NATIONAL RURAL UTILITIES COOPERATIVE FINANCE CORP /DC/
Form 10-K
July 31, 2018

UNITED STATES
SECURITIES AND EXCHANGE
Washington, D.C. 20549

FORM 10-K

ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the fiscal year ended May 31, 2018
OR
TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934
For the transition period from to

Commission File Number: 1-7102

NATIONAL RURAL UTILITIES COOPERATIVE FINANCE CORPORATION
(Exact name of registrant as specified in its charter)

District of Columbia	52-0891669
(State or other jurisdiction of incorporation or organization)	(I.R.S. employer identification no.)

20701 Cooperative Way, Dulles, Virginia, 20166
(Address of principal executive offices) (Zip Code)
Registrant's telephone number, including area code: (703) 467-1800

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

Title of Each Class	Name of Each Exchange on Which Registered
6.55% Collateral Trust Bonds, due 2018	New York Stock Exchange
7.35% Collateral Trust Bonds, due 2026	New York Stock Exchange

Securities Registered Pursuant to Section 12(g) of the Act: None

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes No
Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or 15(d) of the Act. Yes No
Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes No
Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes No
Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405 of this chapter) is not contained herein, and will not be contained, to the best of the registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form

10-K.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, smaller reporting company, or an emerging growth company. See the definitions of “large accelerated filer,” “accelerated filer,” “smaller reporting company,” and “emerging growth company” in Rule 12b-2 of the Exchange Act. Large accelerated filer Accelerated filer Non-accelerated filer Smaller reporting company Emerging growth company

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transaction period for complying with any new or revised financial accounting standards provided pursuant to Section13(a) of the Exchange Act.

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

The Registrant is a tax-exempt cooperative and therefore does not issue capital stock.

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FORWARD-LOOKING STATEMENTS

This Annual Report on Form 10-K contains certain statements that are considered “forward-looking statements” within the Securities Act of 1933, as amended, and the Exchange Act of 1934, as amended. Forward-looking statements, which are based on certain assumptions and describe our future plans, strategies and expectations, are generally identified by our use of words such as “intend,” “plan,” “may,” “should,” “will,” “project,” “estimate,” “anticipate,” “believe,” “continue,” “potential,” “opportunity” and similar expressions, whether in the negative or affirmative. All statements about future expectations or projections, including statements about loan volume, the appropriateness of the allowance for loan losses, operating income and expenses, leverage and debt-to-equity ratios, borrower financial performance, impaired loans, and sources and uses of liquidity, are forward-looking statements. Although we believe that the expectations reflected in our forward-looking statements are based on reasonable assumptions, actual results and performance may differ materially from our forward-looking statements due to several factors. Factors that could cause future results to vary from our forward-looking statements include, but are not limited to, general economic conditions, legislative changes including those that could affect our tax status, governmental monetary and fiscal policies, demand for our loan products, lending competition, changes in the quality or composition of our loan portfolio, changes in our ability to access external financing, changes in the credit ratings on our debt, valuation of collateral supporting impaired loans, charges associated with our operation or disposition of foreclosed assets, technological changes within the rural electric utility industry, regulatory and economic conditions in the rural electric industry, nonperformance of counterparties to our derivative agreements, the costs and effects of legal or governmental proceedings involving us or our members and the factors listed and described under “Item 1A. Risk Factors” of this Report. Except as required by law, we undertake no obligation to update or publicly release any revisions to forward-looking statements to reflect events, circumstances or changes in expectations after the date on which the statement is made.

PART I

Item 1. Business
OVERVIEW

National Rural Utilities Cooperative Finance Corporation (“CFC”) is a member-owned cooperative association incorporated under the laws of the District of Columbia in April 1969. CFC’s principal purpose is to provide its members with financing to supplement the loan programs of the Rural Utilities Service (“RUS”) of the United States Department of Agriculture (“USDA”). CFC makes loans to its rural electric members so they can acquire, construct and operate electric distribution, generation and transmission (“power supply”) systems and related facilities. CFC also provides its members with credit enhancements in the form of letters of credit and guarantees of debt obligations. As a cooperative, CFC is owned by and exclusively serves its membership, which consists of not-for-profit entities or subsidiaries or affiliates of not-for-profit entities. CFC is exempt from federal income taxes under Section 501(c)(4) of the Internal Revenue Code. As a member-owned cooperative, CFC’s objective is not to maximize profit, but rather to offer members cost-based financial products and services. As described below under “Allocation and Retirement of Patronage Capital,” CFC annually allocates its net earnings, which consist of net income excluding the effect of certain noncash accounting entries, to (i) a cooperative educational fund; (ii) a general reserve, if necessary; (iii) members based on each member’s patronage of CFC’s loan programs during the year; and (iv) a members’ capital reserve. CFC funds its activities primarily through a combination of public and private issuances of debt securities, member investments and retained equity. As a Section 501(c)(4) tax-exempt, member-owned cooperative, we cannot issue equity securities.

Our financial statements include the consolidated accounts of CFC, National Cooperative Services Corporation (“NCSC”), Rural Telephone Finance Cooperative (“RTFC”) and subsidiaries created and controlled by CFC to hold foreclosed assets resulting from defaulted loans or bankruptcy. We did not carry any foreclosed assets on our consolidated balance sheet as of May 31, 2018 or May 31, 2017. Unless stated otherwise, references to “we,” “our” or “us” relate to CFC and its consolidated entities. All references to members within this document include members, associates and affiliates of CFC and its consolidated entities, except where indicated otherwise.

NCSC is a taxable cooperative incorporated in 1981 in the District of Columbia as a member-owned cooperative association. The principal purpose of NCSC is to provide financing to its members, entities eligible to be members of CFC and the for-profit and nonprofit entities that are owned, operated or controlled by, or provide significant benefit to Class A, B and C members of CFC. See “Members” below for a description of our member classes. NCSC’s membership consists of distribution systems, power supply systems and statewide and regional associations that were members of CFC as of May 31, 2018. CFC, which is the primary source of funding for NCSC, manages NCSC’s business operations under a management agreement that is automatically renewable on an annual basis unless terminated by either party. NCSC pays CFC a fee and, in exchange, CFC reimburses NCSC for loan losses under a guarantee agreement. As a taxable cooperative, NCSC pays income tax based on its reported taxable income and deductions. NCSC is headquartered with CFC in Dulles, Virginia.

RTFC is a taxable Subchapter T cooperative association originally incorporated in South Dakota in 1987 and reincorporated as a member-owned cooperative association in the District of Columbia in 2005. RTFC’s principal purpose is to provide financing for its rural telecommunications members and their affiliates. RTFC’s membership consists of a combination of not-for-profit and for-profit entities. CFC is the sole lender to and manages the business operations of RTFC through a management agreement that is automatically renewable on an annual basis unless terminated by either party. RTFC pays CFC a fee and, in exchange, CFC reimburses RTFC for loan losses under a guarantee agreement. As permitted under Subchapter T of the Internal Revenue Code, RTFC pays income tax based on its taxable income, excluding patronage-sourced earnings allocated to its patrons. RTFC is headquartered with CFC in Dulles, Virginia.

Our principal operations are currently organized for management reporting purposes into three business segments: CFC, NCSC and RTFC. We provide information on the financial performance of our business segments in “Note 14—Business Segments.”

OUR BUSINESS

Our business strategy and policies are set by our board of directors and may be amended or revised from time to time by the board of directors. We are a nonprofit tax-exempt cooperative finance organization, whose primary focus is to provide our members with the credit products they need to fund their operations. As such, our business focuses on lending to electric systems and securing access to capital through diverse funding sources at rates that allow us to offer competitively priced credit products to our members.

Focus on Electric Lending

CFC focuses on lending to its member electric utility cooperatives. Most of our electric cooperative borrowers continue to demonstrate stable operating performance and strong financial ratios. Our electric cooperative members experience limited competition as they generally operate in exclusive territories and the majority are not rate regulated. Loans to electric utility organizations represented approximately 99% of total loans outstanding as of both May 31, 2018 and 2017.

Maintain Diversified Funding Sources

We strive to maintain diversified funding sources beyond capital market offerings of debt securities. We offer various short- and long-term unsecured investment products to our members and affiliates, including commercial paper, select notes, daily liquidity fund notes, medium-term notes and subordinated certificates. While we continue to issue debt securities, such as secured collateral trust bonds, unsecured medium-term notes and dealer commercial paper, in the capital markets, we also have access to funds through bank revolving line of credit arrangements, government-guaranteed programs such as funding from the Federal Financing Bank that is guaranteed by RUS through the Guaranteed Underwriter Program (the “Guaranteed Underwriter Program”) as well as private placement note purchase agreements with the Federal Agricultural Mortgage Corporation (“Farmer Mac”). We provide additional information on our funding sources in “Item 7. MD&A—Consolidated Balance Sheet Analysis,” “Item 7. MD&A—Liquidity Risk,” “Note 5—Short-Term Borrowings,” “Note 6—Long-Term Debt,” “Note 7—Subordinated Deferrable Debt” and “Note

8—Members' Subordinated Certificates."

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LOAN PROGRAMS

CFC lends to its members and associates. NCSC lends to its members, associates, entities eligible to be members of CFC and for-profit and nonprofit entities that are owned, operated or controlled by, or provide significant benefit, to CFC members. RTFC lends to its members, organizations affiliated with its members and associates. See “Item 1. Business—Members” for additional information on the entities that comprise our membership. Loans to NCSC associates may require a guarantee of repayment to NCSC from the CFC member cooperative with which it is affiliated. CFC, NCSC and RTFC loans generally contain provisions that restrict further borrower advances or trigger an event of default if there is any material adverse change in the business or condition, financial or otherwise, of the borrower.

CFC Loan Programs

Long-Term Loans

CFC’s long-term loans generally have the following characteristics:

- terms of up to 35 years on a senior secured basis;
- amortizing, bullet maturity or serial payment structures;
- the property, plant and equipment financed by and securing the long-term loan has a useful life equal to or in excess of the loan maturity;
- flexibility for the borrower to select a fixed interest rate for periods of one to 35 years or a variable interest rate; and
- the ability for the borrower to select various tranches with either a fixed or variable interest rate for each tranche.

Borrowers typically have the option of selecting a fixed or variable interest rate at the time of each advance on long-term loan facilities. When selecting a fixed rate, the borrower has the option to choose a fixed rate for a term of one year through the final maturity of the loan. When the selected fixed interest rate term expires, the borrower may select another fixed rate for a term of one year through the remaining loan maturity or the current variable rate. Long-term fixed rates are set daily for new loan advances and loans that reprice. The fixed rate on each loan is generally determined on the day the loan is advanced or repriced based on the term selected. The variable rate is set on the first day of each month.

To be in compliance with the covenants in the loan agreement and eligible for loan advances, distribution systems generally must maintain an average modified debt service coverage ratio, as defined in the loan agreement, of 1.35 or greater. CFC may make long-term loans to distribution systems, on a case-by-case basis, that do not meet these general criteria. Power supply systems generally are required: (i) to maintain an average modified debt service coverage ratio, as defined in the loan agreement, of 1.00 or greater; (ii) to establish and collect rates and other revenue in an amount to yield margins for interest, as defined in an indenture, in each fiscal year sufficient to equal at least 1.00; or (iii) both. CFC may make long-term loans to power supply systems, on a case-by-case basis, that may include other requirements, such as maintenance of a minimum equity level.

Line of Credit Loans

Line of credit loans are designed primarily to assist borrowers with liquidity and cash management and are generally advanced at variable interest rates. Line of credit loans are typically revolving facilities. Certain line of credit loans require the borrower to pay off the principal balance for at least five consecutive business days at least once during each 12-month period. Line of credit loans are generally unsecured and may be conditional or unconditional facilities.

Line of credit loans also are made available as interim financing when a member either receives RUS approval to obtain a loan and is awaiting its initial advance of funds or submits a loan application that is pending approval from

RUS (sometimes referred to as “bridge loans”). In these cases, when the borrower receives the RUS loan advance, the funds must be used to repay the bridge loans.

Syndicated Line of Credit Loans

A syndicated line of credit loan is typically a large financing offered by a group of lenders that work together to provide funds for a single borrower. Syndicated loans are generally unsecured, floating-rate loans that can be provided on a

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revolving or term basis for tenors that range from several months to five years. Syndicated financings are arranged for borrowers on a case-by-case basis. CFC may act as lead lender, arranger and/or administrative agent for the syndicated facilities. CFC uses its best efforts to syndicate the loan requirements of certain borrowers. The success of such efforts depends on the financial position and credit quality of the borrower as well as market conditions.

NCSC Loan Programs

Long-Term Loans

NCSC's long-term loans generally have the following characteristics:

- terms of up to 35 years on a senior secured or unsecured basis;
- amortizing, bullet maturity or serial payment structures;
- the property, plant and equipment financed by and securing the long-term loan has a useful life equal to or in excess of the loan maturity;
- flexibility for the borrower to select a fixed interest rate for periods of one to 35 years or a variable interest rate; and
- the ability for the borrower to select various tranches with either a fixed or variable interest rate for each tranche.

NCSC allows borrowers to select a fixed interest rate or a variable interest rate at the time of each advance on long-term loan facilities. When selecting a fixed rate, the borrower has the option to choose a fixed rate for a term of one year through the final maturity of the loan. When the selected fixed interest rate term expires, the borrower may select another fixed rate for a term of one year through the remaining loan maturity or the current variable rate. The fixed rate on a loan generally is determined on the day the loan is advanced or repriced based on the term selected. The variable rate is set on the first day of each month.

Line of Credit Loans

NCSC also provides revolving line of credit loans to assist borrowers with liquidity and cash management on terms similar to those provided by CFC as described herein.

RTFC Loan Programs

Loans to rural local exchange carriers or holding companies of rural local exchange carriers represented 95% and 97% of RTFC's total outstanding loans as of May 31, 2018 and 2017, respectively. Most of these rural telecommunications companies have diversified their operations and also provide broadband services.

Long-Term Loans

RTFC makes long-term loans to rural telecommunications systems for debt refinancing, construction or upgrades of infrastructure, acquisitions and other corporate purposes.

RTFC's long-term loans generally have the following characteristics:

- terms not exceeding 10 years on a senior secured basis;
- amortizing or bullet maturity payment structures;
- the property, plant and equipment financed by and securing the long-term loan has a useful life equal to or in excess of the loan maturity;
- flexibility for the borrower to select a fixed interest rate for periods from one year to the final loan maturity or a variable interest rate; and

- the ability for the borrower to select various tranches with either a fixed or variable interest rate for each tranche.

When a selected fixed interest rate term expires, generally the borrower may select another fixed-rate term or the current variable rate. The fixed rate on a loan is generally determined on the day the loan is advanced or converted to a fixed rate based on the term selected. The variable rate is set on the first day of each month.

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To borrow from RTFC, a rural telecommunication system generally must be able to demonstrate the ability to achieve and maintain an annual debt service coverage ratio of 1.25. RTFC may make long-term loans to rural telecommunication systems, on a case-by-case basis, that do not meet this general criterion.

Line of Credit Loans

Line of credit loans are generally unsecured. Line of credit loans are designed primarily to assist borrowers with liquidity and cash management and generally are advanced at variable interest rates. Line of credit loans are typically revolving facilities and generally require the borrower to pay off the principal balance for at least five consecutive business days at least once during each 12-month period. Line of credit loans also are made available as interim financing, or bridge loans, when a borrower either receives RUS approval to obtain a loan and is awaiting its initial advance of funds or submits a loan application that is pending approval from RUS. RUS loan advances, when received, must be used to repay these bridge loans.

Loan Features and Options

Interest Rates

As a member-owned cooperative finance organization, we are a cost-based lender. As such, our interest rates are set based on a yield that we believe will generate a reasonable level of earnings to cover our cost of funding, general and administrative expenses and loan loss provision. Various standardized discounts may reduce the stated interest rates for borrowers meeting certain criteria related to performance, volume, collateral and equity requirements.

Conversion Option

Generally, a borrower may convert a long-term loan from a variable interest rate to a fixed interest rate at any time without a fee and convert a long-term loan from a fixed rate to another fixed rate or to a variable rate at any time based on current loan policies.

Prepayment Option

Generally, borrowers may prepay long-term fixed-rate loans at any time, subject to payment of an administrative fee and a make-whole premium, and prepay long-term variable-rate loans at any time, subject to payment of an administrative fee. Line of credit loans may be prepaid at any time without a fee.

Loan Security

Long-term loans made by CFC typically are senior secured on parity with other secured lenders (primarily RUS), if any, by all assets and revenue of the borrower, subject to standard liens typical in utility mortgages such as those related to taxes, worker’s compensation awards, mechanics’ and similar liens, rights-of-way and governmental rights. We are able to obtain liens on parity with liens for the benefit of RUS because RUS’ form of mortgage expressly provides for other lenders such as CFC to have a parity lien position if the borrower satisfies certain conditions or obtains a written lien accommodation from RUS. When we make loans to borrowers that have existing loans from RUS, we generally require those borrowers to either obtain such a lien accommodation or satisfy the conditions necessary for our loan to be secured on parity under the mortgage with the loan from RUS. As noted above, CFC line of credit loans generally are unsecured.

We provide additional information on our loan programs in “Item 7. MD&A—Consolidated Balance Sheet Analysis,” “MD&A—Off-Balance Sheet Arrangements” and “MD&A—Credit Risk.”

GUARANTEE PROGRAMS

When we guarantee our members' debt obligations, we use the same credit policies and monitoring procedures for guarantees as for loans. If a member system defaults in its obligation to pay debt service, then we are obligated to pay any required amounts under our guarantees. Meeting our guarantee obligations satisfies the underlying obligation of our member systems and prevents the exercise of remedies by the guarantee beneficiary based upon a payment default by a member system. The member system is required to repay any amount advanced by us with interest pursuant to the documents evidencing the member system's reimbursement obligation. We were not required to perform pursuant to any of our guarantee obligations during the year ended May 31, 2018.

Guarantees of Long-Term Tax-Exempt Bonds

We guarantee debt issued for our members' construction or acquisition of pollution control, solid waste disposal, industrial development and electric distribution facilities. Governmental authorities issue such debt on a nonrecourse basis and the interest thereon is exempt from federal taxation. The proceeds of the offering are made available to the member system, which in turn is obligated to pay the governmental authority amounts sufficient to service the debt.

If a system defaults for failure to make the debt payments and any available debt service reserve funds have been exhausted, we are obligated to pay scheduled debt service under our guarantee. Such payment will prevent the occurrence of an event of payment default that would otherwise permit acceleration of the bond issue. The system is required to repay any amount that we advance pursuant to our guarantee plus interest on that advance. This repayment obligation, together with the interest thereon, is typically senior secured on parity with other lenders (including, in most cases, RUS), by a lien on substantially all of the system's assets. If the security instrument is a common mortgage with RUS, then in general, we may not exercise remedies for up to two years following default. However, if the debt is accelerated under the common mortgage because of a determination that the related interest is not tax-exempt, the system's obligation to reimburse us for any guarantee payments will be treated as a long-term loan. The system is required to pay us initial and/or ongoing guarantee fees in connection with these transactions.

Certain guaranteed long-term debt bears interest at variable rates that are adjusted at intervals of one to 270 days including weekly, every five weeks or semi-annually to a level favorable to their resale or auction at par. If funding sources are available, the member that issued the debt may choose a fixed interest rate on the debt. When the variable rate is reset, holders of variable-rate debt have the right to tender the debt for purchase at par. In some transactions, we have committed to purchase this debt as liquidity provider if it cannot otherwise be re-marketed. If we hold the securities, the member cooperative pays us the interest earned on the bonds or interest calculated based on our short-term variable interest rate, whichever is greater. The system is required to pay us stand-by liquidity fees in connection with these transactions.

Letters of Credit

In exchange for a fee, we issue irrevocable letters of credit to support members' obligations to energy marketers, other third parties and to the USDA Rural Business and Cooperative Development Service. Each letter of credit is supported by a reimbursement agreement with the member on whose behalf the letter of credit was issued. In the event a beneficiary draws on a letter of credit, the agreement generally requires the member to reimburse us within one year from the date of the draw, with interest accruing from the draw date at our line of credit variable interest rate.

The Federal Communications Commission ("FCC") has designated CFC as an acceptable source for letters of credit in support of FCC programs that encourage deployment of high-speed broadband services throughout rural America. The designation allows CFC to provide credit support for rural electric and telecommunication cooperatives that participate in programs designed to increase deployment of broadband services to underserved rural areas.

Other Guarantees

We may provide other guarantees as requested by our members. Other guarantees are generally unsecured with guarantee fees payable to us.

We provide additional information on our guarantee programs and outstanding guarantee amounts as of May 31, 2018 and 2017 in “Item 7. MD&A—Off-Balance Sheet Arrangements,” “Item 7. MD&A—Credit Risk—Loan and Guarantee Portfolio Credit Risk” and “Note 12—Guarantees.”

INVESTMENT POLICY

We invest funds in accordance with policies adopted by our board of directors. Pursuant to our current investment policy, an Investment Management Committee was established to oversee and administer our investments with the objective of seeking returns consistent with the preservation of principal and maintenance of adequate liquidity. The Investment Management Committee may direct funds to be invested in: direct obligations of, or obligations guaranteed by, the United States or agencies thereof and investments in government-sponsored enterprises, certain financial institutions in the form of overnight investment products and Eurodollar deposits, bankers’ acceptances, certificates of deposit, working capital acceptances or other deposits. Other permitted investments include highly rated obligations, such as commercial paper, certain obligations of foreign governments, municipal securities, asset backed securities, mortgage-backed securities and certain corporate bonds. In addition, we may invest in overnight or term repurchase agreements. All of these investments are subject to requirements, and limitations set forth in our investment policy.

INDUSTRY

Overview

Since the enactment of the Rural Electrification Act in 1936, RUS has financed the construction of electric generating plants, transmission facilities and distribution systems to provide electricity to rural areas. Today, with CFC membership comprised, in part, of rural electric utility systems in 49 states and three U.S. territories, the percentage of farms and residences in rural areas of the United States receiving central station electric service increased from 11% in 1934 to almost 100% currently.

RUS makes loan guarantees and provides other forms of financial assistance to rural electric system borrowers. Under the Rural Electrification Act, RUS is authorized to make direct loans to systems that qualify for the hardship program (5% interest rate), the municipal rate program (based on a municipal government obligation index) and a Treasury rate program (at Treasury plus 0.125%). RUS also is authorized to guarantee loans that bear interest at a rate agreed upon by the borrower and the lender (which generally has been the Federal Financing Bank). RUS exercises oversight of borrowers’ operations. Its loans and guarantees are secured by a mortgage or indenture on substantially all of the system’s assets and revenue.

Leading up to CFC’s formation in 1969, there was a growing need for capital for electric cooperatives to build new electric facilities due to growth in rural America. The electric cooperatives formed CFC so a source of financing would be available to them to supplement the RUS loan programs and to mitigate uncertainty related to government funding.

CFC aggregates the combined strength of its rural electric member cooperatives to access the public capital markets and other funding sources. CFC works cooperatively with RUS; however, CFC is not a federal agency or a government-sponsored enterprise. Our members are not required to have outstanding loans from RUS as a condition of borrowing from CFC. CFC meets the financial needs of its rural members by:

- providing bridge loans required by borrowers in anticipation of receiving RUS funding;
- providing financial products not otherwise available from RUS including lines of credit, letters of credit, guarantees on tax-exempt financing, weather-related disaster recovery lines of credit, unsecured loans and investment products such as commercial paper, member capital securities, select notes and medium-term notes;

- meeting the financing needs of those rural electric systems that repay or prepay their RUS loans and replace the government loans with private capital; and
- providing financing to RUS-eligible rural electric systems for infrastructure; including for those facilities that are not eligible for financing from RUS.

Many electric cooperatives are making investments in fiber to support core electric plant communications. Some of these electric cooperatives are leveraging these fiber assets to offer broadband services, either directly or through partnering with local telecommunication companies and others.

Electric Member Operating Environment

In general, electric cooperatives have not been significantly impacted by the effects of retail deregulation. There were 19 states that had adopted programs that allow consumers to choose their supplier of electricity as of May 31, 2018. Depending on the state, the choices can range from being limited to commercial and industrial consumers to "retail choice" for all consumers. In most states, cooperatives have been exempted from or have been allowed to opt out of the regulations allowing for competition. In states offering retail competition, it is important to note that while consumers may be able to choose their energy supplier, the electric utility still receives compensation for the necessary service of delivering electricity to consumers through its utility transmission and distribution plant.

The electric industry is facing a potential decrease to kilowatt-hour sales due to technology advances that increase energy efficiency of all appliances and devices used in the home and in businesses as well as from distributed generation in the form of rooftop solar and home generators ("behind-the-meter generation"). Electric cooperatives are facing the same issues, but in general to a lesser extent than investor-owned power systems. Electric cooperatives have options available to mitigate the impact of such issues, such as rate structures to ensure that costs are appropriately recovered for grid and other necessary ancillary services. To date, we have not seen negative impacts in the electric cooperative financial results due to behind-the-meter generation.

Regulatory Oversight

There are 11 states in which some or all electric cooperatives are subject to state regulatory oversight of their rates and tariffs (terms and conditions) by state utility commissions. Those states are Arizona, Arkansas, Hawaii, Kentucky, Louisiana, Maine, Maryland, New Mexico, Vermont, Virginia and West Virginia.

Regulatory jurisdiction by state commissions generally includes rate and tariff regulation, the issuance of securities and the enforcement of service territory as provided for by state law.

Parts II and III of the Federal Power Act ("FPA") provide the Federal Energy Regulatory Commission ("FERC") with regulatory authority over three aspects of electric power:

- the transmission of electric energy in interstate commerce;
- the sale of electric energy at wholesale in interstate commerce; and
- the approval and enforcement of reliability standards affecting all users, owners and operators of the bulk power system.

The FERC also regulates the issuance of securities by public utilities under the FPA provided the state commission does not.

Our distribution and power supply members are subject to regulation by various federal, regional, state and local authorities with respect to the environmental effects of their operations. At the federal level, the U.S. Environmental Protection Agency ("EPA") from time to time proposes rulemakings that could force the electric utility industry to incur capital costs to comply with potential new regulations and possibly retire coal-fired generating capacity. Since there are only 11 states in which some or all electric cooperatives are subject to state regulatory oversight of their rates and tariffs, in most cases any associated costs of compliance can be passed on to cooperative consumers without additional regulatory approval. One EPA rulemaking is the Clean Power Plan ("CPP"). Falling under Section 111(d) of the federal

Clean Air Act, the CPP is designed to cut carbon emissions (from 2005 levels) from existing fossil fuel-fired power plants by 32% by 2030. The CPP is presently under legal review by United States Court of Appeals for the District of Columbia Circuit and the United States Supreme Court has stayed the rule pending disposition of this appeal. On October 16, 2017, the EPA officially proposed to repeal the CPP. In a future regulatory action, the EPA is expected to replace the CPP with a more narrowly focused rule.

LENDING COMPETITION

RUS is the largest lender to electric cooperatives. RUS provides long-term secured loans. CFC provides financial products and services, primarily in the form of long-term secured and short-term unsecured loans, to its electric cooperative members to supplement RUS financing, to provide loans to members that have elected not to borrow from RUS, and to bridge long-term financing provided by RUS.

CFC's primary competitor is CoBank, ACB, a federally chartered instrumentality of the United States that is a member of the Farm Credit System. CFC also competes with banks, other financial institutions and the capital markets to provide loans and other financial products to our members. As a result, we are competing with the customer service, pricing and funding options our members are able to obtain from these sources. We attempt to minimize the effect of competition by offering a variety of loan options and value-added services and by leveraging the working relationships developed with the majority of our members over the past 49 years. Further, on an annual basis, we allocate substantially all net earnings to members (i) in the form of patronage capital, which reduces our members' effective cost of borrowing, and (ii) through the members' capital reserve. The value-added services that we provide include, but are not limited to, benchmarking tools, financial models, publications and various conferences, meetings and training workshops.

In order to meet other financing needs of our members, we offer options that include credit support in the form of letters of credit and guarantees, loan syndications and loan participations. Our credit products are tailored to meet the specific needs of each member cooperative, and we often offer specific transaction structures that our competitors do not provide. CFC also offers certain risk mitigation products and interest rate discounts on secured, long-term loans for its members that meet certain criteria, including performance, volume, collateral and equity requirements.

CFC has established certain funds to benefit its members. Since 1981, CFC has set aside a portion of its annual net earnings in a cooperative educational fund to promote awareness and appreciation of the cooperative principles. As directed by the CFC Board of Directors, a portion of the contributions to the fund are distributed through the electric cooperative statewide associations. Since 1986, CFC has supported its members' efforts to protect their service territories from erosion or takeover by other utilities through assistance from the Cooperative System Integrity Fund, which is funded through voluntary contributions from members. Amounts from the Integrity Fund are distributed to applicants who establish that: (i) all or a significant portion of their consumers, services or facilities face a hostile threat of acquisition or annexation by a competing entity; (ii) face a significant threat in their ability to continue to provide non-electric energy services to customers; or (iii) are facing regulatory, judicial or legislative challenges that threaten their existence under the cooperative business model.

Our rural electric borrowers are mostly private companies; thus, the overall size of the rural electric lending market cannot be determined from public information. We estimate the size of the overall rural electric lending market from the annual financial and statistical reports filed with us by our members using calendar year data; however, there are certain limitations with regard to these estimates, including the following:

- while the underlying data included in the financial and statistical reports may be audited, the preparation of the financial and statistical reports is not audited;
- in some cases, not all members provide the annual financial and statistical reports on a timely basis to be included in summarized results; and
- the financial and statistical reports do not include comprehensive data on indebtedness by lenders other than RUS.

The following table displays long-term debt outstanding to CFC, RUS and other lenders in the electric cooperative industry as of December 31, 2017 and 2016, based on financial data reported to us by our electric utility cooperative members. The data as of December 31, 2017 was provided by 812 distribution systems and 58 power supply systems, while the data as of December 31, 2016 was provided by 807 electric cooperative distribution systems and 58 power supply systems.

(Dollars in thousands)	December 31, 2017 Debt Outstanding	% of Total	2016 Debt Outstanding	% of Total
Total long-term debt reported by members:[1]				
Distribution	$48,147,703		$47,362,415	
Power supply	47,862,984		47,853,905	
Less: Long-term debt funded by RUS	(39,180,420)		(39,273,545)	
Members' non-RUS long-term debt	$56,830,267		$55,942,775	
Funding source of members' long-term debt:				
Long-term debt funded by CFC	$22,671,264	40 %	$22,083,606	39 %
Long-term debt funded by other lenders	34,159,003	60	33,859,169	61
Members' non-RUS long-term debt	$56,830,267	100%	$55,942,775	100%

[1] Reported amounts are based on member-provided information, which may not have been subject to audit by an independent accounting firm.

Members' long-term debt funded by CFC, by type, as of December 31, 2017 and 2016 is summarized further below.

(Dollars in thousands)	December 31, 2017 Debt Outstanding	% of Total	2016 Debt Outstanding	% of Total
Distribution	$18,489,086	82 %	$17,825,633	81 %
Power supply	4,182,178	18	4,257,973	19
Long-term debt funded by CFC	$22,671,264	100%	$22,083,606	100%

We are not able to specifically identify the amount of debt our members have outstanding to CoBank, ACB, from either the annual financial and statistical reports our members file with us or from CoBank, ACB's public disclosure; however, we believe CoBank, ACB, is the additional lender, along with CFC and RUS, with significant long-term debt outstanding to rural electric cooperatives.

REGULATION

General

CFC, NCSC and RTFC are not subject to direct federal regulatory oversight or supervision with regard to lending. CFC, NCSC and RTFC are subject to state and local jurisdiction commercial lending and tax laws that pertain to business conducted in each state, including but not limited to lending laws, usury laws and laws governing mortgages. These state and local laws regulate the manner in which we make loans and conduct other types of transactions. The statutes, regulations and policies to which the companies are subject may change at any time. In addition, the interpretation and application by regulators of the laws and regulations to which we are subject may change from time to time. Certain of our contractual arrangements, such as those pertaining to funding obtained through the Guaranteed Underwriter Program, provide for the Federal Financing Bank and RUS to periodically review and assess CFC's compliance with program terms and conditions.

Derivatives Regulation

CFC engages in over-the-counter derivative transactions to manage interest rate risk. As an end user of derivative financial instruments, CFC is subject to regulations that apply to derivatives generally. The Dodd-Frank Act ("DFA"), enacted July 2010, resulted in, among other things, comprehensive regulation of the over-the-counter ("OTC") derivatives market. The DFA provides for an extensive framework for the regulation of OTC derivatives, including mandatory clearing, exchange

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trading and transaction reporting of certain OTC derivatives. In August 2013, the U.S. Commodities Futures Trading Commission ("CFTC") issued a final rule "Clearing Exemption for Certain Swaps Entered into by Cooperatives," which created an exemption from mandatory clearing for cooperatives. In April 2016, the CFTC issued a final rule "Margin Requirements for Uncleared Swaps for Swap Dealers and Major Swap Participants," which includes an exemption from margin requirements for uncleared swaps for cooperatives that are financial end users. CFC is an exempt cooperative end user of derivative financial instruments and does not participate in the derivatives markets for speculative, trading or investing purposes and does not make a market in derivatives.

MEMBERS

Our consolidated membership, after taking into consideration entities that are members of both CFC and NCSC and eliminating memberships between CFC, NCSC and RTFC, totaled 1,449 members and 216 associates as of May 31, 2018.

CFC

CFC's bylaws provide that cooperative or nonprofit corporations, public corporations, utility districts and other public bodies that received or are eligible to receive a loan or commitment for a loan from RUS or any successor agency (as well as subsidiaries, federations or statewide and regional associations that are wholly owned or controlled by such entities) are eligible for membership. One of the criteria for eligibility for RUS financing is a "rural area" test. CFC relies on the definition of "rural" as specified in the Rural Electrification Act, as amended. "Rural" is defined in the Rural Electrification Act as any area other than a city, town or unincorporated area that has a population of less than 20,000, or any area within the service area of a borrower who, at the date of enactment of the Food, Conservation and Energy Act of 2008, had an outstanding RUS electric loan. The definition of "rural" under the act permits an area to be defined as "rural" regardless of the development of such area subsequent to the approval of the outstanding loan. Thus, those entities that received or qualify for financing from RUS are eligible to apply for membership, upon approval of membership by the CFC Board of Directors, and subsequently to borrow from CFC regardless of whether there is an outstanding loan with RUS. There are no requirements to maintain membership, although the board has the authority to suspend a member under certain circumstances. CFC has not suspended a member to date.

CFC has the following types of members, all of which are not-for-profit entities or subsidiaries or affiliates of not-for-profit entities.

Class A – Distribution Systems

Cooperative or nonprofit corporations, public corporations, utility districts and other public bodies, which received or are eligible to receive a loan or commitment for a loan from RUS or any successor agency, and that are engaged or planning to engage in furnishing utility services to their members and patrons for their use as ultimate consumers. The majority of our distribution system members are consumer-owned electric cooperatives.

Distribution systems are utilities engaged in retail sales of electricity to residential and commercial consumers in their defined service areas. Such sales are generally on an exclusive basis using the distribution system's infrastructure, including substations, wires and related support systems. Distribution systems vary in size from small systems that serve a few thousand customers to large systems that serve more than 200,000 customers. Thus, the amount of loan funding required by different distribution systems varies significantly. Distribution systems may serve customers in more than one state.

Most distribution systems have long-term power purchase contracts with their power supply systems, which are owned and controlled by the member distribution systems. Wholesale power for resale also comes from other sources, including power supply contracts with government agencies, investor-owned utilities and other entities, and, in some cases, the distribution systems own generating facilities.

Class B – Power Supply Systems

Cooperative or nonprofit corporations that are federations of Class A members or of other Class B members, or both, or that are owned and controlled by Class A members or by other Class B members, or both, and that are engaged or planning to engage in furnishing utility services primarily to Class A members or other Class B members. Our power supply system members are member-owned electric cooperatives.

The power supply systems vary in size from one with thousands of megawatts of power generation capacity to systems that have no generating capacity, which generally operate transmission lines to supply certain distribution systems or manage power supply purchase arrangements for the benefit of their distribution system members. Thus, the amount of loan funding required by different power supply systems varies significantly. Power supply members may serve distribution systems located in more than one state.

The wholesale power supply contracts with their distribution system members permit the power supply system, subject to regulatory approval in certain instances, to establish rates to produce revenue sufficient to cover debt service, to meet the cost of operation and maintenance of all power supply systems and related facilities and to pay the cost of any power and energy purchased for resale.

Class C – Statewide and Regional Associations

Statewide and regional associations that are wholly owned or controlled by Class A members or Class B members, or both, or that are wholly owned subsidiaries of a CFC member, and that do not furnish utility services but supply other forms of service to their members. Certain states have an organization that represents and serves the distribution systems and power supply systems located in the state. Such statewide organizations provide training and legislative, regulatory, media and related services.

Class D – National Associations of Cooperatives

National associations of cooperatives that are Class A, Class B and Class C members, provided said national associations have, at the time of admission to membership in CFC, members domiciled in at least 80% of the states in the United States. National Rural Electric Cooperative Association (“NRECA”) is our sole Class D member. NRECA provides training, sponsors regional and national meetings, and provides legislative, regulatory, media and related services for nearly all rural electric cooperatives.

CFC Class A, B, C and D members are eligible to vote on matters put to a vote of the membership. Associates are not eligible to vote on matters put to a vote of the membership.

CFC’s membership as of May 31, 2018 consisted of:

- 841 Class A distribution systems;
- 67 Class B power supply systems;
- 64 Class C statewide and regional associations, including NCSC; and
- 1 Class D national association of cooperatives.

In addition, CFC has associates that are nonprofit groups or entities organized on a cooperative basis that are owned, controlled or operated by Class A, B, C or D members and are engaged in or plan to engage in furnishing non-electric services primarily for the benefit of the ultimate consumers of CFC members. CFC had 47 associates, including RTFC, as of May 31, 2018.

NCSC

Membership in NCSC includes organizations that are Class A, B or C members of CFC, or eligible for such membership and are approved for membership by the NCSC Board of Directors.

NCSC’s membership consisted of 440 distribution systems, two power supply systems and five statewide associations as of May 31, 2018. All of NCSC’s members also were CFC members. CFC, however, is not a member of NCSC. In addition to members, NCSC had 165 associates as of May 31, 2018. NCSC’s associates may include members of CFC, entities eligible to be members of CFC and for-profit and not-for-profit entities that are owned, controlled or operated by or provide significant benefit to Class A, B and C members of CFC.

RTFC

Membership in RTFC is limited to cooperative corporations, private corporations, public corporations, nonprofit corporations, utility districts and other public bodies that are approved by the RTFC Board of Directors and are actively borrowing or are eligible to borrow from RUS's traditional infrastructure loan program. These companies must be engaged directly or indirectly in furnishing telephone services as the licensed incumbent carrier. Holding companies, subsidiaries and other organizations that are owned, controlled or operated by members are referred to as affiliates, and are eligible to borrow from RTFC. Associates are organizations that provide non-telecommunications services to rural telecommunications companies that are approved by the RTFC Board of Directors. Neither affiliates nor associates are eligible to vote at meetings of the members.

RTFC's membership consisted of 477 members as of May 31, 2018. RTFC also had five associates as of May 31, 2018. CFC is not a member of RTFC.

The business affairs of CFC, NCSC and RTFC are governed by separate boards of directors for each entity. We provide additional information on CFC's corporate governance in "Item 10. Directors, Executive Officers and Corporate Governance."

TAX STATUS

In 1969, CFC obtained a ruling from the Internal Revenue Service recognizing CFC's exemption from the payment of federal income taxes as an organization described under Section 501(c)(4) of the Internal Revenue Code. In order for CFC to maintain its exemption under Section 501(c)(4) of the Internal Revenue Code, CFC must be "not organized for profit" and must be "operated exclusively for the promotion of social welfare" within the meaning of that section of the tax code. The Internal Revenue Service determined that CFC is an organization that is "operated exclusively for the promotion of social welfare" because the ultimate beneficiaries of its lending activities, like those of the RUS loan program, are the consumers of electricity produced by rural electric systems, the communities served by these systems and the nation as a whole.

As an organization described under Section 501(c)(4) of the Internal Revenue Code, no part of CFC's net earnings can inure to the benefit of any private shareholder or individual. This requirement is referred to as the private inurement prohibition and was added to Section 501(c)(4) of the Internal Revenue Code in 1996. A legislative exception allows organizations like CFC to continue to make allocations of net earnings to members in accordance with its cooperative status.

CFC believes its operations have not changed materially from those described to the Internal Revenue Service in its exemption filing. CFC reviews the impact on operations of any new activity or potential change in product offerings or business in general to determine whether such change in activity or operations would be inconsistent with its status as an organization described under Section 501(c)(4).

NCSC is a taxable cooperative that pays income tax based on its taxable income and deductions.

RTFC is a taxable cooperative under Subchapter T of the Internal Revenue Code and is not subject to income taxes on income from patronage sources that is allocated to its borrowers, as long as the allocation is properly noticed and at least 20% of the amount allocated is retired in cash prior to filing the applicable tax return. RTFC pays income tax based on its taxable income and deductions, excluding amounts allocated to its borrowers.

ALLOCATION AND RETIREMENT OF PATRONAGE CAPITAL

District of Columbia cooperative law requires cooperatives to allocate net earnings to patrons, to a general reserve in an amount sufficient to maintain a balance of at least 50% of paid-up capital and to a cooperative educational fund, as well as permits additional allocations to board-approved reserves. District of Columbia cooperative law also requires that a cooperative's net earnings be allocated to all patrons in proportion to their individual patronage and each patron's allocation be distributed to the patron unless the patron agrees that the cooperative may retain its share as additional capital.

CFC

Annually, the CFC Board of Directors allocates its net earnings to its patrons in the form of patronage capital, to a cooperative educational fund, to a general reserve, if necessary, and to other board-approved reserves. Net earnings are calculated by adjusting net income to exclude the noncash effects of the accounting for derivative financial instruments. Net losses, if any, are not allocated to board approved reserves or members and do not affect amounts previously allocated as patronage capital or to the reserves. Net earnings are first applied against prior-period losses, if any, before an allocation of patronage capital is made. CFC has never experienced an adjusted net loss.

An allocation to the general reserve is made, if necessary, to maintain the balance of the general reserve at 50% of the membership fees collected. CFC's bylaws require the allocation to the cooperative educational fund to be at least 0.25% of its net earnings. Funds from the cooperative educational fund are disbursed annually to statewide cooperative organizations to fund the teaching of cooperative principles and for other cooperative education programs.

Currently, CFC has one additional board-approved reserve, the members' capital reserve. The CFC Board of Directors determines the amount of net earnings that is allocated to the members' capital reserve, if any. The members' capital reserve represents net earnings that CFC holds to increase equity retention. The net earnings held in the members' capital reserve have not been specifically allocated to members, but may be allocated to individual members in the future as patronage capital if authorized by the CFC Board of Directors.

All remaining net earnings are allocated to CFC's members in the form of patronage capital. The amount of net earnings allocated to each member is based on the member's patronage of CFC's lending programs during the year. No interest is earned by members on allocated patronage capital. There is no effect on CFC's total equity as a result of allocating net earnings to members in the form of patronage capital or to board-approved reserves. The CFC Board of Directors has voted annually on whether or not to retire a portion of the patronage capital allocation. Upon retirement, patronage capital is paid out in cash to the members to which it was allocated. CFC's total equity is reduced by the amount of patronage capital retired to its members and by amounts disbursed from board-approved reserves.

Pursuant to CFC's bylaws, the CFC Board of Directors determines the method, basis, priority and order of retirement of amounts allocated. The current policy of the CFC Board of Directors is to retire 50% of the prior fiscal year's allocated net earnings following the end of each fiscal year and to hold the remaining 50% for 25 years to fund operations. The amount and timing of future retirements remains subject to annual approval by the CFC Board of Directors, and may be affected by CFC's financial condition and other factors. The CFC Board of Directors has the authority to change the current practice for allocating and retiring net earnings at any time, subject to applicable cooperative law.

NCSC

In accordance with District of Columbia cooperative law and its bylaws and board policies, NCSC allocates its net earnings to a cooperative educational fund, to a general reserve, if necessary, and to other board-approved reserves. Net earnings are calculated by adjusting net income to exclude the noncash effects of the accounting for derivative financial instruments. Net losses, if any, are not allocated to board-approved reserves and do not affect amounts previously allocated to the reserves.

Pursuant to NCSC's bylaws, the NCSC Board of Directors shall determine the method, basis, priority and order of amounts allocated. An allocation to the general reserve is made, if necessary, to maintain the balance of the general reserve at 50% of the membership fees collected. There is no effect on NCSC's total equity due to the allocation of net earnings to board-approved reserves. NCSC's bylaws require the allocation to the cooperative educational fund to be at least 0.25% of its net earnings. Funds from the cooperative educational fund are disbursed annually to fund the teaching of cooperative principles and for other cooperative education programs.

RTFC

In accordance with District of Columbia cooperative law and its bylaws and board policies, RTFC allocates its net earnings to its patrons, a cooperative educational fund and a general reserve, if necessary. Net losses are not allocated to members and do not affect amounts previously allocated as patronage capital or to the reserves. Current period earnings are first applied against any prior year losses before allocating patronage capital.

Pursuant to RTFC’s bylaws, the RTFC Board of Directors shall determine the method, basis, priority and order of retirement of amounts allocated. RTFC’s bylaws require that it allocate at least 1% of net earnings to a cooperative educational fund. Funds from the cooperative educational fund are disbursed annually to fund the teaching of cooperative principles and for other cooperative education programs. An allocation to the general reserve is made, if necessary, to maintain the balance of the general reserve at 50% of the membership fees collected. The remainder is allocated to borrowers in proportion to their patronage. RTFC provides notice to its members of the amount allocated and retires 20% of the allocation for that year in cash prior to the filing of the applicable tax return. Any additional amounts are retired as determined by the RTFC Board of Directors with due regard for RTFC’s financial condition. There is no effect on RTFC's total equity due to the allocation of net earnings to members or board-approved reserves. The retirement of amounts previously allocated to members or amounts disbursed from board-approved reserves reduces RTFC's total equity.

EMPLOYEES

We had 254 employees as of May 31, 2018. We believe that our relations with our employees are good.

AVAILABLE INFORMATION

Our annual reports on Form 10-K, quarterly reports on Form 10-Q, current reports on Form 8-K, and any amendments to these reports, are available for free at www.nrucfc.coop as soon as reasonably practicable after they are electronically filed with or furnished to the U.S. Securities and Exchange Commission (“SEC”). These reports also are available for free on the SEC’s website at www.sec.gov. Information posted on our website is not incorporated by reference into this Form 10-K.

Item 1A. Risk Factors

Our financial condition, results of operations and liquidity are subject to various risks and uncertainties inherent in our business. If any of the events or circumstances described in the following risks actually occur, our business, liquidity, financial condition or results of operations could be adversely affected. The risks described below are the risks we consider to be material to our business. Other risks and uncertainties, including those not currently known to us, could also negatively impact our business, results of operations and financial condition. You should consider the following risks together with all of the other information in this Annual Report on Form 10-K.

RISK FACTORS

If we are unable to access the capital markets or other external sources for funding, our liquidity position may be negatively affected and we may not have sufficient funds to meet all of our financial obligations as they become due.
We depend on access to the capital markets and other sources of financing, such as our bank revolving credit agreements, investments from our members, private debt issuances through Farmer Mac and through the Guaranteed Underwriter Program, to fund new loan advances and refinance our long- and short-term debt and, if necessary, to fulfill our obligations under our guarantee and repurchase agreements. Market disruptions, downgrades to our long-term and/or short-term debt ratings, adverse changes in our business or performance, downturns in the electric industry and other events over which we have no control may deny or limit our access to the capital markets and/or subject us to higher costs for such funding. Our access to other sources of funding also could be limited by the same factors, by adverse changes in the business or performance of our members, by the banks committed to our revolving credit agreements or Farmer Mac, or by changes in federal law or the Guaranteed Underwriter Program. Our funding needs are determined primarily by scheduled short- and long-term debt maturities and the amount of our loan advances to our borrowers relative to the scheduled payment amortization of loans previously made by us. If we are unable to timely issue debt into the capital markets or obtain funding from other sources, we may not have the funds to meet all of our obligations as they become due.

A reduction in the credit ratings for our debt could adversely affect our liquidity and/or cost of debt.

Our credit ratings are important to maintaining our liquidity position. We currently contract with three nationally recognized statistical rating organizations to receive ratings for our secured and unsecured debt and our commercial paper. In order to access the commercial paper markets at current levels, we believe that we need to maintain our current ratings for commercial paper of P1 from Moody's Investors Service ("Moody's"), A-1 from S&P Global Inc. ("S&P") and F-1 from

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Fitch Ratings Inc. (“Fitch”). Changes in rating agencies’ rating methodology, actions by governmental entities or others, losses from impaired loans and other factors could adversely affect the credit ratings on our debt. A reduction in our credit ratings could adversely affect our liquidity and competitive position, increase our borrowing costs or limit our access to the capital markets and the sources of financing available to us. A significant increase in our cost of borrowings and interest expense could cause us to sustain losses or impair our liquidity by requiring us to seek other sources of financing, which may be difficult to obtain.

Our ability to maintain compliance with the covenants related to our revolving credit agreements, collateral trust bond and medium-term note indentures and debt agreements could affect our ability to retire patronage capital, result in the acceleration of the repayment of certain debt obligations, adversely impact our credit ratings and hinder our ability to obtain financing.

We must maintain compliance with all covenants and conditions related to our revolving credit agreements and debt indentures. We are required to maintain a minimum average adjusted times interest earned ratio (“adjusted TIER”) for the six most recent fiscal quarters of 1.025 and an adjusted leverage ratio of no more than 10-to-1. In addition, we must maintain loans pledged as collateral for various debt issuances at or below 150% of the related secured debt outstanding as a condition to borrowing under our revolving credit agreements. If we were unable to borrow under the revolving credit agreements, our short-term debt ratings would likely decline, and our ability to issue commercial paper could become significantly impaired. Our revolving credit agreements also require that we earn a minimum annual adjusted TIER of 1.05 in order to retire patronage capital to members. See “MD&A—Non-GAAP Financial Measures” for additional information on our adjusted measures and a reconciliation to the most comparable GAAP measures.

Pursuant to our collateral trust bond indentures, we are required to maintain eligible pledged collateral at least equal to 100% of the principal amount of the bonds issued under the indenture. Pursuant to one of our collateral trust bond indentures and our medium-term note indenture, we are required to limit senior indebtedness to 20 times the sum of our members’ equity, subordinated deferrable debt and members’ subordinated certificates. If we were in default under our collateral trust bond or medium-term note indentures, the existing holders of these securities have the right to accelerate the repayment of the full amount of the outstanding debt principal of the security before the stated maturity of such debt. That acceleration of debt repayments poses a significant liquidity risk, as we might not have enough cash or committed credit available to repay the debt. In addition, if we are not in compliance with the collateral trust bond and medium-term note covenants, we would be unable to issue new debt securities under such indentures. If we were unable to issue new collateral trust bonds and medium-term notes, our ability to fund new loan advances and refinance maturing debt would be impaired.

We are required to pledge eligible distribution system or power supply system loans as collateral equal to at least 100% of the outstanding balance of debt issued under a revolving note purchase agreement with Farmer Mac. We also are required to pledge distribution or power supply loans as collateral equal to at least 100% of the outstanding balance of debt under the Guaranteed Underwriter Program. Collateral coverage less than 100% for either of these debt programs constitutes an event of default, which if not cured within 30 days, could result in creditors accelerating the repayment of the outstanding debt principal before the stated maturity. An acceleration of the repayment of debt could pose a liquidity risk if we had insufficient cash or committed credit available to repay the debt. In addition, we would be unable to issue new debt securities under the applicable debt agreement, which could impair our ability to fund new loan advances and refinance maturing debt.

Changes in the level and direction of interest rates or our ability to successfully manage interest rate risk could adversely affect our financial results and condition.

Our earnings are largely dependent on net interest income. Our interest rate risk exposure is primarily related to the funding of a fixed-rate loan portfolio. We have a matched funding objective that is intended to manage the funding of asset and liability repricing terms within a range of total assets based on the current environment and extended outlook for interest rates. We maintain a limited unmatched position, or interest rate gap, on our fixed-rate assets within a targeted range of adjusted total assets to provide us with funding flexibility.

Our primary strategies for managing interest rate risk include the use of derivatives and limiting the amount of fixed-rate assets that can be funded by variable-rate debt to a specified percentage of total assets based on prevailing market conditions. We face the risk that changes in interest rates could reduce our net interest income and our earnings, especially if actual conditions turn out to be materially different than those we assumed. Fluctuations in interest rates, including changes in the relationship between short-term rates and long-term rates may affect the pricing of loans to borrowers and our cost of funds, which could adversely affect the difference between the interest that we earn on assets and the interest we pay on liabilities used to fund assets. Such changes may also affect our ability to hedge various forms of market and interest rate risk and may decrease the effectiveness of those hedges in helping to manage such risks, which could cause our interest rate gap to exceed our targeted range and have an adverse impact on net interest income, earnings and cash flows. See "Item 7. MD&A—Market Risk" for additional information.

We are subject to credit risk that a borrower or other counterparty may not be able to meet its contractual obligations in accordance with agreed-upon terms, which could result in significantly higher, unexpected losses.
Our loan portfolio, which represents the largest component of assets on our balance sheet, accounts for the substantial majority of exposure to credit risk. We had total loans outstanding of $25,168 million as of May 31, 2018. We reserve for credit losses in our loan portfolio by establishing an allowance for loan losses through a provision charge to earnings. The amount of the allowance for loan losses, which was $19 million as of May 31, 2018, is based on our assessment of credit losses inherent in our loan portfolio as of each balance sheet date, taking into consideration management's continuing evaluation of credit risk related to: industry concentrations; macro-economic conditions; specific credit risks; loan loss experience; current loan portfolio quality; present political and regulatory conditions; and unidentified losses and risks inherent in the current loan portfolio. We consider the process for determining the amount of the allowance as one of our critical accounting policies because it involves significant judgments and assumptions about highly complex and inherently uncertain matters, and the use of reasonably different estimates and assumptions could have a material impact on our results of operations or financial condition. Management believes that the allowance for loan losses appropriately reflects credit losses inherent in our loan portfolio as of May 31, 2018. However, our actual credit losses could exceed our estimate of probable losses due to changes in economic conditions that adversely affect borrowers, new information regarding existing loans, identification of additional problem loans and other factors, both within and outside of our control. In those cases, we may be required to increase the allowance for loan losses through an increase in the provision for loan losses, which would reduce net income and may have a material adverse effect on our financial results.

Adverse changes, developments or uncertainties in the rural electric utility industry could adversely impact the operations or financial performance of our member electric cooperatives, which, in turn, could have an adverse impact on our financial results.
Our focus as a tax-exempt, member-owned finance cooperative is on lending to our rural member electric utility cooperatives, which is the primary source of our revenue. As a result of lending primarily to our members, we have a loan portfolio with single-industry concentration. Loans to rural electric utility cooperatives accounted for approximately 99% of our total loans outstanding as of May 31, 2018. While we historically have experienced limited defaults and very low credit losses in our electric utility loan portfolio, factors that have a negative impact on the operations of our member rural electric cooperatives could cause a deterioration in their financial performance and the value of the collateral securing their loans, which could impair their ability to repay us in accordance with the terms of their loan. In such case, it may be necessary to increase our allowance for loan losses, which would result in an increase in the provision for loan losses and a decrease in our net income.

We may obtain entities or other assets through foreclosure, which would subject us to the same performance and financial risks as any other owner or operator of similar businesses or assets.
As a financial institution, from time to time we may obtain entities and assets of borrowers in default through foreclosure proceedings. If we become the owner and operator of entities or assets obtained through foreclosure, we are subject to the same performance and financial risks as any other owner or operator of similar assets or entities. In particular, the value of the foreclosed assets or entities may deteriorate and have a negative impact on our results of operations. We assess foreclosed assets, if any, for impairment periodically as required under generally accepted accounting principles in the United States ("GAAP"). Impairment charges, if required, represent a reduction to earnings in the period of the charge. There may be substantial judgment used in the determination of whether such assets are

impaired and in the calculation of the amount of the impairment. In addition, when foreclosed assets are sold to a third party, the sale price we receive may be below the amount previously recorded in our financial statements, which will result in a loss being recorded in the period of the sale.

The nonperformance of our derivative counterparties could impair our financial results.
We use interest rate swaps to manage our interest rate risk. There is a risk that the counterparties to these agreements will not perform as agreed, which could adversely affect our results of operations. The nonperformance of a counterparty on an agreement would result in the derivative no longer being an effective risk management tool, which could negatively affect our overall interest rate risk position. In addition, if a counterparty fails to perform on our derivative obligation, we could incur a financial loss to replace the derivative with another counterparty and/or a loss through the failure of the counterparty to pay us amounts owed. We were in a net payable position, after taking into consideration master netting agreements, for all of our interest rate swaps as of May 31, 2018.

A decline in our credit rating could trigger payments under our derivative agreements, which could impair our financial results.
We have certain interest rate swaps that contain credit risk-related contingent features referred to as rating triggers. Under certain rating triggers, if the credit rating for either counterparty falls to the level specified in the agreement, the other counterparty may, but is not obligated to, terminate the agreement. If either counterparty terminates the agreement, a net payment may be due from one counterparty to the other based on the prevailing fair value, excluding credit risk, of the underlying derivative instrument. These rating triggers are based on our senior unsecured credit ratings by Moody’s and S&P. Based on our interest rate swap agreements subject to rating triggers, if all agreements for which we owe amounts were terminated as of May 31, 2018 and our senior unsecured ratings fell below Baa3 by Moody’s or below BBB- by S&P, we would have been required to make a payment of up to $81 million as of that date. In calculating the required payments, we only considered agreements that, when netted for each counterparty pursuant to a master netting agreement, would require a payment upon termination. In the event that we are required to make a payment as a result of a rating trigger, it could have a material adverse impact on our financial results.

Advances in technology may change the way electricity is generated and transmitted, which could adversely affect the business operations of our members and negatively impact the credit quality of our loan portfolio and financial results.
Advances in technology could reduce demand for power supply systems and distribution services. The development of alternative technologies that produce electricity, including solar cells, wind power and microturbines, has expanded and could ultimately provide affordable alternative sources of electricity and permit end users to adopt distributed generation systems that would allow them to generate electricity for their own use. As these and other technologies, including energy conservation measures, are created, developed and improved, the quantity and frequency of electricity usage by rural customers could decline. Advances in technology and conservation that cause our electric system members’ power supply, transmission and/or distribution facilities to become obsolete prior to the maturity of loans secured by these assets could have an adverse impact on the ability of our members to repay such loans, which could result in an increase in nonperforming or restructured loans. These conditions could negatively impact the credit quality of our loan portfolio and financial results.

Breaches of our information technology systems, or those managed by third parties, may damage relationships with our members or subject us to reputational, financial, legal or operational consequences.
Cyber-related attacks pose a risk to the security of our members’ strategic business information and the confidentiality and integrity of our data, which includes strategic and proprietary information. Security breaches may occur through the actions of third parties, employee error, malfeasance, technology failures or other irregularities. Any such breach or unauthorized access could result in a loss of this information, a loss of integrity of this information, a delay or inability to provide service of affected products, damage to our reputation, including a loss of confidence in the security of our products and services, and significant legal and financial exposure. Because the techniques used to obtain unauthorized access, disable or degrade service or sabotage systems change frequently, we may be unable to anticipate these techniques or implement adequate preventative measures. As a result, cyber-related attacks may remain undetected for an extended period and may be costly to remediate.

Our business depends on the reliable and secure operation of computer systems, network infrastructure, and other information technology managed by third parties including, but not limited to: our service providers for external storage and processing of our information on cloud-based systems; our consulting and advisory firms and contractors that have access to our confidential and proprietary data; and administrators for our employee payroll and benefits management. We have limited control and visibility over third-party systems that we rely on for our business. The occurrence of a cyber-related attack, breach, unauthorized access, or other cybersecurity event could result in damage to our third parties' operations. The failure of third parties to provide services agreed upon through service level agreements, whether as a result of the occurrence of a cyber-related attack or other event, could result in the loss of access to our data, the loss of integrity of our data, disruptions to our corporate functions, loss of business opportunities, reputational damage, or otherwise adversely impact our financial results and result in significant costs and liabilities.

While CFC maintains insurance coverage that, subject to policy terms and conditions, covers certain aspects of cyber risks, including business interruptions caused by cyber-related attacks on information technology systems managed by third parties, such insurance coverage may be insufficient to cover all losses. Our failure to comply with applicable laws and regulations regarding data security and privacy could result in fines, sanctions and litigation. Additionally, new regulation in the areas of data security and privacy may increase our costs and our members' costs.

Loss of our tax-exempt status could adversely affect our earnings.
CFC has been recognized by the Internal Revenue Service as an organization for which income is exempt from federal taxation under Section 501(c)(4) of the Internal Revenue Code (other than any net income from an unrelated trade or business). In order to maintain CFC's tax-exempt status, it must continue to operate exclusively for the promotion of social welfare by operating on a cooperative basis for the benefit of its members by providing them cost-based financial products and services consistent with sound financial management, and no part of CFC's net earnings may inure to the benefit of any private shareholder or individual other than the allocation or return of net earnings or capital to its members in accordance with CFC's bylaws and incorporating statute in effect in 1996.

If CFC were to lose its status as a 501(c)(4) organization, it would become a taxable cooperative and would be required to pay income tax based on its taxable income. If this event occurred, we would evaluate all options available to modify CFC's structure and/or operations to minimize any potential tax liability.

As a tax-exempt cooperative and nonbank financial institution, our lending activities are not subject to the regulations and oversight of U.S. financial regulators such as the Federal Reserve, the Federal Deposit Insurance Corporation or the Office of Comptroller of Currency. Because we are not under the purview of such regulation, we could engage in activities that could expose us to greater credit, market and liquidity risk, reduce our safety and soundness and adversely affect our financial results.
Financial institutions subject to regulations, oversight and monitoring by U.S. financial regulators are required to maintain specified levels of capital and may be restricted from engaging in certain lending-related and other activities that could adversely affect the safety and soundness of the financial institution or are considered conflicts of interest. As a tax-exempt, nonbank financial institution, we are not subject to the same oversight and supervision. There is no federal financial regulator that monitors compliance with our risk policies and practices or that identifies and addresses potential deficiencies that could adversely affect our financial results. Without regulatory oversight and monitoring, there is a greater potential for us to engage in activities that could pose a risk to our safety and soundness relative to regulated financial institutions.
Competition from other lenders could adversely impact our financial results.
We compete with other lenders for the portion of the rural utility loan demand for which RUS will not lend and for loans to members that have elected not to borrow from RUS. The primary competition for the non-RUS loan volume is from CoBank, ACB, a federally chartered instrumentality of the United States that is a member of the Farm Credit System. As a government-sponsored enterprise, CoBank, ACB has the benefit of an implied government guarantee with respect to its funding. Competition may limit our ability to raise rates to adequately cover increases in costs, which could have an adverse impact on our results of operations, and increasing interest rates to cover costs could cause a reduction in new lending business.

Our elected directors also serve as officers or directors of certain of our individual member cooperatives, which may result in a potential conflict of interest with respect to loans, guarantees and extensions of credit that we may make to or on behalf of such member cooperatives.

In accordance with our charter documents and the purpose for which we were formed, we lend only to our members and associates. CFC’s directors are elected or appointed from our membership, with 10 director positions filled by directors of members, 10 director positions filled by general managers or chief executive officers of members, two positions appointed by NRECA and one at-large position that must, among other things, be a director, financial officer, general manager or chief executive of one of our members. CFC currently has loans outstanding to members that are affiliated with CFC directors and may periodically extend new loans to such members. The relationship of CFC's directors to our members may give rise to conflicts of interests from time to time. See "Item 13. Certain Relationships and Related Transactions, and Director Independence—Review and Approval of Transactions with Related Persons" for a description of our policies with regard to approval of loans to members affiliated with CFC directors.

Item 1B. Unresolved Staff Comments

None.

Item 2. Properties

CFC owns approximately 141,000 square feet of office, meeting and storage space that serves as its headquarters in Loudoun County, Virginia.

Item 3. Legal Proceedings

From time to time, CFC is subject to certain legal proceedings and claims in the ordinary course of business, including litigation with borrowers related to enforcement or collection actions. Management presently believes that the ultimate outcome of these proceedings, individually and in the aggregate, will not materially harm our financial position, liquidity, or results of operations. CFC establishes reserves for specific legal matters when it determines that the likelihood of an unfavorable outcome is probable and the loss is reasonably estimable. Accordingly, no reserve has been recorded with respect to any legal proceedings at this time.

Item 4. Mine Safety Disclosures

Not applicable.

PART II

Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities

Not applicable.

Item 6. Selected Financial Data

The following table provides a summary of consolidated selected financial data for the five-year period ended May 31, 2018. In addition to financial measures determined in accordance with generally accepted accounting principles in the United States (“GAAP”), management also evaluates performance based on certain non-GAAP measures and metrics, which we refer to as “adjusted” measures. Certain financial covenant provisions in our credit agreements are also based on non-GAAP financial measures. Our key non-GAAP financial measures are adjusted net income, adjusted net interest income, adjusted interest expense, adjusted net interest yield, adjusted times interest earned ratio (“adjusted TIER”) and adjusted debt-to-equity ratio. The most comparable GAAP measures are net income, net interest income, interest expense, net interest yield, TIER and debt-to-equity ratio, respectively. The primary adjustments we make to calculate these non-GAAP measures consist of (i) adjusting interest expense and net interest income to include the impact of net periodic derivative cash settlements; (ii) adjusting net income, senior debt and total equity to exclude the non-cash impact of the accounting for derivative financial instruments; (iii) adjusting senior debt to exclude the amount that funds CFC member loans guaranteed by RUS, subordinated deferrable debt and members’ subordinated certificates; and (iv) adjusting total equity to include subordinated deferrable debt and members’ subordinated certificates and exclude cumulative derivative forward value gains and losses and accumulated other comprehensive income. We believe our non-GAAP adjusted measures, which are not a substitute for GAAP and may not be consistent with similarly titled non-GAAP measures used by other companies, provide meaningful information and are useful to investors because management evaluates performance based on these metrics, and certain financial covenants in our committed bank revolving line of credit agreements and debt indentures are based on adjusted measures. See “Item 7. MD&A—Non-GAAP Financial Measures” for a detailed reconciliation of these adjusted measures to the most comparable GAAP measures.

Five-Year Summary of Selected Financial Data

	Year Ended May 31,					Change	
(Dollars in thousands)	2018	2017	2016	2015	2014	2018 vs. 2017	2017 vs. 2016
Statement of operations							
Interest income	$1,077,357	$1,036,634	$1,012,636	$952,976	$957,540	4%	2%
Interest expense	(792,735)	(741,738)	(681,850)	(635,684)	(654,655)	7	9
Net interest income	284,622	294,896	330,786	317,292	302,885	(3)	(11)
Fee and other income	17,578	19,713	21,785	36,783	17,762	(11)	(10)
Total revenue	302,200	314,609	352,571	354,075	320,647	(4)	(11)
Benefit (provision) for loan losses	18,575	(5,978)	646	21,954	(3,498)	**	**
Derivative gains (losses) (1)	231,721	94,903	(309,841)	(196,999)	(34,421)	144	**
Results of operations of foreclosed assets	—	(1,749)	(6,899)	(120,148)	(13,494)	**	(75)
Operating expenses(2)	(90,884)	(86,226)	(86,343)	(76,530)	(72,566)	5	0
Other non-interest expense	(1,943)	(1,756)	(1,593)	(870)	(1,738)	11	10
Income (loss) before income taxes	459,669	313,803	(51,459)	(18,518)	194,930	46	**
Income tax expense	(2,305)	(1,704)	(57)	(409)	(2,004)	35	2,889
Net income (loss)	$457,364	$312,099	$(51,516)	$(18,927)	$192,926	47	**
Adjusted operational financial measures							
	$(867,016)	$(826,216)	$(770,608)	$(718,590)	$(728,617)	5%	7%

Adjusted interest expense(3)							
Adjusted net interest income(3)	210,341	210,418	242,028	234,386	228,923	0	(13)
Adjusted net income(3)	151,362	132,718	169,567	95,166	153,385	14	(22)
Selected ratios							
Fixed-charge coverage ratio/TIER(4)	1.58	1.42	0.92	0.97	1.29	16 bps	50 bps
Adjusted TIER(3)	1.17	1.16	1.22	1.13	1.21	1	(6)
Net interest yield(5)	1.12 %	1.20 %	1.43 %	1.47 %	1.42 %	(8)	(23)
Adjusted net interest yield(3)(6)	0.83	0.86	1.05	1.08	1.07	(3)	(19)
Net charge-off rate(7)	0.00	0.01	0.00	0.00	0.01	(1)	1

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	Year Ended May 31,					Change	
(Dollars in thousands)	2018	2017	2016	2015	2014	2018 vs. 2017	2017 vs. 2016
Balance sheet							
Cash and cash equivalents	$230,999	$166,615	$204,540	$248,836	$338,715	39%	(19)%
Investment securities	608,851	92,554	87,940	84,472	55,177	558	5
Loans to members[8]	25,178,608	24,367,044	23,162,696	21,469,017	20,476,642	3	5
Allowance for loan losses	(18,801)	(37,376)	(33,258)	(33,690)	(56,429)	(50)	12
Loans to members, net	25,159,807	24,329,668	23,129,438	21,435,327	20,420,213	3	5
Total assets	26,690,204	25,205,692	24,270,200	22,846,059	22,190,685	6	4
Short-term borrowings	3,795,910	3,342,900	2,938,848	3,127,754	4,099,331	14	14
Long-term debt	18,714,960	17,955,594	17,473,603	16,244,794	14,475,635	4	3
Subordinated deferrable debt	742,410	742,274	742,212	395,699	395,627	0	0
Members' subordinated certificates	1,379,982	1,419,025	1,443,810	1,505,420	1,612,191	(3)	(2)
Total debt outstanding	24,633,262	23,459,793	22,598,473	21,273,667	20,582,784	5	4
Total liabilities	25,184,351	24,106,887	23,452,822	21,934,273	21,220,311	4	3
Total equity	1,505,853	1,098,805	817,378	911,786	970,374	37	34
Guarantees[9]	805,161	889,617	909,208	986,500	1,064,822	(9)	(2)
Selected ratios—period end							
Allowance coverage ratio[10]	0.07%	0.15%	0.14%	0.16%	0.28%	(8) bps	1 bp
Debt-to-equity ratio[11]	16.72	21.94	28.69	24.06	21.87	(522)	(675)
Adjusted debt-to-equity ratio[3]	6.18	5.95	5.82	6.26	5.90	23	13

**Calculation of percentage change is not meaningful.

(1)Consists of interest rate swap cash settlements and forward value gains (losses). Derivative cash settlement amounts represent net periodic contractual interest accruals related to derivatives not designated for hedge accounting. Derivative forward value gains (losses) represent changes in fair value during the period, excluding net periodic contractual interest accruals, related to derivatives not designated for hedge accounting and expense amounts reclassified into income related to the cumulative transition loss recorded in accumulated other comprehensive income as of June 1, 2001, as a result of the adoption of the derivative accounting guidance that required derivatives to be reported at fair value on the balance sheet.

(2)Consists of salaries and employee benefits and the other general and administrative expenses components of non-interest expense, each of which are presented separately on our consolidated statements of operations.

(3)See "Non-GAAP Financial Measures" for details on the calculation of these non-GAAP adjusted measures and the reconciliation to the most comparable GAAP measures.

(4)Calculated based on net income (loss) plus interest expense for the period divided by interest expense for the period. The fixed-charge coverage ratios and TIER were the same during each period presented because we did not have any capitalized interest during these periods.

(5)Calculated based on net interest income for the period divided by average interest-earning assets for the period.

(6)Calculated based on adjusted net interest income for the period divided by average interest-earning assets for the period.

(7)Calculated based on net charge-offs (recoveries) for the period divided by average total outstanding loans for the period.

(8)Consists of the outstanding principal balance of member loans plus unamortized deferred loan origination costs, which totaled $11 million as of both May 31, 2018 and 2017, and $10 million as of May 31, 2016, 2015 and 2014.
(9)Reflects the total amount of member obligations for which CFC has guaranteed payment to a third party as of the end of each period. This amount represents our maximum exposure to loss, which significantly exceeds the guarantee liability recorded on our consolidated balance sheets. See “Note 12—Guarantees” for additional information.
(10)Calculated based on the allowance for loan losses at period end divided by total outstanding loans at period end.
(11)Calculated based on total liabilities at period end divided by total equity at period end.

Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations ("MD&A")

INTRODUCTION

Our financial statements include the consolidated accounts of National Rural Utilities Cooperative Finance Corporation ("CFC"), National Cooperative Services Corporation ("NCSC") and Rural Telephone Finance Cooperative ("RTFC"), and subsidiaries created and controlled by CFC to hold foreclosed assets. CFC did not hold, and did not have any subsidiaries or other entities that held, foreclosed assets as of May 31, 2018 or May 31, 2017. See "Item 1. Business—Overview" for information on the business activities of each of these entities. Unless stated otherwise, references to "we," "our" or "us" relate to CFC and its consolidated entities. All references to members within this document include members, associates and affiliates of CFC and its consolidated entities.

Management monitors a variety of key indicators to evaluate our business performance. In addition to financial measures determined in accordance with GAAP, management also evaluates performance based on certain non-GAAP measures, which we refer to as "adjusted" measures. We identify our non-GAAP adjusted measures in "Item 6. Selected Financial Data" and provide a reconciliation to the most comparable GAAP measures below under "Non-GAAP Financial Measures."

The following MD&A is intended to provide the reader with an understanding of our results of operations, financial condition and liquidity by discussing the factors influencing changes from period to period and the key measures used by management to evaluate performance, such as net interest income, net interest yield, loan growth, debt-to-equity ratio and credit quality metrics. MD&A is provided as a supplement to, and should be read in conjunction with, our audited consolidated financial statements and related notes in this Annual Report on Form 10-K for the fiscal year ended
May 31, 2018 and the information contained elsewhere in this report, including the risk factors discussed under "Part I—Item 1A. Risk Factors" in this report.

EXECUTIVE SUMMARY

Our primary objective as a member-owned cooperative lender is to provide cost-based financial products to our rural electric members while maintaining a sound financial position required for investment-grade credit ratings on our debt instruments. Our objective is not to maximize net income; therefore, the rates we charge our member-borrowers reflect our adjusted interest expense plus a spread to cover our operating expenses, a provision for loan losses and earnings sufficient to achieve interest coverage to meet our financial objectives. Our goal is to earn an annual minimum adjusted TIER of 1.10 and to maintain an adjusted debt-to-equity ratio at approximately or below 6.00-to-1.

We are subject to period-to-period volatility in our reported GAAP results due to changes in market conditions and differences in the way our financial assets and liabilities are accounted for under GAAP. Our financial assets and liabilities expose us to interest-rate risk. We use derivatives, primarily interest rate swaps, as part of our strategy in managing this risk. Our derivatives are intended to economically hedge and manage the interest-rate sensitivity mismatch between our financial assets and liabilities. We are required under GAAP to carry derivatives at fair value on our consolidated balance sheet; however, the financial assets and liabilities for which we use derivatives to economically hedge are carried at amortized cost. Changes in interest rates and spreads result in periodic fluctuations in the fair value of our derivatives, which may cause volatility in our earnings because we do not apply hedge accounting for our interest rate swaps. As a result, the mark-to-market changes in our interest rate swaps are recorded in earnings. Based on the composition of our interest rate swaps, we generally record derivative losses in earnings when interest rates decline and derivative gains when interest rates rise. This earnings volatility generally is not indicative of the underlying economics of our business, as the derivative forward fair value gains or losses recorded each period may or may not be realized over time, depending on the terms of our derivative instruments and future changes in market conditions that impact the periodic cash settlement amounts of our interest rate swaps. As such, management uses our adjusted non-GAAP results to evaluate our operating performance. Our adjusted results include realized net periodic interest rate swap settlement amounts but exclude the impact of unrealized forward fair value gains and losses. Our financial debt covenants are also based on our non-GAAP adjusted results, as the forward fair value gains and losses related to our interest rate swaps do not affect our cash flows, liquidity or ability to service our debt.

Financial Performance

Reported Results

We reported net income of $457 million and a TIER of 1.58 for fiscal year ended May 31, 2018 (“fiscal year 2018”), compared with a net income of $312 million and a TIER of 1.42 for fiscal year 2017, and a net loss of $52 million and a TIER of 0.92 for fiscal year 2016. Our debt-to-equity ratio decreased to 16.72 as of May 31, 2018, from 21.94 as of May 31, 2017, primarily due to an increase in equity resulting from our reported net income of $457 million for fiscal year 2018, which was partially offset by patronage capital retirement of $45 million in September 2017.

The variance of $145 million between our reported net income of $457 million for fiscal year 2018 and net income of $312 million for fiscal year 2017 was driven by an increase in derivative gains of $137 million and a favorable shift in the provision for loan losses of $24 million, partially offset by a decrease in net interest income of $10 million and an increase in operating expenses of $5 million. We recognized derivative gains of $232 million in fiscal year 2018, compared with derivative gains of $95 million in the prior fiscal year, both of which were attributable to a net increase in the fair value of our pay-fixed swaps as interest rates increased across the swap curve during each period. The increase in interest rates, however, was more pronounced during fiscal year 2018, which resulted in significantly higher derivative gains relative to fiscal year 2017. We recorded a benefit for loan losses of $18 million in fiscal year 2018, compared with a provision of $6 million in fiscal year 2017. The benefit for loan losses was attributable to a reduction in our allowance for loan losses due to changes in the loss severity, or recovery rate, assumptions used in determining the collective allowance for our electric distribution and power supply loan portfolios to reflect management’s current assessment of expected losses in the event of default on a loan in these portfolios. The decrease in net interest income resulted from compression in the net interest yield, which was partially offset by an increase of 3% in average interest-earning assets. The net interest yield declined by 8 basis points to 1.12%, reflecting the impact of an overall increase in our average cost of funds due to the increase in interest rates during fiscal year 2018, which resulted in a higher average cost for our short-term and variable-rate borrowings.

The variance of $364 million between our reported net income of $312 million for fiscal year 2017 and net loss of $52 million for fiscal year 2016 was driven by mark-to-market changes in the fair value of our derivatives. We recognized derivative gains of $95 million in fiscal year 2017, largely due to an overall increase in interest rates during the year. In contrast, we recognized derivative losses of $310 million in fiscal year 2016, attributable to a decline in longer-term interest rates and a flattening of the swap curve. The favorable impact of the shift of $405 million to derivative gains in fiscal year 2017 was partially offset by a reduction in net interest income of $36 million, resulting from a decrease in the net interest yield of 23 basis points to 1.20%, which was partially offset by an increase in average interest-earning assets.

Adjusted Non-GAAP Results

Our adjusted net income totaled $151 million and our adjusted TIER was 1.17 for fiscal year 2018, compared with adjusted net income of $133 million and adjusted TIER of 1.16 for fiscal year 2017, and adjusted net income of $170 million and adjusted TIER of 1.22 for fiscal year 2016. Our adjusted debt-to-equity ratio increased to 6.18 as of May 31, 2018, from 5.95 as of May 31, 2017, predominately due to an increase in debt outstanding to fund loan growth.

The increase in adjusted net income of $18 million in fiscal year 2018 from fiscal year 2017 was primarily driven by the favorable shift in the provision for loan losses of $24 million, partially offset by the increase in operating expenses of $5 million. While our adjusted net interest yield decreased by 3 basis points to 0.83%, largely due to an increase in our adjusted average cost of borrowings, adjusted net interest income of $210 million was flat because of the increase in average interest-earning assets of 3%.

The decrease in adjusted net income of $37 million in fiscal year 2017 from the prior fiscal year was primarily driven by a decrease in adjusted net interest income of $32 million, resulting from a reduction in the adjusted interest yield of 19 basis points to 0.86%, which was partially offset by the increase in average interest-earning assets of 6%.

Lending Activity

Loans to members totaled $25,179 million as of May 31, 2018, an increase of $812 million, or 3%, from May 31, 2017. The increase was primarily due to an increase in CFC distribution loans of $726 million, an increase in NCSC loans of

$173 million and an increase in RTFC loans of $9 million, which was partially offset by a decrease in CFC power supply loans of $107 million.

Long-term loan advances totaled $2,203 million during fiscal year 2018, with approximately 67% of those advances for capital expenditures by members and 24% for the refinancing of loans made by other lenders. CFC had long-term fixed-rate loans totaling $904 million that were scheduled to reprice during fiscal year 2018. Of this total, $742 million repriced to a new long-term fixed rate; $157 million repriced to a long-term variable rate; and $5 million was repaid in full.

Financing Activity

We issue debt primarily to fund growth in our loan portfolio. As such, our outstanding debt volume generally increases and decreases in response to member loan demand. As total outstanding loans increased during fiscal year 2018, our debt also increased. Total debt outstanding was $24,633 million as of May 31, 2018, an increase of $1,173 million, or 5%, from May 31, 2017. The increase was primarily attributable to an increase in dealer medium-term notes of $638 million; an increase in the Federal Agricultural Mortgage Corporation (“Farmer Mac”) notes payable of $378 million; an aggregate increase in member commercial paper, select notes and daily liquidity fund notes of $230 million; and an increase in dealer commercial paper outstanding of $65 million. These increases were partially offset by a decrease in notes payable to the Federal Financing Bank and guaranteed by RUS under the Guaranteed Underwriter Program of $129 million.

We provide additional information on our financing activities below under “Consolidated Balance Sheet Analysis—Debt” and “Liquidity Risk.”

Outlook for the Next 12 Months

We currently expect that our net interest income, net interest yield, adjusted net interest income and adjusted net interest yield will increase over the next 12 months as a result of a projected decrease in our average cost of funds and an increase in average outstanding loans. We have scheduled maturities of higher-cost debt over the next 12 months, including $1,830 million in collateral trust bonds with a weighted average coupon rate of 6.98%. On July 12, 2018, we redeemed $300 million of the $1 billion aggregate principal amount of 10.375% collateral trust bonds due November 1, 2018, leaving a remaining outstanding amount of $700 million. We expect that we will be able to replace this higher-cost debt with lower-cost funding, which will reduce our aggregate weighted average cost of funds. We expect the amount of long-term loan advances to exceed anticipated loan repayments over the next 12 months, resulting in an increase in average outstanding loans.

Long-term debt scheduled to mature over the next 12 months totaled $2,745 million as of May 31, 2018. We believe we have sufficient liquidity from the combination of existing cash and cash equivalents, member loan repayments, committed bank revolving lines of credit and our ability to issue debt in the capital markets, to our members and in private placements, to meet the demand for member loan advances and satisfy our obligations to repay long-term debt maturing over the next 12 months. As of May 31, 2018, sources of liquidity available for access, which we refer to as our liquidity reserves, totaled$7,147 million, consisting of (i) $231 million in cash and cash equivalents, (ii) up to $1,225 million available under committed loan facilities under the Guaranteed Underwriter Program, (iii) up to $3,082 million available under committed bank revolving line of credit agreements, (iv) up to $200 million available under a committed revolving note purchase agreement with Farmer Mac, and (v) up to $2,409 million available under a revolving note purchase agreement with Farmer Mac, subject to market conditions.

We believe we can continue to roll over the outstanding member short-term debt of $2,632 million as of May 31, 2018, based on our expectation that our members will continue to reinvest their excess cash in our commercial paper, daily liquidity fund notes, select notes and medium-term notes. Although we expect to continue accessing the dealer commercial paper market to help meet our liquidity needs, we intend to manage our short-term wholesale funding risk by maintaining outstanding dealer commercial paper at an amount below $1,250 million for the foreseeable future. We expect to continue to be in compliance with the covenants under our committed bank revolving line of credit agreements, which will allow us to mitigate roll-over risk as we can draw on these facilities to repay dealer or member commercial paper that cannot be refinanced with similar debt.

While we are not subject to bank regulatory capital rules, we generally aim to maintain an adjusted debt-to-equity ratio at approximately or below 6.00-to-1. Our adjusted debt-to-equity ratio was 6.18 as of May 31, 2018, above our targeted threshold due to the increase in debt outstanding to fund loan growth. Due to anticipated asset growth, we expect our adjusted debt-to-equity ratio to be above 6.00-to-1 over the next 12 months.

CRITICAL ACCOUNTING POLICIES AND ESTIMATES

The preparation of financial statements in accordance with GAAP requires management to make a number of judgments, estimates and assumptions that affect the amount of assets, liabilities, income and expenses in the consolidated financial statements. Understanding our accounting policies and the extent to which we use management's judgment and estimates in applying these policies is integral to understanding our financial statements. We provide a discussion of our significant accounting policies under "Note 1—Summary of Significant Accounting Policies."

We have identified certain accounting policies as critical because they involve significant judgments and assumptions about highly complex and inherently uncertain matters, and the use of reasonably different estimates and assumptions could have a material impact on our results of operations or financial condition. Our most critical accounting policies and estimates involve the determination of the allowance for loan losses and fair value. We evaluate our critical accounting estimates and judgments required by our policies on an ongoing basis and update them as necessary based on changing conditions. Management has discussed significant judgments and assumptions in applying our critical accounting policies with the Audit Committee of our board of directors. See "Item 1A. Risk Factors" for a discussion of the risks associated with management's judgments and estimates in applying our accounting policies and methods.

Allowance for Loan Losses

We maintain an allowance for loan losses that represents management's estimate of probable losses inherent in our loan portfolio as of each balance sheet date. Our allowance for loan losses includes a collective allowance for loans in our portfolio that are not individually impaired and a specific allowance for loans identified as individually impaired. Our allowance for loan losses decreased by $18 million to $19 million as of May 31, 2018, from $37 million as of May 31, 2017.

Collective Allowance

The collective loss reserve is calculated using an internal model to estimate probable incurred losses for segments within our loan portfolio that have similar risk characteristics. Our segments are based on member borrower type, which are further stratified into loan pools based on borrower risk ratings. As part of our credit risk-management process, we regularly evaluate each borrower and loan facility in our loan portfolio and assign an internal risk rating. Our borrower risk rating is intended to reflect probability of default. We engage an independent third party to perform an annual review of a sample of borrowers and loan facilities to corroborate our internally assigned risk ratings. We determine the collective allowance by applying loss factors to the outstanding principal balance of each loan pool. The loss factors consist of a probability of default, or default rate, and the loss given default, or loss severity. The probability of default is based on an estimated loss emergence period of five years. We utilize third-party industry default data for estimated default rates. We utilize our historical loss experience for each borrower type to estimate loss severity, which we refer to as our recovery rates. The historical recovery rates for each borrower type may be adjusted based on management's consideration and assessment of current conditions and relevant factors, such as recent trends in credit performance, historical variability of recovery rates and additional analysis of long-term loss severity experience, changes in risk management practices, current and past underwriting standards, specific industry issues and trends and general economic conditions.

Specific Allowance

The specific allowance for individually impaired loans that are not collateral dependent is calculated based on the difference between the recorded investment in the loan and the present value of the expected future cash flows, discounted at the loan's effective interest rate. If the loan is collateral dependent, we measure the impairment based on the current fair value of the collateral less estimated selling costs. Loans are considered to be collateral dependent if repayment of the loan is expected to be provided solely by the underlying collateral and there are no other available and reliable sources of repayment.

Key Assumptions

Determining the appropriateness of the allowance for loan losses is subject to numerous estimates and assumptions requiring significant management judgment about matters that involve a high degree of subjectivity and are difficult to predict. The key assumptions in determining our collective allowance that require significant management judgment and may have a material impact on the amount of the allowance include: our evaluation of the risk profile of various loan portfolio segments and internally assigned borrower risk ratings; the estimated loss emergence period; the selection of third-party proxy data to estimate the probability of default; our historical loss experience and assumptions regarding recovery rates in the event of default; and management's judgment in the selection and evaluation of qualitative factors to assess the overall current level of exposure within our loan portfolio. The key assumptions in determining our specific allowance that require significant management judgment and may have a material impact on the amount of the allowance include estimating the amount and timing of expected cash flows from impaired loans and estimating the value of underlying collateral, each of which impacts loss severity and certain cash flow assumptions. The degree to which any particular assumption affects the allowance for loan losses depends on the severity of the change and its relationship to the other assumptions.

We regularly evaluate the underlying assumptions used in determining the allowance for loan losses and periodically update our assumptions to better reflect present conditions, including current trends in credit performance and borrower risk profile, portfolio concentration risk, changes in risk-management practices, changes in the regulatory environment, general economic trends and other factors specific to our loan portfolio segments. In the fourth quarter of fiscal year 2018, we increased the recovery rate assumptions used in determining the collective allowance for our electric distribution and power supply loan portfolios to reflect management's current assessment of expected losses in the event of default on a loan in these portfolios. The increase in recovery rate assumptions for these electric utility loan portfolios was the primary driver of the $18 million reduction in our allowance for loan losses to $19 million as of May 31, 2018, from $37 million as of
May 31, 2017.

Our electric utility loan portfolio has continued to exhibit strong credit performance. In fiscal year 2018, for the fifth consecutive fiscal year, we had no payment defaults, charge-offs, delinquent loans or nonperforming loans in our electric utility loan portfolio. In addition, 93% of the loans in our total loan portfolio were secured as of May 31, 2018, up from 92% as of May 31, 2017. Although we downgraded one electric distribution cooperative and its subsidiary, which had combined total loans outstanding of $165 million, to substandard as of May 31, 2018, they are current with regard to all payments of principal and interest on their loans and we currently do not anticipate a default. Therefore, the loans outstanding to this borrower and its subsidiary were not deemed to be impaired as of May 31, 2018. In the event of a default, we currently expect to collect substantially all of the outstanding amount based on our historical average recovery rate for the electric distribution and power supply loan portfolios.

Sensitivity Analysis

As noted above, our allowance for credit losses is sensitive to a variety of factors. While management uses its best judgment to assess loss data and other factors to determine the allowance for loan losses, changes in our loss assumptions, adjustments to assigned borrower risk ratings, the use of alternate external data sources or other factors could affect our estimate of probable credit losses inherent in the portfolio as of each balance sheet date, which would also impact the related provision for loan losses recognized in our consolidated statements of operations. For example, changes in the inputs below, without taking into consideration the impact of other potential offsetting or correlated inputs, would have the following effect on our allowance of loan losses as of May 31, 2018.

- A 10% increase or decrease in the default rates for all of our portfolio segments would result in a corresponding increase or decrease of approximately $2 million.

- A 1% increase or decrease in the recovery rates for all of our portfolio segments would result in a corresponding decrease or increase of approximately $4 million.
- A one-notch downgrade in the internal borrower risk ratings for our entire loan portfolio would result in an increase of approximately $22 million, while a one-notch upgrade would result in a decrease of approximately $11 million.

These sensitivity analyses are intended to provide an indication of the isolated impact of hypothetical alternative assumptions on our allowance for loan losses. Because management evaluates a variety of factors and inputs in determining the allowance for loan losses, these sensitivity analyses are not considered probable and do not imply an expectation of future changes in loss rates or borrower risk ratings. Given current processes employed in estimating the allowance for loan losses, management believes the inherent loss rates and currently assigned risk ratings are appropriate. It is possible that others performing the analyses, given the same information, may at any point in time reach different reasonable conclusions that could be significant to our consolidated financial statements.

We provide additional information on the methodology for determining the allowance for loan losses in “Note 1—Summary of Significant Accounting Policies” and changes in our allowance for loan losses in “Note 4—Loans.” Also refer to “Note 4—Loans” for information on the credit quality of our loan portfolios.

Fair Value

Certain of our financial instruments are carried at fair value on our consolidated balance sheet, with changes in fair value recorded either through earnings or other comprehensive income (loss) in accordance with applicable accounting standards. These include our available-for-sale investment securities and derivatives. The determination of fair value is important for certain other assets that are periodically evaluated for impairment using fair value, such as individually impaired loans.

Fair value is defined as the price that would be received for an asset or paid to transfer a liability in an orderly transaction between market participants on the measurement date (also referred to as an exit price). The fair value accounting guidance provides a three-level fair value hierarchy for classifying fair value measurement techniques. This hierarchy is based on the markets in which the assets or liabilities trade and whether the inputs to the valuation techniques used to measure fair value are observable or unobservable. Fair value measurement is assigned a level based on the lowest level of any input that is significant to the fair value measurement in its entirety. The three levels of the fair value hierarchy are summarized below:

Level 1: Quoted prices (unadjusted) in active markets for identical assets or liabilities
Level 2: Observable market-based inputs, other than quoted prices in active markets for identical assets or liabilities
Level 3: Unobservable inputs

The degree of management judgment involved in determining fair value is dependent upon the availability of quoted prices in active markets or observable market parameters. When quoted prices and observable data in active markets are not fully available, management’s judgment is necessary to estimate fair value. Changes in market conditions, such as reduced liquidity in the capital markets or changes in secondary market activities, may reduce the availability and reliability of quoted prices or observable data used to determine fair value.

Significant judgment may be required to determine whether certain assets and liabilities measured at fair value are classified as Level 2 or Level 3. In making this determination, we consider all available information that market participants use to measure fair value, including observable market data, indications of market liquidity and orderliness, and our understanding of the valuation techniques and significant inputs used. Based upon the specific facts and circumstances, judgments are made regarding the significance of Level 3 inputs used in determining the fair value of the asset or liability in its entirety. If Level 3 inputs are considered significant, the valuation technique is classified as Level 3. The process for determining fair value using unobservable inputs is generally more subjective and involves a high degree of management judgment and assumptions.

Financial instruments recorded at fair value on a recurring basis, which consisted primarily of financial instruments, including available-for-sale investment securities, deferred compensation investments and derivatives, represented 1% of our total assets as of both May 31, 2018 and 2017, and 1% and 2%, respectively, of total liabilities as of May 31, 2018 and 2017. The fair value of these financial instruments was determined using either Level 1 or 2 inputs. We did not have any financial instruments recorded at fair value on a recurring basis for which the fair value was determined using Level 3 inputs as of May 31, 2018 and 2017.

We discuss the valuation inputs and assumptions used in determining the fair value, including the extent to which we have relied on significant unobservable inputs to estimate fair value, in “Note 13—Fair Value Measurement.”

RECENT ACCOUNTING CHANGES AND OTHER DEVELOPMENTS

See “Note 1—Summary of Significant Accounting Policies” for information on recently issued accounting standards and the expected impact of the adoption of these accounting standards. To the extent we believe the adoption of new accounting standards has had or will have a material impact on our consolidated results of operations, financial condition or liquidity, we also discuss the impact in the applicable section(s) of this MD&A.

CONSOLIDATED RESULTS OF OPERATIONS

The section below provides a comparative discussion of our consolidated results of operations between fiscal year 2018 and 2017 and between fiscal year 2017 and 2016. Following this section, we provide a comparative analysis of our consolidated balance sheets as of May 31, 2018 and 2017. You should read these sections together with our “Executive Summary—Outlook for the Next 12 Months” where we discuss trends and other factors that we expect will affect our future results of operations.

Net Interest Income

Net interest income represents the difference between the interest income earned on our interest-earning assets, which includes loans and investment securities, and the interest expense on our interest-bearing liabilities. Our net interest yield represents the difference between the yield on our interest-earning assets and the cost of our interest-bearing liabilities plus the impact from non-interest bearing funding. We expect net interest income and our net interest yield to fluctuate based on changes in interest rates and changes in the amount and composition of our interest-earning assets and interest-bearing liabilities. We do not fund each individual loan with specific debt. Rather, we attempt to minimize costs and maximize efficiency by proportionately funding large aggregated amounts of loans.

Table 1 presents our average balance sheets for fiscal years 2018, 2017 and 2016, and for each major category of our interest-earning assets and interest-bearing liabilities, the interest income earned or interest expense incurred, and the average yield or cost. Table 1 also presents non-GAAP adjusted interest expense, adjusted net interest income and adjusted net interest yield, which reflect the inclusion of net accrued periodic derivative cash settlements in interest expense. We provide reconciliations of our non-GAAP adjusted measures to the most comparable GAAP measures under “Non-GAAP Financial Measures.”

Table 1: Average Balances, Interest Income/Interest Expense and Average Yield/Cost

	Year Ended May 31,								
(Dollars in thousands)	2018			2017			2016		
Assets:	Average Balance	Interest Income/Expense	Average Yield/Cost	Average Balance	Interest Income/Expense	Average Yield/Cost	Average Balance	Interest Income/Expense	Average Yield/Cost
Long-term fixed-rate loans[1]	$22,570,209	$1,000,492	4.43%	$21,896,200	$980,173	4.48%	$20,734,387	$959,701	4.63%
Long-term variable-rate loans	925,910	27,152	2.93	799,412	19,902	2.49	708,801	19,858	2.80
Line of credit loans	1,402,555	38,195	2.72	1,124,471	25,389	2.26	1,031,548	24,864	2.41
TDR loans [2]	12,885	889	6.90	14,349	905	6.31	12,947	512	3.95
Nonperforming loans	—	—	—	—	—	—	3,164	142	4.49
Other income, net[3]	—	(1,185)	—	—	(1,082)	—	—	(1,088)	—
Total loans	24,911,559	1,065,543	4.28	23,834,432	1,025,287	4.30	22,490,847	1,003,989	4.46
Cash, time deposits and investment securities	512,517	11,814	2.31	734,095	11,347	1.55	639,060	8,647	1.35
Total interest-earning assets	$25,424,076	$1,077,357	4.24%	$24,568,527	$1,036,634	4.22%	$23,129,907	$1,012,636	4.38%
Other assets, less allowance for loan losses	644,563			574,682			808,479		
Total assets	$26,068,639			$25,143,209			$23,938,386		
Liabilities:									
Short-term borrowings	$3,294,573	$50,616	1.54%	$3,185,084	$26,684	0.84%	$2,995,530	$14,728	0.49%
Medium-term notes	3,361,484	111,814	3.33	3,345,410	99,022	2.96	3,412,061	86,270	2.53
Collateral trust bonds	7,625,182	336,079	4.41	7,293,251	340,854	4.67	6,917,265	333,338	4.82
Guaranteed Underwriter Program notes payable	4,956,417	140,551	2.84	4,873,520	142,661	2.93	4,649,532	143,240	3.08
Farmer Mac notes payable	2,578,793	56,004	2.17	2,355,324	33,488	1.42	2,124,552	20,529	0.97
Other notes payable	33,742	1,509	4.47	39,314	1,780	4.53	44,621	2,051	4.60
Subordinated deferrable debt	742,336	37,661	5.07	742,203	37,657	5.07	435,488	21,245	4.88
	1,396,449	58,501	4.19	1,433,657	59,592	4.16	1,458,376	60,449	4.14

Subordinated certificates									
Total interest-bearing liabilities	$23,988,976	$792,735	3.30%	$23,267,763	$741,738	3.19%	$22,037,425	$681,850	3.09%
Other liabilities	822,745			921,749			1,036,907		
Total liabilities	24,811,721			24,189,512			23,074,332		
Total equity	1,256,918			953,697			864,054		
Total liabilities and equity	$26,068,639			$25,143,209			$23,938,386		
Net interest spread[4]			0.94%			1.03%			1.29%
Impact of non-interest bearing funding[5]			0.18			0.17			0.14
Net interest income/net interest yield[6]		$284,622	1.12%		$294,896	1.20%		$330,786	1.43%
Adjusted net interest income/adjusted net interest yield:									
Interest income		$1,077,357	4.24%		$1,036,634	4.22%		$1,012,636	4.38%
Interest expense		792,735	3.30		741,738	3.19		681,850	3.09
Add: Net accrued periodic derivative cash settlement[7]		74,281	0.69		84,478	0.80		88,758	0.89
Adjusted interest expense/adjusted average cost[8]		$867,016	3.61%		$826,216	3.55%		$770,608	3.50%
Adjusted net interest spread[4]			0.63%			0.67%			0.88%
Impact of non-interest bearing funding			0.20			0.19			0.17
Adjusted net interest income/adjusted net interest yield[9]		$210,341	0.83%		$210,418	0.86%		$242,028	1.05%

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(1)Interest income on long-term, fixed-rate loans includes loan conversion fees, which are generally deferred and recognized as interest income using the effective interest method.
(2)Troubled debt restructuring ("TDR") loans.
(3)Consists of late payment fees and net amortization of deferred loan fees and loan origination costs.
(4)Net interest spread represents the difference between the average yield on interest-earning assets and the average cost of interest-bearing liabilities. Adjusted net interest spread represents the difference between the average yield on total interest-earning assets and the adjusted average cost of total interest-bearing liabilities.
(5)Includes other liabilities and equity.
(6)Net interest yield is calculated based on net interest income for the period divided by total average interest-earning assets for the period.
(7)Represents the impact of net accrued periodic interest rate swap settlements during the period, which is added to interest expense to derive non-GAAP adjusted interest expense. The average (benefit)/cost associated with derivatives is calculated based on net accrued periodic interest rate swap settlements during the period divided by the average outstanding notional amount of derivatives during the period. The average outstanding notional amount of interest rate swaps was $10,816 million, $10,590 million and $9,993 million for fiscal year 2018, 2017 and 2016, respectively.
(8)Adjusted interest expense represents interest expense plus net accrued periodic interest rate swap settlements during the period. Net accrued periodic derivative cash settlements are reported on our consolidated statements of operations as a component of derivative gains (losses). Adjusted average cost is calculated based on adjusted interest expense for the period divided by total average interest-bearing liabilities during the period.
(9)Adjusted net interest yield is calculated based on adjusted net interest income for the period divided by total average interest-earning assets for the period.

Table 2 displays the change in net interest income between periods and the extent to which the variance is attributable to: (i) changes in the volume of our interest-earning assets and interest-bearing liabilities or (ii) changes in the interest rates of these assets and liabilities. The table also presents the change in adjusted net interest income between periods. Because of the numerous simultaneous volume and rate changes during any period, it is not possible to precisely allocate such changes between volume and rate. Changes that are not solely due to either volume or rate are allocated to these categories on a pro-rata basis based on the absolute value of the change due to average volume and average rate.

Table 2: Rate/Volume Analysis of Changes in Interest Income/Interest Expense

	2018 vs. 2017			2017 vs. 2016		
	Total	Variance due to:(1)		Total	Variance due to:(1)	
(Dollars in thousands)	Variance	Volume	Rate	Variance	Volume	Rate
Interest income:						
Long-term fixed-rate loans	$20,319	$30,172	$(9,853)	$20,472	$53,775	$(33,303)
Long-term variable-rate loans	7,250	3,149	4,101	44	2,539	(2,495)
Line of credit loans	12,806	6,279	6,527	525	2,240	(1,715)
Restructured loans	(16)	(92)	76	393	55	338
Nonperforming loans	—	—	—	(142)	(142)	—
Other income, net	(103)	—	(103)	6	—	6
Total loans	40,256	39,508	748	21,298	58,467	(37,169)
Cash, time deposits and investment securities	467	(3,425)	3,892	2,700	1,286	1,414
Interest income	$40,723	$36,083	$4,640	$23,998	$59,753	$(35,755)
Interest expense:						
Short-term borrowings	$23,932	$917	$23,015	$11,956	$932	$11,024
Medium-term notes	12,792	476	12,316	12,752	(1,685)	14,437
Collateral trust bonds	(4,775)	15,513	(20,288)	7,516	18,118	(10,602)
Guaranteed Underwriter Program notes payable	(2,110)	2,427	(4,537)	(579)	6,900	(7,479)
Farmer Mac notes payable	22,516	3,177	19,339	12,959	2,230	10,729
Other notes payable	(271)	(252)	(19)	(271)	(244)	(27)
Subordinated deferrable debt	4	7	(3)	16,412	14,963	1,449
Subordinated certificates	(1,091)	(1,547)	456	(857)	(1,025)	168
Interest expense	50,997	20,718	30,279	59,888	40,189	19,699
Net interest income	$(10,274)	$15,365	$(25,639)	$(35,890)	$19,564	$(55,454)
Adjusted net interest income:						
Interest income	$40,723	$36,083	$4,640	$23,998	$59,753	$(35,755)
Interest expense	50,997	20,718	30,279	59,888	40,189	19,699
Net accrued periodic derivative cash settlements(2)	(10,197)	1,802	(11,999)	(4,280)	5,304	(9,584)
Adjusted interest expense(3)	40,800	22,520	18,280	55,608	45,493	10,115
Adjusted net interest income	$(77)	$13,563	$(13,640)	$(31,610)	$14,260	$(45,870)

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(1)The changes for each category of interest income and interest expense are divided between the portion of change attributable to the variance in volume and the portion of change attributable to the variance in rate for that category. The amount attributable to the combined impact of volume and rate has been allocated to each category based on the proportionate absolute dollar amount of change for that category.
(2)For net accrued periodic derivative cash settlements, the variance due to average volume represents the change in derivative cash settlements resulting from the change in the average notional amount of derivative contracts outstanding. The variance due to average rate represents the change in derivative cash settlements resulting from the net difference between the average rate paid and the average rate received for interest rate swaps during the period.
(3) See “Non-GAAP Financial Measures” for additional information on our adjusted non-GAAP measures.

Net interest income of $285 million for fiscal year 2018 decreased by $10 million, or 3%, from fiscal year 2017, driven by a decrease in the net interest yield of 7% (8 basis points) to 1.12%, which was partially offset by an increase in average interest-earning assets of 3%.

- Net Interest Yield: The decrease in the net interest yield in fiscal year 2018 was primarily due to an increase in our average cos cost of funds increased by 11 basis points to 3.30% for fiscal year 2018, largely due to increases in the cost of our short-term ar (“LIBOR”) was 2.32% as of May 31, 2018, an increase of 111 basis points from May 31, 2017, while the federal funds target r points to 4.24%, largely due to increases in rates on variable rate loans and a higher yield on time deposits and investment secu

- Average Interest-Earning Assets: The increase in average interest-earning assets during fiscal year 2018 was primarily attributable to growth in average total loans of $1,077 million, or 5%, over the prior fiscal year, as members obtained advances to fund capital investments and refinanced with us loans made by other lenders.

Net interest income of $295 million in fiscal year 2017 decreased by $36 million, or 11%, from fiscal year 2016, driven by a decrease in the net interest yield of 16% (23 basis points) to 1.20%, which was partially offset by an increase in average interest-earning assets of 6%.

- Net Interest Yield: The decrease in the net interest yield in fiscal year 2017 reflected the combined impact of a decline in the average yield on interest-earning assets and an increase in our average cost of funds. The average yield on interest-earning assets decreased by 16 basis points to 4.22% in fiscal year 2017. The decrease resulted from repayments on existing long-term loans with higher weighted-average fixed rates than the weighted average fixed rates on new long-term loan advances, coupled with the repricing of higher-rate loans to lower fixed rates. Our average cost of funds increased by 10 basis points in fiscal year 2017 to 3.19%, largely due to an increase in short-term interest rates during the fiscal year.

- Average Interest-Earning Assets: The increase in average interest-earning assets during fiscal year 2017 was primarily attributable to growth in average total loans of $1,344 million, or 6%, over the prior fiscal year, as members obtained advances to fund capital investments and refinanced with us loans made by other lenders.

Adjusted net interest income of $210 million in fiscal year 2018 was flat compared to fiscal year 2017, as the decrease in the adjusted net interest yield of 3% (3 basis points) to 0.83% was offset by the increase in average interest-earning assets of 3%. The decrease in the adjusted net interest yield was driven by an increase in the adjusted average cost of funds of 6 basis points to 3.61%, attributable to the increase in short-term interest rates that resulted in a higher average cost for our short-term and variable-rate borrowings.

Adjusted net interest income of $210 million in fiscal year 2017 decreased by $32 million, or 13%, from fiscal year 2016, driven by a decrease in the adjusted net interest yield of 18% (19 basis points) to 0.86%, which was partially offset by the increase in average interest-earning assets of 6%. The decrease in the adjusted net interest yield was attributable to the combined impact of the decline in the average yield on interest-earning assets and an increase in our adjusted average cost of funds.

Our adjusted net interest income and adjusted net interest yield include the impact of net accrued periodic derivative cash settlements during the year. We recorded net periodic derivative cash settlement expense of $74 million in fiscal year 2018 compared with $84 million and $89 million in fiscal years 2017 and 2016, respectively. See “Non-GAAP Financial Measures” for additional information on our adjusted measures.

Provision for Loan Losses

Our provision for loan losses in each period is primarily driven by the level of allowance that we determine is necessary for probable incurred loan losses inherent in our loan portfolio as of each balance sheet date.

We recorded a benefit for loan losses of $18 million in fiscal year 2018, compared with a provision for loan losses of $6 million in fiscal year 2017 and a benefit for loan losses of $1 million in fiscal year 2016. The benefit for loan losses of $18 million in fiscal year 2018 was due to the $18 million reduction in our allowance for loan losses to $19 million as of May 31, 2018, from $37 million as of May 31, 2017. In the fourth quarter of fiscal year 2018, we increased the recovery rate assumptions used in determining the collective allowance for our electric distribution and power supply loan portfolios to reflect management's current assessment of expected losses in the event of default on a loan in these portfolios. In fiscal year 2018, for the fifth consecutive fiscal year, we had no payment defaults, charge-offs, delinquent loans or nonperforming loans in our electric utility loan portfolio. The increase in recovery rate assumptions was the primary driver of the $18 million reduction in our allowance for loan losses.

The unfavorable shift of $7 million in the provision for loan losses in fiscal year 2017 from the prior fiscal year was primarily attributable to an increase in total loans outstanding coupled with an increase in default rates for loans with higher risk, which was partially offset by a decrease in default rates for loans with lower risk and a reduction in the specific allowance for individually impaired loans.

For additional information on our allowance methodology and our allowance for loan losses, see "Critical Accounting Policies and Estimates" and "Credit Risk—Allowance for Loan Losses" of MD&A. Also refer to "Note 1—Summary of Significant Accounting Policies" and "Note 4—Loans" of this report.

Non-Interest Income

Non-interest income consists of fee and other income, gains and losses on derivatives not accounted for in hedge accounting
relationships and results of operations of foreclosed assets.

Table 3 presents the components of non-interest income recorded in our consolidated results of operations for fiscal years 2018, 2017 and 2016.

Table 3: Non-Interest Income

	Year Ended May 31,		
(Dollars in thousands)	2018	2017	2016
Non-interest income:			
Fee and other income	$17,578	$19,713	$21,785
Derivative gains (losses)	231,721	94,903	(309,841)
Results of operations of foreclosed assets	—	(1,749)	(6,899)
Total non-interest income	$249,299	$112,867	$(294,955)

The significant variances in non-interest income between years were primarily attributable to changes in net derivative gains (losses) recognized in our consolidated statements of operations.

Derivative Gains (Losses)

Our derivative instruments are an integral part of our interest rate risk-management strategy. Our principal purpose in using derivatives is to manage our aggregate interest rate risk profile within prescribed risk parameters. The derivative instruments we use primarily include interest rate swaps, which we typically hold to maturity. In addition, we may on occasion use treasury locks to manage the interest rate risk associated with debt that is scheduled to reprice in the future. The primary factors affecting the fair value of our derivatives and derivative gains (losses) recorded in our results of operations include changes in interest rates, the shape of the swap curve and the composition of our derivative portfolio. We generally do not designate our interest rate swaps, which currently account for the substantial majority of our derivatives, for hedge accounting. Accordingly, changes in the fair value of interest rate swaps are reported in our consolidated statements of operations under derivative gains (losses). However, we typically designate treasury locks as cash flow hedges. We entered into one treasury lock agreement, which was designated as a cash flow hedge of a forecasted transaction, during fiscal year 2018. We did not have any derivatives designated as accounting hedges during fiscal year 2017 or 2016.

We currently use two types of interest rate swap agreements: (i) we pay a fixed rate and receive a variable rate (“pay-fixed swaps”); and (ii) we pay a variable rate and receive a fixed rate (“receive-fixed swaps”). The benchmark variable rate for the substantial majority of the floating-rate payments under our swap agreements is LIBOR. Table 4 displays the average notional amount outstanding, by swap agreement type, and the weighted-average interest rate paid and received for interest rate swap settlements during fiscal years 2018, 2017 and 2016. As indicated in Table 4, our interest rate swap portfolio currently consists of a higher proportion of pay-fixed swaps than receive-fixed swaps. The profile of our interest rate swap portfolio, however, may change as a result of changes in market conditions and actions taken to manage exposure to interest rate risk.

Table 4: Derivative Average Notional Amounts and Average Interest Rates

	Year Ended May 31,								
	2018			2017			2016		
(Dollars in thousands)	Average Notional Balance	Weighted-Average Rate Paid	Weighted-Average Rate Received	Average Notional Balance	Weighted-Average Rate Paid	Weighted-Average Rate Received	Average Notional Balance	Weighted-Average Rate Paid	Weighted-Average Rate Received
Pay-fixed swaps	$7,007,207	2.82 %	1.58 %	$6,675,617	2.89 %	0.90 %	$6,322,338	3.03 %	0.45 %
Receive-fixed swaps	3,808,794	2.16	2.60	3,914,479	1.34	2.71	3,670,585	0.88	2.97
Total	$10,816,001	2.58 %	1.94 %	$10,590,096	2.32 %	1.57 %	$9,992,923	2.24 %	1.38 %

The average remaining maturity of our pay-fixed and receive-fixed swaps was 19 years and five years, respectively, as of May 31, 2018. In comparison, the average remaining maturity of our pay-fixed and receive-fixed swaps was 19 years and four years, respectively, as of May 31, 2017 and 18 years and three years, respectively, as of May 31, 2016.

Pay-fixed swaps generally decrease in value as interest rates decline and increase in value as interest rates rise. In contrast, receive-fixed swaps generally increase in value as interest rates decline and decrease in value as interest rates rise. Because our pay-fixed and receive-fixed swaps are referenced to different maturity terms along the swap curve, different changes in the swap curve—parallel, flattening or steepening—will result in differences in the fair value of our derivatives. The chart below provides comparative swap curves as of May 31, 2018, 2017, 2016 and 2015.

Benchmark rates obtained from Bloomberg.

Table 5 presents the components of net derivative gains (losses) recorded in our consolidated results of operations. Derivative cash settlements represent the net periodic contractual interest amount for our interest-rate swaps for the reporting period. Derivative forward value gains (losses) represent the change in fair value of our interest rate swaps during the reporting period due to changes in expected future interest rates over the remaining life of our derivative contracts.

Table 5: Derivative Gains (Losses)

	Year Ended May 31,		
(Dollars in thousands)	2018	2017	2016
Derivative gains (losses) attributable to:			
Derivative cash settlements	$(74,281)	$(84,478)	$(88,758)
Derivative forward value gains (losses)	306,002	179,381	(221,083)
Derivative gains (losses)	$231,721	$94,903	$(309,841)

The net derivative gains of $232 million in fiscal year 2018 were largely attributable to a net increase in the fair value of our pay-fixed swaps as interest rates increased across the swap curve, as depicted by the May 31, 2018 swap curve presented in the above chart. As depicted in the comparative swap curves, the general level of market interest rates as of the end of fiscal year 2018 was higher relative to the general level of market rates as of the end of fiscal year 2017, resulting in the recognition of significantly higher net derivative gain amounts.

The net derivative gains of $95 million in fiscal year 2017 were primarily attributable to a net increase in the fair value of our swaps due to an overall increase in interest rates across the swap curve, as depicted by the May 31, 2017 swap curve presented in the above chart.

The derivative losses of $310 million in fiscal year 2016 were primarily attributable to a net decrease in the fair value of our swaps due to a flattening of the swap curve resulting from an increase in short-term interest rates and a decline in long-term interest rates, as depicted by the comparative swap curves as of May 31, 2016 and 2015 in the above chart.

See “Note 1—Summary of Significant Accounting Policies—Derivative Instruments” and “Note 9—Derivative Instruments an Hedging Activities” for additional information on our derivative instruments. Also refer to “Note 13—Fair Value Measurement” for information on how we estimate the fair value of our derivative instruments.

Results of Operations of Foreclosed Assets

Results of operations of foreclosed assets consists of the operating results of entities controlled by CFC that hold foreclosed assets, impairment charges related to those entities, gains or losses related to the disposition of the assets and potential subsequent charges related to those assets. On July 1, 2016, we completed the sale of Caribbean Asset Holdings, LLC (“CAH”). As a result, we did not carry any foreclosed assets on our consolidated balance sheet as of May 31, 2018 and 2017.

We recorded charges of $2 million in fiscal year 2017 and $7 million in fiscal year 2016 related to foreclosed assets. The charge of $2 million in fiscal year 2017 represented the combined impact of adjustments recorded at the closing date of the sale of CAH, post-closing purchase price adjustments and certain legal costs incurred pertaining to CAH. The charge of $7 million in fiscal year 2016 was attributable to impairment of our investment in CAH due to a reduction in the fair value less estimated cost to sell.

In connection with the sale of CAH, $16 million of the sale proceeds was deposited into escrow to fund potential indemnification claims following the closing. Of this amount, $14.5 million was designated to cover general indemnification claims and has been released back to us. The remaining $1.5 million was designated to cover indemnification of certain tax liens and remains in escrow. We continue to be liable for certain indemnification obligations, if raised and substantiated, regardless of whether amounts are held in escrow.

Non-Interest Expense

Non-interest expense consists of salaries and employee benefit expense, general and administrative expenses, losses on early extinguishment of debt and other miscellaneous expenses.

Table 6 presents the components of non-interest expense recorded in our consolidated results of operations in fiscal years 2018, 2017 and 2016.

Table 6: Non-Interest Expense

	Year Ended May 31,		
(Dollars in thousands)	2018	2017	2016
Non-interest expense:			
Salaries and employee benefits	$(51,422)	$(47,769)	$(44,590)
Other general and administrative expenses	(39,462)	(38,457)	(41,753)
Gains (losses) on early extinguishment of debt	—	192	(333)
Other non-interest expense	(1,943)	(1,948)	(1,260)
Total non-interest expense	$(92,827)	$(87,982)	$(87,936)

Non-interest expense of $93 million for fiscal year 2018 increased by $5 million, or 6%, from fiscal year 2017, primarily due to an increase in salaries and employee benefits expenses. Non-interest expenses of $88 million in fiscal year 2017 was relatively unchanged from fiscal year 2016, as an increase in salaries and employee benefits expenses was largely offset by a decrease in other general and administrative expenses.

Net Income (Loss) Attributable to Noncontrolling Interests

Net income (loss) attributable to noncontrolling interests represents 100% of the results of operations of NCSC and RTFC, as the members of NCSC and RTFC own or control 100% of the interest in their respective companies. The fluctuations in net income (loss) attributable to noncontrolling interests are primarily due to changes in the fair value of NCSC's derivative instruments recognized in NCSC's earnings.

We recorded net income attributable to noncontrolling interests of $2 million in fiscal year 2018, compared with net income of $2 million in fiscal year 2017 and a net loss of $2 million in fiscal year 2016.

CONSOLIDATED BALANCE SHEET ANALYSIS

Total assets of $26,690 million as of May 31, 2018 increased by $1,485 million, or 6%, from May 31, 2017, primarily due to growth in our loan portfolio. Total liabilities of $25,184 million as of May 31, 2018 increased by $1,077 million, or 4%, from May 31, 2017, largely due to debt issuances to fund loan growth. Total equity increased by $407 million during fiscal year 2018 to $1,506 million as of May 31, 2018, attributable to our reported net income of $457 million, which was partially offset by patronage capital retirement of $45 million in September 2017.

Following is a discussion of changes in the major components of our assets and liabilities during fiscal year 2018. Period-end balance sheet amounts may vary from average balance sheet amounts due to liquidity and balance sheet management activities that are intended to manage liquidity requirements for the company and our customers, and our market risk exposure in accordance with our risk appetite.

Loan Portfolio

We offer long-term fixed- and variable-rate loans and line of credit variable-rate loans. The substantial majority of loans in our portfolio represent advances under secured long-term facilities with terms up to 35 years. Borrowers have the option of selecting a fixed or variable interest rate for each advance for periods ranging from one year to the final maturity of the facility. Line of credit loans are typically revolving facilities and are generally unsecured. We also offer a conversion option to members with long-term loan agreements, which allows borrowers to change the rate and term prior to the repricing date. Borrowers are generally charged a conversion fee when converting from a fixed to a variable rate, or a fixed rate to another fixed rate.

Loans Outstanding

Table 7 summarizes loans to members, by loan type and by member class, for the five-year period ended May 31, 2018. As indicated in Table 7, long-term fixed-rate loans accounted for 90% and 91% of loans to members as of May 31, 2018 and 2017, respectively.

Table 7: Loans Outstanding by Type and Member Class

	May 31,									
(Dollars in millions)	2018		2017		2016		2015		2014	
Loans by type:	Amount	% of Total	Amount	% of Total	Amount	% of Total	Amount	% of Total	Amount	% of Total
Long-term loans:										
Fixed-rate	$22,696	90 %	$22,137	91 %	$21,391	93 %	$19,722	92 %	$18,360	89 %
Variable-rate	1,040	4	847	3	757	3	699	3	772	4
Total long-term loans	23,736	94	22,984	94	22,148	96	20,421	95	19,132	93
Lines of credit	1,432	6	1,372	6	1,005	4	1,038	5	1,335	7
Total loans outstanding	$25,168	100%	$24,356	100 %	$23,153	100%	$21,459	100%	$20,467	100%
Deferred loan origination costs	11	—	11	—	10	—	10	—	10	—
Loans to members	$25,179	100%	$24,367	100 %	$23,163	100%	$21,469	100%	$20,477	100%
Loans by member class:										
CFC:										
Distribution	$19,552	78 %	$18,825	77 %	$17,674	77 %	$16,095	75 %	$15,035	74 %
Power supply	4,397	18	4,505	19	4,401	19	4,181	20	4,086	20
Statewide and associate	70	—	58	—	55	—	65	—	68	—
CFC total	24,019	96	23,388	96	22,130	96	20,341	95	19,189	94
NCSC	786	3	614	3	681	3	732	3	828	4
RTFC	363	1	354	1	342	1	386	2	450	2
Total loans outstanding	$25,168	100%	$24,356	100 %	$23,153	100%	$21,459	100%	$20,467	100%
Deferred loan origination costs	11		11		10	—	10	—	10	—
Loans to members	$25,179	100%	$24,367	100 %	$23,163	100%	$21,469	100%	$20,477	100%

Loans to members totaled $25,179 million as of May 31, 2018, an increase of $812 million, or 3%, from May 31, 2017. The increase was primarily due to an increase in CFC distribution loans of $726 million, an increase in NCSC loans of
$173 million and an increase in RTFC loans of $9 million, which was partially offset by a decrease in CFC power supply loans of $107 million. Long-term loan advances totaled $2,203 million during fiscal year 2018, with approximately 67% of those advances for capital expenditures by members and 24% for the refinancing of loans made by other lenders.

We provide additional information on our loan product types in “Item 1. Business—Loan Programs” and “Note 4—Loans.” Se “Debt—Collateral Pledged” below for information on encumbered and unencumbered loans and “Credit Risk Management” for information on the credit risk profile of our loan portfolio.

Loan Retention Rate

Table 8 presents a comparison between the historical retention rate of CFC's long-term fixed-rate loans that repriced in accordance with our standard loan provisions, during the past three fiscal years and provides information on the percentage of loans that repriced to either another fixed-rate term or a variable rate. The retention rate is calculated based on the election made by the borrower at the repricing date. The average annual retention rate of CFC's repriced loans has been 98% over the last three fiscal years.

Table 8: Historical Retention Rate and Repricing Selection[1]

	May 31, 2018		2017		2016	
(Dollars in thousands)	Amount	% of Total	Amount	% of Total	Amount	% of Total
Loans retained:						
Long-term fixed rate selected	$741,792	82 %	$824,415	84 %	$1,001,118	93 %
Long-term variable rate selected	157,539	17	137,835	14	54,796	5
Total loans retained by CFC	899,331	99	962,250	98	1,055,914	98
Loans repaid[2]	4,637	1	25,076	2	22,415	2
Total	$903,968	100%	$987,326	100%	$1,078,329	100%

[1] Does not include NCSC and RTFC loans.
[2] Includes loans totaling $1 million, $1 million and $4 million as of May 31, 2018, 2017 and 2016, respectively, that were converted to new loans at the repricing date and transferred to a third party as part of our direct loan sale program. See "Note 4—Loans" for information on our sale of loans.

Scheduled Loan Principal Payments

Table 9 displays scheduled long-term loan principal payments as of May 31, 2018, for each of the five fiscal years subsequent to May 31, 2018 and thereafter.

Table 9: Long-Term Loan Scheduled Principal Payments

	Fixed Rate		Variable Rate	
(Dollars in thousands)	Scheduled Principal Payments	Weighted-Average Interest Rate	Scheduled Principal Payments	Total Scheduled Principal Payments
Fiscal year:				
2019	$1,131,941	4.33 %	$94,966	$1,226,907
2020	1,168,011	4.40	77,192	1,245,203
2021	1,168,748	4.43	53,445	1,222,193
2022	1,148,220	4.48	49,092	1,197,312
2023	1,157,297	4.54	43,467	1,200,764
Thereafter	16,921,968	4.66	721,329	17,643,297
Total	$22,696,185	4.60	$1,039,491	$23,735,676

Debt

We utilize both short-term borrowings and long-term debt as part of our funding strategy and asset/liability interest rate risk management. We seek to maintain diversified funding sources across products, programs and markets to manage funding concentrations and reduce our liquidity or debt rollover risk. Our funding sources include a variety of secured and unsecured debt securities in a wide range of maturities to our members and affiliates and in the capital markets.

Debt Product Types

We offer various short- and long-term unsecured debt securities to our members and affiliates, including commercial paper, select notes, daily liquidity fund notes, medium-term notes and subordinated certificates. We also issue commercial paper, medium-term notes and collateral trust bonds in the capital markets. Additionally, we have access to funds under borrowing arrangements with banks, private placements and U.S. government agencies. Table 10 displays our primary funding sources and their selected key attributes.

Table 10: Debt Product Types

Debt Product Type:	Maturity Range	Market	Secured/Unsecured
Short-term funding programs:			
Commercial paper	1 to 270 days	Capital markets, members and affiliates	Unsecured
Select notes	30 to 270 days	Members and affiliates	Unsecured
Daily liquidity fund notes	Demand note	Members and affiliates	Unsecured
Other funding programs:			
Medium-term notes	9 months to 30 years	Capital markets, members and affiliates	Unsecured
Collateral trust bonds[1]	Up to 30 years	Capital markets	Secured
Guaranteed Underwriter Program notes payable[2]	Up to 20 years	U.S. government	Secured
Farmer Mac notes payable[3]	Up to 30 years	Private placement	Secured
Other notes payable[4]	Up to 30 years	Private placement	Both
Subordinated deferrable debt[5]	Up to 30 years	Capital markets	Unsecured
Members' subordinated certificates[6]	Up to 100 years	Members	Unsecured
Revolving credit agreements	3 to 5 years	Bank institutions	Unsecured

[1]Collateral trust bonds are secured by the pledge of permitted investments and eligible mortgage notes from distribution system borrowers in an amount at least equal to the outstanding principal amount of collateral trust bonds.
[2] Represents notes payable under the Guaranteed Underwriter Program, which supports the Rural Economic Development Loan and Grant program. The Federal Financing Bank provides the financing for these notes, and RUS provides a guarantee of repayment. We are required to pledge eligible mortgage notes from distribution and power supply system borrowers in an amount at least equal to the outstanding principal amount of the notes payable.
[3] We are required to pledge eligible mortgage notes from distribution and power supply system borrowers in an amount at least equal to the outstanding principal amount under note purchase agreements with Farmer Mac.
[4] Other notes payable consist of unsecured and secured Clean Renewable Energy Bonds and unsecured notes payable issued by NCSC. We are required to pledge eligible mortgage notes from distribution and power supply system borrowers in an amount at least equal to the outstanding principal amount under the Clean Renewable Energy Bonds Series 2009A note purchase agreement.
[5] Subordinated deferrable debt is subordinate and junior to senior debt and debt obligations we guarantee, but senior to subordinated certificates. We have the right at any time, and from time to time, during the term of the subordinated deferrable debt to suspend interest payments for a maximum period of 20 consecutive quarters. To date, we have not exercised our option to suspend interest payments. We have the right to call the subordinated deferrable debt, at par, any time after 10 years.
[6] Members' subordinated certificates consist of membership subordinated certificates, loan and guarantee certificates and member capital securities, and are subordinated and junior to senior debt, subordinated debt and debt obligations we guarantee. Membership subordinated certificates generally mature 100 years subsequent to issuance. Loan and guarantee subordinated certificates have the same maturity as the related long-term loan. Some certificates also may amortize annually based on the outstanding loan balance. Member capital securities mature 30 years subsequent to

issuance. Member capital securities are callable at par beginning 10 years subsequent to the issuance and anytime thereafter.

Debt Outstanding

Table 11 displays the composition, by product type, of our outstanding debt and the weighted average interest rate as of May 31, 2018, 2017 and 2016. Table 11 also displays the composition of our debt based on several additional selected attributes.

Table 11: Total Debt Outstanding and Weighted-Average Interest Rates

(Dollars in thousands)	May 31, 2018 Outstanding Amount	Weighted-Average Interest Rate		2017 Outstanding Amount	Weighted-Average Interest Rate		2016 Outstanding Amount	Weighted-Average Interest Rate	
Debt product type:									
Commercial paper:									
Members, at par	$1,202,105	1.89	%	$928,158	0.95	%	$848,007	0.45	%
Dealer, net of discounts	1,064,266	1.87		999,691	0.93		659,935	0.43	
Total commercial paper	2,266,371	1.88		1,927,849	0.94		1,507,942	0.44	
Select notes to members	780,472	2.04		696,889	1.12		701,849	0.62	
Daily liquidity fund notes to members	400,635	1.50		527,990	0.80		525,959	0.34	
Medium-term notes:									
Members, at par	643,821	2.31		612,951	1.97		654,058	1.66	
Dealer, net of discounts	3,002,979	3.51		2,364,671	3.48		2,648,369	3.02	
Total medium-term notes	3,646,800	3.30		2,977,622	3.17		3,302,427	2.75	
Collateral trust bonds	7,639,093	3.89		7,634,048	4.08		7,253,096	4.28	
Guaranteed Underwriter Program notes payable	4,856,143	2.85		4,985,484	2.83		4,777,111	2.98	
Farmer Mac notes payable	2,891,496	2.88		2,513,389	1.71		2,303,123	1.15	
Other notes payable	29,860	3.42		35,223	3.55		40,944	3.61	
Subordinated deferrable debt	742,410	4.98		742,274	4.98		742,212	4.98	
Members’ subordinated certificates:									
Membership subordinated certificates	630,448	4.94		630,098	4.94		630,063	4.94	
Loan and guarantee subordinated certificates	528,386	2.93		567,830	3.02		593,701	2.99	
Member capital securities	221,148	5.00		221,097	5.00		220,046	5.00	
Total members’ subordinated certificates	1,379,982	4.18		1,419,025	4.18		1,443,810	4.14	
Total debt outstanding	$24,633,262	3.25	%	$23,459,793	3.07	%	$22,598,473	3.03	%
Security type:									
Unsecured debt	37	%		35	%		37	%	
Secured debt	63			65			63		
Total	100	%		100	%		100	%	
Funding source:									
Members	18	%		18	%		18	%	
Private placement:									
Guaranteed Underwriter Program notes payable	20			21			21		
Farmer Mac notes payable	12			11			10		
Other	—			—			1		
Total private placement	32			32			32		
Capital markets	50			50			50		
Total	100	%		100	%		100	%	

Interest rate type:						
Fixed-rate debt	74	%	74	%	74	%
Variable-rate debt	26		26		26	
Total	100	%	100	%	100	%
Interest rate type including the impact of swaps:						
Fixed-rate debt[1]	87	%	87	%	88	%
Variable-rate debt[2]	13		13		12	
Total	100	%	100	%	100	%
Maturity classification:[3]						
Short-term borrowings	15	%	14	%	13	%
Long-term and subordinated debt[4]	85		86		87	
Total	100	%	100	%	100	%

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(1) Includes variable-rate debt that has been swapped to a fixed rate, net of any fixed-rate debt that has been swapped to a variable rate.
(2) Includes fixed-rate debt that has been swapped to a variable rate, net of any variable-rate debt that has been swapped to a fixed rate. Also includes commercial paper notes, which generally have maturities of less than 90 days. The interest rate on commercial paper notes does not change once the note has been issued; however, the interest rate for new commercial paper issuances changes daily.
(3) Borrowings with an original contractual maturity of one year or less are classified as short-term borrowings. Borrowings with an original contractual maturity of greater than one year are classified as long-term debt.
(4) Consists of long-term debt, subordinated deferrable debt and total members' subordinated debt reported on the consolidated balance sheets. Maturity classification is based on the original contractual maturity as of the date of issuance of the debt.

Our outstanding debt volume generally increases and decreases in response to member loan demand. As outstanding loan balances increased during the year ended May 31, 2018, our debt volume also increased. Total debt outstanding of $24,633 million as of May 31, 2018, increased by $1,173 million, or 5%, from May 31, 2017. The increase was primarily attributable to an increase in dealer medium-term notes of $638 million; an increase in Farmer Mac notes payable of $378 million; an aggregate increase in member commercial paper, select notes and daily liquidity fund notes of $230 million; and an increase in dealer commercial paper outstanding of $65 million. These increases were partially offset by a decrease in Guaranteed Underwriter Program notes payable of $129 million.

Below is a summary of significant financing activities during fiscal year 2018.

- On November 9, 2017, we closed a $750 million committed loan facility ("Series M") from the Federal Financing Bank under the Guaranteed Underwriter Program.

- On November 20, 2017, we amended and restated the three-year and five-year committed bank revolving line of credit agreements to extend the maturity dates to November 20, 2020 and November 20, 2022, respectively, and to terminate certain third-party bank commitments.

- On January 16, 2018, we redeemed $325 million of notes payable outstanding, with an effective interest rate of 2.10% and an original maturity of April 15, 2026, under the Guaranteed Underwriter Program.

- On February 26, 2018, we amended the revolving note purchase agreement with Farmer Mac, dated March 24, 2011 to increase the facility amount from $4,800 million to $5,200 million. Under the amended agreement, we currently can borrow, subject to market conditions, up to $5,200 million at any time through January 11, 2022.

Member Investments

Debt securities issued to our members represent an important, stable source of funding. Table 12 displays outstanding member debt, by debt product type, as of May 31, 2018 and 2017.

Table 12: Member Investments

	May 31, 2018		2017		
(Dollars in thousands)	Amount	% of Total (1)	Amount	% of Total (1)	Increase/(Decrease)
Commercial paper	$1,202,105	53 %	$928,158	48 %	$ 273,947

Select notes	780,472	100	696,889	100	83,583
Daily liquidity fund notes	400,635	100	527,990	100	(127,355)
Medium-term notes	643,821	18	612,951	20	30,870
Members' subordinated certificates	1,379,982	100	1,419,025	100	(39,043)
Total outstanding member debt	$4,407,015		$4,185,013		$ 222,002
Percentage of total debt outstanding	18 %		18 %		

[1] Represents outstanding debt attributable to members for each debt product type as a percentage of the total outstanding debt for each debt product type.

Member investments accounted for 18% of total debt outstanding as of both May 31, 2018 and 2017. Over the last three fiscal years, outstanding member investments have averaged $4,328 million on a quarterly basis.

Short-Term Borrowings

Short-term borrowings consist of borrowings with an original contractual maturity of one year or less and do not include the current portion of long-term debt. Short-term borrowings totaled $3,796 million and accounted for 15% of total debt outstanding as of May 31, 2018, compared with $3,343 million, or 14%, of total debt outstanding as of May 31, 2017. See Table 32: Short-Term Borrowings below under "Liquidity Risk" and "Note 5—Short-Term Borrowings" for detail on the composition of our short-term borrowings.

Long-Term and Subordinated Debt

Long-term debt, defined as debt with an original contractual maturity term of greater than one year, primarily consists of medium-term notes, collateral trust bonds, notes payable under the Guaranteed Underwriter Program and notes payable under our note purchase agreement with Farmer Mac. Subordinated debt consists of subordinated deferrable debt and members' subordinated certificates. Our subordinated deferrable debt and members' subordinated certificates have original contractual maturity terms of greater than one year.

Long-term and subordinated debt totaled $20,837 million and accounted for 85% of total debt outstanding as of May 31, 2018, compared with $20,117 million, or 86%, of total debt outstanding as of May 31, 2017. As discussed above, the increase in total debt outstanding, including long-term and subordinated debt, was primarily due to the issuance of debt to fund the growth in our loan portfolio. See Table 33: Issuances and Repayments of Long-Term and Subordinated Debt below under "Liquidity Risk" for a summary of long-term subordinated debt issuances and repayments for the year ended May 31, 2018.

Collateral Pledged

We are required to pledge loans or other collateral in borrowing transactions under our collateral trust bond indentures, note purchase agreements with Farmer Mac and bond agreements under the Guaranteed Underwriter Program. We are required to maintain pledged collateral equal to at least 100% of the face amount of outstanding borrowings. However, we typically maintain pledged collateral in excess of the required percentage to ensure that required collateral levels are maintained and to facilitate the timely execution of debt issuances by reducing or eliminating the lead time to pledge additional collateral. Under the provisions of our committed bank revolving line of credit agreements, the excess collateral that we are allowed to pledge cannot exceed 150% of the outstanding borrowings under our collateral trust bond indentures, Farmer Mac note purchase agreements or the Guaranteed Underwriter Program. In certain cases, provided that all conditions of eligibility under the different programs are satisfied, we may withdraw excess pledged collateral or transfer collateral from one borrowing program to another to facilitate a new debt issuance.

Table 13 displays the collateral coverage ratios as of May 31, 2018 and 2017 for the debt agreements noted above that require us to pledge collateral.

Table 13: Collateral Pledged

	Requirement/Limit		Actual[(1)]	
Debt Agreement	Debt Indenture Minimum	Committed Bank Revolving Line of	May 31, 2018	2017

		Credit Agreements Maximum		
Collateral trust bonds 1994 indenture	100 %	150 %	111 %	117 %
Collateral trust bonds 2007 indenture	100	150	114	115
Guaranteed Underwriter Program notes payable	100	150	119	117
Farmer Mac notes payable	100	150	115	117
Clean Renewable Energy Bonds Series 2009A	100	150	109	113

[1] Calculated based on the amount of collateral pledged divided by the face amount of outstanding secured debt.

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Of our total debt outstanding of $24,633 million as of May 31, 2018, $15,398 million, or 63%, was secured by pledged loans totaling $18,145 million. In comparison, of our total debt outstanding of $23,460 million as of May 31, 2017, $15,146 million, or 65%, was secured by pledged loans totaling $17,941 million. Total debt outstanding on our consolidated balance sheet is presented net of unamortized discounts and issuance costs. However, our collateral pledging requirements are based on the face amount of secured outstanding debt, which does not take into consideration the impact of net unamortized discounts and issuance costs.

Table 14 displays the unpaid principal balance of loans pledged for secured debt, the excess collateral pledged and unencumbered loans as of May 31, 2018 and 2017.

Table 14: Unencumbered Loans

	May 31,	
(Dollars in thousands)	2018	2017
Total loans outstanding[1]	$25,167,494	$24,356,330
Less: Loans required to be pledged for secured debt [2]	(15,677,138)	(15,435,062)
Loans pledged in excess of requirement[2][3]	(2,467,444)	(2,505,804)
Total pledged loans	$(18,144,582)	$(17,940,866)
Unencumbered loans	$7,022,912	$6,415,464
Unencumbered loans as a percentage of total loans	28%	26%

[1]Reflects unpaid principal balance. Excludes unamortized deferred loan origination costs of $11 million as of both May 31, 2018 and 2017.

[2]Reflects unpaid principal balance of pledged loans.

[3]Excludes cash collateral pledged to secure debt. If there is an event of default under most of our indentures, we can only withdraw the excess collateral
if we substitute cash or permitted investments of equal value.

As displayed above in Table 14, we had excess loans pledged as collateral totaling $2,467 million and $2,506 million as of May 31, 2018 and 2017, respectively. We typically pledge loans in excess of the required amount for the following reasons: (i) our distribution and power supply loans are typically amortizing loans that require scheduled principal payments over the life of the loan, whereas the debt securities issued under secured indentures and agreements typically have bullet maturities; (ii) distribution and power supply borrowers have the option to prepay their loans; and (iii) individual loans may become ineligible for various reasons, some of which may be temporary.

We provide additional information on our borrowings, including the maturity profile, below in “Liquidity Risk.” Refer to “Note 4—Loans—Pledging of Loans” for additional information related to pledged collateral. Also refer to “Note 5—Short-Term Borrowings”, “Note 6—Long-Term Debt”, “Note 7—Subordinated Deferrable Debt” and “Note 8—Members’ Subordinated Certificates” for a more detailed description of each of our debt types.

Equity

Table 15 presents the components of total CFC equity, total equity and total members’ equity as of May 31, 2018 and 2017. As displayed in Table 15, total members’ equity excludes the impact of cumulative unrealized derivative forward value gains (losses) recorded in earnings.

Table 15: Equity

(Dollars in thousands)	May 31, 2018	2017	Change
Membership fees and education fund:			
Membership fees	$969	$971	$(2)
Educational fund	1,976	1,929	47
Total membership fees and educational fund	2,945	2,900	45
Patronage capital allocated	811,493	761,701	49,792
Members' capital reserve	687,785	630,305	57,480
Unallocated net loss:			
Prior year-end cumulative derivative forward value losses	(332,525)	(507,904)	175,379
Current year derivative forward value gains[1]	301,694	175,379	126,315
Current year-end cumulative derivative forward value losses	(30,831)	(332,525)	301,694
Other unallocated net loss	(5,603)	(5,603)	—
Unallocated net loss	(36,434)	(338,128)	301,694
CFC retained equity	1,465,789	1,056,778	409,011
Accumulated other comprehensive income (loss)	8,544	13,175	(4,631)
Total CFC equity	1,474,333	1,069,953	404,380
Noncontrolling interests	31,520	28,852	2,668
Total equity	$1,505,853	$1,098,805	$407,048
Members' equity:			
Total CFC equity	$1,474,333	$1,069,953	$404,380
Excludes:			
Accumulated other comprehensive income	8,544	13,175	(4,631)
Current year-end cumulative derivative forward value losses	(30,831)	(332,525)	301,694
Subtotal	(22,287)	(319,350)	297,063
Total members' equity[2]	$1,496,620	$1,389,303	$107,317

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[1]Represents derivative forward value gains (losses) for CFC only, as total CFC equity does not include the noncontrolling interests of the variable interest entities NCSC and RTFC, which we are required to consolidate. See "Note 14—Business Segments" for the statements of operations for CFC.
[2] See "Non-GAAP Financial Measures" for details on the calculation of this non-GAAP measure and the reconciliation to the most comparable GAAP measures.

Total equity increased by $407 million during fiscal year 2018 to $1,506 million as of May 31, 2018, attributable to our reported net income of $457 million, which was partially offset by patronage capital retirement of $45 million in September 2017.

In July 2018, the CFC Board of Directors authorized the allocation of fiscal year 2018 adjusted net income as follows: $95 million to members in the form of patronage capital; $57 million to the members' capital reserve and $1 million to the cooperative educational fund. The amount of patronage capital allocated each year by CFC's Board of Directors is based on adjusted non-GAAP net income, which excludes the impact of derivative forward value gains (losses). See "Non-GAAP Financial Measures" for information on adjusted net income.

In July 2018, the CFC Board of Directors also authorized the retirement of patronage capital totaling $48 million, which represented 50% of the patronage capital allocation for fiscal year 2018. We expect to return this amount to members in cash in the first quarter of fiscal year 2019. The remaining portion of the allocated amount will be retained by CFC for 25 years under guidelines adopted by the CFC Board of Directors in June 2009.

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In July 2017, the CFC Board of Directors authorized the retirement of allocated net earnings totaling $45 million, which represented 50% of the patronage capital amount of $90 million allocated to members for fiscal year 2017. The $45 million was returned to members in cash in September 2017.

The CFC Board of Directors is required to make annual allocations of adjusted net income, if any. CFC has made annual retirements of allocated net earnings in 38 of the last 39 fiscal years; however, future retirements of allocated amounts are determined based on CFC's financial condition. The CFC Board of Directors has the authority to change the current practice for allocating and retiring net earnings at any time, subject to applicable laws. See "Item 1. Business—Allocation and Retirement of Patronage Capital" for additional information.

OFF-BALANCE SHEET ARRANGEMENTS

In the ordinary course of business, we engage in financial transactions that are not presented on our consolidated balance sheets, or may be recorded on our consolidated balance sheets in amounts that are different from the full contract or notional amount of the transaction. Our off-balance sheet arrangements consist primarily of guarantees of member obligations and unadvanced loan commitments intended to meet the financial needs of our members.

Guarantees

We provide guarantees for certain contractual obligations of our members to assist them in obtaining various forms of financing. We use the same credit policies and monitoring procedures in providing guarantees as we do for loans and commitments. If a member defaults on its obligation, we are obligated to pay required amounts pursuant to our guarantees. Meeting our guarantee obligations satisfies the underlying obligation of our member systems and prevents the exercise of remedies by the guarantee beneficiary based upon a payment default by a member. In general, the member is required to repay any amount advanced by us with accrued interest, pursuant to the documents evidencing the member's reimbursement obligation. Table 16 displays the notional amount of our outstanding guarantee obligations, by guarantee type and by company, as of May 31, 2018 and 2017.

Table 16: Guarantees Outstanding

	May 31,		Increase/
(Dollars in thousands)	2018	2017	(Decrease)
Guarantee type:			
Long-term tax-exempt bonds	$316,985	$468,145	$(151,160)
Letters of credit	343,970	307,321	36,649
Other guarantees	144,206	114,151	30,055
Total	$805,161	$889,617	$(84,456)
Company:			
CFC	$793,156	$874,920	$(81,764)
NCSC	10,431	13,123	(2,692)
RTFC	1,574	1,574	—
Total	$805,161	$889,617	$(84,456)

Of the total notional amount of our outstanding guarantee obligations of $805 million and $890 million as of May 31, 2018 and 2017, respectively, 57% and 67%, respectively, were secured by a mortgage lien on substantially all of the assets and future revenue of the borrowers.

In addition to providing a guarantee on long-term tax-exempt bonds issued by member cooperatives totaling $317 million as of May 31, 2018, we also were the liquidity provider on $250 million of those tax-exempt bonds. As liquidity provider, we may be required to purchase bonds that are tendered or put by investors. Investors provide notice to the remarketing agent that they will tender or put a certain amount of bonds at the next interest rate reset date. If the remarketing agent is unable to sell such bonds to other investors by the next interest rate reset date, we have unconditionally agreed to purchase such bonds. We were not required to perform as liquidity provider pursuant to these obligations during fiscal year 2018 or 2017.

We had outstanding letters of credit for the benefit of our members totaling $344 million as of May 31, 2018. These letters of credit relate to obligations for which we may be required to advance funds based on various trigger events specified in the letter of credit agreements. If we are required to advance funds, the member is obligated to repay the advance amount and accrued interest to us. In addition to these letters of credit, we had master letter of credit facilities in place under which we may be required to issue letters of credit to third parties for the benefit of our members up to an additional $67 million as of May 31, 2018. All of our master letter of credit facilities as of May 31, 2018 were subject to material adverse change clauses at the time of issuance. Prior to issuing a letter of credit under these facilities, we confirm that there has been no material adverse change in the business or condition, financial or otherwise, of the borrower since the time the loan was approved and that the borrower is currently in compliance with the letter of credit terms and conditions.

Table 17 presents the maturities for each of the next five fiscal years and thereafter of the notional amount of our outstanding guarantee obligations of $805 million as of May 31, 2018.

Table 17: Maturities of Guarantee Obligations

	Outstanding	Maturities of Guarantee Obligations					
(Dollars in thousands)	Amount	2019	2020	2021	2022	2023	Thereafter
Guarantees	$ 805,161	$265,684	$66,142	$121,700	$27,515	$160,541	$163,579

We recorded a guarantee liability of $11 million and $15 million as of May 31, 2018 and 2017, respectively, for our guarantee and liquidity obligations associated with our members' debt. We provide additional information about our guarantee obligations in "Note 12—Guarantees."

Unadvanced Loan Commitments

Unadvanced loan commitments represent approved and executed loan contracts for which funds have not been advanced to borrowers. Our line of credit commitments include both contracts that are subject to material adverse change clauses and contracts that are not subject to material adverse change clauses, while our long-term loan commitments are typically subject to material adverse change clauses.

Table 18 displays the amount of unadvanced loan commitments, which consist of line of credit and long-term loan commitments, as of May 31, 2018 and 2017.

Table 18: Unadvanced Loan Commitments

	May 31, 2018		2017		Increase/
(Dollars in thousands)	Amount	% of Total	Amount	% of Total	(Decrease)
Line of credit commitments:					
Conditional[(1)]	$4,835,434	38 %	$5,170,393	41 %	$(334,959)
Unconditional[(2)]	2,857,350	23	2,602,262	21	255,088
Total line of credit unadvanced commitments	7,692,784	61	7,772,655	62	(79,871)
Total long-term loan unadvanced commitments[(1)]	4,952,834	39	4,802,319	38	150,515
Total unadvanced loan commitments	$12,645,618	100%	$12,574,974	100%	$70,644

[1]Represents amount related to facilities that are subject to material adverse change clauses.
[2]Represents amount related to facilities that are not subject to material adverse change clauses.

Table 19 presents the amount of unadvanced loan commitments, by loan type, as of May 31, 2018 and the maturities of the commitment amounts for each of the next five fiscal years and thereafter.

Table 19: Notional Maturities of Unadvanced Loan Commitments

	Available	Notional Maturities of Unadvanced Loan Commitments					
(Dollars in thousands)	Balance	2019	2020	2021	2022	2023	Thereafter
Line of credit	$7,692,784	$4,168,751	$710,763	$805,508	$770,971	$1,211,791	$ 25,000
Long-term loans	4,952,834	883,840	586,005	652,499	1,714,338	1,104,185	11,967
Total	$12,645,618	$5,052,591	$1,296,768	$1,458,007	$2,485,309	$2,315,976	$ 36,967

Unadvanced line of credit commitments accounted for 61% of total unadvanced loan commitments as of May 31, 2018, while unadvanced long-term loan commitments accounted for 39% of total unadvanced loan commitments. Unadvanced line of credit commitments are typically revolving facilities for periods not to exceed five years. Unadvanced line of credit commitments generally serve as supplemental back-up liquidity to our borrowers. Historically, borrowers have not drawn the full commitment amount for line of credit facilities, and we have experienced a very low utilization rate on line of credit loan facilities regardless of whether or not we are obligated to fund the facility where a material adverse change exists.

Our unadvanced long-term loan commitments have a five-year draw period under which a borrower may advance funds prior to the expiration of the commitment. We expect that the majority of the long-term unadvanced loan commitments of $4,953 million will be advanced prior to the expiration of the commitment.

Because we historically have experienced a very low utilization rate on line of credit loan facilities, which account for the majority of our total unadvanced loan commitments, we believe the unadvanced loan commitment total of $12,646 million as of May 31, 2018 is not necessarily representative of our future funding requirements.

Unadvanced Loan Commitments—Conditional

The substantial majority of our line of credit commitments and all of our unadvanced long-term loan commitments include material adverse change clauses. Unadvanced loan commitments subject to material adverse change clauses totaled $9,789 million and $9,973 million as of May 31, 2018 and 2017, respectively, and accounted for 77% and 79% of the combined total of unadvanced line of credit and long-term loan commitments as of May 31, 2018 and 2017, respectively. Prior to making advances on these facilities, we confirm that there has been no material adverse change in the borrower's business or condition, financial or otherwise, since the time the loan was approved and confirm that the borrower is currently in compliance with loan terms and conditions. In some cases, the borrower's access to the full amount of the facility is further constrained by use of proceeds restrictions, imposition of borrower-specific restrictions, or by additional conditions that must be met prior to advancing funds. Since we generally do not charge a fee for the borrower to have an unadvanced amount on a loan facility that is subject to a material adverse change clause, our borrowers tend to request amounts in excess of their immediate estimated loan requirements.

Unadvanced Loan Commitments—Unconditional

Unadvanced loan commitments not subject to material adverse change clauses at the time of each advance consisted of unadvanced committed lines of credit totaling $2,857 million and $2,602 million as of May 31, 2018 and 2017, respectively. For contracts not subject to a material adverse change clause, we are generally required to advance amounts on the committed facilities as long as the borrower is in compliance with the terms and conditions of the facility.

Syndicated loan facilities, where the pricing is set at a spread over a market index rate as agreed upon by all of the participating financial institutions based on market conditions at the time of syndication, accounted for 86% of unconditional line of credit commitments as of May 31, 2018. The remaining 14% represented unconditional committed line of credit loans, which under any new advance would be made at rates determined by us.

Table 20 presents the maturities for each of the next five fiscal years of the notional amount of unconditional committed lines of credit not subject to a material adverse change clause as of May 31, 2018.

Table 20: Maturities of Notional Amount of Unconditional Committed Lines of Credit

(Dollars in thousands)	Available Balance	Notional Maturities of Unconditional Committed Lines of Credit				
		2019	2020	2021	2022	2023
Committed lines of credit	$2,857,350	$279,285	$435,151	$444,326	$644,178	$1,054,410

RISK MANAGEMENT

Overview

We face a variety of risks that can significantly affect our financial performance, liquidity, reputation and ability to meet the expectations of our members, investors and other stakeholders. As a financial services company, the major categories of risk exposures inherent in our business activities include credit risk, liquidity risk, market risk and operational risk. These risk categories are summarized below.

- Credit risk is the risk that a borrower or other counterparty will be unable to meet its obligations in accordance with agreed-upon terms.

- Liquidity risk is the risk that we will be unable to fund our operations and meet our contractual obligations or that we will be unable to fund new loans to borrowers at a reasonable cost and tenor in a timely manner.

- Market risk is the risk that changes in market variables, such as movements in interest rates, may adversely affect the match between the timing of the contractual maturities, re-pricing and prepayments of our financial assets and the related financial liabilities funding those assets.

- Operational risk is the risk of loss resulting from inadequate or failed internal controls, processes, systems, human error or external events. Operational risk also includes compliance risk, fiduciary risk, reputational risk and litigation risk.

Effective risk management is critical to our overall operations and in achieving our primary objective of providing cost-based financial products to our rural electric members while maintaining the sound financial results required for investment-grade credit ratings on our rated debt instruments. Accordingly, we have a risk-management framework that is intended to govern the principal risks we face in conducting our business and the aggregate amount of risk we are willing to accept, referred to as risk appetite, in the context of CFC's mission and strategic objectives and initiatives.

Risk-Management Framework

Our risk-management framework consists of defined policies, procedures and risk tolerances that are intended to align with CFC's mission. The CFC Board of Directors is responsible for risk governance by approving the enterprise risk-management framework and providing oversight on risk policies, risk appetite and our performance against established goals. In fulfilling its risk governance responsibility, the CFC Board of Directors receives periodic reports on business activities from management. The CFC Board of Directors reviews CFC's risk profile and management's assessment of those risks throughout the year at its periodic meetings. The board also establishes CFC's loan policies and has established a Loan Committee of the board comprising no fewer than 10 directors that reviews the performance of the loan portfolio in accordance with those policies. For additional information about the role of the CFC Board of Directors in risk governance and oversight, see "Item 10. Directors, Executive Officers and Corporate Governance."

Management is responsible for execution of the risk-management framework, risk policy formation and daily management of the risks associated with our business. Management executes its responsibility by establishing processes for identifying, measuring, assessing, managing, monitoring and reporting risks. Management and operating groups maintain policies and procedures, specific to each major risk category, to identify and measure our primary risk exposures at the transaction, obligor and portfolio levels and ensure that our exposures remain within prescribed limits. Management also is responsible for establishing and maintaining internal controls to mitigate key risks. We have a number of management-level risk oversight committees across the organization and groups within the organization that have a defined set of authorities and responsibilities specific to one or more risk types, including the Corporate Credit Committee, Credit Risk Management group, Asset Liability Committee, Investment Management Committee, Corporate Compliance group, Internal Audit group and Disclosure Committee. These risk oversight committees and groups collectively help management facilitate enterprise-wide understanding and monitoring of CFC's risk profile and the control processes with respect to our inherent risks. Management and the risk oversight committees periodically report actual results, significant current and emerging risks, initiatives and risk-management concerns to the CFC Board of Directors.

CREDIT RISK

Our loan portfolio, which represents the largest component of assets on our balance sheet, and guarantees account for the substantial majority of our credit risk exposure. We also engage in certain non-lending activities that may give rise to credit and counterparty settlement risk, including the purchase of investment securities and entering into derivative transactions to manage interest rate risk. Our primary credit exposure is to rural electric cooperatives that provide essential electric services to end-users, the majority of which are residential customers. We also have a limited portfolio of loans to not-for-profit and for-profit telecommunication companies.

Credit Risk Management

We manage portfolio and borrower credit risk consistent with credit policies established by the CFC Board of Directors and through credit underwriting, approval and monitoring processes and practices adopted by management. Our board-established credit policies include guidelines regarding the types of credit products we offer, limits on credit we extend to individual borrowers, approval authorities delegated to management, and use of syndications and loan sales. We maintain an internal risk rating system in which we assign a rating to each borrower and credit facility. We review and update the risk ratings at least annually. Assigned risk ratings inform our credit approval, borrower monitoring and portfolio review processes. Our Corporate Credit Committee approves individual credit actions within its own authority and together with our Credit Risk Management group, establishes standards for credit underwriting, oversees credits deemed to be higher risk, reviews assigned risk ratings for accuracy, and monitors the overall credit quality and performance statistics of our loan portfolio and guarantees.

Loan and Guarantee Portfolio Credit Risk

Below we provide information on the credit risk profile of our loan portfolio and guarantees, including security provisions, loan concentration, credit performance and our allowance for loan losses.

Security Provisions

Except when providing line of credit loans, we generally lend to our members on a senior secured basis. Long-term loans are generally secured on parity with other secured lenders (primarily RUS), if any, by all assets and revenue of the borrower with exceptions typical in utility mortgages. Line of credit loans are generally unsecured. In addition to the collateral pledged to secure our loans, distribution and power supply borrowers also are required to set rates charged to customers to achieve certain specified financial ratios.

Table 21 presents, by loan type and by company, the amount and percentage of secured and unsecured loans in our loan portfolio as of May 31, 2018 and 2017. Of our total loans outstanding, 93% were secured and 7% were unsecured as of May 31, 2018. Of our total loans outstanding, 92% were secured and 8% were unsecured as of May 31, 2017.

Table 21 : Loan Portfolio Security Profile[1]

	May 31, 2018				
(Dollars in thousands)	Secured	% of Total	Unsecured	% of Total	Total
Loan type:					
Long-term loans:					
Long-term fixed-rate loans	$22,220,087	98 %	$476,098	2 %	$22,696,185
Long-term variable-rate loans	996,970	96	42,521	4	1,039,491
Total long-term loans	23,217,057	98	518,619	2	23,735,676
Line of credit loans	69,097	5	1,362,721	95	1,431,818
Total loans outstanding	$23,286,154	93	$1,881,340	7	$25,167,494
Company:					
CFC	$22,233,592	93 %	$1,784,327	7 %	$24,017,919
NCSC	703,396	89	83,061	11	786,457
RTFC	349,166	96	13,952	4	363,118
Total loans outstanding	$23,286,154	93	$1,881,340	7	$25,167,494

	May 31, 2017				
(Dollars in thousands)	Secured	% of Total	Unsecured	% of Total	Total
Loan type:					
Long-term loans:					
Long-term fixed-rate loans	$21,503,871	97 %	$632,819	3 %	$22,136,690
Long-term variable-rate loans	795,326	94	52,093	6	847,419
Total long-term loans	22,299,197	97	684,912	3	22,984,109
Line of credit loans	54,258	4	1,317,963	96	1,372,221
Total loans outstanding	$22,353,455	92	$2,002,875	8	$24,356,330
Company:					
CFC	$21,591,723	92 %	$1,796,264	8 %	$23,387,987
NCSC	424,636	69	189,288	31	613,924
RTFC	337,096	95	17,323	5	354,419
Total loans outstanding	$22,353,455	92	$2,002,875	8	$24,356,330

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[1]Excludes deferred loan origination costs of $11 million as of both May 31, 2018 and 2017.

As part of our strategy in managing our credit risk exposure, we entered into a long-term standby purchase commitment agreement with Farmer Mac in fiscal year 2016. Under this agreement, we may designate certain loans to be covered under the commitment, as approved by Farmer Mac, and in the event any such loan later goes into payment default for at least 90 days, upon request by us, Farmer Mac must purchase such loan at par value. The outstanding principal balance of loans covered under this agreement totaled $660 million as of May 31, 2018, compared with $843 million as of May 31, 2017. No loans have been put to Farmer Mac for purchase pursuant to this agreement. Our credit exposure is also mitigated by long-term loans guaranteed by RUS. Guaranteed RUS loans totaled $161 million and $167 million as of May 31, 2018 and 2017, respectively.

Credit Concentration

Concentrations may exist when there are amounts loaned to borrowers engaged in similar activities or in geographic areas that would cause them to be similarly impacted by economic or other conditions or when there are large exposures to single borrowers. As a tax-exempt, member-owned finance cooperative, CFC's principal focus is to provide funding to its rural electric utility cooperative members to assist them in acquiring, constructing and operating electric distribution, power

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supply systems and related facilities. As a result of lending primarily to our rural electric utility cooperative members, we have a loan portfolio subject to single-industry and single-obligor concentrations. Outstanding loans to electric utility organizations represented approximately 99% of the total outstanding loan portfolio as of May 31, 2018, unchanged from May 31, 2017. Although our organizational structure and mission results in single-industry concentration, we serve a geographically diverse group of electric and telecommunications borrowers throughout the United States and its territories, including all 50 states, the District of Columbia, American Samoa and Guam. Our consolidated membership totaled 1,449 members and 216 associates as of May 31, 2018. Despite our credit concentrations, we historically have experienced limited defaults and very low credit losses in our electric loan portfolio. In fiscal year 2018, for the fifth consecutive fiscal year, we had no payment defaults, charge-offs, delinquent loans or nonperforming loans in our electric utility loan portfolio.

Geographic Concentration

We currently have loans outstanding to borrowers in 48 states and the District of Columbia. Texas had the largest concentration of outstanding loans to borrowers in any one state, with approximately 15% of total loans outstanding as of both May 31, 2018 and 2017, respectively, and also the largest concentration of borrowers, with 70 borrowers as of May 31, 2018 and 73 borrowers as of May 31, 2017. In addition to having the largest number of borrowers, Texas also had the largest concentration of electric power supply borrowers. Electric power supply borrowers generally require significantly more capital than electric distribution and telecommunications borrowers. Of our 67 electric power supply borrowers, eight were located in Texas as of May 31, 2018.

Table 22 presents the number of CFC, NCSC and RTFC borrowers and the percentage of total loans outstanding by state or U.S. territory as of May 31, 2018 and 2017.

Table 22: Loan Geographic Concentration

	May 31,			
	2018		2017	
U.S. State/Territory	Number of Borrowers	% of Total Loans Outstanding	Number of Borrowers	% of Total Loans Outstanding
Texas	70	15.11 %	73	14.86 %
Georgia	48	5.83	44	5.77
Missouri	48	5.43	48	5.27
Colorado	26	5.41	26	5.27
Kansas	30	4.77	31	4.57
Alaska	17	3.79	16	3.61
Florida	17	3.70	17	3.17
Illinois	29	3.65	27	3.43
North Dakota	18	3.42	18	3.62
South Carolina	23	3.05	23	3.12
North Carolina	28	3.01	28	3.17
Indiana				