	629
Less: Accumulated Depreciation	**(271)**	(252)	(262)
Net Property on Operating Leases	**$ 324**	$ 351	$ 367

Year Ended December 31,	2023	2022	2021
Depreciation Expense	**$ 107**	$ 109	$ 128

At December 31, 2023, gross minimum lease payments to be received for direct financing leases and minimum future rental revenue for noncancelable operating leases in which we are the lessor are as follows:

Year	Minimum Lease Payments	Minimum Future Rental Revenue
2024	$ 758	$ 66
2025	613	42
2026	466	26
2027	330	17
2028	212	11
Subsequent Years	410	9

Note 4 – Investment Securities, Federal Funds Sold and Other Overnight Funds

A summary of the amortized cost and fair value of investment securities available-for-sale is as follows. See Note 11 for disclosures about fair value measurements of financial instruments, including investments.

December 31, 2023	Amortized Cost	Gross Unrealized Gains	Gross Unrealized Losses	Fair Value
U.S. Treasury Debt	**$ 14,831**	**$ 8**	**$ (478)**	**$ 14,361**
U.S. Agency Debt	**2,442**	**17**	**(77)**	**2,382**
Residential Mortgage-Backed Securities (MBS):				
Ginnie Mae	**1,050**	**1**	**(153)**	**898**
U.S. Agency	**3,195**	**10**	**(101)**	**3,104**
Commercial MBS:				
U.S. Agency	**17,878**	**25**	**(846)**	**17,057**
Corporate Bonds(1)	**499**	**1**	**(18)**	**482**
Asset-Backed and Other	**62**	**-**	**(3)**	**59**
Total	**$ 39,957**	**$ 62**	**$ (1,676)**	**$ 38,343**
December 31, 2022				
Certificates of Deposit	$ 850	$ -	$ -	$ 850
U.S. Treasury Debt	14,779	-	(727)	14,052
U.S. Agency Debt	1,733	-	(106)	1,627
Residential MBS:				
Ginnie Mae	1,014	-	(177)	837
U.S. Agency	1,417	2	(100)	1,319
Commercial MBS:				
U.S. Agency	14,567	8	(988)	13,587
Corporate Bonds	534	-	(33)	501
Asset-Backed and Other	328	-	(4)	324
Total	$ 35,222	$ 10	$ (2,135)	$ 33,097
December 31, 2021				
U.S. Treasury Debt	$ 15,531	$ 218	$ (33)	$ 15,716
U.S. Agency Debt	1,997	81	(1)	2,077
Residential MBS:				
Ginnie Mae	1,205	3	(8)	1,200
U.S. Agency	1,214	15	(9)	1,220
Commercial MBS:				
U.S. Agency	11,237	64	(76)	11,225
Corporate Bonds	361	22	-	383
Asset-Backed and Other	22	-	(1)	21
Total	$ 31,567	$ 403	$ (128)	$ 31,842

(1) Amortized cost and fair value include ACL on investments of $3 million at December 31, 2023.

Allowance for Credit Losses on Investment Securities

As discussed in Note 2, available-for-sale investment securities with unrealized losses are also evaluated for an ACL under ASU 326. Management excludes those investment securities with no risk of credit loss from the ACL evaluation because they carry a full faith and credit guarantee of the U.S. government or are issued by U.S. agencies with an implicit guarantee from the U.S. government. For non-guaranteed investment securities, an analysis is performed at the individual security level to determine whether any portion of the unrealized loss is a credit loss. As of December 31, 2023, our ACL on investment securities was $3 million. We recorded a credit loss reversal on our investment securities of $3 million for the year ended December 31, 2023 that is included in the provision for credit losses in our consolidated statement of income.

A summary of the contractual maturity, amortized cost, fair value and weighted average yield of investment securities by investment category at December 31, 2023 is as follows:

	Contractual Maturity				
December 31, 2023	In One Year or Less	One to Five Years	Five to Ten Years	After Ten Years	Total
U.S. Treasury Debt Securities					
Amortized Cost	$ 6,399	$ 7,102	$ 1,330	$ -	$ 14,831
Fair Value	6,358	6,713	1,290	-	14,361
Weighted Average Yield	3.80 %	2.17 %	3.28 %	- %	2.97 %
U.S. Agency Debt Securities					
Amortized Cost	$ 73	$ 1,029	$ 1,303	$ 37	$ 2,442
Fair Value	72	988	1,289	33	2,382
Weighted Average Yield	2.72 %	2.72 %	3.91 %	3.03 %	3.36 %
Ginnie Mae Residential MBS					
Amortized Cost	$ -	$ -	$ -	$ 1,050	$ 1,050
Fair Value	-	-	-	898	898
Weighted Average Yield	- %	- %	- %	2.04 %	2.04 %
U.S. Agency Residential MBS					
Amortized Cost	$ -	$ 12	$ 1,976	$ 1,207	$ 3,195
Fair Value	-	12	1,915	1,177	3,104
Weighted Average Yield	- %	5.36 %	4.67 %	5.15 %	4.85 %
U.S. Agency Commercial MBS					
Amortized Cost	$ 397	$ 4,000	$ 13,394	$ 87	$ 17,878
Fair Value	390	3,830	12,758	79	17,057
Weighted Average Yield	2.84 %	3.33 %	4.40 %	4.30 %	4.13 %
Corporate Bonds					
Amortized Cost	$ 53	$ 366	$ 80	$ -	$ 499
Fair Value	52	353	77	-	482
Weighted Average Yield	3.54 %	4.04 %	4.31 %	- %	4.03 %
Asset-Backed and Other					
Amortized Cost	$ 7	$ 44	$ -	$ 11	$ 62
Fair Value	7	44	-	8	59
Weighted Average Yield	5.20 %	5.06 %	- %	4.54 %	4.98 %
Total					
Amortized Cost	$ 6,929	$ 12,553	$ 18,083	$ 2,392	$ 39,957
Fair Value	6,879	11,940	17,329	2,195	38,343
Weighted Average Yield	3.73 %	2.65 %	4.31 %	3.72 %	3.65 %

While the majority of our residential MBS have contractual maturities in excess of 10 years, expected maturities for these securities are shorter than contractual maturities because borrowers have the right to call or prepay obligations with or without penalties.

The following table shows the fair value and gross unrealized losses for investments in a loss position aggregated by investment category, and the length of time the securities have been in a continuous unrealized loss position at December 31, 2023, 2022 and 2021. The continuous loss position is based on the date the impairment first occurred.

	Less Than 12 Months		Greater Than 12 Months	
	Fair Value	Unrealized Losses	Fair Value	Unrealized Losses
December 31, 2023				
U.S. Treasury Debt	**$ 1,493**	**$ (7)**	**$ 9,531**	**$ (471)**
U.S. Agency Debt	**371**	**(1)**	**1,361**	**(76)**
Residential MBS:				
Ginnie Mae	**5**	**-**	**750**	**(153)**
U.S. Agency	**1,418**	**(11)**	**763**	**(90)**
Commercial MBS:				
U.S. Agency	**3,278**	**(23)**	**11,200**	**(823)**
Corporate Bonds	**5**	**-**	**441**	**(18)**
Asset-Backed and Other	**-**	**-**	**17**	**(3)**
Total	**$ 6,570**	**$ (42)**	**$ 24,063**	**$ (1,634)**
December 31, 2022				
Certificates of Deposits	$ 750	$ -	$ -	$ -
U.S. Treasury Debt	8,669	(297)	3,882	(430)
U.S. Agency Debt	1,505	(96)	122	(10)
Residential MBS:				
Ginnie Mae	104	(2)	731	(175)
U.S. Agency	759	(44)	351	(56)
Commercial MBS:				
U.S. Agency	9,090	(469)	3,295	(519)
Corporate Bonds	482	(31)	7	(2)
Asset-Backed and Other	316	(2)	5	(2)
Total	$ 21,675	$ (941)	$ 8,393	$ (1,194)
December 31, 2021				
U.S. Treasury Debt	$ 3,838	$ (33)	$ -	$ -
U.S. Agency Debt	41	(1)	174	-
Residential MBS:				
Ginnie Mae	992	(8)	-	-
U.S. Agency	186	(3)	77	(6)
Commercial MBS:				
U.S. Agency	2,480	(11)	2,890	(65)
Asset-Backed and Other	5	-	9	(1)
Total	$ 7,542	$ (56)	$ 3,150	$ (72)

As of December 31, 2023, we expect to collect all principal and interest payments on our investment securities, except for those included in our ACL of $3 million as more fully described on page 108. We do not intend to sell the securities in unrealized loss positions, nor is it 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.

Sales of Investment Securities

In 2023, we sold 8 U.S. Treasury debt securities for total proceeds of $548 million to replace lower yielding investments with higher yielding investments. The resulting net loss from the sales totaled $7 million which was more than offset by higher net interest income.

In 2022, we sold a U.S. Treasury debt security for total proceeds of $495 million and two corporate bonds for total proceeds of $18 million to take advantage of favorable market conditions. We also sold a U.S. agency mortgage-backed security for total proceeds of less than $1 million for administrative reasons. The resulting net gain from the sales totaled $2 million.

In 2021, we sold 18 U.S. Treasury debt securities for total proceeds of $3.2 billion, eighteen U.S. Agency debentures for total proceeds of $618 million and one commercial mortgage-backed security for total proceeds of $94 million resulting in losses of $36 million. We sold these securities to rebalance the investment portfolio to take advantage of market opportunities to sell lower yielding investments and replace them with higher yielding investments and to efficiently manage our tax obligations.

All gains and losses on sale of investment securities are recorded in noninterest income in our consolidated statements of income.

Federal Funds Sold and Other Overnight Funds

Federal funds sold transactions involve lending excess cash reserve balances on a short-term basis, generally overnight. Other overnight funds include deposits with commercial banks and reverse repurchase agreements with the Federal Reserve. In each of these transactions, funds are returned to the Bank the following day and earn interest overnight. Such investments are reported at fair value, which is generally their face value. We held $2.6 billion and $2.8 billion of overnight bank deposits and federal funds sold instruments at December 31, 2023 and December 31, 2022, respectively. In addition, we held $2.0 billion and $9.6 billion of reverse repurchase agreements at December 31, 2023 and December 31, 2022, respectively.

Note 5 – Bonds and Notes Payable

We are primarily liable for the following bonds and notes payable measured at amortized cost as of the respective periods.

December 31,	2023	2022	2021
Bonds	**$ 164,536**	$ 153,168	$ 138,759
Medium-term Notes	**61**	62	64
Discount Notes	**10,766**	17,600	14,188
Total Systemwide Debt Securities	**175,363**	170,830	153,011
Cash Investment Services Payable	**2,338**	2,409	1,588
Rural Utilities Service Bonds	**825**	825	350
Cash Collateral Payable to Derivative Counterparties	**295**	559	1
Total Bonds and Notes	**$ 178,821**	$ 174,623	$ 154,950

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, 2023 was 86 days.

Other Bonds and Notes

Cash investment services payable related to our customers are generally short-term in nature and mature within one year.

Rural Utilities Service (RUS) bonds were $825 million at December 31, 2023 and 2022 and $350 million at December 31, 2021, and relate to funding pursuant to a bond guarantee program offered by the RUS agency of the United States Department of Agriculture. 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. The bonds outstanding mature in 10-30 years. As part of the bond guarantee agreement with RUS, we are required to pledge collateral in an amount equal to at least 110 percent of the principal balance of all bonds outstanding. As of December 31, 2023 we had $250 million, $375 million and $200 million outstanding on our Series D, Series E and Series F funding from RUS, respectively, and each of these facilities was fully drawn. In October 2023, we closed on an additional $450 million of Series G funding with RUS, which is undrawn and allows us to access funding through July 2028.

Maturities and Rates

The aggregate maturities and the weighted average interest rates of CoBank's Systemwide Debt Securities measured at amortized cost at December 31, 2023 are shown in the following table. Weighted average interest rates include the effect of related interest rate swaps and other derivatives.

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
2024	$ 63,347	4.64 %	$ -	- %	$ 10,766	5.05 %	$ 74,113	4.70 %
2025	49,516	4.85	-	-	-	-	49,516	4.85
2026	11,902	3.12	-	-	-	-	11,902	3.12
2027	7,020	2.92	-	-	-	-	7,020	2.92
2028	9,051	3.30	61	5.75	-	-	9,112	3.32
2029 and thereafter	23,700	2.85	-	-	-	-	23,700	2.85
Total	$ 164,536	4.19 %	$ 61	5.75 %	$ 10,766	5.05 %	$ 175,363	4.24 %

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, 2023, callable debt was $38.9 billion, with the range of first call dates being from January 2024 through October 2028.

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 $11.7 billion at December 31, 2023. 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 2023 and no modifications were made. For discussion related to the FCA's capital regulations, see Note 6.

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, 2023, 2022 and 2021, 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 2023, however no significant 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 Fund 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. The Insurance Corporation has adopted a Policy Statement addressing the periodic determination of the secure base amount that is currently set at the 2 percent level. The Insurance Corporation may use its discretion to adjust the premium assessments in response to changing conditions. When the amount in the Insurance Fund exceeds the SBA, the Insurance Corporation may return excess amounts, but must still ensure that premiums are sufficient to maintain the level of the Insurance Fund at the SBA. No such excess amounts related to the Insurance Fund were returned to CoBank from the Insurance Corporation in 2023, 2022 and 2021.

The Insurance Corporation premium rates were 18 basis points of average outstanding adjusted insured debt obligations for 2023, 20 basis points of average outstanding adjusted insured debt obligations for 2022, and 16 basis points of average outstanding adjusted insured debt obligations for 2021. Premium rates also include 10 basis points assessed to nonaccrual loans and impaired investments for all three years.

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 Farmer Mac.

At December 31, 2023, the assets of the Insurance Fund aggregated $7.5 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 will remain in full force and effect until terminated by either the Insurance Corporation or the Federal Financing Bank. 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 Extinguishments of Debt

Gains on early extinguishments of Systemwide Debt Securities and RUS bonds were less than $1 million in 2023 and $1 million in 2022 compared to losses of $126 million in 2021. During 2023, we extinguished $8.3 billion of Systemwide Debt Securities compared to $4.0 billion and $1.0 billion in 2022 and 2021, respectively. We extinguished $260 million of RUS bonds during 2021 compared to none in 2023 and 2022. There were no sales of Systemwide Debt Securities to other Farm Credit Banks during 2023, 2022 and 2021. All gains and losses on early extinguishments of debt are reported as a component of noninterest income.

Note 6 – Shareholders' Equity

Description of Equities

As of December 31, 2023, we had $1.6 billion of preferred stock and $4.1 billion of common stock outstanding, as summarized in the tables below.

Preferred and Common Stock	Preferred	Class A	Class A
Shares Authorized	n/a [1]	Unlimited	Unlimited
Shares Outstanding (000)	4,325	2,051	38,705
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 2023, 2022 and 2021 are summarized in the following table.

Shares of Common Stock ($ in Thousands)	2023	2022	2021
Beginning amounts at January 1	**39,997**	40,127	39,117
Issuances	**2,673**	1,437	1,279
Retirements	**(1,914)**	(1,567)	(329)
Ending amounts at December 31	**40,756**	39,997	40,127

As approved by our shareholders, CoBank may have up to $2.5 billion of preferred stock outstanding at any time and is authorized to issue preferred stock up to this limit through December 31, 2026. This allows 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 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 (URE) 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 H, Series I, Series J and Series K 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 URE) in amounts equal to the face amount of the applicable nonqualified written notices of allocation or such other notice; and (4) remaining URE and reserves to the holders of common stock in proportion to patronage to the extent possible.

In June 2022, CoBank stockholders approved board-recommended amendments to the Bank's capitalization bylaws lowering target equity ranges for customer-owners. Under the approved amendments, the target equity range for cooperatives and other patronage-eligible commercial borrowers decreased to 4-10 percent, from the previous range of 7-13 percent. For direct loans with Farm Credit System institutions, the target equity range decreased to 2-5 percent from the previous range of 4-6 percent. The target equity levels for customer-owners are set within the ranges established in the bylaws and are included in the capital plans approved by the Board of Directors.

In August 2022, the Bank's Board of Directors amended the capital plans for customer-owners to decrease the target equity levels. The target equity level for cooperatives and other patronage-eligible commercial borrowers was decreased from 8 percent to 7 percent. For direct loans with affiliated Associations, the target equity level was decreased from 4 percent to 3 percent and the loan base period was changed from a five-year trailing average to a one-year average. For non-affiliated Farm Credit System institutions, the target equity level was decreased from 4 percent to 3.25 percent. The new target equity levels were effective starting in 2022. In

December 2022, the Board of Directors approved stock retirements reflecting the impact of these lower target equity levels as well as normal retirements. These stock retirements were executed in March 2023 and totaled $191 million.

In December 2023, the Board of Directors approved stock retirements of $45 million, which will be executed in March 2024.

Management and the Board of Directors regularly evaluate the Bank's capital plans based on financial performance, capital requirements, asset growth, emerging risks and other items. Any future changes to patronage and capital distributions would be subject to FCA regulations and Board approval.

Preferred Stock

The following table summarizes our outstanding preferred stock as of December 31, 2023.

Preferred Stock

	Series E	Series H	Series I	Series J	Series K
Type	Non-Cumulative Perpetual	Non-Cumulative Perpetual	Non-Cumulative Perpetual	Non-Cumulative Perpetual	Non-Cumulative Perpetual
Issue Date	January 2012	November 2014	April 2016	December 2021	August 2022
Shares Outstanding (000)	125	3,000	375	425	400
Amount Outstanding (000)	$ 125,205	$ 300,000	$ 375,000	$ 425,000	$ 400,000
Par Value (per share)	$ 1,000	$ 100	$ 1,000	$ 1,000	$ 1,000
Current Dividend Rate (%)	3-month CME Term SOFR + 0.26161% spread adjustment + 1.18% (6.84781% at December 31, 2023)	6.20%	6.25%	4.25%	6.45%
Next Change in Dividend Rate (% and Dates)	n/a	3-month USD LIBOR + 3.744% beginning on January 1, 2025[2]	3-month USD LIBOR + 4.66% beginning on October 1, 2026[2]	5-year Treasury Rate + 3.049% beginning on January 1, 2027	5-year Treasury Rate + 3.487% beginning on October 1, 2027
Dividend Frequency	Quarterly	Quarterly	Semi-Annual; Quarterly beginning on October 1, 2026	Quarterly	Quarterly
Optional Redemption Begins (Date)[1]	July 2027 and each five year anniversary thereafter 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	Quarterly calls on or after January 1, 2027 at par plus accrued dividends	Quarterly calls on or after October 1, 2027 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.

(2) Given LIBOR is no longer being quoted, these instruments will convert to variable rates pursuant to fallback language in the preferred stock agreements.

On December 2, 2021, we issued $425 million of Series J non-cumulative perpetual preferred stock. We used the net proceeds from the Series J preferred stock issuance to increase our regulatory capital pursuant to FCA regulations and for general corporate purposes, including the redemption of our Series G non-cumulative perpetual preferred stock as described below. Dividends on the Series J preferred stock, if declared by the Board of Directors in its sole discretion, are non-cumulative and are payable quarterly in arrears at a fixed annual rate of 4.25 percent from the date of issuance up to, but excluding January 1, 2027. Thereafter, dividends will accrue at an annual rate equal to the five-year U.S. Treasury rate as of the most recent reset dividend determination date plus a spread of 3.049 percent per annum and will be paid quarterly. The preferred stock is redeemable at par value, in whole or in part, at the Bank's option quarterly beginning on or after January 1, 2027.

On January 1, 2022, we redeemed all of our outstanding Series G non-cumulative perpetual preferred stock totaling $200 million. The dividend rate for our Series G preferred stock was 6.125 percent through the date of redemption.

On August 16, 2022, we issued $400 million of Series K non-cumulative perpetual preferred stock. We used the net proceeds from the Series K preferred stock issuance to increase our regulatory capital pursuant to FCA regulations and for general corporate purposes, including the redemption of our Series F non-cumulative perpetual preferred stock as described below. Dividends on the Series K preferred stock, if declared by the Board of Directors in its sole discretion, are non-cumulative and are payable quarterly in arrears at a fixed annual rate of 6.45 percent from the date of issuance up to, but excluding October 1, 2027. Thereafter, dividends will accrue at an annual rate equal to the five-year U.S. Treasury rate as of the most recent reset dividend determination date plus a spread of 3.487 percent per annum and will be paid quarterly. The preferred stock is redeemable at par value, in whole or in part, at the Bank's option quarterly beginning on or after October 1, 2027.

On October 1, 2022, we redeemed all of our outstanding Series F non-cumulative perpetual preferred stock totaling $400 million. The dividend rate for our Series F preferred stock was 6.25 percent through the date of redemption.

During 2023, 2022 and 2021, we retired $8 million, $69 million and $23 million, respectively, of our outstanding Series E non-cumulative perpetual preferred stock in a series of open market purchase transactions. The Series E preferred stock was purchased at a discount from par value resulting in modest gains on retirement recorded in unallocated retained earnings.

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.

Payments of preferred stock dividends and stock retirements, including preferred stock redemptions, require the approval of our Board of Directors and are subject to FCA regulations.

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 beginning on page 140. Additionally, 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 for these financing transactions. Therefore, 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. Accrued patronage for eligible common shareholders totaled $965 million for 2023 and is payable in March 2024, of which $831 million will be paid in cash (including $106 million of special cash patronage) and $134 million will be paid in common stock. For 2022, total patronage was $995 million, of which $856 million was paid in cash (including $149 million of special cash patronage) and $139 million was paid in common stock in March 2023. For 2021, total patronage was $885 million, of which $757 million was paid in cash (including $125 million of special cash patronage) and $128 million was paid in common stock in March 2022. 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, 2023.

At December 31, 2023, 2022 and 2021, our capital and leverage ratios exceeded regulatory minimums as noted in the following table.

Regulatory Capital Ratios	Regulatory Minimum	December 31, 2023	2022	2021
Common Equity Tier 1 Capital Ratio	4.5 %	**11.58 %**	11.62 %	12.74 %
Tier 1 Capital Ratio	6.0	**13.27**	13.39	14.70
Total Capital Ratio	8.0	**14.11**	14.25	15.63
Tier 1 Leverage Ratio(1)	4.0	**6.79**	6.80	7.47
Permanent Capital Ratio	7.0	**13.37**	13.51	14.81
Unallocated Retained Earnings (URE) and URE Equivalents Leverage Ratio	1.5	**3.23**	3.13	3.36

(1) At least 1.5 percent must be URE and URE equivalents.

See pages 147 through 157 for more information on the required regulatory capital disclosures, including the components of the regulatory capital ratios above.

Accumulated Other Comprehensive Income (Loss)

Changes in accumulated other comprehensive income (loss) for 2023, 2022 and 2021 are presented in the following table.

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 Derivatives	Net Pension Adjustment	Total
Balance at December 31, 2022	**$ (1,928)**	**$ 64**	**$ (63)**	**$ (1,927)**
Cumulative effect of change in accounting principle(2)	**5**	**-**	**-**	**5**
Balance at January 1, 2023, as adjusted	**$ (1,923)**	**$ 64**	**$ (63)**	**$ (1,922)**
Other comprehensive income (loss) before reclassifications	**450**	**(73)**	**5**	**382**
Amounts reclassified from accumulated other comprehensive income (loss) to net income	**7**	**9**	**-**	**16**
Net current-period other comprehensive income (loss)	**457**	**(64)**	**5**	**398**
Balance at December 31, 2023	**$ (1,466)**	**$ –**	**$ (58)**	**$ (1,524)**
Balance at January 1, 2022	$ 232	$ (36)	$ (41)	$ 155
Other comprehensive (loss) income before reclassifications	(2,158)	89	(27)	(2,096)
Amounts reclassified from accumulated other comprehensive (loss) income to net income	(2)	11	5	14
Net current-period other comprehensive (loss) income	(2,160)	100	(22)	(2,082)
Balance at December 31, 2022	$ (1,928)	$ 64	$ (63)	$ (1,927)
Balance at January 1, 2021	$ 799	$ (43)	$ (68)	$ 688
Other comprehensive (loss) income before reclassifications	(594)	(5)	19	(580)
Amounts reclassified from accumulated other comprehensive income (loss) to net income	27	12	8	47
Net current-period other comprehensive (loss) income	(567)	7	27	(533)
Balance at December 31, 2021	$ 232	$ (36)	$ (41)	$ 155

(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 loss.
(2) Effective January 1, 2023, we adopted the CECL accounting standard pursuant to ASU "Financial Instruments - Credit Losses (Topic 326)".

The following table presents the effect of reclassifications from accumulated other comprehensive income (loss) to net income for the years ended December 31, 2023, 2022 and 2021.

Reclassifications from Accumulated Other Comprehensive Income (Loss) to Net Income

	Location of Gain (Loss) Recognized in Income Statement	Amount Reclassified from Accumulated Other Comprehensive Income (Loss)		
Year Ended December 31,		**2023**	**2022**	**2021**
Unrealized Gains (Losses) on Available-For-Sale Investment Securities:				
Sales Gains and Losses	Noninterest Income - Other, Net	**$ (7)**	$ 2	$ (36)
Tax Effect	Provision for Income Taxes	**-**	-	9
Unrealized Gains (Losses) on Interest Rate Swaps and Other Derivatives:				
Interest Rate Contracts	Interest Expense	**(10)**	(10)	(14)
Foreign Exchange Contracts	Interest Income	**1**	(2)	2
Tax Effect	Provision for Income Taxes	**-**	1	-
Pension and Other Benefit Plans:				
Net Actuarial Loss	Operating Expenses - Employee Compensation	**-**	(5)	(10)
Prior Service Cost/Credit	Operating Expenses - Employee Compensation	**(1)**	(1)	(1)
Tax Effect	Provision for Income Taxes	**1**	1	3
Total Reclassifications		**$ (16)**	$ (14)	$ (47)

Note 7 – 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 would be subject to general creditors in a bankruptcy or liquidation 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 $15 million, $13 million and $14 million for 2023, 2022 and 2021, 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 and retirement-eligible employees under age 65 also have other postretirement benefits (OPEB), which primarily include access to health care benefits. Substantially all 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 years ended December 31, 2023, 2022 and 2021, as well as a statement of funded status as of December 31 of each year.

	Retirement Plans			Other Postretirement Benefits		
	2023	**2022**	**2021**	**2023**	**2022**	**2021**
Change in Benefit Obligation:						
Benefit Obligation at January 1	**$ 337**	$ 422	$ 439	**$ 2**	$ 2	$ 2
Service Cost	**4**	5	5	**-**	-	-
Interest Cost on Benefit Obligation	**17**	12	11	**-**	-	-
Plan Participant Contributions	**-**	-	-	**-**	-	-
Actuarial Loss (Gain)	**13**	(77)	(11)	**-**	-	-
Benefits Paid	**(28)**	(25)	(22)	**(1)**	(1)	(1)
Benefit Obligation at December 31	**343**	337	422	**1**	1	1
Change in Plan Assets:						
Fair Value of Plan Assets at January 1	**295**	405	387	**-**	-	-
Actual Return on Plan Assets	**39**	(90)	34	**-**	-	-
Employer Contributions	**8**	5	5	**-**	1	-
Benefits Paid	**(28)**	(25)	(21)	**-**	(1)	(1)
Plan Participant Contributions	**-**	-	-	**(1)**	-	-
Fair Value of Plan Assets at December 31	**314**	295	405	**(1)**	–	(1)
Funded (Unfunded) Status - Fair Value of Plan Assets Less Than Benefit Obligation	**(29)**	(42)	(17)	**(2)**	(1)	(2)
Net Amount Recognized - December 31	**$ (29)**	$ (42)	$ (17)	**$ (2)**	$ (1)	$ (2)

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

	Projected Benefit Obligation			Accumulated Benefit Obligation		
	2023	**2022**	**2021**	**2023**	**2022**	**2021**
Funded Qualified Plans	**$ 304**	$ 296	$ 372	**$ 274**	$ 289	$ 361
SERP/ERP	**39**	41	50	**37**	38	47
Total	**$ 343**	$ 337	$ 422	**$ 311**	$ 327	$ 408

The $314 million in fair value of plan assets shown in the table above 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 $304 million and $274 million, respectively, as of December 31, 2023.

We hold assets in trust accounts related to our SERPs and ERP. Such assets had a fair value of $42 million as of December 31, 2023, which is included in other assets in our consolidated balance sheets and accordingly, they are not included as part of the assets in the table on page 121. As depicted in the preceding table, our SERPs and ERP had a projected benefit obligation and an accumulated benefit obligation of $39 million and $37 million, respectively, as of December 31, 2023.

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

	Retirement Plans			Other Postretirement Benefits		
	2023	**2022**	**2021**	**2023**	**2022**	**2021**
Accrued Benefit Liabilities	**$ (29)**	$ (42)	$ (17)	**$ (2)**	$ (1)	$ (2)
Net Amounts Recognized	**$ (29)**	$ (42)	$ (17)	**$ (2)**	$ (1)	$ (2)

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

	Retirement Plans			Other Postretirement Benefits		
	2023	**2022**	**2021**	**2023**	**2022**	**2021**
Service Cost	**$ 4**	$ 5	$ 5	**$ -**	$ -	$ -
Interest Cost on Benefit Obligation	**17**	12	11	**-**	-	-
Expected Return on Plan Assets	**(21)**	(21)	(20)	**-**	-	-
Amortization of Prior Service Cost	**1**	1	1	**-**	-	-
Recognized Actuarial Loss (Gain)	**-**	5	10	**-**	-	-
Net Periodic Benefit Cost	**$ 1**	$ 2	$ 7	**$ -**	$ -	$ -

We anticipate that our total pension expense for the Retirement Plans will be approximately $2 million in 2024, as compared to $1 million in 2023.

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

Amounts Included in Accumulated Other Comprehensive Loss (Income) Pre-Tax at December 31, 2023	Qualified Retirement Plans	Nonqualified Retirement Plans	Other Postretirement Benefits	Total
Net Actuarial Loss (Gain)	$ 72	$ 6	$ (2)	$ 76
Prior Service Cost	1	-	-	1
Amount Recognized in Accumulated Other Comprehensive Loss (Income)	$ 73	$ 6	$ (2)	$ 77

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 and our net periodic benefit cost are as follows:

	Benefit Obligations			Net Periodic Benefit Cost		
	2023	**2022**	**2021**	**2023**	**2022**	**2021**
Discount Rate	**5.00 %**	5.20 %	2.94 %	**5.20 %**	2.94 %	2.59 %
Expected Return on Qualified Plan Assets (Qualified Plans Only)	**n/a**	n/a	n/a	**5.90**	5.83	5.83
Rate of Compensation Increase	**3.68**	3.54	3.40	**3.40**	3.40	3.40

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 6.7 percent annual rate of increase in the per capita cost of covered health care benefits was assumed for 2023. The rate was assumed to decrease gradually to 4.5 percent through 2029 and remain at that level thereafter.

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, 2023, 2022 and 2021 are shown in the following table, along with the adopted range for target allocation percentages by asset class as of December 31, 2023. 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 on a monthly basis at the direction of the Committee.

Retirement Plan Assets

Asset Category	Target Allocation[1]	Percentage of Plan Assets at December 31, 2023	2022	2021
Domestic Equity	29 - 33 %	**32 %**	28 %	30 %
Domestic Fixed Income	43 - 47	**45**	48	47
International Equity, Emerging Markets Equity and Fixed Income	22 - 26	**23**	23	22
Global Equity	-	**-**	1	1
Total	100 %	**100 %**	100 %	100 %

(1) Future asset allocation changes for the CoBank, ACB Retirement Plan are expected to occur in accordance with the liability-driven investment strategy adopted by our Retirement Trust Committee as the Plan's funded status improves.

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, 2023 for each of the fair value hierarchy levels as defined in Note 11.

Fair Value Measurements

	December 31, 2023				
Asset Category	Level 1	Level 2	Level 3	NAV[1]	Total
Cash	$ 4	$ -	$ -	$ -	$ 4
Domestic Equity:					
Large-cap Growth Funds[2]	40	-	-	41	81
Small-cap Growth Funds[2]	-	-	-	12	12
International Equity[3]	36	-	-	11	47
Equity and Fixed Income Funds[4]	20	-	-	-	20
Domestic Fixed Income Bond Funds[5]	-	17	-	133	150
Total	$ 100	$ 17	$ -	$ 197	$ 314

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

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

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 and no transfers into or out of Level 3 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 while reducing overall funded status volatility; and to provide competitive investment returns as measured against appropriate benchmarks.

Expected Contributions

We expect to contribute approximately $3 million to our funded, qualified defined benefit pension plans in 2024 and less than $1 million, net of collected retiree premiums, to our other postretirement benefit plans in 2024. We also expect to contribute approximately $3 million to our trust accounts related to our SERPs and ERP in 2024. Our actual 2024 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
2024	$ 26	$ -
2025	26	-
2026	26	-
2027	26	-
2028	28	-
2029 to 2033	132	1

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 and Human Resources 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 key employees 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 and Human Resources 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. Under the long-term incentive compensation plan, a minimum return on active patron stock investment and a minimum capital threshold must be achieved in each year within the three-year performance period for a full payout to be made. The required minimum return on active patron stock investment was 11.0 percent for all performance periods disclosed herein. The required minimum capital threshold was a minimum total regulatory capital ratio of 11.5 percent for all performance periods disclosed herein.

Note 8 – Income Taxes

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

Year Ended December 31,	2023	2022	2021
Current:			
Federal	**$ 108**	$ 62	$ 55
State	**24**	20	9
Total Current	**132**	82	64
Deferred:			
Federal	**(8)**	28	28
State	**4**	-	10
Total Deferred	**(4)**	28	38
Total	**$ 128**	$ 110	$ 102
Comprehensive Tax Provision (Benefit) Allocable to:			
Pre-Tax Income	**$ 128**	$ 110	$ 102
Comprehensive Income - Amounts Allocable to:			
Investment Securities	**52**	(247)	(68)
Derivatives	**(5)**	-	-
Pension Liability	**2**	(9)	9
Total	**$ 177**	$ (146)	$ 43

In addition to the information above, the January 1, 2023 adoption of the CECL accounting standard, which is described in Note 2, included a $23 million reduction in deferred tax assets.

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

December 31,	2023	2022	2021
ACL on Loans	**$ 148**	$ 163	$ 148
Employee Benefits	**50**	50	41
Unrealized Net Losses on Investment Securities and Derivatives	**158**	207	-
Loan Origination Fees	**20**	16	12
Other Deferred Tax Assets	**70**	70	64
Gross Deferred Tax Assets	**446**	506	265
Leasing	**840**	837	788
Unrealized Net Gains on Investment Securities and Derivatives	**-**	-	42
Other Deferred Tax Liabilities	**42**	37	32
Gross Deferred Tax Liabilities	**882**	874	862
Net Deferred Tax Liabilities	**$ (436)**	$ (368)	$ (597)

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 and our ability to implement tax planning strategies.

The effective tax rates were less than the statutory income tax rate primarily due to $965 million, $995 million, and $871 million of accrued patronage distributions for the years ended December 31, 2023, 2022, and 2021, 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,	2023	2022	2021
Federal Tax at Statutory Rate	**$ 343**	$ 327	$ 297
State Tax, Net	**22**	16	15
Patronage Distributions Allocated by:			
Taxable Entity	**(84)**	(87)	(76)
Nontaxable Entity	**(96)**	(90)	(83)
Special Patronage Distributions Allocated by:			
Taxable Entity	**(8)**	(15)	(10)
Nontaxable Entity	**(14)**	(16)	(13)
Effect of Nontaxable Entity	**(29)**	(15)	(25)
Tax-Exempt Activities	**(1)**	(1)	(1)
Federal and State Tax Credits	**(8)**	(6)	(5)
Other	**3**	(3)	3
Provision for Income Taxes	**$ 128**	$ 110	$ 102

A reconciliation of the beginning and ending amount of unrecognized tax benefits, excluding interest and penalties, is as follows:

Year Ended December 31,	2023	2022	2021
Beginning Balance January 1	**$ 10**	$ 11	$ 7
Additions Based on Tax Positions Related to the Current Year	**2**	1	2
Additions for Tax Positions of Prior Years	**1**	-	4
Reductions for Tax Positions of Prior Years	**(1)**	-	(1)
Lapse of Applicable Statute of Limitations	**(1)**	(2)	(1)
Ending Balance December 31	**$ 11**	$ 10	$ 11

The total amount of unrecognized tax benefits that, if recognized, would impact the effective tax rate is $12 million. We do not currently believe that the unrecognized tax benefits will change materially within the next 12 months.

CoBank is no longer subject to federal tax examination for periods before 2019. In April 2020, the Internal Revenue Service initiated an examination of our federal tax returns that were amended to realize the benefit of certain equipment leasing transactions. The IRS examination was completed and in December 2021 we received a cash refund for the full amount of the receivable accrued from the amended federal tax returns, including accrued interest.

CoBank files tax returns in most states each year and is under continuous examination by various state taxing authorities. With some exceptions, we are no longer subject to state and local income tax examinations by taxing authorities for periods before 2019. For all open audits, any potential adjustments have been considered in establishing our reserve for uncertain tax positions as of December 31, 2023.

We recognize accrued interest and penalties related to unrecognized tax benefits as a component of the provision for income taxes. We had approximately $3 million of interest and penalties accrued at each December 31 of 2023, 2022 and 2021, respectively.

Note 9 – 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, 2023, outstanding commitments to extend credit and commercial letters of credit were $49.7 billion and $129 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, 2023, the maximum potential amount of future payments that we may be required to make under our outstanding standby letters of credit was $2.0 billion, with a fair value of $16 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 2024 to February 2044.

In addition, we had outstanding commitments of $184 million at December 31, 2023 to fund our equity investments, which include RBICs.

Note 10 – Derivatives and Hedging Activities

Risk Management Objectives and Strategies

We maintain an overall interest rate risk management strategy that incorporates the use of interest rate swaps and other derivatives to manage liquidity risk, market risk 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, fixed-rate for floating-rate swaps and floating-rate for floating-rate swaps with payment obligations tied to specific indices. In the course of managing risk in our investment and loan portfolios, we also periodically hedge cap and floor risk embedded within our floating-rate investments and loans by entering into derivative transactions. 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, 2023, 2022 and 2021 are shown in the following table.

Activity in the Notional Amounts of Derivatives

	Swaps	Caps / Floors	Spots / Forwards	Total
December 31, 2022	**$ 78,075**	**$ 3,825**	**$ 145**	**$ 82,045**
Additions / Accretion	**162,698**	**788**	**1,368**	**164,854**
Maturities / Amortization	**(164,995)**	**(1,341)**	**(1,466)**	**(167,802)**
Terminations	**(2,203)**	**(20)**	**-**	**(2,223)**
December 31, 2023	**$ 73,575**	**$ 3,252**	**$ 47**	**$ 76,874**
December 31, 2021	$ 54,939	$ 4,530	$ 179	$ 59,648
Additions / Accretion	142,337	556	1,774	144,667
Maturities / Amortization	(114,964)	(1,237)	(1,808)	(118,009)
Terminations	(4,237)	(24)	-	(4,261)
December 31, 2022	$ 78,075	$ 3,825	$ 145	$ 82,045
December 31, 2020	$ 46,666	$ 6,435	$ 157	$ 53,258
Additions / Accretion	93,141	411	2,029	95,581
Maturities / Amortization	(83,766)	(566)	(2,007)	(86,339)
Terminations	(1,102)	(1,750)	-	(2,852)
December 31, 2021	$ 54,939	$ 4,530	$ 179	$ 59,648

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.

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 for our equity positioning strategy. For fair value hedges, the amount of hedge ineffectiveness is recognized as net interest income in current period earnings.

Cash Flow Hedges

Our cash flow hedges include interest rate caps and interest rate floors to hedge cap and floor risk embedded within a portion of our floating-rate investment securities and loans. Interest rate caps and floors are an integral part of our interest rate hedging strategies. 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. Cash flow hedges also include pay fixed interest rate swaps that convert certain of our floating-rate debt to fixed rate to manage re-pricing intervals and lower funding costs. For cash flow hedges, 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. For cash flow hedges in which the forecasted transaction is not probable of occurring, the amounts reclassified from accumulated other comprehensive income (loss) are reflected in current period earnings. At December 31, 2023, we expect that $13 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 significant majority of our cash flow hedges are of exposure to the variability of cash flows for a period of 13 years or less. The maximum term over which we are hedging our exposure to the variability of future cash flows for all forecasted transactions is approximately 30 years.

Derivatives Not Designated As Hedges

Derivative agreements with our customers and the related offsetting derivative agreements with counterparties as well as our short-term interest rate swaps indexed to Secured Overnight Financing Rate (SOFR) under our basis risk management strategy and certain other derivatives are not designated as hedging instruments and do not receive hedge accounting treatment. Accordingly, any changes in the fair value of customer related derivatives are recognized immediately as noninterest income/expense in current period earnings. Changes in the fair value of short-term SOFR interest rate swaps and certain other derivatives are recognized immediately as interest 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. When the fair value of a derivative contract is negative, the counterparty is exposed to us.

Derivative transactions with our customers are typically secured through our loan agreements. We record a credit valuation adjustment to the fair value estimate of derivative assets with our customers to incorporate the impact of nonperformance risk, including credit risk. As of December 31, 2023, 2022, and 2021, the notional amount of derivatives with our customers totaled $14.4 billion, $13.5 billion and $13.1 billion, respectively.

CoBank is subject to certain regulations requiring certain derivative transactions to be cleared through a central clearinghouse and traded on regulated swap execution facilities, with exceptions for certain qualifying swaps entered into by end-users and financial cooperatives. 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. FCMs prequalify counterparties to all cleared swaps, set exposure limits for each counterparty and collect initial margin and variation margin or settlement payments daily for changes in the value of cleared derivatives, which protect against credit risk in the event of a counterparty default. As of December 31, 2023, 2022 and 2021, the notional amount of our cleared derivatives was $51.8 billion, $58.7 billion and $36.8 billion, respectively. Initial margin and settlement payments totaling $205 million and $23 million, respectively, were held by our CCP for our cleared derivatives as of December 31, 2023, $158 million and $280 million, respectively, as of December 31, 2022 and $111 million and $50 million, respectively, as of December 31, 2021.

Our remaining 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, 2023, 2022 and 2021, the notional amount of derivatives with our non-customer counterparties, excluding cleared derivatives, totaled $10.7 billion, $9.9 billion and $9.8 billion, respectively.

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, 2023 our non-customer counterparties posted $295 million in cash as collateral with us.

At December 31, 2023 and December 31, 2022, the net fair value of our derivatives to all of our dealer counterparties was a net asset and was offset by the collateral we received from our dealer counterparties. The net fair value of our derivatives to all of our dealer counterparties was a net liability at December 31, 2021 and was offset by the collateral we posted to our dealer counterparties. The amount of losses related to derivatives we are exposed to in the event of nonperformance by dealer counterparties to our derivative positions is mitigated by collateral held by us.

Hedge Terminations

During 2023, we terminated $100 million in notional value of interest rate swaps which hedged the fair value of certain of our fixed-rate debt. The swaps were previously accounted for as fair value hedges and the $2 million of hedged item basis adjustment upon termination will be amortized to earnings as an offset to interest expense over the remaining life of the original hedging relationships.

During 2022, we terminated $1.1 billion in notional value of interest rate swaps which hedged the fair value of certain of our fixed-rate debt. The swaps were previously accounted for as fair value hedges and the $34 million of hedged item basis adjustment upon termination will be amortized to earnings as an offset to interest expense over the remaining life of the original hedging relationships.

During 2021, we terminated $1.75 billion in notional value of interest rate floors which hedged cash flows from certain of our floating-rate loans. The floors were previously accounted for as cash flow hedges and the $8 million gain in accumulated other comprehensive income upon termination will be amortized to earnings as an increase to interest income over the remaining life of the original hedging relationships.

We terminated interest rate swaps with customers and offsetting dealer counterparties totaling notional value of $2.1 billion, $3.1 billion and $1.1 billion in 2023, 2022 and 2021, respectively. Proceeds from the customer terminations were offset by payments for the offsetting dealer terminations.

A summary of the impact of interest rate swaps and other derivatives on our consolidated balance sheets as of December 31, 2023, 2022 and 2021 is shown in the following tables.

December 31,	2023		2022		2021	
Fair Value of Derivatives	Derivative Assets[(1)]	Derivative Liabilities[(2)]	Derivative Assets[(1)]	Derivative Liabilities[(2)]	Derivative Assets[(1)]	Derivative Liabilities[(2)]
Derivatives Designated as Hedging Instruments						
Interest Rate Contracts	**$ 155**	**$ 221**	$ 114	$ 539	$ 142	$ 37
Foreign Exchange Contracts	**-**	**-**	-	2	1	1
Total Derivatives Designated as Hedging Instruments	**$ 155**	**$ 221**	$ 114	$ 541	$ 143	$ 38
Derivatives Not Designated as Hedging Instruments						
Interest Rate Contracts	**$ 680**	**$ 612**	$ 886	$ 818	$ 394	$ 334
Foreign Exchange Contracts	**-**	**-**	-	-	-	-
Total Derivatives Not Designated as Hedging Instruments	**$ 680**	**$ 612**	$ 886	$ 818	$ 394	$ 334
Settlement Payments	**$ (23)**	**$ -**	$ -	$ (280)	$ (50)	$ -
Total Derivatives	**$ 812**	**$ 833**	$ 1,000	$ 1,079	$ 487	$ 372

(1) These assets make up the interest rate swaps and other derivatives in the consolidated balance sheets.

(2) These liabilities make up the interest rate swaps and other derivatives in the consolidated balance sheets.

A summary of the impact of interest rate swaps and other derivatives on our consolidated statements of income and comprehensive income for the years ended December 31, 2023, 2022 and 2021 is shown in the following tables.

Effect of Fair Value and Cash Flow Hedge Accounting on the Consolidated Statement of Income

	Interest Income Loans	Interest Income Investments[1]	Total Interest Income	Interest Expense	Net Interest Income
Year Ended December 31, 2023					
Total Amount of Line Items Presented in Consolidated Statement of Income	**$ 7,266**	**$ 1,667**	**$ 8,933**	**$ (7,086)**	**$ 1,847**
Gain (Loss) on Fair Value Hedge Relationships:					
Interest Rate Contracts:					
Recognized on Derivatives	**$ -**	**$ -**	**$ -**	**$ 439**	**$ 439**
Recognized on Hedged Items	**-**	**-**	**-**	**(436)**	**(436)**
Net Income Recognized on Fair Value Hedges	**$ -**	**$ -**	**$ -**	**$ 3**	**$ 3**
Gain (Loss) on Cash Flow Hedge Relationships:					
Interest Rate Contracts:					
Amount of Gain (Loss) Reclassified from Accumulated Other Comprehensive Income (Loss) into Income (Loss)	**$ 2**	**$ -**	**$ 2**	**$ (12)**	**$ (10)**
Foreign Exchange Contracts:					
Amount of Gain (Loss) Reclassified from Accumulated Other Comprehensive Income (Loss) into Income (Loss)[2]	**1**	**-**	**1**	**-**	**1**
Amount Excluded from Effectiveness Testing Recognized in Earnings Based on an Amortization Approach	**1**	**-**	**1**	**-**	**1**
Net Income (Expense) Recognized on Cash Flow Hedges	**$ 4**	**$ -**	**$ 4**	**$ (12)**	**$ (8)**
Net Income (Expense) Recognized on Fair Value and Cash Flow Hedges	**$ 4**	**$ -**	**$ 4**	**$ (9)**	**$ (5)**
Year Ended December 31, 2022					
Total Amount of Line Items Presented in Consolidated Statement of Income	$ 3,909	$ 839	$ 4,748	$ (2,864)	$ 1,884
Gain (Loss) on Fair Value Hedge Relationships:					
Interest Rate Contracts:					
Recognized on Derivatives	$ -	$ -	$ -	$ (621)	$ (621)
Recognized on Hedged Items	-	-	-	623	623
Net Income Recognized on Fair Value Hedges	$ -	$ -	$ -	$ 2	$ 2
Gain (Loss) on Cash Flow Hedge Relationships:					
Interest Rate Contracts:					
Amount of Gain (Loss) Reclassified from Accumulated Other Comprehensive Income (Loss) into Income (Loss)	$ 3	$ -	$ 3	$ (13)	$ (10)
Foreign Exchange Contracts:					
Amount of Gain (Loss) Reclassified from Accumulated Other Comprehensive Income (Loss) into Income (Loss)[3]	(2)	-	(2)	-	(2)
Amount Excluded from Effectiveness Testing Recognized in Earnings Based on an Amortization Approach	1	-	1	-	1
Net Income (Expense) Recognized on Cash Flow Hedges	$ 2	$ -	$ 2	$ (13)	$ (11)
Net Income (Expense) Recognized on Fair Value and Cash Flow Hedges	$ 2	$ -	$ 2	$ (11)	$ (9)

(1) Includes interest income on investment securities, federal funds sold and other overnight funds.

(2) Fully offset by a $1 million loss on foreign currency denominated loans (hedged items) which is also located in Interest Income - Loans in the consolidated statements of income.

(3) Fully offset by a $2 million gain on foreign currency denominated loans (hedged items) which is also located in Interest Income - Loans in the consolidated statements of income.

Effect of Fair Value and Cash Flow Hedge Accounting on the Consolidated Statement of Income	Interest Income Loans	Interest Income Investments[1]	Total Interest Income	Interest Expense	Net Interest Income
Year Ended December 31, 2021					
Total Amount of Line Items Presented in Consolidated Statement of Income	$ 2,431	$ 438	$ 2,869	$ (1,143)	$ 1,726
Gain (Loss) on Fair Value Hedge Relationships:					
Interest Rate Contracts:					
Recognized on Derivatives	$ -	$ -	$ -	$ 253	$ 253
Recognized on Hedged Items	-	-	-	(251)	(251)
Net Income Recognized on Fair Value Hedges	$ -	$ -	$ -	$ 2	$ 2
Gain (Loss) on Cash Flow Hedge Relationships:					
Interest Rate Contracts:					
Amount of Gain (Loss) Reclassified from Accumulated Other Comprehensive Income (Loss) into Income (Loss)	$ -	$ -	$ -	$ (14)	$ (14)
Foreign Exchange Contracts:					
Amount of Gain (Loss) Reclassified from Accumulated Other Comprehensive Income (Loss) into Income (Loss)[2]	2	-	2	-	2
Amount Excluded from Effectiveness Testing Recognized in Earnings Based on an Amortization Approach	-	-	-	-	-
Net Income (Expense) Recognized on Cash Flow Hedges	$ 2	$ -	$ 2	$ (14)	$ (12)
Net Income (Expense) Recognized on Fair Value and Cash Flow Hedges	$ 2	$ -	$ 2	$ (12)	$ (10)

[1] Includes interest income on investment securities, federal funds sold and other overnight funds.

[2] Fully offset by a $2 million loss on foreign currency denominated loans (hedged items) which is also located in Interest Income - Loans in the consolidated statements of income.

Effect of Cash Flow Hedge Accounting on the Consolidated Balance Sheets	Amount of Gain (Loss) Recognized in Accumulated Other Comprehensive Income (Loss) on Derivatives		
Year Ended December 31,	**2023**	**2022**	**2021**
Interest Rate Contracts	**$ (79)**	$ 90	$ (6)
Foreign Exchange Contracts	**1**	(2)	2
Total	**$ (78)**	$ 88	$ (4)

Effect of Derivatives not Designated as Hedging Relationships on the Consolidated Statements of Income	Net Amount of Gain or (Loss) Recognized		
Year Ended December 31,	**2023**	**2022**	**2021**
Interest Rate Contracts[1]	**$ -**	$ 11	$ 5
Foreign Exchange Contracts	**-**	-	-
Total	**$ -**	$ 11	$ 5

[1] Includes a $1 million loss, $8 million gain and less than $1 million loss on short-term derivatives indexed to SOFR, recognized in interest expense for the years ended December 31, 2023, 2022 and 2021, respectively, and a $1 million gain, $3 million gain and $5 million gain on derivatives with customers and related offsetting derivatives with counterparties including credit valuation adjustments and recognized in noninterest income / expense for the years ended December 31, 2023, 2022 and 2021, respectively.

A summary of the cumulative basis adjustment for fair value hedging relationships included in the carrying amount of hedged liabilities as of December 31, 2023, 2022 and 2021 is shown in the following table.

Derivatives in Fair Value Hedging Relationships	December 31,		
Bonds and Notes	**2023**	**2022**	**2021**
Carrying Amount of Hedged Liabilities	$ **28,954**	$ 28,765	$ 18,030
Cumulative Basis Adjustment Included in Carrying Amount of Hedged Liabilities:			
Hedged Items Currently Designated	**(106)**	(542)	81
Hedged Items No Longer Designated	**(13)**	(24)	-

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 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 Derivatives and Collateral

		Amounts Not Offset In the Consolidated Balance Sheets		
As of December 31, 2023	**Gross Amounts of Assets/ Liabilities Presented in the Consolidated Balance Sheets**	**Cash Collateral Received/Pledged[(1)]**	**Investment Securities Received/Pledged as Collateral[(1)]**	**Net Amount**
Assets:				
Interest Rate Swaps and Other Derivatives:				
Dealer	$ **351**	$ **(295)**	$ **(71)**	$ **-** [(2)]
Customer	**80**	**-**	**-**	**80**
Clearinghouse	**381**	**-**	**-**	**381**
Accrued Interest Receivable on Derivative Contracts	**35**	**-**	**-**	**35**
Liabilities:				
Interest Rate Swaps and Other Derivatives:				
Dealer	**8**	**-**	**-**	**8**
Customer	**545**	**-**	**-**	**545**
Clearinghouse	**280**	**-**	**(205)**	**75**
Accrued Interest Payable on Derivative Contracts	**128**	**-**	**-**	**128**

(1) Cash collateral received/pledged is recognized in the consolidated balance sheets whereas investment securities received/pledged are not.

(2) Cash received as collateral fully offset the related gross asset in the consolidated balance sheets.

Offsetting of Derivatives and Collateral

As of December 31, 2022	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
Assets:				
Interest Rate Swaps and Other Derivatives:				
Dealer	$ 544	$ (560)	$ -	$ - [2]
Customer	65	-	-	65
Clearinghouse	390	-	-	390
Accrued Interest Receivable on Derivative Contracts	20	-	-	20
Liabilities:				
Interest Rate Swaps and Other Derivatives:				
Dealer	4	-	-	4
Customer	751	-	-	751
Clearinghouse	325	-	(158)	167
Accrued Interest Payable on Derivative Contracts	83	-	-	83
As of December 31, 2021				
Assets:				
Interest Rate Swaps and Other Derivatives:				
Dealer	$ 57	$ (1)	$ -	$ 56
Customer	307	-	-	307
Clearinghouse	122	-	-	122
Accrued Interest Receivable on Derivative Contracts	44	-	-	44
Liabilities:				
Interest Rate Swaps and Other Derivatives:				
Dealer	144	(81)	-	63
Customer	69	-	-	69
Clearinghouse	159	-	(111)	48
Accrued Interest Payable on Derivative Contracts	6	-	-	6

(1) Cash collateral received/pledged is recognized in the consolidated balance sheets whereas investment securities received/pledged are not.

(2) Cash received as collateral fully offset the related gross asset in the consolidated balance sheets.

Note 11 – Fair Value Measurements

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 independent sources. 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, 2023 consist of assets held in a trust fund related to deferred compensation and nonqualified retirement plans. The trust fund 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, 2023 include our derivative contracts, collateral balances related to derivative contracts, federal funds sold and other overnight funds, U.S. Treasury and agency debt investment securities, Ginnie Mae MBS, corporate bonds, and the substantial majority of agency MBS and 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 interest rate swaps and other derivatives 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 and discounting (primarily the Overnight Index Swap rate for collateralized non-customer derivative contracts and SOFR for collateralized cleared derivative contracts and non-collateralized customer derivative contracts), 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

Level 2 Asset	Valuation Technique	Inputs
Federal Funds Sold and Other Overnight Funds	Carrying Value	Par/Principal Plus Accrued Interest
Investment Securities	Third-Party Pricing Service	Prepayment Rate
		Lifetime Default Rate
		Loss Severity
		Benchmark Yield Curve
		Quoted Prices
Interest Rate Swaps and Other Derivatives	Discounted Cash Flow	Benchmark Yield Curve
		Counterparty Credit Risk
		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, 2023 include 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 Level 3 agency MBS is estimated through a third-party pricing service that uses valuation models to estimate current market prices. Fair value for a small portion of our Level 3 ABS is calculated internally using third-party models. 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, 2023 also include $65 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 'Assets and Liabilities Measured at Fair Value on a Recurring Basis' tables beginning on page 135 because they are not measured on a recurring basis.

Our Level 3 liabilities at December 31, 2023 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 Level 3 assets or liabilities occurred in 2023, 2022 and 2021.

The following table presents quantitative information about Level 3 fair value measurements as of December 31, 2023.

Quantitative Information About Valuation Techniques and Unobservable Inputs to Level 3 Fair Value Measurements

	Fair Value	Valuation Technique	Unobservable Inputs	Range (Weighted Average)
Assets				
Investment Securities:				
U.S. Agency MBS	$ 49	Third-Party Pricing Service	Prepayment Rate	*
			Lifetime Default Rate	*
			Loss Severity	*
Other (included in Asset-Backed)	18	Discounted Cash Flow	Prepayment Rate	0% (0%)
Nonperforming Loans	65	Appraisal / Discounted Cash Flow	Income/Expense Data	**
			Comparable Sales	**
			Replacement Cost	**
Liabilities				
Standby Letters of Credit	$ 16	Discounted Cash Flow	Mark-to-Market Spread	0.1-1.3% (0.9%)

* 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 table presents the assets and liabilities that are measured at fair value on a recurring basis at December 31, 2023, 2022 and 2021 for each of the fair value hierarchy levels.

Assets and Liabilities Measured at Fair Value on a Recurring Basis

	December 31, 2023				December 31, 2022				December 31, 2021			
	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total	Level 1	Level 2	Level 3	Total
Assets												
Federal Funds Sold and Other Overnight Funds	$ -	$ 4,615	$ -	$ 4,615	$ -	$ 12,401	$ -	$ 12,401	$ -	$ 5,500	$ -	$ 5,500
Investment Securities:												
Certificates of Deposit	-	-	-	-	-	850	-	850	-	-	-	-
U.S. Treasury Debt	-	14,361		14,361	-	14,052	-	14,052	-	15,716	-	15,716
U.S. Agency Debt	-	2,382	-	2,382	-	1,627	-	1,627	-	2,077	-	2,077
Residential MBS:												
Ginnie Mae	-	898	-	898	-	837	-	837	-	1,200	-	1,200
U.S. Agency	-	3,055	49	3,104	-	1,261	58	1,319	-	1,148	72	1,220
Commercial MBS:												
U.S. Agency	-	17,057	-	17,057	-	13,587	-	13,587	-	11,225	-	11,225
Corporate Bonds	-	482	-	482	-	501	-	501	-	383	-	383
Asset-Backed and Other	-	41	18	59	-	299	25	324	-	1	20	21
Interest Rate Swaps and Other Derivatives	-	812	-	812	-	1,000	-	1,000	-	487	-	487
Assets Held in Trust (included in Other Assets)	121	-	-	121	109	-	-	109	121		-	121
Collateral Assets (included in Other Assets)	-	-	-	-	-	-	-	-	-	81	-	81
Total Assets	$ 121	$ 43,703	$ 67	$ 43,891	$ 109	$ 46,415	$ 83	$ 46,607	$ 121	$ 37,818	$ 92	$ 38,031
Liabilities												
Interest Rate Swaps and Other Derivatives	$ -	$ 833	$ -	$ 833	$ -	$ 1,079	$ -	$ 1,079	$ -	$ 372	$ -	$ 372
Collateral Liabilities (included in Bonds and Notes)	-	295	-	295	-	560	-	560	-	-	-	-
Standby Letters of Credit (included in Other Liabilities)	-	-	16	16	-	-	17	17	-	-	16	16
Total Liabilities	$ -	$ 1,128	$ 16	$ 1,144	$ -	$ 1,639	$ 17	$ 1,656	$ -	$ 372	$ 16	$ 388

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

	U.S. Agency Residential MBS	Asset-Backed Securities and Other	Standby Letters of Credit
Balance at January 1, 2023	**$ 58**	**$ 25**	**$ 17**
Total Gains or Losses (Realized/Unrealized)			
Included in Other Comprehensive Income	**(1)**	**-**	**-**
Purchases	**-**	**10**	**-**
Issuances	**-**	**-**	**12**
Settlements	**(9)**	**(17)**	**(13)**
Accretion	**1**	**-**	**-**
Balance at December 31, 2023	**$ 49**	**$ 18**	**$ 16**
Balance at January 1, 2022	$ 72	$ 20	$ 16
Total Gains or Losses (Realized/Unrealized)			
Included in Other Comprehensive Income	(3)	(2)	-
Purchases	-	16	-
Issuances	-	-	19
Settlements	(12)	(9)	(18)
Accretion	1	-	-
Balance at December 31, 2022	$ 58	$ 25	$ 17
Balance at January 1, 2021	$ 84	$ 13	$ 13
Total Gains or Losses (Realized/Unrealized)			
Included in Other Comprehensive Income	1	-	-
Purchases	-	7	-
Issuances	-	-	15
Settlements	(14)	-	(12)
Accretion	1	-	-
Balance at December 31, 2021	$ 72	$ 20	$ 16

Estimated Fair Value of Certain Other Financial Instruments

The following table presents the estimated fair value 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, 2023, 2022 and 2021.

	December 31, 2023			December 31, 2022			December 31, 2021		
	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	**$ 147,285**	**$ 143,546**	**Level 3**	$ 139,407	$ 133,760	Level 3	$ 127,878	$ 129,847	Level 3
Financial Liabilities:									
Bonds and Notes	**$ 178,821**	**$ 175,023**	**Level 3**	$ 174,623	$ 168,797	Level 3	$ 154,950	$ 156,357	Level 3
Off-Balance Sheet Financial Instruments:									
Commitments to Extend Credit	**$ -**	**$ (166)**	**Level 3**	$ -	$ (143)	Level 3	$ -	$ (130)	Level 3

Commitments to Extend Credit

The fair value of commitments to extend credit is estimated using a discounted cash flow method by applying a risk-adjusted spread percentage to these obligations.

Note 12 – 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. We also participate in loans and leases to immediate family members of directors or entities affiliated with immediate family members 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. All related party loans are made in accordance with established policies on substantially the same terms, including interest rates, amortization schedules and collateral requirements, as those prevailing at the time for comparable transactions with unrelated borrowers.

Total loans outstanding to customers whose officers or directors serve on our Board of Directors and loans to immediate family members of directors or entities affiliated with immediate family members of directors amounted to $0.7 billion, $1.0 billion and $0.5 billion at December 31, 2023, 2022 and 2021, respectively. During 2023, $2.5 billion of advances on related party loans were made and repayments on related party loans totaled $2.8 billion. None of these loans outstanding at December 31, 2023 were delinquent, in nonaccrual status or, in the opinion of management, involved more than a normal risk of collectability.

Note 13 – Segment Financial Information

We conduct our lending operations through three operating segments: Agribusiness, Farm Credit Banking and Rural Infrastructure.

The accompanying tables present 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 attributed to the operating segments. Intersegment transactions are generally insignificant and significant amounts are eliminated upon consolidation.

We do not hold significant assets in any foreign country. Substantially all of our agricultural export finance loans are U.S. dollar-denominated and 24 percent of these loans are guaranteed by the U.S. government. For the three years ended December 31, 2023, 2022 and 2021, no customer made up 10 percent or more of our gross or net interest income.

Segment Financial Information				
	Agribusiness	Farm Credit Banking	Rural Infrastructure	Total CoBank
2023 Results of Operations:				
Net Interest Income	**$ 912**	**$ 336**	**$ 599**	**$ 1,847**
Provision for Credit Losses	**17**	**-**	**59**	**76**
Noninterest Income (Expense)	**255**	**(4)**	**208**	**459**
Operating Expenses	**358**	**51**	**186**	**595**
Provision for Income Taxes	**61**	**-**	**67**	**128**
Net Income	**$ 731**	**$ 281**	**$ 495**	**$ 1,507**
Selected Financial Information at December 31, 2023:				
Loans	**$ 37,785**	**$ 77,658**	**$ 32,572**	**$ 148,015**
Less: Allowance for Loan Losses	**(459)**	**-**	**(271)**	**(730)**
Net Loans	**$ 37,326**	**$ 77,658**	**$ 32,301**	**$ 147,285**
Accrued Interest Receivable and Other Assets	**754**	**608**	**1,110**	**2,472**
Total Segment Assets	**$ 38,080**	**$ 78,266**	**$ 33,411**	**$ 149,757**
Federal Funds Sold and Other Overnight Funds				**4,615**
Investment Securities				**38,343**
Other Assets				**1,644**
Total Assets	**$ 38,080**	**$ 78,266**	**$ 33,411**	**$ 194,359**
2022 Results of Operations:				
Net Interest Income	$ 1,054	$ 291	$ 539	$ 1,884
Provision for Credit Losses	71	-	40	111
Noninterest Income	213	9	144	366
Operating Expenses	362	49	169	580
Provision for Income Taxes	60	-	50	110
Net Income	$ 774	$ 251	$ 424	$ 1,449
Selected Financial Information at December 31, 2022:				
Loans	$ 40,098	$ 71,529	$ 28,462	$ 140,089
Less: Allowance for Loan Losses	(517)	-	(165)	(682)
Net Loans	$ 39,581	$ 71,529	$ 28,297	$ 139,407
Accrued Interest Receivable and Other Assets	695	497	995	2,187
Total Segment Assets	$ 40,276	$ 72,026	$ 29,292	$ 141,594
Federal Funds Sold and Other Overnight Funds				12,401
Investment Securities				33,097
Other Assets				1,751
Total Assets	$ 40,276	$ 72,026	$ 29,292	$ 188,843
2021 Results of Operations:				
Net Interest Income	$ 931	$ 285	$ 510	$ 1,726
Provision for Credit Losses	16	-	2	18
Noninterest Income	120	7	72	199
Operating Expenses	303	47	141	491
Provision for Income Taxes	55	-	47	102
Net Income	$ 677	$ 245	$ 392	$ 1,314
Selected Financial Information at December 31, 2021:				
Loans	$ 38,094	$ 65,632	$ 24,803	$ 128,529
Less: Allowance for Loan Losses	(499)	-	(152)	(651)
Net Loans	$ 37,595	$ 65,632	$ 24,651	$ 127,878
Accrued Interest Receivable and Other Assets	558	309	720	1,587
Total Segment Assets	$ 38,153	$ 65,941	$ 25,371	$ 129,465
Federal Funds Sold and Other Overnight Funds				5,500
Investment Securities				31,842
Other Assets				3,499
Total Assets	$ 38,153	$ 65,941	$ 25,371	$ 170,306

Note 14 – Commitments and Contingent Liabilities

Under the Farm Credit Act, 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 $415.5 billion at December 31, 2023.

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, 2023, the aggregated assets of the Insurance Fund totaled $7.5 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.

On April 15, 2016, we redeemed $500 million in par value of our outstanding 7.875 percent subordinated notes (the Notes) due in 2018 totaling $405 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. In June 2016, a lawsuit was commenced by the filing of a complaint in the United States District Court Southern District of New York (the "Court") against CoBank by a number of investors (the "Plaintiffs") who had held CoBank's 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 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. CoBank and Plaintiffs filed respective motions for summary judgment.

On September 14, 2021, the Court ruled on the two summary judgment motions. On the breach of contract claim, the Court ruled in favor of the Plaintiffs. On the breach of implied covenant of good faith and fair dealing claim, the Court ruled in favor of CoBank. The Court further ruled that the amount of damages remained in dispute and required a trial. As a result of the ruling, during the third quarter of 2021 CoBank recorded an expense relating to the litigation. In January 2022, CoBank entered into a confidential settlement agreement with the Plaintiffs to resolve all claims alleged in the litigation. The case was dismissed with prejudice on January 18, 2022.

We are involved in various judicial, regulatory and arbitration proceedings concerning matters arising in connection with our business. While the outcome of such 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 such 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 9.

Note 15 – Quarterly Financial Information

Unaudited quarterly results of operations for the years ended December 31, 2023, 2022 and 2021, are shown in the table below.

Quarterly Financial Information (Unaudited)					
2023	**First**	**Second**	**Third**	**Fourth**	**Total**
Net Interest Income	**$ 465**	**$ 450**	**$ 456**	**$ 476**	**$ 1,847**
Provision for Credit Losses	**20**	**42**	**8**	**6**	**76**
Noninterest Income and Expenses, Net	**33**	**49**	**35**	**19**	**136**
Provision for Income Taxes	**36**	**27**	**33**	**32**	**128**
Net Income	**$ 376**	**$ 332**	**$ 380**	**$ 419**	**$ 1,507**
2022	**First**	**Second**	**Third**	**Fourth**	**Total**
Net Interest Income	$ 488	$ 504	$ 448	$ 444	$ 1,884
Provision for Credit Losses (Credit Loss Reversal)	46	59	(30)	36	111
Noninterest Income and Expenses, Net	33	64	40	77	214
Provision for Income Taxes	32	28	43	7	110
Net Income	$ 377	$ 353	$ 395	$ 324	$ 1,449
2021	**First**	**Second**	**Third**	**Fourth**	**Total**
Net Interest Income	$ 443	$ 447	$ 407	$ 429	$ 1,726
Provision for Credit Losses (Credit Loss Reversal)	55	–	(50)	13	18
Noninterest Income and Expenses, Net	30	58	72	132	292
Provision for Income Taxes	34	31	31	6	102
Net Income	$ 324	$ 358	$ 354	$ 278	$ 1,314

Note 16 – Subsequent Events

We have evaluated subsequent events through February 29, 2024, which is the date the financial statements were issued.

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. The Associations are not authorized by the Farm Credit Act to participate directly in the issuance of Systemwide Debt Securities. Therefore, we are the primary funding source for our affiliated Associations. As of December 31, 2023, we have 16 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 $71.8 billion at December 31, 2023. During 2023, $215.1 billion of advances on wholesale loans were made to our affiliated Associations and repayments totaled $209.1 billion.

Our bylaws permit our Board of Directors to set the required level of Association investment in the Bank within a range of 2 to 5 percent of Association borrowings beginning in 2022. In 2022, the required investment level was changed from 4 percent of the five-year trailing average loan volume to 3 percent of the one-year average loan volume. 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. We separately publish certain unaudited combined financial information of the District, including a condensed statement of condition and statement of income, which can be found on our website at www.cobank.com.

Effective January 1, 2021, two of our affiliated Associations, Farm Credit of Western Oklahoma, ACA and AgPreference, ACA merged and are doing business as Farm Credit of Western Oklahoma, ACA.

Effective January 1, 2022, two of our affiliated Associations, Farm Credit East, ACA and Yankee Farm Credit, ACA merged and are doing business as Farm Credit East, ACA.

Effective November 1, 2022, two of our affiliated Associations, Farm Credit of Western Oklahoma, ACA and Farm Credit of Enid, ACA merged and are doing business as Farm Credit of Western Oklahoma, ACA.

Effective January 1, 2023, two of our affiliated Associations, Northwest Farm Credit Services, ACA and Farm Credit West, ACA merged and are doing business as AgWest, ACA.

Effective October 1, 2023, two of our affiliated Associations, American AgCredit, ACA and Farm Credit of New Mexico, ACA merged and are doing business as American AgCredit, ACA.

Report of Management

CoBank, ACB

February 29, 2024

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 2023, 2022 and 2021 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, 2023, 2022 and 2021. CoBank is also examined by the Farm Credit Administration (FCA).

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 A. Still	Thomas E. Halverson	David P. Burlage
Chair of the Board	President and Chief Executive Officer	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 2023 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, 2023.

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, 2023 has been audited by PricewaterhouseCoopers LLP, independent auditors, as stated in their report beginning on page 82, which expresses an unqualified opinion on the effectiveness of the Bank's internal control over financial reporting as of December 31, 2023. 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 2023) 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, 2023, 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 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 Notes to Financial Statements	Page 33 Page 91
Description of Property		
Location of Property	Office Locations	Inside Back Cover
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 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; Enfield, CT; Louisville, KY; Lubbock, TX; Omaha, NE; Rocklin, CA; St. Louis, MO and Wichita, KS, some of which are located in CoBank banking centers. 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 and safety of management travel, CoBank utilizes a variety of transportation to serve its customers, including aircraft (both commercial and fractional interest).		
Legal Proceedings and Enforcement Actions	Notes to Financial Statements	Note 14
Description of Capital Structure	Notes to Financial Statements	Note 6
Description of Liabilities		
Debt Outstanding	Notes to Financial Statements	Note 5
Contingent Liabilities	Notes to Financial Statements	Note 14
Selected Financial Data for the Five Years Ended December 31, 2023	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	Page 33
Directors and Senior Officers		
Directors' Information	Board of Directors Disclosure	Page 158
Senior Officers' Information	Senior Officers	Page 170
Transactions with Directors and Senior Officers	Notes to Financial Statements	Note 12

Annual Report to Shareholders Disclosure Information Required by Farm Credit Administration Regulations

CoBank, ACB

(Unaudited)

	Section	Location
Involvement in Certain Legal Proceedings		
There were no matters that came to the attention of the Board of Directors or management regarding the involvement of current directors or senior officers in specified legal proceedings which are required to be disclosed.		
Relationship with Independent Auditors		
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		
Financial Statements and Footnotes	Financial Information Notes to Financial Statements	Page 85 Page 91
Report of Management	Report of Management	Page 142
Report of Independent Auditors	Report of Independent Registered Public Accounting Firm	Page 82
Aggregate Fees Incurred for Services Rendered by Independent Auditors	Board of Directors Disclosure	Page 160
Credit and Services to Young, Beginning, and Small Farmers and Ranchers and Producers or Harvesters of Aquatic Products	Young, Beginning, and Small Farmers	Page 187
Unincorporated Business Entities	Unincorporated Business Entities	Page 188
Regulatory Capital Disclosures	Regulatory Capital Disclosures	Page 147
FCL Titling Trust Assets	FCL Titling Trust Assets.	Page 189

Regulatory Capital Disclosures

CoBank, ACB

(Unaudited) ($ in Millions, Except as Noted)

Overview

The Farm Credit Administration (FCA) adopted final rules relating to regulatory capital requirements for the Farm Credit System (System) in 2016, which took effect January 1, 2017. The capital regulations include public disclosure requirements set forth in Title 12 of the Code of Federal Regulations parts 628.61 through 628.63.

As described in Note 2 in the consolidated financial statements and Management's Discussion and Analysis in this annual report, CoBank adopted the CECL accounting standard effective January 1, 2023. The impact to the Bank upon adoption was a net reduction in our ACL on loans of $75 million with a corresponding increase to retained earnings, net of taxes. The CECL adjustment to retained earnings increased Tier 1 capital while the CECL adjustment to the ACL on loans decreased Tier 2 capital. The ACL on investments of $3 million as of December 31, 2023 is excluded from the Bank's regulatory capital. See Notes 2, 3, and 4 for further discussion of these items.

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

Disclosure Requirement	Description	2023 Annual Report Reference
Scope of Application	Corporate entity and consolidated subsidiaries	Page 147
	Description of entity consolidation	Page 147
	Restrictions on transfers of funds or capital	Page 147
Capital Structure	Terms and conditions of capital instruments	Note 6 - Pages 114 to 119; Page 148
	Regulatory capital components	Page 148
Capital Adequacy	Capital adequacy assessment	Page 73; Note 6 - Page 117
	Risk-weighted assets	Page 150
	Regulatory capital ratios	Page 73; Note 6 - Page 117
Capital Buffers	Quantitative disclosures	Pages 73, 149
Credit Risk	Credit risk management and policies	Page 48
	Summary of exposures	Page 151
	Geographic distribution	Page 152
	Industry distribution	Page 153
	Contractual maturity	Page 154
	Nonperforming loans and ACL	Note 1 - Page 91; Note 3 - Page 98
Counterparty Credit Risk-Related Exposures	General description	Pages 53, 154
	Counterparty exposures	Note 10 - Page 127; Page 154
Credit Risk Mitigation	General description	Pages 151, 155
	Exposures with reduced capital requirements	Note 10 - Pages 125 to 133; Pages 51, 53, 151, 155
Securitization	General description	Pages 51, 156
	Securitization exposures	Pages 66 to 68, Note 4 - Pages 108 to 112; Note 11 - Pages 132 to 137; Page 156
Equities	General description	Pages 148, 157
Interest Rate Risk for Non-Trading Activities	General description	Pages 54, 157
	Interest rate sensitivity	Page 58

Scope of Application

The disclosures contained herein relate to CoBank, ACB and its wholly-owned subsidiaries, CoBank, FCB and Farm Credit Leasing Services Corporation (FCL), collectively hereinafter referred to as CoBank or the Bank. 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.

Regulatory Capital Disclosures

CoBank, ACB

(Unaudited) ($ in Millions, Except as Noted)

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 System Association Captive Insurance Company (Captive). 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 Captive 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.

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 6 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 ACL on loans 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 ACL on loans. The following table provides a summary of the Bank's regulatory capital components.

Regulatory Capital Components		
Three Months Ended December 31, 2023		**Average Balance**
Common Equity Tier 1 Capital (CET1)		
Common Cooperative Equities:		
Statutory Minimum Purchased Borrower Stock	$	2
Other Required Member Purchased Stock		1,022
Allocated Equities:		
Qualified Allocated Equities Subject to Retirement		2,830
Nonqualified Allocated Equities Subject to Retirement		-
Nonqualified Allocated Equities Not Subject to Retirement		3,437
Unallocated Retained Earnings		3,634
Paid-In Capital		-
Regulatory Adjustments and Deductions Made to CET1		269
Total CET1	$	11,194
Tier 1 Capital		
Non-Cumulative Perpetual Preferred Stock	$	1,625
Regulatory Adjustments and Deductions Made to Tier 1 Capital		-
Total Additional Tier 1 Capital		1,625
Total Tier 1 Capital	$	12,819
Tier 2 Capital		
Common Cooperative Equities Not Included in CET1	$	-
Tier 2 Capital Elements:		
ACL on Loans		814
Regulatory Adjustments and Deductions Made to Tier 2 Capital		-
Total Tier 2 Capital	$	814
Total Capital	$	13,633

Regulatory Capital Disclosures

CoBank, ACB

(Unaudited) ($ in Millions, Except as Noted)

A reconciliation of total shareholders' equity in our consolidated balance sheet to total regulatory capital is presented below.

Reconciliation to the December 31, 2023 Consolidated Balance Sheet	End of Period
Total Shareholders' Equity	$ 11,193
Adjustments to Regulatory Capital:	
Accumulated Other Comprehensive Loss	1,524
Regulatory Adjustments and Deductions Made to CET1	(142)
Tier 2 ACL on Loans	814
Total Capital	$ 13,389 [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, 2023.

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 73.

Regulatory Capital Disclosures

CoBank, ACB

(Unaudited) ($ in Millions, Except as Noted)

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, 2023		**Average Balance**	
On-Balance Sheet Assets:			
Exposures to Sovereign Entities	$	-	
Exposures to Supranational Entities and Multilateral Development Banks		202	
Exposures to Government-Sponsored Enterprises		19,260	(1)
Exposures to Depository Institutions, Foreign Banks, and Credit Unions		4,196	(2)
Exposures to Public Sector Entities		123	
Corporate Exposures, including Borrower Loans and Leases		56,414	
Residential Mortgage Exposures		-	
Past Due and Nonaccrual Exposures		221	
Securitization Exposures		79	
Equity Investment Exposures		128	
Other Assets		881	
Off-Balance Sheet:			
Unfunded Loan Commitments		13,081	
Equity Investment Commitments		165	
Over-the-Counter Derivatives		149	
Cleared Derivative Transactions		2	
Letters of Credit		1,727	
Reverse Repurchase Transactions		-	
Unsettled Transactions		-	
Total Risk-Weighted Assets Before Additions (Deductions)	$	96,628	
Additions:			
Intra-System Equity Investments	$	134	
Other Regulatory Adjustments and Additions		(405)	
Deductions:			
Regulatory Adjustments and Deductions Made to CET1		269	
Regulatory Adjustments and Deductions Made to Additional Tier 1 Capital		-	
Regulatory Adjustments and Deductions Made to Tier 2 Capital		-	
Total Risk-Weighted Assets	$	96,626	(3)

(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, 2023 was $95.9 billion.

As shown on page 73 of this annual report, the Bank exceeded all capital requirements as of December 31, 2023 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 $519 million as of December 31, 2023.

Regulatory Capital Disclosures

CoBank, ACB

(Unaudited) ($ in Millions, Except as Noted)

Credit Risk

For discussion related to CoBank's credit risk management and policies see "Credit Risk Management" beginning on page 48 of this annual report. Refer to "Nonaccrual Loans and Other Nonperforming Assets" in Note 1 to the consolidated financial statements in this annual report for qualitative disclosures including the definition of nonperforming loans and related policies. Refer to "Allowance for Credit Losses on Loans" in Note 1 to the consolidated financial statements in this annual report for a description of the methodology used to estimate our ACL on loans and our policy for charging-off uncollectible amounts.

The following table summarizes credit exposures related to loans, unfunded loan commitments, investment securities, letters of credit and equity investments. 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, 2023	**Average Balance**	**End of Period**
Loans Outstanding	$ 145,109	$ 148,015
Unfunded Loan Commitments	54,165	53,087
Investment Securities	36,764	38,343
Letters of Credit	2,134	2,057
Equity Investments Outstanding	122	128
Equity Investment Commitments	165	184
Reverse Repurchase Transactions	17	11

The table below shows derivatives by underlying exposure type, segregated between contracts traded in over-the-counter markets and 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, 2023	**Average Balance**		**End of Period**	
	Notional Amount	**Gross Positive Fair Value**	**Notional Amount**	**Gross Positive Fair Value**
Over-the-Counter Derivatives:				
Interest Rate Contracts	$ 23,566	$ 389	$ 25,073	$ 407
Foreign Exchange Contracts	50	-	46	-
Total Over-the-Counter Derivatives	$ 23,616	$ 389	$ 25,119	$ 407
Cleared Derivatives:				
Interest Rate Contracts	45,912	576	51,755	405
Total Derivatives	$ 69,528	$ 965	$ 76,874	$ 812

(Unaudited) ($ in Millions, Except as Noted)

The following table illustrates the geographic distribution of our total loan commitments as of December 31, 2023.

Total Lending Portfolio - Geographic Distribution		
As of December 31, 2023	**Wholesale Loans[1]**	**Commercial Loans**
California	42 %	6 %
Washington	24	2
Connecticut	12	1
Texas	5 [2]	8
Kansas	6	3
Oklahoma	4	2
Colorado	3	3
Illinois	-	5
Latin America	-	4
New York	-	4
Florida	-	4
Minnesota	-	4
Asia	-	4
Ohio	-	3
Iowa	-	3
Pennsylvania	2 [2]	1
Georgia	-	3
Indiana	-	2
Missouri	-	2
Wisconsin	-	2
Europe, Middle East, and Africa	-	2
Mississippi	- [2]	2
Arkansas	-	2
Nebraska	-	2
Michigan	-	2
North Carolina	-	2
Alabama	1 [2]	1
Massachusetts	-	2
Other	1	19
Total	100 %	100 %

[1] The distribution of wholesale loan commitments 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 loan commitments to nonaffiliated Associations.

(Unaudited) ($ in Millions, Except as Noted)

The following table illustrates the geographic distribution of our nonperforming loans as of December 31, 2023.

Nonperforming Loans - Geographic Distribution	
As of December 31, 2023	**Share[1]**
California	26 %
Colorado	20
Kansas	12
Nebraska	10
Ohio	10
Arkansas	5
Missouri	3
Kentucky	3
Oregon	2
Other	9
Total	100 %

[1] The distribution of nonperforming loans is based on the state in which the borrower is headquartered and may not be representative of their operations and business activities.

The following table illustrates the primary business/commodity distribution of our total loan commitments as of December 31, 2023.

Total Lending Portfolio - Distribution by Primary Business/Commodity	
As of December 31, 2023	**Share**
Affiliated Associations	48 %
Electric Distribution	7
Farm Supply, Grain and Marketing	5
Nonaffiliated Entities	4
Regulated Utilities	4
Agricultural Export Finance	4
Generation and Transmission	3
Lease Financing (through FCL)	3
Fruits, Nuts and Vegetables	3
Forest Products	2
Dairy	2
Water and Waste	2
Wireless	2
Livestock, Fish and Poultry	1
Cattle	1
Local Exchange Carriers	1
Cable	1
Independent Power Producer	1
Competitive Local Telephone Exchange Carriers	1
Other	5
Total	100 %

The following table presents a summary of the remaining contractual maturity of our loans, unfunded loan commitments, investment securities, letters of credit, derivatives and equity investments at December 31, 2023.

Contractual Maturity ($ in Millions)

As of December 31, 2023	In One Year or Less	One to Five Years	After Five Years	Total
Loans Outstanding	$ 93,848	$ 25,922	$ 28,245	$ 148,015
Unfunded Loan Commitments	30,956	18,159	3,972	53,087
Investment Securities	6,879	11,940	19,524	38,343
Letters of Credit	244	1,251	562	2,057
Derivatives (Notional Amounts)	36,980	27,003	12,891	76,874
Equity Investments Outstanding	32	77	19	128
Equity Investment Commitments	46	110	28	184

Refer to Note 3 to the consolidated financial statements in this annual report for amounts of nonperforming loans (with or without related ACL), loans in nonaccrual status and greater than 90 days past due, loans past due greater than 90 days and still accruing interest, the ACL, charge-offs, and changes in components of our ACL.

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 10 to the consolidated financial statements in this annual report for information related to interest rate swaps and other derivatives utilized by CoBank including a summary of the fair value of derivative assets and liabilities, collateral held and net unsecured exposure.

(Unaudited) ($ in Millions, Except as Noted)

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 reduce 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 which guarantees payment in the event of default by the borrower. We further mitigate our exposure for certain agricultural export financing transactions by purchasing credit enhancement from non-government third parties. Refer to the Operating Segment Financial Review section beginning on page 41 of this annual report for additional discussion related to our AEFD.

As discussed on page 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.

Investments

As described in “Credit Risk Related to Investments and Derivatives” beginning on page 53 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 the 1 percent of our investment securities that are not guaranteed by the U.S. government or a U.S. Agency, which include asset-backed securities (ABS) and corporate bonds of midstream energy and communication companies purchased under our lending authorities. As of December 31, 2023, our ABS and midstream energy and communication corporate bonds collectively totaled $541 million of our total investment portfolio. Credit risk in our investment portfolio also arises in a portion of our short-term investments, which include our overnight bank deposits and federal funds sold instruments, which are transacted with highly-rated commercial bank counterparties. We held overnight bank deposits totaling $2.6 billion. The remainder of our short-term investments include reverse repurchase agreements with the Federal Reserve totaling $2.0 billion at December 31, 2023 and have minimal credit risk. Corporate bonds are risk-weighted based on the corporate counterparty and ABS exposures are captured 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, 2023	Average Exposure	Risk Weighted Exposures
Guaranteed Loans	$ 1,754	$ -
Loans to Farm Credit System Entities	75,799	15,160
Investment Securities Issued or Guaranteed by U.S. Government	18,052	-
Investment Securities Issued or Guaranteed by a U.S. Agency	20,500	4,100
Total	$ 116,105	$ 19,260

Derivatives

As described in Note 10 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, 2023, we held financial collateral with dealers totaling $295 million that was included in calculating risk-weighted assets. Total risk-weighted assets for our over-the-counter derivatives and cleared derivative transactions amounted to $149 million and $2 million, respectively, for the three-month period ended December 31, 2023.

(Unaudited) ($ in Millions, Except as Noted)

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, 2023, CoBank did not retain any resecuritization exposures. The following disclosures relate only to ABS not guaranteed by the U.S. government or a U.S. Agency. The average balance of these non-guaranteed securities was $79 million for the three-month period ended December 31, 2023.

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 under policies established by our Asset and Liability Committee. Such policies, which apply to our total investment portfolio as described above, include 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 ABS, CoBank has elected to utilize the Gross Up risk-based capital approach as outlined in FCA regulations, which results in our ABS being risk-weighted on an individual security level.

Below is a summary of our securitization exposures held during the three months ended December 31, 2023 by exposure type and categorized by risk-weight band.

Securitization Exposures

Three Months Ended December 31, 2023	Average Exposure	Risk Weighted Asset (Gross Up Approach)
Asset-Backed Securities	$ 79	$ 79
Total	$ 79	$ 79

Securitization Risk-Weight Bands

Three Months Ended December 31, 2023	Average Exposure	Risk Weighted Asset (Gross Up Approach)
Gross-Up Risk-Weight Bands:		
100% - 125%	$ 79	$ 79
>125% and <1,250%	-	-
1,250%	-	-
Total	$ 79	$ 79

For the three-month period ended December 31, 2023, 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 69 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 11 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 has certain exposure to equity investments. We make investments and are a limited partner in certain Rural Business Investment Companies (RBICs). These RBICs focus on small and middle market companies that create jobs and promote commerce in rural America. CoBank also holds investments in various unincorporated business entities (UBEs), as defined by FCA regulation. We hold these investments to acquire and manage unusual or complex collateral associated with loan workouts as well as to make mission-related investments. Our investments in RBICs and UBEs are not publicly traded and are accounted for under the equity method. We also hold an equity investment as a result of the bankruptcy of a former customer which is accounted for at cost less any impairment as there is no readily determinable fair value. There have been no sales or liquidations of these investments during the three months ended December 31, 2023.

Interest Rate Risk

Interest rate risk, also referred to as market risk, is the risk that changes in interest rates may adversely affect operating results and financial condition. Refer to “Market Risk Management” beginning on page 54 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 58 of this annual report.

Board of Directors Disclosure as of December 31, 2023

CoBank, ACB

Directors

At year-end 2023, CoBank had a total of 17 seated directors, comprised of 13 directors elected by customers from six different geographic regions, 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. There was one vacant seat on the Board that was filled effective January 1, 2024.

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.

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. The Board makes an annual determination as to director independence. For 2023, the Board determined that all directors were considered to be independent. For 2024, the Board has determined that 17 out of 18 directors will be considered 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 2023, the Board of Directors held a total of six meetings and standing committees of the Board of Directors held a total of 35 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 2023, the Audit Committee met a total of six times, including regular meetings in executive session with the head of the Internal Audit Division, the head of the Asset Review Division, and the Bank's independent auditors. The Audit Committee also met in joint session with the Risk Committee a total of four times during 2023 to discuss and review items of common interest. The Audit Committee reviews and approves the quarterly and annual financial statements.

During 2023, Michael S. Brown served as Chair of the Audit Committee. The Board of Directors determined that Mr. Brown 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 a "financial expert" during 2023.

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 applicable 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, 2023 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 2023 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, 2023 and for filing with the FCA.

Board of Directors Disclosure as of December 31, 2023

CoBank, ACB

Aggregate fees incurred by the Bank for services rendered by its independent auditors, PricewaterhouseCoopers LLP, for the years ended December 31, 2023 and 2022 were as follows:

Year Ended December 31,	2023	2022
Audit	**$ 2,142,450**	$ 2,118,000
Audit-related	**-**	72,500
Tax	**83,000**	85,000
All Other	**2,900**	345,700
Total	**$ 2,228,350**	$ 2,621,200

Audit fees were for the annual audit of the consolidated financial statements for 2023 and 2022. Audit-related fees for 2022 included fees for a preferred stock offering. Tax fees for 2023 and 2022 related to asset depreciation services. All other fees for 2023 and 2022 included our annual subscription to accounting research tools and pre-implementation services associated with the Current Expected Credit Losses accounting standard for 2022.

Compensation and Human Resources Committee

The Compensation and Human Resources Committee 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 Chief Executive Officer (CEO). The Compensation and Human Resources 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 diversity, equity and inclusion initiatives. The Compensation and Human Resources Committee also has responsibility, in consultation with the Governance Committee, in matters related to the Bank's director compensation program and philosophy.

Executive Committee

The Executive Committee is comprised of the Board chair and two Board vice 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 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 reviews and recommends special compensation for Board members, if any, due to exceptional demands placed on the time of Board members. The committee reviews and directs 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 161), 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, cybersecurity, technology, 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 2023 consisted of 18 customer-owner representatives and two retired CoBank directors, all of whom were elected by the Bank's shareholders. 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 strives to nominate at least two candidates for each position up for election. Interested candidates who participated in the Nominating Committee process but were not nominated by the Nominating Committee may petition to run for election 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, 2023

CoBank, ACB

The following represents certain information regarding the directors as of December 31, 2023, 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
Duane R. Anderson [1] Age: 59 Year Service Began: 2021	2024	**Principal Occupation:** Operations Lead: J-Six Enterprises, L.L.C., a diversified farming, milling and consolidated cattle and hog operation, Seneca, KS; Former Chief Operating Officer: Sioux Steel Company, manufacturer of agricultural buildings and equipment, Sioux Falls, SD (September 2021 - December 2021); Former Officer: McBee Farms, L.C., Buckner, MO, and McBee Properties, L.C., Blue Springs, MO, asset holding companies, and their affiliated entities (April 2021 - June 2021); Former President and Chief Executive Officer: Ag Partners Cooperative, Inc., an agricultural cooperative, Seneca, KS (April 2020 - January 2021); Former Chief Executive Officer: The Great Bend Cooperative Association, an agricultural cooperative, Great Bend, KS (October 2018 - April 2020).
Matthew W. Beaton [5] Age: 56 Year Service Began: 2022	2025	**Principal Occupation:** Owner/Officer: Beaton's Inc., cranberry farming, Rochester, MA; Owner/Officer: Sure-Cran Services Inc., custom agricultural services, Wareham, MA. **Other Business Affiliations:** Director, Cape Cod Cranberry Growers Association, industry trade association, Carver, MA; Director/Owner: Eagle Holt Co., Inc., cranberry farming, Wareham, MA; Director: Ocean Spray Cranberries, Inc., cranberry marketing cooperative, Lakeville/Middleboro, MA; Owner: Sippican Mills, LLC, real estate holdings, Rochester, MA.
Robert M. Behr [2] Age: 69 Year Service Began: 2013	2024	**Principal Occupation:** Former Chief Executive Officer: Florida’s Natural Growers, Inc., processing and marketing Florida's Natural brand citrus juices, Lake Wales, FL (retired in January 2023). **Other Business Affiliations:** Owner: Behr Citrus Management Inc., a citrus grove, Lakeland, FL; Owner: CPI 3034 LLC, a citrus grove, Winter Haven, FL; Director: CUPS Co-op I, Inc., a citrus producer, Bartow, FL; Director: CUPS Co-op II, Inc., a citrus producer, Bartow, FL; Director: Farm Credit of Central Florida, ACA, an agricultural credit association, Lakeland, FL; Director: Florida's Natural Growers Foundation, Inc., a nonprofit organization, Lake Wales, FL; Owner: L&B Citrus, LLC, a citrus grove, Lakeland, FL; Owner: MBN Property, a citrus grove, LaBelle, FL; Owner: Resurrection Grove LLC, a citrus grove, Winter Haven, FL; Director: Winter Haven Citrus Growers Association, citrus processing and marketing, Tampa, FL.

Board of Directors Disclosure as of December 31, 2023
CoBank, ACB

Name	Term Expires	Principal Occupation and Other Business Affiliations
Michael S. Brown [1, 6] Age: 65 Year Service Began: 2017	2024	**Principal Occupation:** Former Managing Director, Global Head of Multinational Coverage: JPMorgan Chase, N.A., a commercial bank, London, England (retired in June 2013). **Other Business Affiliations:** Owner/Manager: Bayswater LLC, a property management company, San Diego, CA.
Russell G. Brown [4] Age: 65 Year Service Began: 2017	2024	**Principal Occupation:** Former Market President (Northern Neck Region): Atlantic Union Bank, a regional bank, Warsaw, VA (retired in March 2022). **Other Business Affiliations:** Owner: Cobham Hall Farm, grain and timber farm, Warsaw, VA; Alternate Director: The Farm Credit Council, a national trade association, Washington, D.C.; Vice Chair: Northern Neck Electric Cooperative, a rural electric distribution cooperative, Warsaw, VA; Chair: Richmond County Industrial Development Authority (IDA), an economic development organization, Warsaw, VA; Director: VA-MD-DE Association of Electric Cooperatives, a trade association, Richmond, VA; Chair: VA-MD-DE Association of Electric Cooperatives Educational Scholarship Foundation, a nonprofit organization, Richmond, VA.
William M. Farrow, III [4] Age: 68 Year Service Began: 2007	2026	**Principal Occupation:** Former Director, President and Chief Executive Officer: Urban Partnership Bank, a commercial bank, Chicago, IL (retired in December 2017); Former Owner: Winston and Wolfe LLC, a technology development and advisory company, Chicago, IL (retired in December 2023). **Other Business Affiliations:** Advisor: Cedar Street Asset Management LLC, an asset management firm, Chicago, IL; Chair: Cboe Global Markets, Inc., an options and volatility trading resource, Chicago, IL; Director: Endeavor Health, a hospital system, Evanston, IL; Director: WEC Energy Group, an electric and natural gas distribution company, Milwaukee, WI.
David J. Kragnes [4, 9] Age: 71 Year Service Began: 2009	2024	**Principal Occupation:** Former Owner/Operator: David Kragnes Farm, a corn and bean row crop farming operation, Felton, MN (retired in October 2022). **Other Business Affiliations:** Director: The Farm Credit Council, a national trade association, Washington, D.C.; Director: Golden Growers Cooperative, a high fructose corn syrup producing cooperative, Fargo, ND; Advisory Board Member: Quentin Burdick Center for Cooperatives, a cooperative education center, Fargo, ND.

Board of Directors Disclosure as of December 31, 2023

CoBank, ACB

Name	Term Expires	Principal Occupation and Other Business Affiliations
Michael W. Marley [1] Age: 61 Year Service Began: 2020	2027	**Principal Occupation:** Owner: Corrales Dairy, LLC, a dairy farm, Roswell, NM; Owner: Marley Farms, Ltd., an irrigated farming operation, Roswell, NM. **Other Business Affiliations:** Owner/Managing Member: Advanced Thermovoltaic Systems, a renewable energy company, Colorado Springs, CO; Owner: Corrales Farm, LLC, an irrigated farm and dairy facility, Roswell, NM; Owner: Darby Farm, LLC, an irrigated farm and dairy facility, Roswell, NM; Director and Southwest Council Member: Dairy Farmers of America, a milk cooperative, Kansas City, KS; Director: Dairy MAX, a non-profit dairy council, Grand Prairie, TX; Director: Gandy Marley, Inc., an oil field disposal service, Roswell, NM; Owner: Marley Ranches, Ltd., a ranching operation, Roswell, NM; Owner: SAP, LLC, a royalty override, Roswell, NM.
Jon E. Marthedal [3, 4] First Vice Chair Age: 67 Year Service Began: 2013	2025	**Principal Occupation:** Owner/Operator: Marthedal Farms, a grape, raisin, blueberry and almond farming operation, Fresno, CA; Former Owner/Operator: Keystone Blue Farms, LLC, a blueberry farming operation, Fresno, CA; (retired December 2020); Owner/Officer: Marthedal Enterprises Inc., a provider of farm management and custom agriculture services, Fresno, CA. **Other Business Affiliations:** Director: The Farm Credit Council, a national trade association, Washington, D.C.; President: California Blueberry Association, a state trade organization, Fresno, CA; Director: California Blueberry Commission, a state commission, Fresno, CA; Vice Chair: Raisin Administrative Committee, a federal marketing order, Fresno, CA.
Robert N. McLennan[5] Age: 53 Year Service Began: 2022	2025	**Principal Occupation:** President and Chief Executive Officer: Minnkota Power Cooperative, Inc., an electric generation and transmissions cooperative, Grand Forks, ND; General Manager: Square Butte Electric Cooperative, an electric generation cooperative, Grand Forks, ND. **Other Business Affiliations:** Director: BNI Energy/BNI Coal, an energy service company, Bismarck, ND; Director: Energy and Environmental Research Development Foundation (EERC), promoting technology development, commercialization and intellectual property protection, Grand Forks, ND; Director: Grand Forks Economic Development Corporation, economic development, Grand Forks, ND; Director: Lignite Energy Council, industry trade association, Bismarck, ND; Director, National Rural Electric Cooperative Association, National Resolutions Committee, industry trade association, Arlington, VA; Director: North Dakota State University, Quentin Burdick Center for Cooperatives, cooperative education center, Fargo, ND; Director: University of Jamestown, educational institution, Jamestown, ND.

Name	Term Expires	Principal Occupation and Other Business Affiliations
Gary A. Miller [1] Age: 63 Year Service Began: 2020 Also Served: 2006-2017	2027	**Principal Occupation:** President and Chief Executive Officer: GreyStone Power Corporation, an electric distribution cooperative, Douglasville, GA; President and Chief Executive Officer: GreyStone Connect, a rural broadband subsidiary of GreyStone Power Corporation, Douglasville, GA. **Other Business Affiliations:** Director: Development Authority of Douglas County, economic development organization, Douglasville, GA; Chair: Elevate Douglas, an economic development organization, Douglasville, GA; Alternate Director: Georgia Electric Membership Corporation, statewide trade organization, Tucker, GA; Advisory Board Alternate Director: Georgia Transmission Corporation, a power transmission cooperative, Tucker, GA; Director: GRESCO Utility Supply, Inc., an electric material supplier, Smarr, GA; Director: Hospital Authority for Douglas County, oversight body of hospital system, Douglasville, GA; Advisory Board Alternate Director: Oglethorpe Power Corporation, power generation cooperative, Tucker, GA; Director: WellStar Foundation, a supporting organization to WellStar Health System, Marietta, GA.
Catherine Moyer [2, 7] Age: 48 Year Service Began: 2010	2026	**Principal Occupation:** Chief Executive Officer and General Manager: The Pioneer Telephone Association, Inc. (d/b/a Pioneer Communications), a telecommunications provider, Ulysses, KS; Chief Executive Officer: High Plains Telecommunications, Inc., a telecommunications provider, Ulysses, KS. Managing Director: PGB Fiber LLC, a telecommunications provider, Ulysses, KS. **Other Business Affiliations:** Director: The Farm Credit Council, a national trade association, Washington, D.C.; Chair: Kansas Lottery Commission, providing oversight of Kansas lottery and games, Topeka, KS; Chair: Rural Trust Insurance Company, a provider of property and casualty insurance to small telecommunications providers, Greenbelt, MD; Chair: Telcom Insurance Group, a provider of property and casualty coverage to small telecommunications providers, Greenbelt, MD.
Scheherazade S. Rehman [5] Age: 60 Year Service Began: 2019	2026	**Principal Occupation:** Professor: The George Washington University, an educational institution, Washington, D.C. **Other Business Affiliations:** President and Managing Partner: International Consultants Group, a consulting firm, Washington, D.C.; Director: International Trade and Finance Association, an academic/professional association, Winnsboro, SC; Chair: The George Washington University School of Business Deans Council, an educational institution, Washington, D.C.

Board of Directors Disclosure as of December 31, 2023

CoBank, ACB

Name	Term Expires	Principal Occupation and Other Business Affiliations
Kevin A. Still [2, 3, 8] Chair Age: 66 Year Service Began: 2002	2026	**Principal Occupation:** President and Chief Executive Officer: Co-Alliance Cooperative, Inc., a cooperative supplying energy, agronomy and animal nutrition, producing swine and marketing grain, Indianapolis, IN; Former Chief Executive Officer and Treasurer: Excel Co-op, Inc., Frontier Co-op, Inc., IMPACT Co-op, Inc., LaPorte County Farm Bureau Cooperative Association, and Midland Co-op, Inc., agricultural retail cooperatives, Avon, IN (entities consolidated into Co-Alliance Cooperative, Inc. as of February 2021). **Other Business Affiliations:** Board President: Agensan, a captive insurance company, Indianapolis, IN; Officer: Alliance Feed, LLC, an agricultural retail coop, Indianapolis, IN; Vice Chair: Endeavor Ag and Energy LLP, a propane and agronomy organization, Indianapolis, IN; Officer: Legacy Feed LLC, a feed manufacturing and swine management company, Millville, IN; President: Northwind Pork, LLC, a pork producing operation, Kewanna, IN; President: NWP Sows, LLC, a pig production company, Indianapolis, IN; Owner/President: Still Farms, LLC, a grain farm, Galesburg, IL; President and Chief Executive Officer: United Energy, LLC, an agricultural retail coop, Richmond, IN; Director: Wholestone Farms II, LLC, a food company, Pipestone, MN.
Edgar A. Terry [5, 10] Age: 64 Year Service Began: 2016	2027	**Principal Occupation:** Owner/President: Terry Farms, Inc., a vegetable and strawberry farming operation, Ventura, CA; Owner/Limited Partner: Ag. Center LTD, a real estate company, Ventura, CA; Owner/Officer: Amigos Fuerza, Inc., a provider of farm labor contracting, Ventura, CA; Owner/Limited Partner: Central AP, LLP, farmland real estate, Ventura, CA; Owner/Partner: JJE, LLC, farmland real estate, Ventura, CA; Owner/Officer: Moonridge Management, Inc., a provider of back office and HR consulting, Ventura, CA; Owner/Vice President: Rancho Adobe, Inc., farmland real estate, Ventura, CA; Owner/President: Willal, Inc., a sales and marketing company, Ventura, CA; Senior Adjunct Professor: California Lutheran University, an educational institution, Thousand Oaks, CA. **Other Business Affiliations:** Advisory Board Chair: Center for Economic Research and Forecasting, an economic forecasting and fundraising advisory board, Thousand Oaks, CA; Director: Federal Farm Credit Banks Funding Corporation, issuer of Systemwide debt, Jersey City, NJ; Director: Limoneira Company, a publicly held agribusiness and real estate development Company, Santa Paula, CA; Chair: Ventura County Fairgrounds Foundation, a nonprofit organization, Ventura, CA.

Board of Directors Disclosure as of December 31, 2023

CoBank, ACB

Name	Term Expires	Principal Occupation and Other Business Affiliations
Sureena S. Bains Thiara [5] Age: 55 Year Service Began: 2023	2026	**Principal Occupation:** Owner: Far Horizon Crop Insurance, a crop insurance company, Yuba City, CA; Owner: Four Leaf Farms LLC, an almond and walnut farming operation, Yuba City, CA; Owner: Manseena Orchards Partnership: a prune and walnut farming operation, Yuba City, CA. **Other Business Affiliations:** Owner: JKB Enterprises LLC, a prune farming operation, Yuba City, CA; Owner: JKB Holdings LLC, a prune farming operation, Yuba City, CA; Director: Farm Credit System Audit Committee, providing financial audit oversight, Jersey City, NJ.
Brandon J. Wittman [2, 3] Second Vice Chair Age: 53 Year Service Began: 2018	2026	**Principal Occupation:** Chief Executive Officer and General Manager: Yellowstone Valley Electric Cooperative, Inc., an electric distribution cooperative, Huntley, MT. **Other Business Affiliations:** Director: The Farm Credit Council, a national trade association, Washington, D.C.; Customer Advisory Committee Member: Border States Electric, a utility material supply service provider, Bismarck, ND; Manager's Advisory Committee Member: Central Montana Electric Power Cooperative, a wholesale power supplier, Great Falls, MT; Advisory Committee Member: Highlands College of Montana Tech Lineman Program, an educational institution, Butte, MT; Director: Montana Electric Cooperatives Association, an electric cooperatives statewide association, Great Falls, MT; Director: Montana Land Information Advisory Council, advises the State Librarian and the State Library Commission, Helena, MT.

Compensation of Directors

The CoBank Board's director compensation program, developed in consultation with Pay Governance LLC, a third-party compensation consultant, provides a compensation package that the Board believes is fair and reasonable and enables the recruitment and retention of individuals to the Bank's Board with the requisite expertise and experience to represent shareholder interests. The program is based on the Bank's director compensation philosophy, which utilizes a benchmarking approach and methodology based on data about market levels of director compensation. The program provides for compensation in the form of cash retainers to be paid in quarterly installments, and directors may elect to defer payment of all or part of their director compensation in accordance with agreements and applicable law. The director compensation program covers attendance at all Board and committee meetings, customer and trade association meetings and special assignments. CoBank's director compensation program also allows special compensation in excess of the retainers described below only in the event that exceptional circumstances or demands are placed on the time of Board members, and only if approved by the Board. Directors' compensation is reduced by $5,000 for an unexcused absence at any regular Board meeting or Board planning meeting or any other required meeting as determined by the Board. The director compensation philosophy and program are reviewed by the Compensation and Human Resources Committee which recommends adjustments to retainers and fees, when warranted. Special compensation for Board members, if any, due to exceptional demands placed on the time of Board members is recommended by the Governance Committee. In addition, the Governance Committee provides guidance to the Board chair in determining whether to excuse an absence or reduce a director's compensation for a missed meeting. The Board approves changes to compensation and special compensation, if any.

For 2023, director compensation was comprised of a cash retainer for all Board members in the annual amount of $130,000, plus an additional retainer paid to Board officers and committee chairs. The Board chair received a $50,000 retainer while each of the Board vice chairs received a $25,000 retainer. The Audit Committee chair received a $30,000 retainer. The Compensation and Human Resources Committee chair, the Risk Committee chair and the Governance Committee chair each received a $20,000 retainer. The Executive Committee chair received a retainer as Board chair and did not receive an additional retainer for serving as a committee chair. The Board did not approve any adjustments for unexcused absences in 2023. Additional information for each director who served during 2023 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 $417,526, $447,185 and $286,270 for the years ended December 31, 2023, 2022 and 2021, respectively.

Board of Directors Disclosure as of December 31, 2023

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, 2023.

Name of Director	Number of Days Served at Board Meetings	Number of Days Served in Other Official CoBank Activities	Total Compensation Paid During 2023
Duane R. Anderson	20	21	$130,000
Matthew W. Beaton	19	16	$130,000
Robert M. Behr	19	15	$130,000
Michael S. Brown (1)	19	29	$160,000
Russell G. Brown	19	36	$130,000
William M. Farrow III	18	9	$130,000
David J. Kragnes (2) (3)	20	9	$150,000
Michael W. Marley	20	20	$130,000
Jon E. Marthedal (2) (4)	19	36	$155,000
Robert N. McLennan	19	8	$130,000
Gary A. Miller	19	17	$130,000
Catherine Moyer (2) (5)	19	14	$150,000
Scheherazade S. Rehman	18	18	$130,000
Kevin A. Still (6)	19	32	$180,000
Edgar A. Terry (2) (7)	18	18	$150,000
Sureena S. Bains Thiara	17	14	$130,000
Brandon J. Wittman (2) (8)	20	34	$155,000
Total	322	346	$2,400,000

(1) Mr. Brown received a $30,000 retainer for service as the Chair of the Audit Committee.

(2) In 2023, 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.

(3) Mr. Kragnes received a $20,000 retainer for service as the Chair of the Governance Committee.

(4) Mr. Marthedal received a $25,000 retainer for service as the First Vice Chair of the Board.

(5) Ms. Moyer received a $20,000 retainer for service as the Chair of the Compensation and Human Resources Committee.

(6) Mr. Still received a $50,000 retainer for service as the Chair of the Board.

(7) Mr. Terry received a $20,000 retainer for service as the Chair of the Risk Committee.

(8) Mr Wittman received a $25,000 retainer for service as the Second Vice Chair of the Board.

Senior Officers as of December 31, 2023

CoBank, ACB

Thomas E. Halverson,
President and Chief Executive Officer

Mr. Halverson, 59, 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. 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. He also serves as an advisor to the Board of the Innovation Center for U.S. Dairy and is a member of the President's Planning Committee (PPC) of the Farm Credit System and Chairman of the PPC Business Practices Committee.

Deboleena Bose,
Chief Human Resources Officer

Ms. Bose, 52, was appointed as chief human resources officer effective August 17, 2020. Ms. Bose is responsible for designing and implementing the Bank's human capital plan to attract, retain and develop talent, through a framework of evolving programs to create an inclusive workplace where a diverse workforce will thrive. She also leads the change management function of the Bank. She is a member of CoBank's Management Executive Committee and supports the board's Compensation and Human Resources committee. Prior to joining CoBank, Ms. Bose served as Vice President of Human Resources for Michigan-based Whirlpool Corporation. Previously, Ms. Bose spent over two decades with General Electric in various positions in Asia, Europe and North America, including six years leading human resources for the global onshore wind business of General Electric's renewable energy portfolio.

David P. Burlage,
Chief Financial Officer

Mr. Burlage, 60, 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. He has over 38 years of financial experience. He is a licensed CPA in the State of Ohio and a member of the American Institute of Certified Public Accountants.

Brett A. Challenger,
Executive Vice President, Rural Infrastructure Banking Group

Mr. Challenger, 57, was appointed the executive vice president for CoBank's Rural Infrastructure Banking Group on February 1, 2023. In this role, Mr. Challenger is responsible for serving the needs of infrastructure cooperatives and businesses that specialize in power, communications, water and waste, commodity export and supply chain financing. Prior to his current position, Mr. Challenger managed the Regional Agribusiness Banking Group that specializes in serving the needs of agricultural cooperatives and other commercial agribusinesses that process, market, transport and export agricultural commodities. Previously, he served as senior vice president for CoBank's Energy and Water banking division. He has more than 30 years of experience in advising, lending and capital-raising for agriculture, power, energy, water, waste, infrastructure and other industries in the United States and Asia. Before joining CoBank, Mr. Challenger was a senior vice president and principal, serving as a key member of the initial management team of Duke Capital Partners, LLC. Prior to that, he served as the managing director and co-head of the energy and power group at Bank of America/Banc of America Securities, LLC.

Senior Officers as of December 31, 2023

CoBank, ACB

Timothy M. Curran,
Chief Risk Officer

Mr. Curran, 57, 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, market, liquidity, fraud and anti-money laundering, enterprise security, business continuity and insurance 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, Global Industry Risk Head for Power, Energy, Chemicals and Mining & Metals and Global Market Risk Management of Commodities and Commodity Derivatives. Prior to joining Citigroup in 2003, 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 35 years of experience in the financial services and commodity markets. He serves on the Board of Governors of the Farm Credit System Association Captive Insurance Company. Mr. Curran received a commission as an officer in the U.S. Army achieving the rank of Captain. Mr. Curran is a Chartered Financial Analyst.

Brenda K. Frank,
Executive Vice President, Farm Credit Banking Group

Ms. Frank, 52, was appointed Executive Vice President of Farm Credit Banking effective April 30, 2021. In this role, Ms. Frank is responsible for CoBank's funding relationships with the Bank's affiliated Associations and other Farm Credit institutions as well as cash management services and Farm Credit Leasing. Ms. Frank was formerly the President and CEO of Yankee Farm Credit, ACA, one of CoBank's affiliated Associations. For 10 years prior to joining the Association, she directed Farm Credit Canada's Western Provinces commercial lending and point-of-sale functions. In that role she worked closely with the board of directors to create long-term business strategy and develop enterprise risk management and corporate planning processes. Ms. Frank's 33 years of experience in agriculture commenced with managing the family farm in Minnesota. She has also held roles in sales and IT with Syngenta, and managed grain marketing and agronomy sales at Cargill.

Eric Itambo,
Chief Banking Officer

Mr. Itambo, 53, was appointed chief banking officer effective July 1, 2018. He is responsible for all business segments and banking product groups, capital markets, and oversight of cash management services and the Farm Credit Banking segment. Prior to joining CoBank, Mr. Itambo spent over 20 years with Citigroup, most recently as Managing Director and U.S. Head – Commercial Lending Management for Citigroup's Global Commercial Banking Group. During this time, Mr. Itambo built extensive experience in corporate and investment banking, capital markets, commercial banking and commercial real estate finance businesses, including risk and portfolio management. Mr. Itambo serves as Chairman of the Board of Directors of Farm Credit Leasing.

Andrew D. Jacob,
Chief Operating Officer

Mr. Jacob, 63, was appointed chief operating officer effective September 1, 2019. He is responsible for the operations, information technology, data, project and process management and automation functions of the Bank. Additionally, Mr. Jacob is responsible for CoBank's corporate communications, corporate events, government affairs, strategic analysis, and Knowledge Exchange functions as well as the Bank's Corporate Social Responsibility program. Prior to his current position, Mr. Jacob was CoBank's chief regulatory, legislative and compliance officer from 2015 to 2019. Mr. Jacob also served as CoBank's ethics, compliance, and standards of conduct officer from 2011 to 2019. 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 regulatory policy senior leadership roles. Mr. Jacob is a Chartered Financial Analyst.

Senior Officers as of December 31, 2023

CoBank, ACB

M. Mashenka Lundberg,
Chief Legal Officer and General Counsel

Ms. Lundberg, 56, 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 and regulatory functions 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. Ms. Lundberg serves on the Board of Directors of Mile High United Way, a social services organization in the Denver area. Ms. Lundberg also serves on the Board of Directors and as chair of the audit committee of the Dumb Friends League, a community-based animal welfare organization in the Rocky Mountain Region.

Michael L. Short,
Chief Credit Officer

Mr. Short, 62, was appointed as the chief credit officer effective January 1, 2019. Mr. Short had previously served as the interim chief credit officer from August 2018. As chief credit officer, he is responsible for all of CoBank's credit approval and credit related administrative functions including loan approval, credit support and analysis, credit guidelines, credit training, loan compliance and monitoring, collateral audit and special assets. Prior to serving as the interim chief credit officer, he was the senior vice president of credit approvals from June 2017 to August 2018 and has held leadership positions in Capital Markets and Special Assets since joining CoBank in 2013. He began his financial services career with Bank of America, and went on to John Hancock, where he held several senior positions during his eleven years there. Mr. Short has more than 32 years of financial services experience.

Steven W. Wittbecker,
Chief Sustainability Officer

Mr. Wittbecker, 50, was appointed chief sustainability officer effective March 15, 2022. In this role, Mr. Wittbecker is responsible for defining CoBank's long-term Environmental, Social and Corporate Governance strategy and the development and execution of related policies and practices. Prior to this role, Mr. Wittbecker served as CoBank's chief audit officer for 10 years, overseeing the Bank's internal audit and asset review functions working collaboratively with functional leaders across the enterprise. He joined CoBank in 2011, after serving as a Director in PricewaterhouseCoopers' Risk Assurance practice for over eight years. Mr. Wittbecker has over 23 years of public accounting, consulting and internal audit experience.

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, 2023, 2022 and 2021.

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 2023 the CEO's target total direct compensation mix was approximately 20 percent base salary and 80 percent performance-based, variable incentives;
- A substantial portion of performance-based, variable compensation is based on three-year performance goals;
- 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 formulaic 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;
- There is a ten percent discretionary upward or downward modification that the Board of Directors may apply to allow for adjustments based on business circumstances within the short- and 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, 2023, no employees were employed subject to the terms of an employment agreement; and
- The Committee engages an independent executive compensation consultant to provide competitive benchmark data, advise on strategic compensation matters, administer the CEO performance evaluation and 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 2023 CoBank reported strong financial performance while fulfilling its mission in a safe and sound manner. As a result of our performance, our short-term incentive plan for 2023 was funded between the target and maximum award level based upon performance goals set at the beginning of 2023. In addition, based on strong performance in the 2021 through 2023 period against performance goals set at the beginning of 2021, our long-term incentive plan was funded at the maximum award level. 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, Business Unit results and increased shareholder value;
- Properly balance the risk profile of the Bank with both short- and long-term incentives;
- Operate within a consistent philosophy and framework;

- Create a culture of adherence to core values and strong ethical behavior; and
- Enhance management of risk and accountability through a clawback provision for all top executive incentive payouts.

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, benefits and human capital 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 base salary, benefits and 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 and reviews and approves for recommendation to the Board of Directors the Bank's incentive plans.

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 corporate performance and results of the formal evaluation of CEO performance conducted by the Board. 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 and significant customer relationships.

For 2023, the Committee engaged Pay Governance LLC (Consultant) directly to serve as its independent advisor on executive and Board compensation matters. Periodically, the Committee conducts a review process related to the selection of the Committee's independent advisor and on an annual basis, the Committee assures the qualifications and independence of the Consultant as an independent and objective advisor. For 2023, Pay Governance did not provide any other services to CoBank that were not approved in advance by the Committee and only provides advice related to compensation matters.

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 key employees 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 specific supplemental retirement benefits, as discussed on page 173.

Overview of Senior Officers' Compensation		
Component	**CoBank Philosophy**	**Design Characteristics**
Salary	• Market-based compensation • Provides a foundation for other components • Competitive relative to positions of similar scope and complexity at a select peer group of financial institutions • Reflects individual performance, competencies and responsibilities	• Traditional salary structure with salary ranges for each job grade • Structure reviewed annually • Salaries based on market and individual performance • Merit budgets based on market and other factors
Short-Term Incentive Plan	• Links rewards to achievement of annual goals • Recognizes corporate, Business Unit and individual performance • Aligns the interests of shareholders and senior officers through bank-wide financial and strategic business objectives • Balances short-term results with the risk profile of the Bank • Links pay to performance outcomes • Establishes competitive incentive opportunities relative to peers	• Multiple corporate and Business Unit financial and non-financial goals • Discretionary component (within a range) to allow for adjustments based on business circumstances • Awards are capped • Minimum performance for each goal required • Minimum return on active patron stock investment of 11 percent must be achieved in plan year in order for any payout to be made • Individual payouts require minimum individual performance level and are based on equal weighting of individual and corporate/ Business Unit performance • Clawback provision for the Bank's Management Executive Committee, including the CEO

Overview of Senior Officers' Compensation (continued)		
Component	**CoBank Philosophy**	**Design Characteristics**
Long-Term Incentive Plan	• Provides opportunities for compensation tied to CoBank's sustained performance • Provides balance through emphasis on long-term results, compared to short-term orientation of annual short-term incentive plan • Encourages longer-term retention of plan participants • 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 • Aligns the interests of shareholders and senior officers through bank-wide financial and strategic business objectives • Links pay to performance outcomes • Establishes competitive incentive opportunities relative to peers	• Multiple corporate financial and non-financial goals • Discretionary component (within a range) to allow for adjustments based on business circumstances • Awards are capped • Three-year performance periods • New plan starts each year (plans overlap) • Minimum performance for each goal required • Minimum return on active patron stock investment of 11 percent and average total capital ratio of 11.5 percent must be achieved in each year of the plan for a full payout • No individual performance factor is considered in determining payouts • Individual performance is contemplated in determining participation in the plan • Clawback provision for the Bank's Management Executive Committee, including the CEO
Retirement Benefits	• Provide for a source of income subsequent to retirement • Encourage longer-term retention of employees • Provide for competitive total compensation opportunities over the employee's career	• Benefits vary based on date of hire • Senior officers hired prior to January 1, 2007 participate in a defined benefit plan and supplemental retirement plan • 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 • Other retirement benefits include a 401(k) retirement savings plan • 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, as applicable, based on market and other factors

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 (Annual) 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
- For nine Business Units, a portion of the STIP corporate performance measures are determined based on metrics specific to the unit's performance
- Board of Directors also provides subjective evaluation related to achievement of the Bank's strategic business objectives
- All employees are eligible to participate
- For 2023, CoBank performed at or above maximum award levels on two corporate performance goals, between the target and maximum award levels on two corporate performance goals, and between the target and minimum award level on one corporate performance goal
- For the nine Business Units, the corporate factor includes between two and three additional unit performance measures using metrics that may include transaction quality, transaction volume, and revenue and profitability, as appropriate. Business Units' performance varied within four percentage points of the overall corporate performance.
- The Board of Directors retains the discretion to apply a ten percent subjective upward or downward modification to the corporate performance factor

Short-term incentive payments are based on a combination of annual corporate and individual performance. The short-term incentive plan aligns the interests of shareholders and employees through the establishment of a balanced scorecard of bank-wide and, in certain cases, Business Unit financial results 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, 2023, 2022 and 2021.

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 the formulaic outcomes of the 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 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 2023 performance period, the target short-term incentive level for the CEO was 120 percent of salary. For the other senior officers, the targets ranged from 50-85 percent.

- *Corporate Performance Factor* — The corporate performance factor is determined at the end of the year based on annual actual business results relative to a balanced scorecard of financial measures and strategic business objectives, as established at the beginning of each year by the Board of Directors. The Board of Directors retains discretion to make adjustments to the corporate performance factor and to apply an upward or downward adjustment of up to ten percent to the corporate performance factor, where appropriate, in addition to providing a subjective performance result for the achievement of strategic business objectives. The Board of Directors also has discretion to adjust the corporate performance factor for the Business Units beyond ten percent should performance warrant it.

CoBank utilizes a balanced scorecard for measuring short-term performance to emphasize overall success in executing our strategy and managing risks. The short-term incentive corporate scorecard establishes certain key performance indicators, of which 80 percent focus on the achievement of specified financial measures related to profitability, lending-related activities, transaction 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 and taking into consideration any discretionary adjustments made by the Board of Directors. Each scorecard performance measure is weighted separately, and the factor is set such that if performance of each measure is within a range of 98 to 102 percent of target, the result is a performance factor of 100 percent. The formulaic results of the performance factor can vary from zero to 150 percent, depending on performance against the targets and without any application of the ten percent discretionary element available to the Board of Directors. The Committee approves the overall performance factors and funding of the STIP for actual performance relative to target. The 2023 short-term incentive corporate scorecard is as follows:

2023 Short-Term Incentive Corporate Scorecard

	Weight	
Performance Measure	**Senior Officers**	**Business Unit**
Net Income	20 %	12.5 %
Return on Common Equity (Excluding Accumulated Other Comprehensive Income/Loss)	15	12.5
Strategic Business Objectives	20	20
Loan Quality (Adverse Loans Ratio)	20	10
Operating Expense Ratio	25	15
Unit Specific Measures	N/A	30

For nine Business Units, 30 percent of the corporate performance factor is represented by unit specific performance measures for transaction quality, transaction volume, and revenue and profitability, as appropriate.

- *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 expectations 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 2023, 2022 and 2021 for the CEO, other senior officers and any highly compensated employees are presented in the Summary Compensation Table on page 183.

Long-Term Incentives

Overview

Long-Term Incentive Plan (LTIP)

- o Awards based upon corporate performance for overlapping three-year periods
- o Corporate financial performance measures are balanced: profitability, loan quality and capital consideration
- o Board of Directors also provides subjective evaluation related to the achievement of corporate strategic business objectives
- o For the 2021 through 2023 performance period, CoBank performed at or above maximum award level on all four corporate performance goals
- o The Board of Directors retains the discretion to apply a ten percent subjective upward or downward modification to the corporate performance factor

CoBank utilizes a long-term incentive compensation plan that provides senior officers and specified other key employees with the opportunity for compensation tied to CoBank's sustained success. The long-term incentive plan provides accountability and balance for the annual outcomes measured in the short-term plan. Participants in the long-term plan directly influence the outcomes of actions and risks taken during each three-year 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, potential and performance to drive the success of strategies and initiatives 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 sustainable and profitable growth in shareholder and customer value, and to enhance the ability 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 with those of senior officers and key employees through the establishment of bank-wide financial targets 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. The Board of Directors, in connection with the annual business and financial plan, establishes the long-term performance metrics at the beginning of each three-year performance period and the strategic business objectives at the beginning of each year of the three-year performance period. A minimum return on active patron stock investment of 11 percent, ensuring that shareholders are rewarded first, as well as a minimum total regulatory capital ratio of 11.5 percent must be achieved in each year of the three-year performance period for a full payout to be approved.

The actual long-term incentive award is determined as follows:

Individual Long-Term Incentive Dollar Target x 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 Dollar Target —* Long-Term Incentive Dollar Target amounts are determined by the CEO based on the value expected to be delivered during the incentive plan period and taking into consideration individual performance. Nominations are reviewed and agreed upon by the Management Executive Committee and approved by the CEO. Participants are considered based on the value they are expected to create for the Bank and its shareholders.

- *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 by applying an upward or downward adjustment of ten percent 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 incentive 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 consideration, 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 using an average of strategic business objective results during each year in the three-year performance period, as well as taking into consideration any discretionary adjustments made by the Board of Directors. Each scorecard performance measure is weighted separately and 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 and without any application of the ten percent discretionary element available to the Board of Directors. The Committee approves the corporate performance factor and funding of the long-term incentive plan based on actual performance relative to target. The long-term incentive corporate scorecards for the three-year performance periods 2021 through 2023, and 2022 through 2024 and 2023 through 2025 are as follows:

Long-Term Incentive Corporate Scorecards: 2021 – 2023, 2022 – 2024 and 2023 – 2025 Periods	
Performance Measure	**Weight**
Net Income	27.5 %
Return on Common Equity (Excluding Accumulated Other Comprehensive Income/Loss)	27.5 %
Strategic Business Objectives	20 %
Adverse Loans Ratio	25 %

The actual long-term incentive awards for 2023, 2022 and 2021 for the CEO and other senior officers are presented in the Summary Compensation Table on page 183.

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 account 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 two senior officers employed at December 31, 2023, as well as specified other senior managers. For 2023, there were no new 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 under age 65, 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 post-retirement health care benefits.

Defined Benefit Pension Plans

Two senior officers participate in the defined benefit pension plan. Retirement benefits under this plan 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. The senior officers participating in the defined benefit pension plan have been employed for more than five years and, as such are fully vested in the plan.

For one senior officer, the benefits are determined based on years of service and final average pay. Eligible compensation for this senior officer, 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. 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.

For the second senior officer, benefits are determined by the accumulation of a cash balance account with interest credits and contribution credits based on years of service and eligible compensation. The accrued benefit is based on the contribution credits which are calculated annually using the participant's years of vesting service and compensation as of the last day of the year. This senior officer's contribution credit is currently 7 percent of compensation. Interest credits are credited to the cash balance account as of the first day of the plan year equal to the average yield on ten-year U.S. Treasuries using a four-month look-back period.

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 otherwise 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 key employees 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 by federal law or who defer short-term incentive plan payments. The Bank's contributions are made at the same employer contribution percentages as provided under the 401(k) retirement savings plan. The compensation that is deferred and the employer contributions are invested in the available investment options selected by the participants. These investment options are 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 are paid pursuant to the participant's elections made in accordance with applicable law. If the death of a participant occurs before the entire benefit 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 Separate Production Based Incentive Plans* – The STIP and LTIP are the only incentive plans within CoBank and are funded based upon a balanced scorecard of 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, Business Unit 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 discretion 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 and capital threshold 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.

- *Clawback Policy* – Provides for recoupment/recovery of compensation in the event of a financial restatement or other actions (see “Recoupment of Compensation (Clawback)” below).

- *Shareholder Return* – A minimum return on active patron stock investment must be achieved for incentive compensation payments to be approved.

- *Fixed Director Compensation Benchmarked to Market Norms* – The director compensation program provides fixed pay levels with no performance incentives to align with common board compensation practices and avoid any potential conflict of interest when the Board of Directors establishes performance goals for Bank incentive programs and evaluates performance of the Bank.

Additionally, the Compensation and Human Resources Committee considers an assessment of compensation-related risks for all of our employees, annually. 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 impact 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.

Recoupment of Compensation (Clawback)

CoBank has 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. Additionally, the policy includes circumstances under which the "clawback" could be enforced which include ethical misconduct, theft, misappropriation, violation of Bank policy, or materially imprudent judgment that caused financial or reputational harm to the Bank, 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.

Summary Compensation Table

The following table summarizes compensation earned by our CEO as well as aggregate compensation earned by our other senior officers for the years ended December 31, 2023, 2022 and 2021. 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)

			Annual					
Name of Individual or Number in Group[2]	Year	Salary	Short-Term Incentive Compensation[3]	Long-Term Incentive Compensation[3]	Change in Pension Value	Deferred/ Perquisites[4]	Other[5]	Total
CEO:								
Thomas E. Halverson	2023	**$ 913**	**$ 2,206**	**$ 3,390**	**$ -**	**$ 312**	**$ -**	**$ 6,821**
Thomas E. Halverson	2022	880	2,049	3,203	-	288	-	6,420
Thomas E. Halverson	2021	880	1,831	2,404	-	290	-	5,405
Aggregate Number of Senior Officers (excluding the CEO):								
10	2023	**$ 4,204**	**$ 5,223**	**$ 3,945**	**$ 592**	**$ 1,029**	**$ -**	**$ 14,993**
10	2022	3,743	4,626	3,500	13	949	177	13,008
9	2021	3,466	4,414	2,965	258	901	100	12,104

(1) Disclosure of the total compensation paid during 2023 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. 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) 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.

(5) For 2022, represents amount paid to a senior officer who left the Bank in 2022 for separation pay pursuant to the terms of an agreement. For 2021, amount represents $50 paid to two senior officers who joined the Bank in 2021.

Pension Benefits

The following table presents certain pension benefit information by plan for the senior officer group as of December 31, 2023. The CEO does not participate in the defined benefit pension plan.

Pension Benefits Table ($ in Thousands)

Number in Group[(1)]	Plan Name	Number of Years of Credited Service	Actuarial Present Value of Accumulated Benefits	Payments During Last Fiscal Year[(2)]
Aggregate Number of Senior Officers				
2	CoBank, ACB Retirement Plan	19.42	$ 1,270	$ –
2	Supplemental Executive Retirement Plan	19.42	2,728	–
Total			$ 3,998	$ –

(1) The senior officers included in the pension benefits disclosure are those defined by FCA regulations §619.9310 and §620.6.

(2) Represents post-retirement benefit payments made during the last fiscal 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, 2023.

Members of the 2024 Compensation and Human Resources Committee:

Catherine Moyer, Chair
Robert M. Behr
Jon E. Marthedal
Kevin A. Still

February 29, 2024

Code of Ethics
CoBank, ACB

CoBank has established a Code of Ethics for its directors and associates, which defines values and expectations for ethical conduct in business activities. It incorporates several core principles, including the responsibility to maintain high ethical standards of care, honesty, integrity, and fairness. The Code of Ethics includes expectations for appropriate professional conduct identifying and reporting conflicts of interest, and reporting ethics concerns or violations. Our president and chief executive officer, chief banking officer, chief operating officer, chief risk officer, chief credit officer, chief legal officer and general counsel, chief financial officer and other senior financial professionals make additional representations related to the preparation and distribution of our financial statements and related disclosures. Our Code of Ethics is available at www.cobank.com. Alternatively, 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

CoBank also has a confidential hotline maintained by a third party 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 confidential hotline can be reached by calling 1-888-525-5391 and the online reporting site is found at www.cobank.ethicspoint.com.

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, 2023:				
Young	22,689	16.83 %	$ 8,948,508	7.29 %
Beginning	36,595	27.15	16,340,509	13.31
Small	46,749	34.68	9,761,967	7.95
Gross New Loans and Commitments Made During 2023:				
Young	4,647	16.84 %	$ 2,339,402	6.66 %
Beginning	7,214	26.15	4,194,930	11.95
Small	8,536	30.94	1,799,090	5.12

Small Farmers and Ranchers ($ in Thousands)

Number / Volume of Loans Outstanding by Loan Size at December 31, 2023

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	13,143	9,758	13,666	10,182
Total Loan Volume to Small Farmers and Ranchers	$ 348,017	$ 741,294	$ 2,244,447	$ 6,428,209

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	50	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.

FCL Titling Trust Assets

CoBank, ACB

CoBank's wholly-owned leasing subsidiary, Farm Credit Leasing Services Corporation (FCL), has purchased beneficial interests in leases and assets through a motor vehicle titling trust. Participation in these trusts is obtained through the purchase of beneficial interests in a designated series of titling trusts backed by eligible motor vehicle leases, as approved by the FCA and subject to certain conditions.

The following table presents the asset amount by trust/subtrust as of December 31, 2023.

FCL Titling Trust Assets ($ in Millions)

Titling Trust	Amount
Altec Titling Trust	$ 21

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: February 29, 2024

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: February 29, 2024

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 2023 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. Copies of financial reports of our affiliated Associations and the System are available on their respective websites. CoBank's 2024 Quarterly and Annual Reports to Shareholders will be available on approximately May 10, 2024, August 9, 2024, November 8, 2024, and February 28, 2025 (Annual Report).

OFFICE LOCATIONS

COBANK NATIONAL OFFICE

6340 South Fiddlers Green Circle
Greenwood Village, CO 80111
303-740-4000
800-542-8072

FARM CREDIT LEASING SERVICES CORPORATION

1665 Utica Avenue South, Suite 400
Minneapolis, MN 55416
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

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

LOUISVILLE BANKING CENTER*
2000 High Wickham Place
Suite 101
Louisville, KY 40245
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*
1665 Utica Avenue South
Suite 400
Minneapolis, MN 55416
952-417-7900
800-282-4150
FCL: 800-444-2929

OMAHA BANKING CENTER*
18205 Capitol Avenue
Suite 325
Omaha, NE 68022
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
601 West Riverside Avenue
Suite 650
Spokane, WA 99201
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

INTERNATIONAL REPRESENTATIVE OFFICE

350 Orchard Road
#15-07 Shaw House
Singapore 238868
65-6534-526

DESIGN: Watermark (wmkagency.com)

COBANK

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Greenwood Village, Colorado 80111
800. 542. 8072